



# ILE Buyer's Guide

A Complete Line of Industrial Lubrication Equipment



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# Table of Contents

## Electric Pumps

|                                |       |
|--------------------------------|-------|
| G1™                            | 6-9   |
| G3™                            | 10-14 |
| G3™ Accessories                | 15-16 |
| Modu-Flo®                      | 17    |
| LubeMaster®                    | 18-21 |
| Miniature Meter-Flo®           | 22-23 |
| Meter-Flo®                     | 24    |
| Injecto-Flo® E0-1 and E0-3     | 25    |
| Injecto-Flo® II.               | 26-27 |
| Thrif-T-Luber®                 | 28    |
| Maxi-Flo™                      | 29    |
| Electro-Hydraulic Barrel Pumps | 30    |

## Pneumatic Pumps

|                      |       |
|----------------------|-------|
| Modu-Flo®            | 31-32 |
| E-Series™            | 33-34 |
| MSA-10™ and MSA-100™ | 35    |
| Injecto-Flo® A0-1.   | 36    |
| LubriSystem®         | 37    |

## Manual Pumps

|                   |    |
|-------------------|----|
| Manual Grease Gun | 38 |
| PH Pump™          | 39 |
| LubriSystem®      | 40 |
| Thrif-T-Luber®    | 41 |

## Mechanical Pumps

|                           |       |
|---------------------------|-------|
| LubeMaster® Ratchet Drive | 42-43 |
| MLS Series™               | 44    |

## Hydraulic Pumps

|           |    |
|-----------|----|
| Modu-Flo® | 45 |
|-----------|----|

|                                         |       |
|-----------------------------------------|-------|
| Single Series™ Single Point Lubricators | 46-51 |
|-----------------------------------------|-------|

## Single Line Resistive Metering Devices

|                |    |
|----------------|----|
| Thrif-T-Luber® | 52 |
|----------------|----|

## Single Line Parallel Metering Devices

|                             |       |
|-----------------------------|-------|
| Piston Distributors         | 53-55 |
| LubriSystem® Injectors      | 56-57 |
| GL-32™ and GL-43™ Injectors | 58    |
| GL-1™ Injectors             | 59    |
| GL-11™ Injectors            | 60    |

## Series Progressive Metering Devices

|                                           |       |
|-------------------------------------------|-------|
| Trabon® USP Mono Block                    | 61    |
| Trabon® MD Divider Valve                  | 62    |
| Trabon® MJ Divider Valve                  | 63    |
| Trabon® MSP Divider Valve                 | 64-66 |
| Trabon® MSP Stainless Steel Divider Valve | 67-68 |
| Manzel® MHH Divider Valve                 | 69-70 |
| Trabon® MX Divider Valve                  | 71-72 |
| Trabon® MXP Divider Valve                 | 73-74 |
| Trabon® MGO Divider Valve                 | 75-76 |

# Table of Contents

## Air Oil

|                                           |       |
|-------------------------------------------|-------|
| A/O Series™ Valves . . . . .              | 77    |
| High Speed Spindl-Gard® Systems . . . . . | 78-79 |

## General Accessories

|                                            |    |
|--------------------------------------------|----|
| Trabon® Spra-Control™ Valve . . . . .      | 80 |
| Reset Indicators . . . . .                 | 81 |
| Automatic Relief Indicator . . . . .       | 82 |
| Rupture Indicators . . . . .               | 83 |
| Rupture to Atmosphere Indicators . . . . . | 84 |
| Magnetic Visual Indicator . . . . .        | 85 |
| Cycle Switch . . . . .                     | 85 |
| Proximity Switch . . . . .                 | 86 |
| Pressure Switch . . . . .                  | 87 |
| Broken Line Indicator . . . . .            | 88 |
| Filters . . . . .                          | 89 |
| Fittings . . . . .                         | 90 |
| Pressure Gauges and Check Valves . . . . . | 91 |

## Controllers

|                                 |    |
|---------------------------------|----|
| GLC 2200™ Controller . . . . .  | 92 |
| GLC 4400™ Controller . . . . .  | 93 |
| Solid State Timer . . . . .     | 94 |
| WMP III Maxi-Monitor® . . . . . | 95 |

## On-Road Mobile Lubrication

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| Grease Jockey® Pump Kits . . . . .                                 | 96    |
| Grease Jockey® Right and Left Front Pump Kits for Trucks . . . . . | 97    |
| Grease Jockey® Rear Axle Modules Truck and Tractor Kits . . . . .  | 97    |
| Grease Jockey® Pneumatic Universal Truck Kits . . . . .            | 98-99 |
| Universal Trailer Lubrication Kits . . . . .                       | 100   |
| Easy Greaser® for Trucks and Trailers . . . . .                    | 101   |
| Manual Hand Pump . . . . .                                         | 102   |

## Off-Road Mobile Lubrication

|                                                       |         |
|-------------------------------------------------------|---------|
| Dyna-Star® 10:1 Hydraulically Powered Pumps . . . . . | 103-104 |
| Dyna-Star® 5:1 and Fireball 300 50:1 . . . . .        | 104     |

## Compressor Lubrication

|                                                 |         |
|-------------------------------------------------|---------|
| Manzel® Model 25 Lubricator . . . . .           | 105-107 |
| Manzel® MBL Box Lubricator . . . . .            | 108-115 |
| Manzel® GBL 7500 . . . . .                      | 116     |
| Manzel® DSL Box Lubricators and Pumps . . . . . | 117-118 |
| Model HP-15 High Pressure . . . . .             | 119     |
| Model HP-50 High Pressure Lubricators . . . . . | 120     |
| Manzel® MVB Pumps . . . . .                     | 121-122 |

## Compressor Lubrication Accessories

|                                                |     |
|------------------------------------------------|-----|
| Lube Sentinel II Monitor™ . . . . .            | 123 |
| Manzel® Lube-Line Alert . . . . .              | 124 |
| Pneumatic/Electric Lube Sentry Valve . . . . . | 125 |
| Balancing Valve . . . . .                      | 126 |

|                 |         |
|-----------------|---------|
| Index . . . . . | 127-134 |
|-----------------|---------|

# Graco Pumps-at-a-Glance

## Selecting the Right Pump is Easy!

Choose your pump based on the system metering device, power source and fluid type.



= Series Progressive



= Single Line Parallel



= Single Line Resistive

| Graco Pump                     | Metering Device |     |     | Power Source |    |           |           |        |            | Fluid Type          |
|--------------------------------|-----------------|-----|-----|--------------|----|-----------|-----------|--------|------------|---------------------|
|                                | SP              | SLP | SLR | AC           | DC | Pneumatic | Hydraulic | Manual | Mechanical |                     |
| Dyna-Star®                     | •               | •   |     |              |    |           | •         |        |            | Grease              |
| E-Series™                      | •               |     |     |              |    | •         |           |        |            | Oil or grease       |
| Electric-Hydraulic Barrel Pump | •               |     |     | •            |    |           |           |        |            | Oil or grease       |
| G1™                            | •               | •   |     | •            | •  |           |           |        |            | Oil or grease       |
| G3™                            | •               | •   |     | •            | •  |           |           |        |            | Oil or grease       |
| Injecto-Flo®                   | •               | •   |     | •            |    | •         |           |        |            | Oil                 |
| Injecto-Flo® II                |                 | •   |     | •            |    |           |           |        |            | Oil or fluid grease |
| LubeMaster®                    | •               |     |     | •            | •  |           |           |        | •          | Oil or grease       |
| LubriSystem®                   |                 | •   |     | •            | •  | •         |           | •      |            | Oil or grease       |
| Manual Grease Gun              | •               | •   | •   |              |    |           |           | •      |            | Oil or grease       |
| Maxi-Flo®                      | •               |     |     | •            |    |           |           |        |            | Oil                 |
| Meter-Flo®                     | •               |     |     | •            |    |           |           |        |            | Oil                 |
| Miniature Meter-Flo®           | •               |     |     | •            |    |           |           |        |            | Oil                 |
| Modu-Flo®                      | •               |     |     | •            | •  | •         | •         |        |            | Oil or grease       |
| MSA™                           | •               |     |     |              |    | •         |           |        |            | Oil or grease       |
| PH Pump                        | •               | •   | •   |              |    |           |           | •      |            | Oil or grease       |
| Thrif-T Luber®                 |                 |     | •   | •            |    |           |           | •      |            | Oil                 |

# Electric Pumps

## G1™ Pumps

### Simple Solution. Sophisticated Results.

Choose the user friendly Graco G1 Pump where you need a reliable, simple alternative to manual lubrication. Work smarter and get better productivity from your equipment and maintenance staff with G1 Series lubrication pumps.

### Features and Benefits

- Choice of 2, 4, or 8 liter reservoirs for oil or grease. Size to match your system needs
- Connect to DC (12 or 24v) and AC (90-240v) power sources with CPC or DIN-style connectors for easy, no hassle installations
- Available with stirring paddle and wiper arm to keep material from separating. Optional follower plate ensures grease stays level for extreme angle installations
- G1 comes with one pump element installed that reliably delivers lubricant when you need it
- G1 Standard™ has no internal controller for a low cost solution. G1 Plus™ has built-in on/off timer with optional low level feature that shuts down the pump when empty. Manual run initiates lube cycles on-demand with the option for remote control.

### Typical Applications

- On-Road Lubrication
- Off-Road Lubrication
- Series Progressive Lubrication

### Lubrication Used

- Oil
- NLGI #000 to NLGI #2

### Technical Specifications

|                          |                                                     |
|--------------------------|-----------------------------------------------------|
| Max Pressure             | 5,100 psi (352 bar)                                 |
| Power                    | 12 VDC, 24 VDC, 90-240 VAC                          |
| Operating Temperature    | -40° F to 158° F (-40° C to 70° C)                  |
| Reservoir Size           | 2, 4 or 8 liter                                     |
| Maximum Run Time         | 30 minutes                                          |
| Control Options          | Standard or Plus                                    |
| Output per Element /Min. | 0.25 in. <sup>3</sup> (4 cm <sup>3</sup> ) / minute |
| IP Rating                | IP69K                                               |
| Instruction Manual       | 332316                                              |



G1 Standard



G1 Plus

# Electric Pumps

## G1™ Pumps and Accessories



### G1 Standard

Comes standard with no controller for use with separate or existing machine control for a low cost solution. Capable of sending a low level signal to your external controller or PLC with the low level option.

|             |        | Reservoir Size | Part Number | Voltage    | Wiper Arm | Follower Plate | External Low Level | Power Connection |
|-------------|--------|----------------|-------------|------------|-----------|----------------|--------------------|------------------|
| Application | Grease | 2 liter        | 94G006      | 12 VDC     | ✓         |                |                    | CPC              |
|             |        |                | 94G009      | 12 VDC     | ✓         |                | ✓                  | CPC              |
|             |        |                | 94G018      | 24 VDC     | ✓         |                |                    | CPC              |
|             |        |                | 94G021      | 24 VDC     | ✓         |                | ✓                  | CPC              |
|             |        |                | 94G036      | 24 VDC     | ✓         |                |                    | DIN              |
|             |        |                | 94G039      | 24 VDC     | ✓         |                | ✓                  | DIN              |
|             |        |                | 94G063      | 90-240 VAC | ✓         |                |                    | DIN              |
|             |        |                | 94G066      | 90-240 VAC | ✓         |                | ✓                  | DIN              |
|             |        |                | 94G069      | 90-240 VAC |           | ✓              | ✓                  | DIN              |
|             |        | 4 liter        | 94G007      | 12 VDC     | ✓         |                |                    | CPC              |
|             |        |                | 94G010      | 12 VDC     | ✓         |                | ✓                  | CPC              |
|             |        |                | 94G019      | 24 VDC     | ✓         |                |                    | CPC              |
|             |        |                | 94G022      | 24 VDC     | ✓         |                | ✓                  | CPC              |
|             |        |                | 94G037      | 24 VDC     | ✓         |                |                    | DIN              |
|             |        |                | 94G040      | 24 VDC     | ✓         |                | ✓                  | DIN              |
|             |        |                | 94G064      | 90-240 VAC | ✓         |                |                    | DIN              |
|             |        |                | 94G067      | 90-240 VAC | ✓         |                | ✓                  | DIN              |
|             |        |                | 94G070      | 90-240 VAC |           | ✓              | ✓                  | DIN              |
|             |        | 8 liter        | 94G008      | 12 VDC     | ✓         |                |                    | CPC              |
|             |        |                | 94G011      | 12 VDC     | ✓         |                | ✓                  | CPC              |
|             |        |                | 94G020      | 24 VDC     | ✓         |                |                    | CPC              |
|             |        |                | 94G023      | 24 VDC     | ✓         |                | ✓                  | CPC              |
|             |        |                | 94G038      | 24 VDC     | ✓         |                |                    | DIN              |
|             |        |                | 94G041      | 24 VDC     | ✓         |                | ✓                  | DIN              |
|             |        |                | 94G065      | 90-240 VAC | ✓         |                |                    | DIN              |
|             |        |                | 94G068      | 90-240 VAC | ✓         |                | ✓                  | DIN              |
|             |        |                | 94G071      | 90-240 VAC |           | ✓              | ✓                  | DIN              |

# Electric Pumps

## G1™ Pumps and Accessories

### G1 Standard (continued)

|             |     | Reservoir Size | Part Number | Voltage    | Wiper Arm | Follower Plate | External Low Level | Power Connection |
|-------------|-----|----------------|-------------|------------|-----------|----------------|--------------------|------------------|
| Application | Oil | 2 liter        | 94G042      | 24 VDC     |           |                |                    | DIN              |
|             |     |                | 94G045      | 24 VDC     |           |                | ✓                  | DIN              |
|             |     |                | 94G072      | 90-240 VAC |           |                |                    | DIN              |
|             |     |                | 94G075      | 90-240 VAC |           |                | ✓                  | DIN              |
|             |     | 4 liter        | 94G043      | 24 VDC     |           |                |                    | DIN              |
|             |     |                | 94G046      | 24 VDC     |           |                | ✓                  | DIN              |
|             |     |                | 94G073      | 90-240 VAC |           |                |                    | DIN              |
|             |     |                | 94G076      | 90-240 VAC |           |                | ✓                  | DIN              |
|             |     | 8 liter        | 94G044      | 24 VDC     |           |                |                    | DIN              |
|             |     |                | 94G047      | 24 VDC     |           |                | ✓                  | DIN              |
|             |     |                | 94G074      | 90-240 VAC |           |                |                    | DIN              |
|             |     |                | 94G077      | 90-240 VAC |           |                | ✓                  | DIN              |

### G1 Standard Power Cables

|        |                            |
|--------|----------------------------|
| 126217 | 15' - 3 wire CPC connector |
| 123358 | 15' - DIN connector        |



### G1 Plus

Built-in controller with selectable pump on/pump off timer comes with local manual run and password protection. Optional low level sensing and shut-down available, as well as remote manual run when adding the 5 wire CPC cable and remote push button accessories.

|             |        | Reservoir Size | Part Number | Voltage    | Remote Manual Run* | Wiper Arm | Follower Plate | External Low Level <sup>1</sup> | Low Level | Power Connection |
|-------------|--------|----------------|-------------|------------|--------------------|-----------|----------------|---------------------------------|-----------|------------------|
| Application | Grease | 2 liter        | 94G000      | 12 VDC     | ✓                  | ✓         |                |                                 |           | CPC              |
|             |        |                | 94G003      | 12 VDC     | ✓                  | ✓         |                | ✓                               | ✓         | CPC              |
|             |        |                | 94G012      | 24 VDC     | ✓                  | ✓         |                |                                 |           | CPC              |
|             |        |                | 94G015      | 24 VDC     | ✓                  | ✓         |                | ✓                               | ✓         | CPC              |
|             |        |                | 94G024      | 24 VDC     |                    | ✓         |                |                                 |           | DIN              |
|             |        |                | 94G027      | 24 VDC     |                    | ✓         |                |                                 | ✓         | DIN              |
|             |        |                | 94G048      | 90-240 VAC |                    | ✓         |                |                                 |           | DIN              |
|             |        |                | 94G051      | 90-240 VAC |                    | ✓         |                |                                 | ✓         | DIN              |
|             |        |                | 94G054      | 90-240 VAC |                    |           | ✓              |                                 | ✓         | DIN              |

\* = Requires use of the 5 wire CPC cable and remote push button accessory.

<sup>1</sup> = External Low Level indicated on Remote Manual Run accessory when using 5 wire CPC cable and remote push button accessory.

# Electric Pumps

## G1™ Pumps and Accessories

### G1 Plus (continued)

|             |        | Reservoir Size | Part Number | Voltage    | Remote Manual Run* | Wiper Arm | Follower Plate | External Low Level <sup>1</sup> | Low Level | Power Connection |
|-------------|--------|----------------|-------------|------------|--------------------|-----------|----------------|---------------------------------|-----------|------------------|
| Application | Grease | 4 liter        | 94G001      | 12 VDC     | ✓                  | ✓         |                |                                 |           | CPC              |
|             |        |                | 94G004      | 12 VDC     | ✓                  | ✓         |                | ✓                               | ✓         | CPC              |
|             |        |                | 94G013      | 24 VDC     | ✓                  | ✓         |                |                                 |           | CPC              |
|             |        |                | 94G016      | 24 VDC     | ✓                  | ✓         |                | ✓                               | ✓         | CPC              |
|             |        |                | 94G025      | 24 VDC     |                    | ✓         |                |                                 |           | DIN              |
|             |        |                | 94G028      | 24 VDC     |                    | ✓         |                |                                 | ✓         | DIN              |
|             |        |                | 94G049      | 90-240 VAC |                    | ✓         |                |                                 |           | DIN              |
|             |        |                | 94G052      | 90-240 VAC |                    | ✓         |                |                                 | ✓         | DIN              |
|             |        |                | 94G055      | 90-240 VAC |                    |           | ✓              |                                 | ✓         | DIN              |
|             |        | 8 liter        | 94G002      | 12 VDC     | ✓                  | ✓         |                |                                 |           | CPC              |
|             |        |                | 94G005      | 12 VDC     | ✓                  | ✓         |                | ✓                               | ✓         | CPC              |
|             |        |                | 94G014      | 24 VDC     | ✓                  | ✓         |                |                                 |           | CPC              |
|             |        |                | 94G017      | 24 VDC     | ✓                  | ✓         |                | ✓                               | ✓         | CPC              |
|             |        |                | 94G026      | 24 VDC     |                    | ✓         |                |                                 |           | DIN              |
|             |        |                | 94G029      | 24 VDC     |                    | ✓         |                |                                 | ✓         | DIN              |
|             |        |                | 94G050      | 90-240 VAC |                    | ✓         |                |                                 |           | DIN              |
|             |        |                | 94G053      | 90-240 VAC |                    | ✓         |                |                                 | ✓         | DIN              |
|             |        |                | 94G056      | 90-240 VAC |                    |           | ✓              |                                 | ✓         | DIN              |
|             | Oil    | 2 liter        | 94G030      | 24VDC      |                    |           |                |                                 |           | DIN              |
|             |        |                | 94G033      | 24VDC      |                    |           |                |                                 | ✓         | DIN              |
|             |        |                | 94G057      | 90-240 VAC |                    |           |                |                                 |           | DIN              |
|             |        |                | 94G060      | 90-240 VAC |                    |           |                |                                 | ✓         | DIN              |
|             |        | 4 liter        | 94G031      | 24VDC      |                    |           |                |                                 |           | DIN              |
|             |        |                | 94G034      | 24VDC      |                    |           |                |                                 | ✓         | DIN              |
|             |        |                | 94G058      | 90-240 VAC |                    |           |                |                                 |           | DIN              |
|             |        |                | 94G061      | 90-240 VAC |                    |           |                |                                 | ✓         | DIN              |
|             |        | 8 liter        | 94G032      | 24VDC      |                    |           |                |                                 |           | DIN              |
|             |        |                | 94G035      | 24VDC      |                    |           |                |                                 | ✓         | DIN              |
|             |        |                | 94G059      | 90-240 VAC |                    |           |                |                                 |           | DIN              |
|             |        |                | 94G062      | 90-240 VAC |                    |           |                |                                 | ✓         | DIN              |

\* = Requires use of the 5 wire CPC cable and remote push button accessory.

1 = External Low Level indicated on Remote Manual Run accessory when using 5 wire CPC cable and remote push button accessory.

### G1 Plus Power Cables

|        |                                |
|--------|--------------------------------|
| 126217 | 15 foot - 3 wire CPC connector |
| 123750 | 15 foot - 5 wire CPC connector |
| 126219 | 20 foot - 5 wire CPC connector |
| 126220 | 30 foot - 5 wire CPC connector |
| 123358 | 15 foot - DIN connector        |

# Electric Pumps

## G3™ Pumps

### Versatile Design Helps Solve Today's Lubrication Challenges

Temperature changes, changing grease types and challenging installation requirements are no problem for the G3 electric lubrication pump. With its flexible design, including adjustable pump elements and an ability to work with both injector-based and series progressive systems, G3 is a rugged, cost-effective pump designed to serve multiple markets and applications. The pump features three control choices, which means added flexibility for easy lube system set-up, operation and troubleshooting. The pump extends machinery life, reduces operating costs and increases productivity for usage in a wide variety of markets, including in-plant manufacturing, mobile and wind turbines.

### Features and Benefits

- Advanced flow dynamics—helps to prevent grease separation
- Load minimizing drive—for longer life
- Adjustable stroke pump—ensures a custom fit
- Five reservoir sizes to select from—provides a custom fit
- The most advanced user controls in its class—allows you to customize for your unique needs

### Typical Applications

- On-Road
- Off-Road
- In-Plant Machine and Conveyor Lubrication
- Wind Energy

### Lubrication Used

- Oil
- NLGI #000 to NLGI #2

### Technical Specifications

|                                                    |                                                                                                                                 |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Max Pressure                                       | 5,100 psi (352 bar)                                                                                                             |
| Power                                              | 12 VDC, 24 VDC, 90-240 VAC                                                                                                      |
| Operating Temperature                              | -13° F to 158° F (-25° C to 70° C)                                                                                              |
| Reservoir Size                                     | 2, 4, 8, 12 or 16 liter                                                                                                         |
| Maximum Run Time                                   | 30 minutes                                                                                                                      |
| Control Options                                    | Standard, Pro or Max                                                                                                            |
| Output per Element /Min.                           | 0.12 in <sup>3</sup> , 0.18 in <sup>3</sup> , 0.25 in <sup>3</sup> (2 cm <sup>3</sup> , 3 cm <sup>3</sup> , 4 cm <sup>3</sup> ) |
| Certifications/Ratings                             | CE, ETL*, IP69K                                                                                                                 |
| *Conforms to UL 73, certified to CSA 22.2 No 68-09 |                                                                                                                                 |
| Instruction Manual                                 | 3A0414                                                                                                                          |

### G3 with Data Management System (DMS)

- Simple data transfer to your PC via USB flash drive for further analysis using Excel® or Notepad®
- Provides performance history for lube system events, such as cycle detection, error logs and allows a quick check of lubrication performance to meet your system requirements
- Preferred lube cycle program can be stored and transferred to other G3 pumps in your fleet for quick and accurate repeatability
- Provides you the comfort and security in knowing your pump is being properly maintained and your lube system is protecting your valuable asset



Standard Model



Pro Model



Max Model



# Electric Pumps

## G3™ Pumps



### G3 Standard

Comes standard with no controller for use with separate or existing machine control for a low cost solution. Some models capable of sending a low level signal to your external controller or PLC.

|             |        | Reservoir Size | Part Number | Voltage    | Wiper Arm | Follower Plate | External Low Level | Power Connection |
|-------------|--------|----------------|-------------|------------|-----------|----------------|--------------------|------------------|
| Application | Grease | 2 liter        | 96G000      | 12 VDC     | ✓         |                |                    | CPC              |
|             |        |                | 96G003      | 12 VDC     | ✓         |                | ✓                  | CPC              |
|             |        |                | 96G001      | 24 VDC     | ✓         |                |                    | CPC              |
|             |        |                | 96G005      | 24 VDC     | ✓         |                | ✓                  | CPC              |
|             |        |                | 96G006      | 24 VDC     |           | ✓              | ✓                  | CPC              |
|             |        |                | 96G182      | 24 VDC     | ✓         |                | ✓                  | DIN              |
|             |        |                | 96G002      | 90-240 VAC | ✓         |                |                    | DIN              |
|             |        |                | 96G007      | 90-240 VAC | ✓         |                | ✓                  | DIN              |
|             |        |                | 96G008      | 90-240 VAC |           | ✓              | ✓                  | DIN              |
|             |        | 4 liter        | 96G038      | 12 VDC     | ✓         |                |                    | CPC              |
|             |        |                | 96G044      | 12 VDC     | ✓         |                | ✓                  | CPC              |
|             |        |                | 96G040      | 24 VDC     | ✓         |                |                    | CPC              |
|             |        |                | 96G048      | 24 VDC     | ✓         |                | ✓                  | CPC              |
|             |        |                | 96G053      | 24 VDC     |           | ✓              | ✓                  | CPC              |
|             |        |                | 96G184      | 24 VDC     | ✓         |                | ✓                  | DIN              |
|             |        |                | 96G042      | 90-240 VAC | ✓         |                |                    | DIN              |
|             |        |                | 96G055      | 90-240 VAC | ✓         |                | ✓                  | DIN              |
|             |        |                | 96G062      | 90-240 VAC |           | ✓              | ✓                  | DIN              |
|             |        | 8 liter        | 96G039      | 12 VDC     | ✓         |                |                    | CPC              |
|             |        |                | 96G045      | 12 VDC     | ✓         |                | ✓                  | CPC              |
|             |        |                | 96G049      | 24 VDC     | ✓         |                | ✓                  | CPC              |
|             |        |                | 96G041      | 24 VDC     | ✓         |                |                    | CPC              |
|             |        |                | 96G043      | 90-240 VAC | ✓         |                |                    | DIN              |
|             |        |                | 96G056      | 90-240 VAC | ✓         |                | ✓                  | DIN              |
|             |        | 12 liter       | 96G057      | 90-240 VAC | ✓         |                | ✓                  | DIN              |
|             |        | 12 liter       | 96G171      | 24 VDC     | ✓         |                |                    | CPC              |
|             |        | 16 liter       | 96G172      | 24 VDC     | ✓         |                |                    | CPC              |
|             |        | 16 liter       | 96G058      | 90-240 VAC | ✓         |                | ✓                  | DIN              |
|             | Oil    | 2 liter        | 96G050      | 24 VDC     |           |                | ✓                  | CPC              |
|             |        |                | 96G059      | 90-240 VAC |           |                | ✓                  | DIN              |
|             |        | 4 liter        | 96G051      | 24 VDC     |           |                | ✓                  | CPC              |
|             |        |                | 96G060      | 90-240 VAC |           |                | ✓                  | DIN              |
|             |        | 8 liter        | 96G052      | 24 VDC     |           |                | ✓                  | CPC              |
|             |        |                | 96G061      | 90-240 VAC |           |                | ✓                  | DIN              |

# Electric Pumps

## G3™ Pumps



### G3 Pro

Built-in controller with selectable pump on/pump off timer comes with local manual run and password protection with pre-lube function to initiate lube cycle on start-up. Optional low level sensing, warning and shut-down alarm available as well as remote manual run.

|             |        | Reservoir Size | Part Number | Voltage    | Manual Run | Wiper Arm | Follower Plate | External Low Level* | Low Level | Power Connection |
|-------------|--------|----------------|-------------|------------|------------|-----------|----------------|---------------------|-----------|------------------|
| Application | Grease | 2 liter        | 96G027      | 12 VDC     |            | ✓         |                |                     |           | CPC              |
|             |        |                | 96G033      | 12 VDC     | A          | ✓         |                | A                   | ✓         | CPC-5 Pin        |
|             |        |                | 96G028      | 24 VDC     |            | ✓         |                |                     |           | CPC              |
|             |        |                | 96G011      | 24 VDC     | ✓          | ✓         |                | ✓                   | ✓         | CPC              |
|             |        |                | 96G012      | 24 VDC     | ✓          |           | ✓              | ✓                   | ✓         | CPC              |
|             |        |                | 96G034      | 24 VDC     | ✓          | ✓         |                | A                   | ✓         | CPC-5 Pin        |
|             |        |                | 96G029      | 90-240 VAC |            | ✓         |                |                     |           | DIN              |
|             |        |                | 96G013      | 90-240 VAC |            | ✓         |                |                     | ✓         | DIN              |
|             |        |                | 96G014      | 90-240 VAC |            |           | ✓              |                     | ✓         | DIN              |
|             |        | 4 liter        | 96G135      | 12 VDC     |            | ✓         |                |                     |           | CPC              |
|             |        |                | 96G147      | 12 VDC     | A          | ✓         |                | A                   | ✓         | CPC-5 Pin        |
|             |        |                | 96G137      | 24 VDC     |            | ✓         |                |                     |           | CPC              |
|             |        |                | 96G068      | 24 VDC     | ✓          | ✓         |                | ✓                   | ✓         | CPC              |
|             |        |                | 96G073      | 24 VDC     | ✓          |           | ✓              | ✓                   | ✓         | CPC              |
|             |        |                | 96G149      | 24 VDC     | A          | ✓         |                | A                   | ✓         | CPC-5 Pin        |
|             |        |                | 96G139      | 90-240 VAC |            | ✓         |                |                     |           | DIN              |
|             |        |                | 96G075      | 90-240 VAC |            | ✓         |                |                     | ✓         | DIN              |
|             |        |                | 96G082      | 90-240 VAC |            |           | ✓              |                     | ✓         | DIN              |
|             |        | 8 liter        | 96G136      | 12 VDC     |            | ✓         |                |                     |           | CPC              |
|             |        |                | 96G148      | 12 VDC     | A          | ✓         |                | A                   | ✓         | CPC-5 Pin        |
|             |        |                | 96G138      | 24 VDC     |            | ✓         |                |                     |           | CPC              |
|             |        |                | 96G069      | 24 VDC     | ✓          | ✓         |                | ✓                   | ✓         | CPC              |
|             |        |                | 96G150      | 24 VDC     | A          | ✓         |                | A                   | ✓         | CPC-5 Pin        |
|             |        |                | 96G140      | 90-240 VAC |            | ✓         |                |                     |           | DIN              |
|             |        |                | 96G076      | 90-240 VAC |            | ✓         |                |                     | ✓         | DIN              |
|             |        | 12 liter       | 96G163      | 24 VDC     | A          | ✓         |                | A                   | ✓         | CPC-5 Pin        |
|             |        |                | 96G077      | 90-240 VAC |            | ✓         |                |                     | ✓         | DIN              |
|             |        | 16 liter       | 96G167      | 24 VDC     | A          | ✓         |                | A                   | ✓         | CPC-5 Pin        |
|             |        |                | 96G078      | 90-240 VAC |            | ✓         |                |                     | ✓         | DIN              |

A = On these Pro Control models the remote manual run input, remote low level warning output and power are combined in the CPC-5 Pin connector and cord.

\* = External Low Level is indicated on the Manual Run Control device.

# Electric Pumps

## G3™ Pumps

### G3 Pro (continued)

|     | Reservoir Size | Part Number | Voltage    | Manual Run | Wiper Arm | Follower Plate | External Low Level* | Low Level | Power Connection |
|-----|----------------|-------------|------------|------------|-----------|----------------|---------------------|-----------|------------------|
| Oil | 2 liter        | 96G070      | 24 VDC     | ✓          |           |                | ✓                   | ✓         | CPC              |
|     |                | 96G079      | 90-240 VAC |            |           |                |                     | ✓         | DIN              |
|     | 4 liter        | 96G071      | 24 VDC     | ✓          |           |                | ✓                   | ✓         | CPC              |
|     |                | 96G080      | 90-240 VAC |            |           |                |                     | ✓         | DIN              |
|     | 8 liter        | 96G072      | 24 VDC     | ✓          |           |                | ✓                   | ✓         | CPC              |
|     |                | 96G081      | 90-240 VAC |            |           |                |                     | ✓         | DIN              |

A = On Pro control models the remote manual run input, remote low level warning output and power are combined in the CPC-5 Pin connector and cord.

\* = External low level is indicated on the manual run control device.



### G3 Max

Built-in controller with selectable pump on/pump off timer has low level warning and shut-down alarm or set up faults to an external alarm. Comes with manual run and password protection with pre-lube function to initiate lube cycle on start-up. Mix and match up to three cycle and pressure switches for custom installations and feedback. Machine count input is ideally suited for inconsistently used equipment. Optional Data Management System™ (DMS) uses a common USB port to quickly configure, store and transfer error log history to Excel® or Notepad® for longer equipment life and performance.

|             | Reservoir Size | Part Number | Voltage    | # of Cycle/ Press. Input | Machine Count | Vent Valve Output* | Alarm Output | Manual Run | Wiper Arm | Follower Plate | Low Level | Power Connection |
|-------------|----------------|-------------|------------|--------------------------|---------------|--------------------|--------------|------------|-----------|----------------|-----------|------------------|
| Application | Oil            | 96G030      | 12 VDC     | 1                        |               |                    |              |            | ✓         |                | ✓         | CPC              |
|             |                | 96G021      | 12 VDC     | 1-3                      | ✓             | ✓                  | ✓            | ✓          | ✓         |                | ✓, B      | DIN              |
|             |                | 96G035      | 12 VDC     | 1                        |               | ✓                  | A            | A          | ✓         |                | A         | CPC-5 Pin        |
|             |                | 96G031      | 24 VDC     | 1                        |               |                    |              |            | ✓         |                | ✓         | CPC              |
|             |                | 96G017      | 24 VDC     | 1                        |               | ✓                  |              | ✓          | ✓         |                | ✓, B      | CPC              |
|             |                | 96G018      | 24 VDC     | 1                        |               | ✓                  |              | ✓          |           | ✓              | ✓, B      | CPC              |
|             |                | 96G036      | 24 VDC     | 1                        |               | ✓                  | A            | A          | ✓         |                | A         | CPC-5 Pin        |
|             |                | 96G023      | 24 VDC     | 1-3                      | ✓             | ✓                  | ✓            | ✓          | ✓         |                | ✓, B      | DIN              |
|             |                | 96G024      | 24 VDC     | 1-3                      | ✓             | ✓                  | ✓            | ✓          |           | ✓              | ✓, B      | DIN              |
|             |                | 96G032      | 90-240 VAC | 1                        |               |                    |              |            | ✓         |                | ✓         | DIN              |
|             |                | 96G019      | 90-240 VAC | 1                        |               | ✓                  |              |            | ✓         |                | ✓         | DIN              |
|             |                | 96G020      | 90-240 VAC | 1                        |               | ✓                  |              |            |           | ✓              | ✓         | DIN              |
|             |                | 96G025      | 90-240 VAC | 1-3                      | ✓             | ✓                  | ✓            | ✓          | ✓         |                | ✓, B      | DIN              |
|             |                | 96G026      | 90-240 VAC | 1-3                      | ✓             | ✓                  | ✓            | ✓          |           | ✓              | ✓, B      | DIN              |
|             |                | 96G037      | 90-240 VAC | 1                        |               |                    | ✓            |            | ✓         |                | ✓, B      | DIN              |
|             | Grease         | 96G141      | 12 VDC     | 1                        |               |                    |              |            | ✓         |                | ✓         | CPC              |
|             |                | 96G159      | 12 VDC     | 1                        | ✓             |                    | A            | A          | ✓         |                | A         | CPC-5 Pin        |
|             |                | 96G151      | 12 VDC     | 1                        |               | ✓                  | A            | A          | ✓         |                | A         | CPC-5 Pin        |
|             |                | 96G096      | 12 VDC     | 1-3                      | ✓             | ✓                  | ✓            | ✓          | ✓         |                | ✓, B      | DIN              |
|             |                | 96G143      | 24 VDC     | 1                        |               |                    |              |            | ✓         |                | ✓         | CPC              |
|             |                | 96G088      | 24 VDC     | 1                        |               | ✓                  |              | ✓          | ✓         |                | ✓, B      | CPC              |
|             |                | 96G090      | 24 VDC     | 1                        |               | ✓                  |              | ✓          |           | ✓              | ✓, B      | CPC              |
|             |                | 96G160      | 24 VDC     | 1                        | ✓             |                    | A            | A          | ✓         |                | A         | CPC-5 Pin        |
|             |                | 96G155      | 24 VDC     | 1                        |               | ✓                  | A            | A          | ✓         |                | A         | CPC-5 Pin        |
|             |                | 96G103      | 24 VDC     | 1-3                      | ✓             | ✓                  | ✓            | ✓          | ✓         |                | ✓, B      | DIN              |
|             |                | 96G113      | 24 VDC     | 1-3                      | ✓             | ✓                  | ✓            | ✓          |           | ✓              | ✓, B      | DIN              |
|             |                | 96G145      | 90-240 VAC | 1                        |               |                    |              |            | ✓         |                | ✓         | DIN              |
|             |                | 96G092      | 90-240 VAC | 1                        |               | ✓                  |              |            | ✓         |                | ✓         | DIN              |
|             |                | 96G094      | 90-240 VAC | 1                        |               | ✓                  |              |            |           | ✓              | ✓         | DIN              |
|             |                | 96G118      | 90-240 VAC | 1-3                      | ✓             | ✓                  | ✓            | ✓          | ✓         |                | ✓, B      | DIN              |
|             |                | 96G128      | 90-240 VAC | 1-3                      | ✓             | ✓                  | ✓            | ✓          |           | ✓              | ✓, B      | DIN              |
|             |                | 96G183      | 90-240 VAC | 1                        |               |                    | ✓            |            | ✓         |                | ✓         | DIN              |

\*Requires purchase of a vent valve kit

A = On Max control models the remote manual run button input, remote alarm output, remote low level output and power are combined in the CPC-5 pin connector and cord.

B = On Max control models, external low level is indicated by the manual run control device and/or the alarm output



# Electric Pumps

## G3™ Pumps

### G3 Max (continued)

|             |        | Reservoir Size | Part Number | Voltage    | # of Cycle/<br>Press. Input | Machine Count | Vent Valve Output* | Alarm Output | Manual Run | Wiper Arm | Follower Plate | Low Level | Power Connection |
|-------------|--------|----------------|-------------|------------|-----------------------------|---------------|--------------------|--------------|------------|-----------|----------------|-----------|------------------|
| Application | Grease | 8 liter        | 96G142      | 12 VDC     | 1                           |               |                    |              |            | ✓         |                | ✓         | CPC              |
|             |        |                | 96G152      | 12 VDC     | 1                           |               | ✓                  | A            | A          | ✓         |                | A         | CPC-5 Pin        |
|             |        |                | 96G097      | 12 VDC     | 1-3                         | ✓             | ✓                  | ✓            | ✓          | ✓         |                | ✓, B      | DIN              |
|             |        |                | 96G144      | 24 VDC     | 1                           |               |                    |              |            | ✓         |                | ✓         | CPC              |
|             |        |                | 96G089      | 24 VDC     | 1                           |               | ✓                  |              | ✓          | ✓         |                | ✓, B      | CPC              |
|             |        |                | 96G156      | 24 VDC     | 1                           |               | ✓                  | A            | A          | ✓         |                | A         | CPC-5 Pin        |
|             |        |                | 96G104      | 24 VDC     | 1-3                         | ✓             | ✓                  | ✓            | ✓          | ✓         |                | ✓, B      | DIN              |
|             |        |                | 96G093      | 90-240 VAC | 1                           |               | ✓                  |              |            | ✓         |                | ✓         | DIN              |
|             |        |                | 96G146      | 90-240 VAC | 1                           |               |                    |              |            | ✓         |                | ✓         | DIN              |
|             |        |                | 96G119      | 90-240 VAC | 1-3                         | ✓             | ✓                  | ✓            | ✓          | ✓         |                | ✓, B      | DIN              |
|             |        | 12 liter       | 96G164      | 24 VDC     | 1                           |               | ✓                  | A            | A          | ✓         |                | A         | CPC-5 Pin        |
|             |        |                | 96G105      | 24 VDC     | 1-3                         | ✓             | ✓                  | ✓            | ✓          | ✓         |                | ✓, B      | DIN              |
|             |        |                | 96G120      | 90-240 VAC | 1-3                         | ✓             | ✓                  | ✓            | ✓          | ✓         |                | ✓, B      | DIN              |
|             |        | 16 liter       | 96G168      | 24 VDC     | 1                           |               | ✓                  | A            | A          | ✓         |                | A         | CPC-5 Pin        |
|             |        |                | 96G106      | 24 VDC     | 1-3                         | ✓             | ✓                  | ✓            | ✓          | ✓         |                | ✓, B      | DIN              |
|             |        |                | 96G166      | 90-240 VAC | 1                           |               | ✓                  |              |            | ✓         |                | ✓         | DIN              |
|             |        |                | 96G121      | 90-240 VAC | 1-3                         | ✓             | ✓                  | ✓            | ✓          | ✓         |                | ✓, B      | DIN              |
|             | Oil    | 2 liter        | 96G107      | 24 VDC     | 1-3                         | ✓             | ✓                  | ✓            | ✓          |           |                | ✓, B      | DIN              |
|             |        |                | 96G122      | 90-240 VAC | 1-3                         | ✓             | ✓                  | ✓            | ✓          |           |                | ✓, B      | DIN              |
|             |        | 4 liter        | 96G108      | 24 VDC     | 1-3                         | ✓             | ✓                  | ✓            | ✓          |           |                | ✓, B      | DIN              |
|             |        |                | 96G123      | 90-240 VAC | 1-3                         | ✓             | ✓                  | ✓            | ✓          |           |                | ✓, B      | DIN              |
|             |        | 8 liter        | 96G109      | 24 VDC     | 1-3                         | ✓             | ✓                  | ✓            | ✓          |           |                | ✓, B      | DIN              |
|             |        |                | 96G124      | 90-240 VAC | 1-3                         | ✓             | ✓                  | ✓            | ✓          |           |                | ✓, B      | DIN              |

### G3 Max with Data Management System

|             |        | Reservoir Size | Part Number | Voltage    | # of Cycle/<br>Press. Input | Machine Count | Vent Valve Output* | Alarm Output | Manual Run | Wiper Arm | Follower Plate | Low Level | Power Connection |
|-------------|--------|----------------|-------------|------------|-----------------------------|---------------|--------------------|--------------|------------|-----------|----------------|-----------|------------------|
| Application | Grease | 2 liter        | 96G098      | 12 VDC     | 1-2                         | ✓             | ✓                  | ✓            | ✓          | ✓         |                | ✓, B      | DIN              |
|             |        |                | 96G110      | 24 VDC     | 1-2                         | ✓             | ✓                  | ✓            | ✓          | ✓         |                | ✓, B      | DIN              |
|             |        |                | 96G115      | 24 VDC     | 1-2                         | ✓             | ✓                  | ✓            | ✓          |           | ✓              | ✓, B      | DIN              |
|             |        |                | 96G125      | 90-240 VAC | 1-2                         | ✓             | ✓                  | ✓            | ✓          | ✓         |                | ✓, B      | DIN              |
|             |        |                | 96G132      | 90-240 VAC | 1-2                         | ✓             | ✓                  | ✓            | ✓          |           | ✓              | ✓, B      | DIN              |
|             |        | 4 liter        | 96G161      | 12 VDC     | 1                           | ✓             |                    | A            | A          | ✓         |                | A         | CPC-5 Pin        |
|             |        |                | 96G153      | 12 VDC     | 1                           |               | ✓                  | A            | A          | ✓         |                | A         | CPC-5 Pin        |
|             |        |                | 96G099      | 12 VDC     | 1-2                         | ✓             | ✓                  | ✓            | ✓          | ✓         |                | ✓, B      | DIN              |
|             |        |                | 96G162      | 24 VDC     | 1                           | ✓             |                    | A            | A          | ✓         |                | A         | CPC-5 Pin        |
|             |        |                | 96G157      | 24 VDC     | 1                           |               | ✓                  | A            | A          | ✓         |                | A         | CPC-5 Pin        |
|             |        |                | 96G111      | 24 VDC     | 1-2                         | ✓             | ✓                  | ✓            | ✓          | ✓         |                | ✓, B      | DIN              |
|             |        |                | 96G116      | 24 VDC     | 1-2                         | ✓             | ✓                  | ✓            | ✓          |           | ✓              | ✓, B      | DIN              |
|             |        |                | 96G126      | 90-240 VAC | 1-2                         | ✓             | ✓                  | ✓            | ✓          | ✓         |                | ✓, B      | DIN              |
|             |        |                | 96G133      | 90-240 VAC | 1-2                         | ✓             | ✓                  | ✓            | ✓          |           | ✓              | ✓, B      | DIN              |
|             |        | 8 liter        | 96G154      | 12 VDC     | 1                           |               | ✓                  | A            | A          | ✓         |                | A         | CPC-5 Pin        |
|             |        |                | 96G100      | 12 VDC     | 1-2                         | ✓             | ✓                  | ✓            | ✓          | ✓         |                | ✓, B      | DIN              |
|             |        |                | 96G158      | 24 VDC     | 1                           |               | ✓                  | A            | A          | ✓         |                | ✓, B      | CPC-5 Pin        |
|             |        |                | 96G112      | 24 VDC     | 1-2                         | ✓             | ✓                  | ✓            | ✓          | ✓         |                | ✓, B      | DIN              |
|             |        |                | 96G127      | 90-240 VAC | 1-2                         | ✓             | ✓                  | ✓            | ✓          | ✓         |                | ✓, B      | DIN              |
|             |        | 12 liter       | 96G165      | 24 VDC     | 1                           |               | ✓                  | A            | A          | ✓         |                | A         | CPC-5 Pin        |
|             |        | 16 liter       | 96G169      | 24 VDC     | 1                           |               | ✓                  | A            | A          | ✓         |                | A         | CPC-5 Pin        |
|             | Oil    | 2 liter        | 96G174      | 90-240 VAC | 1-2                         | ✓             | ✓                  | ✓            | ✓          |           |                | ✓, B      | DIN              |
|             |        | 4 liter        | 96G175      | 90-240 VAC | 1-2                         | ✓             | ✓                  | ✓            | ✓          |           |                | ✓, B      | DIN              |
|             |        | 8 liter        | 96G176      | 90-240 VAC | 1-2                         | ✓             | ✓                  | ✓            | ✓          |           |                | ✓, B      | DIN              |

\*Requires purchase of a vent valve kit

A = On Max control DMS models the remote manual run button input, remote alarm output, remote low level output and power are combined in the CPC-5 Pin connector and cord.

B = On these Max control models, external low level is indicated by the manual run control device and/or the alarm output

# Electric Pumps

## G3™ Pump Accessories

### G3 Accessories

|        |                                                                                                                                                                                                                                                  |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 571041 | G3 Pump Element—the same adjustability as the pump included with G3                                                                                                                                                                              |
| 571063 | Two Pump Union Kit—combines the output of the left and right pumps for larger lubrication needs                                                                                                                                                  |
| 571026 | Three Pump Union Kit—joins the output of the left, right and center pumps for maximum output                                                                                                                                                     |
| 24P296 | Two Pump Union Kit for use with pump mounted vent valve                                                                                                                                                                                          |
| 24P295 | Three Pump Union Kit for use with pump mounted vent valve                                                                                                                                                                                        |
| 571028 | Adjustable Return-to-Reservoir Pressure Relief Kit – 500-3500 psi (35-241 bar)                                                                                                                                                                   |
| 571036 | Protective Front Cover Kit—snaps over the front control panel on Pro and Max G3 models                                                                                                                                                           |
| 571030 | Remote Manual Run/Monitoring Light—12 VDC                                                                                                                                                                                                        |
| 571032 | Remote Manual Run/Monitoring Light Kit—12 VDC, includes 16 foot M12 cable                                                                                                                                                                        |
| 571031 | Remote Manual Run/Monitoring Light—24 VDC, 90-240 VAC                                                                                                                                                                                            |
| 571033 | Remote Manual Monitoring Light Run Kit—24 VDC, 90-240 VAC, includes 16 foot M12 cable                                                                                                                                                            |
| 571058 | Pressure Relief-to-Atmosphere Kit—requires one of the following six pressure relief valves                                                                                                                                                       |
| 563156 | Pressure Relief Valve—750 psi, 52 bar                                                                                                                                                                                                            |
| 563157 | Pressure Relief Valve—1000 psi, 69 bar                                                                                                                                                                                                           |
| 563158 | Pressure Relief Valve—1500 psi, 103 bar                                                                                                                                                                                                          |
| 563159 | Pressure Relief Valve—2000 psi, 138 bar                                                                                                                                                                                                          |
| 563160 | Pressure Relief Valve—2500 psi, 172 bar                                                                                                                                                                                                          |
| 563161 | Pressure Relief Valve—3000 psi, 207 bar                                                                                                                                                                                                          |
| 124300 | Accessory Cable—16 foot male M12 connector on one end and flying leads on the other end                                                                                                                                                          |
| 124333 | Accessory Cable—16 foot male M12 connector on one end and female M12 connector on the other end                                                                                                                                                  |
| 126331 | Accessory Cable—16 foot female M12 on one end and flying leads on the other end                                                                                                                                                                  |
| 124640 | Alarm Output Accessory Cable—DIN connector to flying leads, 6.5 feet                                                                                                                                                                             |
| 124301 | M12 Female Connector for 6-8 mm cable                                                                                                                                                                                                            |
| 124594 | M12 4-pin Male Connector for 6-8 mm cable                                                                                                                                                                                                        |
| 124595 | M12 4-pin Male Connector for 8-11 mm cable                                                                                                                                                                                                       |
| 125910 | G3 Pump Mounting Bracket                                                                                                                                                                                                                         |
| 563485 | Electronic Proximity Switch—12 VDC, 24 VDC or 90-249 VAC. Use to read movement and provide feedback of piston in series progressive divider valve. Includes five foot cable installed into switch with flying leads. Requires purchase of 124594 |
| 563501 | Electronic Proximity Switch with LED—24VDC or 90-240 VAC. Use to read movement and provide feedback and provide feedback in piston of divider valve. Requires purchase of a cable with M12 female connection                                     |
| 24K415 | Cycle Indicating Proximity Switch—Designed to work with Graco's USP™, MSP™, and MHH™ series progressive divider valves. Requires purchase of a cable with M12 female connection                                                                  |
| 557829 | Electronic Pressure Switch—Use to read pressure in an injector-based system. After injectors dispense, G3 will trigger pump shut down and vent. Includes five foot cable installed into switch with flying leads. Requires purchase of 124595    |
| 24K414 | Pressure Switch—Provides the pressure sensing required for GL32™ and GL43™ Injector Systems. Requires purchase of a cable with M12 female connection                                                                                             |
| 24M644 | High capacity fill zerk with quick disconnect and dust cover                                                                                                                                                                                     |
| 121474 | Female coupler                                                                                                                                                                                                                                   |
| 247886 | Manual Fill Pump—Fits 5 gallon or 35 pound pail                                                                                                                                                                                                  |
| 571162 | Manual Hand Pump—Use with grease cartridges, installs into alternative pump element port. Not recommended for pumps with follower plates or three pump union kits                                                                                |
| 571064 | Cold Temperature Fill Relief Kit—Prevents over pressurizing when filling in cold temperatures                                                                                                                                                    |



# Electric Pumps

## G3™ Pump Accessories

### G3 Vent Valves Ordering Information

| Vent Valves for G3 Max Systems                      |                                                                                                                                                                                            |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 571169                                              | G3 Max Pump Vent Valve Kit—Normally Closed, 12 VDC, adjustable pressure relief, 500-3500 psi (35-241 bar), mounts directly to G3 pump, cable included                                      |
| 571170                                              | G3 Max Pump Vent Valve Kit—Normally Closed, 24 VDC, (also for G3 Max AC Pumps) adjustable pressure relief, 500-3500 psi (35-241 bar), mounts directly to G3 pump, cable included           |
| Vent Valves and Accessories for G3 Standard Systems |                                                                                                                                                                                            |
| 24M478                                              | G3 Standard Pump Vent Valve Kit—Normally Open, 12 VDC, adjustable pressure relief, 500-3500 psi (35-241 bar), mounts directly to G3 pump, requires cable with Deutsch connector—see 24N402 |
| 24M479                                              | G3 Standard Pump Vent Valve Kit—Normally Open, 24 VDC, adjustable pressure relief, 500-3500 psi (35-241 bar), mounts directly to G3 pump, requires cable with Deutsch connector—see 24N402 |
| 24M480                                              | G3 Standard Pump Vent Valve Kit—Normally Open, 115 VAC, adjustable pressure relief, 500-3500 psi (35-241 bar), mounts directly to G3 pump, requires cable with DIN connector—see 123358    |
| 24N182                                              | G3 Standard Pump Vent Valve Kit—Normally Open, 230 VAC, adjustable pressure relief, 500-3500 psi (35-241 bar), mounts directly to G3 pump, requires cable with DIN connector—see 123358    |
| 24N402                                              | Vent Valve Power Cable—For Normally Open, 12 or 24 VDC Valve, Deutsch Connector, 6 feet                                                                                                    |
| 123358                                              | Vent Valve Power Cable For Normally Open, 115 or 230 VAC Valve, DIN Connector, 15 feet                                                                                                     |
| 24N351                                              | Save installation time and money without the need for additional cabling. Patch cable connects vent valves with DIN connection directly to the DIN Pump Power connector.                   |



24M480



24N351

# Electric Pumps

## Modu-Flo®

### Highly Configurable Pump Solution For Nearly Any Application

The Modu-Flo system is ideal for applications where minimizing downtime is critical. Customizing is easy—just mix and match pumps, reservoirs and manifolds in any configuration to meet most applications. Replace the pump or reservoir, without disconnecting lubrication lines. Electric pumps available for use with AC or DC supply voltage make Modu-Flo the right solution for any automated electric lubrication system.

- Modular system design allows configurations to work in all applications
- Easy to standardize on components and reduce inventory
- Adjustable pump output for fast, convenient customizing

### Typical Applications

- Presses and other in plant machines

### Lubrication Used

- Oil and Grease up to NLGI #2

### Technical Specifications

|                        |                                                                                   |
|------------------------|-----------------------------------------------------------------------------------|
| Output per Stroke      | 0.024 cu.in. (0.4 cc)                                                             |
| Motor                  | 24 VDC, 115 VAC                                                                   |
| Max Output per Min.    | 24 VDC - 0.29 in <sup>3</sup> (4.7 cc)<br>115 VAC - 0.58 in <sup>3</sup> (9.5 cc) |
| Max Operating Pressure | 2,500 psi (172 bar)                                                               |
| Max Run Time           | 4 Minutes                                                                         |
| Operating Temp         | 20° F to 140° F (-7° C to 60° C)                                                  |
| Operating Environment  | 24 VDC - Inside/Outside, 115 VAC - Inside Only                                    |

### Ordering Information

| Modu-Flo Pumps       |                                                                                         |
|----------------------|-----------------------------------------------------------------------------------------|
| 563356               | 24 VDC Motor, 20 ft Connector Cable                                                     |
| 563346               | 115 VAC Motor, 20 ft Connector Cable                                                    |
| 563333               | Pump-to-Reservoir Manifold, NPT, Liquid Filled Gauge, Fill Check, Outlet Check, Blowout |
| 563329               | Pump-to-Reservoir Manifold, NPT, w/out Hardware or Fittings                             |
| 563355               | Pump-to-Reservoir Manifold, SAE, Dry Gauge, Fill Check, Outlet Check, Blowout           |
| 563324               | Pump-to-Reservoir Manifold, NPT, Dry Gauge, Fill Check, Outlet Check, Blowout           |
| 563331               | Pump-to-Reservoir Manifold, NPT, Dry Gauge, Fill Check, Outlet Check, Tubed Blowout     |
| Modu-Flo Spare Parts |                                                                                         |
| 563137               | 20 ft Connector Cable for 24 VDC                                                        |
| 256778               | Modu-Flo Pump Repair Kit                                                                |
| 557287               | 24 VDC Gear motor                                                                       |
| 557285               | 115 VAC Gear motor                                                                      |

See pneumatic Modu-Flo section for a complete list of configurable parts.



Modu-Flo pump shown with grease reservoir

# Electric Pumps

## LubeMaster®

### Built For Severe-duty Environments

The LubeMaster is a rugged pump package designed for demanding applications. The adjustable output and anti-friction drive bearings make it both reliable and efficient. Rugged cast iron main body and heavy-duty internal components deliver consistent performance in harsh applications. With several reservoir choices and accessories to choose from, the LubeMaster pump can be easily customized to meet virtually all application needs.

### Typical Applications

- Cement plants, paper processing, steel mills and other harsh environments

### Typical Fluids Used

- Oil
- Grease up to NLGI #2

### Technical Specifications

|                          |                                                          |
|--------------------------|----------------------------------------------------------|
| Cycle Rate               | 1-175 Strokes per minute                                 |
| Output Volume per Minute | 0.01-8.62 in <sup>3</sup> (0.16-143.41 cm <sup>3</sup> ) |
| Max Output Pressure      | 5,000 psi (340 bar)                                      |
| Material                 | Plastic or Metal, Cylindrical                            |
| Reservoir Size           | Oil - 12 pint, 20 pint, Grease - 12 lb, 20 lb            |
| Motor                    | 115/230 VAC, 230/460 VAC                                 |

### Ordering Information

| LubeMaster Pumps |                                                                                                                                                                                                                    |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LM2323           | 20 pt Plastic Oil Reservoir (562893), Floor-Mounting 10:1 Reduction (563388), Outlet (1/2 HP, 115/230 VAC, Single Phase, 60 Hz, 1,725 rpm) (557271), Individual Outputs (20 pt Oil, SPDT, 15 amps) (563317)        |
| LM2533           | 20 pt Plastic Oil Reservoir (562893), Floor-Mounting 10:1 Reduction (563388), Outlet (1/2 HP, 230/460 VAC, 3-Phase, 60 Hz, 1,725 rpm) (557270), Individual Outputs (20 pt Oil, SPDT, 15 amps) (563317)             |
| LM4533           | 20 pt Metal Oil Reservoir (562895), Floor-Mounting 60:1 Reduction (563389), Outlet (1/2 HP, 115/230 VAC, Single Phase, 60 Hz, 1,140 rpm) (557272), Individual Outputs (20 pt Oil, SPDT, 15 amps) (563317)          |
| LM4523           | 20 pt Metal Oil Reservoir (562895), Floor-Mounting 60:1 Reduction (563389), Outlet (1/2 HP, 115/230 VAC, Single Phase, 60 Hz, 1,725 rpm) (557271), Individual Outputs (20 pt Oil, SPDT, 15 amps) (563317)          |
| LM5111           | 12 lb Plastic Grease Reservoir (562896)                                                                                                                                                                            |
| LM5311           | 12 lb Plastic Grease Reservoir (562896), Floor-Mounting 10:1 Reduction (563388)                                                                                                                                    |
| LM5331           | 12 lb Plastic Grease Reservoir (562896), Floor-Mounting 10:1 Reduction (563388), Outlet (1/2 HP, 115/230 VAC, Single Phase, 60 Hz, 1,140 rpm) (557272)                                                             |
| LM6344           | 20 lb Plastic Grease Reservoir (562897), Floor-Mounting 10:1 Reduction (563388), Outlet (1/2 HP, 115/230 VAC, Single Phase, 60 Hz, 1,140 rpm) (557272), Individual Outputs (12 lb and 20 lb Grease, SPDT) (563322) |
| LM6334           | 20 lb Plastic Grease Reservoir (562897), Floor-Mounting 10:1 Reduction (563388), Outlet (1/2 HP, 230/460 VAC, 3-Phase, 60 Hz, 1,725 rpm) (557270), Individual Outputs (12 lb and 20 lb Grease, SPDT) (563322)      |
| LM5544           | 12 lb Plastic Grease Reservoir (562896), Floor-Mounting 60:1 Reduction (563389), Outlet (1/2 HP, 115/230 VAC, Single Phase, 60 Hz, 1,140 rpm) (557272), Individual Outputs (12 lb and 20 lb Grease, SPDT) (563322) |
| LM6544           | 20 lb Plastic Grease Reservoir (562897), Floor-Mounting 60:1 Reduction (563389), Outlet (1/2 HP, 115/230 VAC, Single Phase, 60 Hz, 1,140 rpm) (557272), Individual Outputs (12 lb and 20 lb Grease, SPDT) (563322) |
| LM6524           | 20 lb Plastic Grease Reservoir (562897), Floor-Mounting 60:1 Reduction (563389), Outlet (1/2 HP, 115/230 VAC, Single Phase, 60 Hz, 1,725 rpm) (557271), Individual Outputs (12 lb and 20 lb Grease, SPDT) (563322) |



LM5111

# Electric Pumps

LubeMaster®

|        |                                                                                                                                                                                                                   |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LM6534 | 20 lb Plastic Grease Reservoir (562897), Floor-Mounting 60:1 Reduction (563389), Outlet (1/2 HP, 230/460 VAC, 3-Phase, 60 Hz, 1,140 rpm) (557270), Individual Outputs (12 lb and 20 lb Grease, SPDT) (563322)     |
| LM5514 | 12 lb Plastic Grease Reservoir (562896), Floor-Mounting 60:1 Reduction (563389), Individual Outputs (12 lb and 20 lb Grease, SPDT) (563322)                                                                       |
| LM5521 | 12 lb Plastic Grease Reservoir (562896), Wall-Mounting 10:1 Reduction (563386), Outlet (1/2 HP, 230/460 VAC, 3-Phase, 60 Hz, 1,725 rpm) (557270)                                                                  |
| LM5644 | 12 lb Plastic Grease Reservoir (562896), Wall-Mounting 60:1 Reduction (563387), Outlet (1/2 HP, 115/230 VAC, Single Phase, 60 Hz, 1,140 rpm) (567272), Individual Outputs (12 lb and 20 lb Grease, SPDT) (563322) |
| LM6311 | 20 lb Plastic Grease Reservoir (562897), Floor-Mounting 10:1 Reduction (563388)                                                                                                                                   |
| LM6314 | 20 lb Plastic Grease Reservoir (562897), Floor-Mounting 10:1 Reduction (563388), Individual Outputs (12 lb and 20 lb Grease, SPDT) (563322)                                                                       |
| LM6514 | 20 lb Plastic Grease Reservoir (562897), Floor-Mounting 10:1 Reduction (563388), Individual Outputs (12 lb and 20 lb Grease, SPDT) (563322)                                                                       |
| LM7514 | 12 lb Metal Grease Reservoir (562898), Floor-Mounting 60:1 Reduction (563389), Individual Outputs (12 lb or 20 lb Grease, SPDT) (563322)                                                                          |
| LM7344 | 12 lb Metal Grease Reservoir (562898), Floor-Mounting 10:1 Reduction (563388), Outlet (1/2 HP, 115/230 VAC, Single Phase, 60 Hz, 1,140 rpm) (557272), Individual Outputs (12 lb and 20 lb Grease, SPDT) (553322)  |
| LM7534 | 12 lb Metal Grease Reservoir (562898), Floor-Mounting 60:1 Reduction (563389), Outlet (1/2 HP, 230/460 VAC, 3-Phase, 60 Hz, 1,140 rpm) (557273), Individual Outputs (12 lb and 20 lb Grease, SPDT) (563322)       |
| LM7654 | 12 lb Metal Grease Reservoir (562898), Wall-Mounting 60:1 Reduction (563387), Outlet (1/2 HP, 230/460 VAC, 3-Phase, 60 Hz, 1,140 rpm) (557273), Individual Outputs (12 lb and 20 lb Grease, SPDT) (563322)        |
| LM7614 | 12 lb Metal Grease Reservoir (562898), Wall-Mounting 60:1 Reduction (563387), Individual Outputs (12 lb and 20 lb Grease, SPDT) (563322)                                                                          |
| LM8354 | 20 lb Metal Grease Reservoir (562899), Floor-Mounting 10:1 Reduction (563388), Outlet (1/2 HP, 230/460 VAC, 3-Phase, 60 Hz, 1,140 rpm) (557273), Individual Outputs (12 lb and 20 lb Grease, SPDT) (563322)       |
| LM8334 | 20 lb Metal Grease Reservoir (562899), Floor-Mounting 10:1 Reduction (563388), Outlet (1/2 HP, 230/460 VAC, 3-Phase, 60 Hz, 1,725 rpm) (567270), Individual Outputs (12 lb and 20 lb Grease, SPDT) (563322)       |
| LM8314 | 20 lb Metal Grease Reservoir (562899), Floor-Mounting 10:1 Reduction (563388), Individual Outputs (12 lb and 20 lb Grease, SPDT) (563322)                                                                         |
| LM8554 | 20 lb Metal Grease Reservoir (562899), Floor-Mounting 60:1 Reduction (563389), Outlet (1/2 HP, 230/460 VAC, 3-Phase, 60 Hz, 1,140 rpm) (557273), Individual Outputs (12 lb and 20 lb Grease, SPDT) (563322)       |
| LM8531 | 20 lb Metal Grease Reservoir (562899), Floor-Mounting 60:1 Reduction (563389), Outlet (1/2 HP, 230/460 VAC, 3-Phase, 60 Hz, 1,725 rpm) (557270)                                                                   |
| LM8534 | 20 lb Metal Grease Reservoir (562899), Floor-Mounting 60:1 Reduction (563389), Outlet (1/2 HP, 230/460 VAC, 3-Phase, 60 Hz, 1,725 rpm) (557270), Individual Outputs (12 lb and 20 lb Grease, SPDT) (563322)       |
| LM8454 | 20 lb Metal Grease Reservoir (562899), Wall-Mounting 10:1 Reduction (563386), Outlet (1/2 HP, 230/460 VAC, 3-Phase, 60 Hz, 1,140 rpm) (557273), Individual Outputs (12 lb and 20 lb Grease, SPDT) (563322)        |
| LM9511 | Power Prime Reservoir Assembly (562908), Floor-Mounting 60:1 Reduction (563389)                                                                                                                                   |
| LM9521 | Power Prime Reservoir Assembly (562908), Floor-Mounting 60:1 Reduction (563389), Outlet (1/2 HP, 115/230 VAC, Single Phase, 60 Hz, 1,725 rpm) (557271)                                                            |

|        |                                                                                                                                             |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------|
| LM7214 | 12 lb Metal Grease Reservoir (562898), Clutch Drive (563383), Individual Outputs (12 lb and 20 lb Grease, SPDT) (563322)                    |
| LM5114 | 12 lb Plastic Grease Reservoir (562896), Individual Outputs (12 lb and 20 lb Grease, SPDT) (563322)                                         |
| LM4451 | 20 pt Metal Oil Reservoir (562895), Wall-Mounting 10:1 Reduction (563386), Outlet (1/2 HP, 230/460 VAC, 3-Phase, 60 Hz, 1,140 rpm) (557273) |

## LubeMaster Reservoirs

|        |                                |
|--------|--------------------------------|
| 562892 | 12 pt Plastic Oil Reservoir    |
| 562893 | 20 pt Plastic Oil Reservoir    |
| 562894 | 12 pt Metal Oil Reservoir      |
| 562895 | 20 pt Metal Oil Reservoir      |
| 562896 | 12 lb Plastic Grease Reservoir |

# Electric Pumps

LubeMaster®

|                                       |                                                         |
|---------------------------------------|---------------------------------------------------------|
| 562897                                | 20 lb Plastic Grease Reservoir                          |
| 562898                                | 12 lb Metal Grease Reservoir                            |
| 562899                                | 20 lb Metal Grease Reservoir                            |
| 562908                                | Overhead Supply Reservoir                               |
| <b>LubeMaster Drive Option</b>        |                                                         |
| 563383                                | Clutch Drive w/Arm                                      |
| 563388                                | 10:1 Reduction, Floor-Mounting                          |
| 563386                                | 10:1 Reduction, Wall-Mounting                           |
| 563389                                | 60:1 Reduction, Floor-Mounting                          |
| 563387                                | 60:1 Reduction, Wall-Mounting                           |
| <b>LubeMaster Motors</b>              |                                                         |
| 557271                                | 115/230 VAC, 1/2 HP, Single Phase, 60 Hz, 1,725 rpm     |
| 557270                                | 230/460 VAC, 1/2 HP, 3-Phase, 60 Hz, 1,725 rpm          |
| 557272                                | 115/230 VAC, 1/2 HP, Single Phase, 60 Hz, 1,140 rpm     |
| 557273                                | 230/460 VAC, 1/2 HP, 3-Phase, 60 Hz, 1,140 rpm          |
| <b>LubeMaster Low Level Switches</b>  |                                                         |
| 563316                                | 12 pt Oil Low Level, SPDT, 15 amps                      |
| 563317                                | 20 pt Oil Low Level, SPDT, 15 amps                      |
| 563322                                | 12 and 20 lb Grease Low Level                           |
| 563015                                | 12 pt Oil Low Level, SPDT, 10 watts                     |
| 563016                                | 20 pt Oil Low Level, SPDT, 10 watts                     |
| 564377                                | 12 and 20 lb Grease Low Level, Exp Proof                |
| <b>LubeMaster Pressure Indicators</b> |                                                         |
| 563179                                | Standard Blowout, 1,450 psi, Oil                        |
| 563184                                | Standard Blowout, 2,350 psi, Grease                     |
| 563384                                | High-Pressure Blowout Switch, 1,450 psi, Oil            |
| 563385                                | High-Pressure Blowout Switch, 2,350 psi, Grease         |
| <b>LubeMaster Pressure Gauge</b>      |                                                         |
| 557713                                | Liquid Filled Pressure Gauge, 0-3,000 psi               |
| <b>LubeMaster Spare Parts</b>         |                                                         |
| 563380                                | Bare Pump                                               |
| 563962                                | Package of 6 Blowout Discs, Yellow, 1,450 psi, Oil      |
| 563965                                | Package of 6 Blowout Discs, Aluminum, 2,350 psi, Grease |
| 563921                                | Seal Repair Kit                                         |
| 563915                                | Drive Repair Kit                                        |
| 563916                                | Output Manifold Kit - Standard                          |
| 563938                                | Output Manifold Kit - High Output                       |

# Electric Pumps

LubeMaster®

## LubeMaster Ordering Menu Code

NOTE: Utilize number code not lettered code from literature for ordering purposes.

|                             |                                                                   |    |                                              |   |   |   |   |   |   |   |
|-----------------------------|-------------------------------------------------------------------|----|----------------------------------------------|---|---|---|---|---|---|---|
|                             |                                                                   | LM | -                                            | X | - | X | - | X | - | X |
| <b>Pump</b>                 |                                                                   |    |                                              |   |   |   |   |   |   |   |
| LM LubeMaster pump - 563380 |                                                                   |    |                                              |   |   |   |   |   |   |   |
| <b>Reservoir Option</b>     |                                                                   |    |                                              |   |   |   |   |   |   |   |
| 1                           | OPA, 12 pt plastic oil reservoir - 562892                         | 6  | GPB, 20 lb plastic grease reservoir - 562897 |   |   |   |   |   |   |   |
| 2                           | OPB, 20 pt plastic oil reservoir - 562893                         | 7  | GMA, 12 lb metal grease reservoir - 562898   |   |   |   |   |   |   |   |
| 3                           | OMA, 12 pt metal oil reservoir - 562894                           | 8  | GMB, 20 lb metal grease reservoir - 562899   |   |   |   |   |   |   |   |
| 4                           | OMB, 20 pt metal oil reservoir - 562895                           | 9  | OHS, power prime reservoir assembly - 562908 |   |   |   |   |   |   |   |
| 5                           | GPA, 12 lb plastic grease reservoir - 562896                      |    |                                              |   |   |   |   |   |   |   |
| <b>Drive Option</b>         |                                                                   |    |                                              |   |   |   |   |   |   |   |
| 1                           | none                                                              | 4  | DOC, 10:1 reduction, wall-mounting - 563386  |   |   |   |   |   |   |   |
| 2                           | DOA, clutch drive w/arm - 563383                                  | 5  | DOD, 60:1 reduction, floor-mounting - 563389 |   |   |   |   |   |   |   |
| 3                           | DOB, 10:1 reduction, floor-mounting - 563388                      | 6  | DOE, 60:1 reduction, wall-mounting - 563387  |   |   |   |   |   |   |   |
| <b>Motor Option</b>         |                                                                   |    |                                              |   |   |   |   |   |   |   |
| 1                           | none                                                              |    |                                              |   |   |   |   |   |   |   |
| 2                           | MOA, 1/2 HP, 115/230 VAC, single phase, 60 Hz, 1,725 rpm - 557271 |    |                                              |   |   |   |   |   |   |   |
| 3                           | MOB, 1/2 HP, 230/460 VAC, 3-phase, 60 Hz, 1,725 rpm - 557270      |    |                                              |   |   |   |   |   |   |   |
| 4                           | MOC, 1/2 HP, 115/230 VAC, single phase, 60 Hz, 1,140 rpm - 557272 |    |                                              |   |   |   |   |   |   |   |
| 5                           | MOD, 1/2 HP, 230/460 VAC, 3-phase, 60 Hz, 1,140 rpm - 557273      |    |                                              |   |   |   |   |   |   |   |
| <b>Low Level Option</b>     |                                                                   |    |                                              |   |   |   |   |   |   |   |
| 1                           | LOO, none                                                         | 4  | LOC, 12 and 20 lb grease, SPDT - 563322      |   |   |   |   |   |   |   |
| 2                           | LOA, 12 pt oil, SPDT, 15 amps - 563316                            | 5  | LOD, 12 pt oil, SPST, 10 watts - 563015      |   |   |   |   |   |   |   |
| 3                           | LOB, 20 pt oil, SPDT, 15 amps - 563317                            | 6  | LOE, 20 pt oil, SPST, 10 watts - 563016      |   |   |   |   |   |   |   |

Note: Drive Options 3, 4, 5 and 6 contains all required mounting hardware (mounting plate, coupler, coupler guard, nuts, bolts and washers).

Pricing: In order to obtain Menu pricing for LubeMaster components, a pump must be ordered with each drive option on the same purchase order. All drives ordered w/out a pump on the same purchase order will be treated as a spare part and priced accordingly.

### Pressure Indicator Option (sold seperately)

POA - Standard Blowout, 1450 psi (100 bar), Oil, 563179  
 POB - Standard Blowout, 2350 psi (162 bar) Grease, 563184  
 POC - High-Pressure Blowout Switch, 1450 psi (100 bar), Oil, 563384  
 POD - Standard Blowout, 2350 psi (162 bar), Grease, 563385

# Electric Pumps

## Miniature Meter-Flo®

### Versatile All In One Pump Package

Designed for use with virtually any type of Series Progressive or Single Line Resistive oil lubrication system. The Miniature MeterFlo's rugged steel reservoir and motor assembly withstands the toughest applications. Capable of high volumetric output operating continuously at pressures up to 1,000 psi (69 bar).

- Compact with several options to create a complete system using feedback and control

### Typical Applications

- Ideal for smaller series progressive systems requiring continuous lubrication

### Lubrication Used

- Oil - 160-15,000 SUS

### Technical Specifications

Output Volume per minute . . . . . 1, 5, 8, 14 in<sup>3</sup> (16, 82, 131, 229 cm<sup>3</sup>)  
 Output Pressure . . . . . 0-2,000 psi (0-138 bar)  
 Material . . . . . Metal, Rectangular  
 Reservoir Size . . . . . 1.5, 3, 5 gal (12, 24, 40 pint)  
 Motor . . . . . 115 VAC

### Ordering Information

| Miniature Meter-Flo (MMF) Electric (Motor Driven) Pumps w/Reservoirs |                                                                                                                  |
|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| MM1111                                                               | 1.5 gal Reservoir, 1 in <sup>3</sup> /min., 1,500 psi                                                            |
| MM1112                                                               | 1.5 gal Res., 1 in <sup>3</sup> /min., 1,500 psi, Low Level Switch (Reed-Type, SPST)                             |
| MM1121                                                               | 1.5 gal Reservoir, 1 in <sup>3</sup> /min., 1,500 psi, High-Pressure Switch                                      |
| MM1122                                                               | 1.5 gal Reservoir, 1 in <sup>3</sup> /min., 1,500 psi, High-Pressure Switch, Low Level Switch (Reed-Type, SPST)  |
| MM1211                                                               | 1.5 gal Res., 5 in <sup>3</sup> /min., 2,000 psi                                                                 |
| MM1212                                                               | 1.5 gal Res., 5 in <sup>3</sup> /min., 2,000 psi, Low Level Switch (Reed-Type, SPST)                             |
| MM1222                                                               | 1.5 gal Res., 5 in <sup>3</sup> /min., 2,000 psi, High-Pressure Switch (Reed-Type, SPST)                         |
| MM1311                                                               | 1.5 gal Reservoir, 8 in <sup>3</sup> /min., 2,000 psi                                                            |
| MM1312                                                               | 1.5 gal Res., 8 in <sup>3</sup> /min., 2,000 psi, Low Level Switch (Reed-Type, SPST)                             |
| MM1322                                                               | 1.5 gal Reservoir, 8 in <sup>3</sup> /min., 2,000 psi, High-Pressure Switch, Low Level Switch (Reed-Type, SPST)  |
| MM1411                                                               | 1.5 gal Reservoir, 14 in <sup>3</sup> /min., 1,500 psi                                                           |
| MM1412                                                               | 1.5 gal Res., 14 in <sup>3</sup> /min., 1,500 psi, Low Level Switch (Reed-Type, SPST)                            |
| MM1422                                                               | 1.5 gal Reservoir, 14 in <sup>3</sup> /min., 1,500 psi, High-Pressure Switch, Low Level Switch (Reed-Type, SPST) |
| MM2112                                                               | 3 gal Reservoir, 1 in <sup>3</sup> /min., 1,500 psi, Low Level Switch (Reed-Type, SPST)                          |
| MM2122                                                               | 3 gal Reservoir, 1 in <sup>3</sup> /min., 1,500 psi, High-Pressure Switch, Low Level Switch (Reed-Type, SPST)    |
| MM2211                                                               | 3 gal Reservoir, 5 in <sup>3</sup> /min., 2,000 psi                                                              |
| MM2212                                                               | 3 gal Reservoir, 5 in <sup>3</sup> /min., 2,000 psi, Low Level Switch (Reed-Type, SPST)                          |
| MM2221                                                               | 3 gal Reservoir, 5 in <sup>3</sup> /min., 2,000 psi, High-Pressure Switch                                        |
| MM2222                                                               | 3 gal Reservoir, 5 in <sup>3</sup> /min., 2,000 psi, High-Pressure Switch, Low Level Switch (Reed-Type, SPST)    |
| MM2312                                                               | 3 gal Reservoir, 8 in <sup>3</sup> /min., 2,000 psi, Low Level Switch (Reed-Type, SPST)                          |
| MM2322                                                               | 3 gal Reservoir, 8 in <sup>3</sup> /min., 2,000 psi, High-Pressure Switch, Low Level Switch (Reed-Type, SPST)    |
| MM2411                                                               | 3 gal Reservoir, 14 in <sup>3</sup> /min., 1,500 psi                                                             |



MM2211

|        |                                                                                                                |
|--------|----------------------------------------------------------------------------------------------------------------|
| MM2412 | 3 gal Reservoir, 14 in <sup>3</sup> /min., 1,500 psi, Low Level Switch (Reed-Type, SPST)                       |
| MM2422 | 3 gal Reservoir, 14 in <sup>3</sup> /min., 1,500 psi, High-Pressure Switch, Low Level Switch (Reed-Type, SPST) |
| MM3112 | 5 gal Reservoir, 1 in <sup>3</sup> /min., 1,500 psi, Low Level Switch (Reed-Type, SPST)                        |
| MM3122 | 5 gal Reservoir, 1 in <sup>3</sup> /min., 1,500 psi, High-Pressure Switch, Low Level Switch (Reed-Type, SPST)  |
| MM3211 | 5 gal Reservoir, 5 in <sup>3</sup> /min., 2,000 psi (Reed-Type, SPST)                                          |
| MM3212 | 5 gal Reservoir, 5 in <sup>3</sup> /min., 2,000 psi, Low Level Switch (Reed-Type, SPST)                        |
| MM3312 | 5 gal, 8 in <sup>3</sup> /min., 2,000 psi, Low Level Switch                                                    |
| MM3322 | 5 gal Reservoir, 8 in <sup>3</sup> /min., 2,000 psi, High-Pressure Switch, Low Level Switch (Reed-Type, SPST)  |
| MM3411 | 5 gal Reservoir, 14 in <sup>3</sup> /min., 1,500 psi                                                           |
| MM3412 | 5 gal Reservoir, 14 in <sup>3</sup> /min., 1,500 psi, Low Level Switch (Reed-Type, SPST)                       |
| MM3422 | 5 gal Reservoir, 14 in <sup>3</sup> /min., 1,500 psi, High-Pressure Switch, Low Level Switch (Reed-Type, SPST) |

| Miniature Meter-Flow (MMF) Spare Parts |                                                                                     |
|----------------------------------------|-------------------------------------------------------------------------------------|
| 564412                                 | MMF Assembly - Pump, Gearmotor, Reducer Assembly, 1 in <sup>3</sup> /min. Flowrate  |
| 564413                                 | MMF Assembly - Pump, Gearmotor, Reducer Assembly, 5 in <sup>3</sup> /min. Flowrate  |
| 564414                                 | MMF Assembly - Pump, Gearmotor, Reducer Assembly, 8 in <sup>3</sup> /min. Flowrate  |
| 564415                                 | MMF Assembly - Pump, Gearmotor, Reducer Assembly, 14 in <sup>3</sup> /min. Flowrate |
| 557286                                 | Motor, 115 VAC                                                                      |
| 557293                                 | Gear Box, 1 in <sup>3</sup> /min. (12.5:1)                                          |
| 557822                                 | Gear Pump Only, 1 to 8 in <sup>3</sup> /min.                                        |
| 557821                                 | Gear Pump Only, 14 in <sup>3</sup> /min.                                            |
| 557810                                 | Suction Strainer                                                                    |
| 563558                                 | Relief Valve                                                                        |
| 557825                                 | Replacement Level Switch                                                            |

# Electric Pumps

## Miniature Meter-Flo®

### Miniature Meter-Flo Ordering Menu Code

NOTE: Utilize number code not lettered code from literature for ordering purposes.

|                                                                 |   |   |   |   |   |   |   |   |
|-----------------------------------------------------------------|---|---|---|---|---|---|---|---|
| MM                                                              | - | X | - | X | - | X | - | X |
| <b>Reservoir Option</b>                                         |   |   |   |   |   |   |   |   |
| 1 RA, 1.5 gallon reservoir                                      |   |   |   |   |   |   |   |   |
| 2 RB, 3 gallon reservoir                                        |   |   |   |   |   |   |   |   |
| 3 RC, 5 gallon reservoir                                        |   |   |   |   |   |   |   |   |
| <b>Pump / Flow Option (*)</b>                                   |   |   |   |   |   |   |   |   |
| 1 PA, 1 cu.in. / minute (1,500 psi maximum operating pressure)  |   |   |   |   |   |   |   |   |
| 2 PB, 5 cu.in. / minute (2,000 psi maximum operating pressure)  |   |   |   |   |   |   |   |   |
| 3 PC, 8 cu.in. / minute (2,000 psi maximum operating pressure)  |   |   |   |   |   |   |   |   |
| 4 PD, 14 cu.in. / minute (1,500 psi maximum operating pressure) |   |   |   |   |   |   |   |   |
| <b>Pressure Switch Option</b>                                   |   |   |   |   |   |   |   |   |
| 1 SO, no pressure switch                                        |   |   |   |   |   |   |   |   |
| 2 SA, high pressure switch                                      |   |   |   |   |   |   |   |   |
| <b>Low Level Option</b>                                         |   |   |   |   |   |   |   |   |
| 1 LO, no low level switch                                       |   |   |   |   |   |   |   |   |
| 2 LA, low level switch, reed-type, SPST - 563014                |   |   |   |   |   |   |   |   |

(\*) All pump flow rates are based on 160 SUS (at 100 F) 10W oil, 70 F at 1,000 psi.  
Example: Miniature Meterflo (MM) pump package consisting of a 3 gallon reservoir, 5 cu.in./minute pump output, high pressure switch and low level switch.  
Ordering Code: MM2222

# Electric Pumps

## Meter-Flo®

### Continuous Duty Durability

With its solid pump housing, these rugged gear pumps are designed for dependable operation in high demand applications. The gear pump is available with a direct-coupled 1/2 horsepower motor capable of 1,725 rpm's with output volumes of 245 cubic inches per minute. Eleven different pump models to choose from.

### Typical Applications

- Ideal for applications requiring continuous oil delivery up to 1,000 lubrication points

### Lubrication Used

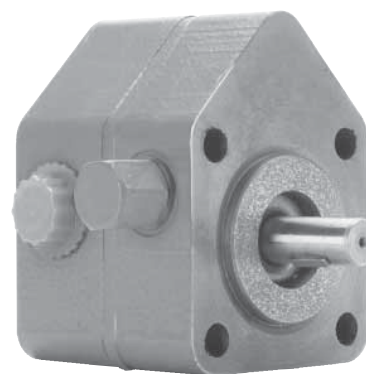
- Oil - 300-3,000 SUS

### Technical Specifications

Output Volume per minute. . . . . 14-245 in<sup>3</sup> (230-4015 cm<sup>3</sup>)  
 Max Output Pressure . . . . . 300-1,500 psi (300-3,000 bar)  
 Operating Temp . . . . . 50° F to 150° F (10° C to 65.5° C)

### Ordering Information

| Meter-Flo Pumps |                                                                                                                                                          |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 557814          | 9 in <sup>3</sup> /min. (147 cm <sup>3</sup> /min.) @ 1,140 rpm, 14 in <sup>3</sup> /min. (229 cm <sup>3</sup> /min.) @ 1,725 rpm, npt Ports, ccw        |
| 557819          | 9 in <sup>3</sup> /min. (147 cm <sup>3</sup> /min.) @ 1,140 rpm, 14 in <sup>3</sup> /min. (229 cm <sup>3</sup> /min.) @ 1,725 rpm, npt Ports, cw         |
| 557813          | 18 in <sup>3</sup> /min. (295 cm <sup>3</sup> /min.) @ 1,140 rpm, 30 in <sup>3</sup> /min. (492 cm <sup>3</sup> /min.) @ 1,725 rpm, npt Ports, ccw       |
| 557815          | 56 in <sup>3</sup> /min. (918 cm <sup>3</sup> /min.) @ 1,140 rpm, 84 in <sup>3</sup> /min. (1,377 cm <sup>3</sup> /min.) @ 1,725 rpm, npt Ports, ccw     |
| 558949          | 56 in <sup>3</sup> /min. (918 cm <sup>3</sup> /min.) @ 1,140 rpm, 84 in <sup>3</sup> /min. (1,377 cm <sup>3</sup> /min.) @ 1,725 rpm, npt Ports, cw      |
| 557816          | 76 in <sup>3</sup> /min. (1,245 cm <sup>3</sup> /min.) @ 1,140 rpm, 117 in <sup>3</sup> /min. (1,917 cm <sup>3</sup> /min.) @ 1,725 rpm, npt Ports, ccw  |
| 558950          | 76 in <sup>3</sup> /min. (1,245 cm <sup>3</sup> /min.) @ 1,140 rpm, 117 in <sup>3</sup> /min. (1,917 cm <sup>3</sup> /min.) @ 1,725 rpm, npt Ports, cw   |
| 557817          | 111 in <sup>3</sup> /min. (1,819 cm <sup>3</sup> /min.) @ 1,140 rpm, 168 in <sup>3</sup> /min. (2,753 cm <sup>3</sup> /min.) @ 1,725 rpm, npt Ports, ccw |
| 558951          | 111 in <sup>3</sup> /min. (1,819 cm <sup>3</sup> /min.) @ 1,140 rpm, 168 in <sup>3</sup> /min. (2,753 cm <sup>3</sup> /min.) @ 1,725 rpm, npt Ports, cw  |
| 557818          | 26 in <sup>3</sup> /min. (426 cm <sup>3</sup> /min.) @ 1,140 rpm, 40 in <sup>3</sup> /min. (655 cm <sup>3</sup> /min.) @ 1,725 rpm, npt Ports, ccw       |
| 557820          | 161 in <sup>3</sup> /min. (2,638 cm <sup>3</sup> /min.) @ 1,140 rpm, 245 in <sup>3</sup> /min. (4,015 cm <sup>3</sup> /min.) @ 1,725 rpm, npt Ports, ccw |
| 558955          | 161 in <sup>3</sup> /min. (2,638 cm <sup>3</sup> /min.) @ 1,140 rpm, 245 in <sup>3</sup> /min. (4,015 cm <sup>3</sup> /min.) @ 1,725 rpm, npt Ports, cw  |
| 558953          | 9 in <sup>3</sup> /min. (147 cm <sup>3</sup> /min.) @ 1,140 rpm, 14 in <sup>3</sup> /min. (229 cm <sup>3</sup> /min.) @ 1,725 rpm, sae Ports             |
| 558954          | 26 in <sup>3</sup> /min. (426 cm <sup>3</sup> /min.) @ 1,140 rpm, 40 in <sup>3</sup> /min. (655 cm <sup>3</sup> /min.) @ 1,725 rpm, sae Ports            |
| Motor Option    |                                                                                                                                                          |
| 558895          | 1/2 HP, 115/230 VAC, 1,725 rpm, Single Phase                                                                                                             |



563557

| Repair Kits                             |                                                       |
|-----------------------------------------|-------------------------------------------------------|
| 557997                                  | MeterFlo Seal Kit - 540-800-XX1 Models                |
| 557998                                  | MeterFlo Relief Valve Repair Kit - 540-800-XX1 Models |
| Meter-Flo Paddle Base and Pump Packages |                                                       |
| 563557                                  | Paddle Base w/Pump 557814                             |
| 564411                                  | Paddle Base w/Pump 557813                             |
| 24N405                                  | Paddle Base w/Pump 557815                             |
| 24N406                                  | Paddle Base w/Pump 557816                             |
| 24N407                                  | Paddle Base w/Pump 557817                             |
| 24N408                                  | Paddle Base w/Pump 557818                             |
| 24N409                                  | Paddle Base w/Pump 557820                             |

# Electric Pumps

## Injecto-Flo® E0-1 and E0-3

### Reliable Machine Tool Lubrication

#### E0-1 and E0-3

A cost effective, low pressure oil solution designed for use with any high volume, intermittent lubrication system. Can be used with Injecto-Flo II series piston distributor products. E0-1 is ideal for small to medium size single line parallel systems requiring intermittent metered lubrication with an electrically driven pump. E0-3 has integrated control and bright LED's to verify system operation. Built-in vent valve gets you up and working with piston distributors fast—no kits to purchase and assemble.

### Typical Applications

- In-plant medium size machine tool lubrication applications

### Typical Fluids Handled

- Oil - ISO 50-1500 (SUS 250-5000)

### Technical Specifications

Power . . . . . 115 VAC, 230 VAC  
Motor Speed . . . . . 1,680 rpm @ 60 Hz, 1,340 rpm @ 50 Hz

#### E0-1

Pump Flow Rate . . . . . 12 in<sup>3</sup>/min. (200 cm<sup>3</sup>/min.)  
Pressure . . . . . 145-650 psi (10-45 bar)  
Reservoir . . . . . Plastic, Rectangular  
Reservoir Size . . . . . 6.3, 7.6, 12.6, 15.8 or 25.3 pint

#### E0-3

Pump Flow Rate . . . . . 8.5 in<sup>3</sup>/min. (140 cm<sup>3</sup>/min.)  
Pressure . . . . . 350 psi (24 bar)  
Operating Temp . . . . . 14° F to 120° F (-10° C to 49° C)  
Reservoir . . . . . Plastic, Rectangular  
Reservoir Size . . . . . 7.6 or 12.6 pint  
Manual . . . . . 313839A



562850



562839

### Ordering Information

| Injecto-Flo E0-1 Pumps |                                                                           |
|------------------------|---------------------------------------------------------------------------|
| 562837                 | Pump w/3 liter Plastic Reservoir, 115 VAC                                 |
| 24B427                 | Pump w/3 liter Plastic Reservoir, 230 VAC                                 |
| 562849                 | Pump w/3 liter Plastic Reservoir, 230 VAC                                 |
| 562838                 | Pump w/3.6 liter Plastic Reservoir, 230 VAC                               |
| 562839                 | Pump w/6 liter Plastic Reservoir, 115 VAC                                 |
| 562840                 | Pump w/6 liter Plastic Reservoir, 230 VAC                                 |
| 562841                 | Pump w/6 liter Plastic Reservoir, 230 VAC                                 |
| 562842                 | Pump w/6 liter Plastic Reservoir, 230 VAC, Return Port                    |
| 562843                 | Pump w/6 liter Metal Reservoir, 115 VAC                                   |
| 562844                 | Pump w/12 liter Metal Reservoir, 115 VAC                                  |
| Injecto-Flo E0-3 Pumps |                                                                           |
| 562851                 | Pump w/3 liter Plastic Reservoir, 115 VAC, Remote Control                 |
| 562850                 | Pump w/3 liter Plastic Reservoir, 115 VAC, Timer Control, Pressure Switch |
| 562852                 | 3.6 liter Plastic Reservoir, 115 VAC                                      |
| 562847                 | 6 liter Reservoir, 115 VAC                                                |

| Injecto-Flo E0-1 Spare Parts |                                                         |
|------------------------------|---------------------------------------------------------|
| 556015                       | Adjustable Relief Valve                                 |
| 556013                       | Gear Pump only                                          |
| 556016                       | Low Level Switch Assembly for 6 and 12 liter Reservoirs |
| 556014                       | Suction Strainer                                        |
| 556011                       | 115 VAC Motor                                           |
| 556012                       | 230 VAC Motor                                           |
| Low Level Switches           |                                                         |
| 556018                       | Low Level Switch                                        |
| 556019                       | Low Level Switch                                        |

# Electric Pumps

## Injecto-Flo® II

### Durable Long Lasting Machine Tool Pump

Great versatility in a small package has many control options. A dependable high-quality gear pump for years of trouble-free operation combined with Injecto-Flo II piston distributor metering devices completes your oil or fluid grease lubrication system. Internal controller with LED alarms is easy to program for any application. Built-in vent valve gets you up and working with piston distributors fast—no kits to purchase and assemble.

### Typical Applications

- Ideal solution for automatic lubrication on small and mid-sized machines

### Typical Fluids Handled

- Oil - 50 to 100 cst
- Fluid Grease NLGI #000

### Technical Specifications

#### Max Output Volume Per Minute

|        |                                              |
|--------|----------------------------------------------|
| Oil    | 30.50 in <sup>3</sup> (500 cm <sup>3</sup> ) |
| Grease | 12.20 in <sup>3</sup> (200 cm <sup>3</sup> ) |

#### Max Pressure

|        |                  |
|--------|------------------|
| Oil    | 360 psi (25 bar) |
| Grease | 580 psi (40 bar) |
| Power  | 230 VAC          |

|                |                      |
|----------------|----------------------|
| Reservoir      | Plastic, Rectangular |
| Reservoir Size | 3, 6 liter           |



122895



15U858

### Ordering Information

| Injecto-Flo II Oil Pumps - 3 liter Reservoirs (no control), 230 VAC |                                                            |
|---------------------------------------------------------------------|------------------------------------------------------------|
| 122545                                                              | 0.2 lpm, Screw Cap                                         |
| 122546                                                              | 0.2 lpm, Straight Connector (10 mm Pipe)                   |
| 122547                                                              | 0.5 lpm, Screw Cap                                         |
| 122548                                                              | 0.5 lpm, Straight Connector (10 mm Pipe)                   |
| 122549                                                              | 0.2 lpm, Single w/DIN, Screw Cap                           |
| 122550                                                              | 0.2 lpm, Single w/DIN, Straight Connector (10 mm Pipe)     |
| 122551                                                              | 0.5 lpm, Single w/DIN, Screw Cap                           |
| 122552                                                              | 0.5 lpm, Single w/DIN, Straight Connector (10 mm Pipe)     |
| 122553                                                              | 0.2 lpm, Single w/M12 Top, Screw Cap                       |
| 15U859                                                              | 0.2 lpm, Single w/M12 Top, Straight Connector (10 mm Pipe) |
| 122554                                                              | 0.5 lpm, Single w/M12 Top, Screw Cap                       |
| 122555                                                              | 0.5 lpm, Single w/M12 Top, Straight Connector (10 mm Pipe) |
| 122556                                                              | 0.2 lpm, Dual w/DIN, Screw Cap                             |
| 122557                                                              | 0.2 lpm, Dual w/DIN, Straight Connector (10 mm Pipe)       |
| 122558                                                              | 0.5 lpm, Dual w/DIN, Screw Cap                             |
| 122559                                                              | 0.5 lpm, Dual w/DIN, Straight Connector (10 mm Pipe)       |
| 122560                                                              | 0.2 lpm, Dual w/M12 Top, Screw Cap                         |
| 122561                                                              | 0.2 lpm, Dual w/M12 Top, Straight Connector (10 mm Pipe)   |
| 122562                                                              | 0.5 lpm, Dual w/M12 Top, Screw Cap                         |
| 15U858                                                              | 0.5 lpm, Dual w/M12 Top Straight Connector (10 mm Pipe)    |

| Injecto-Flo II Oil Pumps - 6 liter Reservoirs (no control), 230 VAC |                                                            |
|---------------------------------------------------------------------|------------------------------------------------------------|
| 122563                                                              | 0.2 lpm, Screw Cap                                         |
| 122564                                                              | 0.2 lpm, Straight Connector (10 mm Pipe)                   |
| 122565                                                              | 0.5 lpm, Screw Cap                                         |
| 122566                                                              | 0.5 lpm, Straight Connector (10 mm Pipe)                   |
| 122567                                                              | 0.2 lpm, Single w/DIN, Screw Cap                           |
| 122568                                                              | 0.2 lpm, Single w/DIN, Straight Connector (10 mm Pipe)     |
| 564138                                                              | 0.5 lpm, Single w/DIN, Screw Cap                           |
| 122569                                                              | 0.5 lpm, Single w/DIN, Straight Connector (10 mm Pipe)     |
| 122570                                                              | 0.2 lpm, Single w/M12 Top, Screw Cap                       |
| 122571                                                              | 0.2 lpm, Single w/M12 Top, Straight Connector (10 mm Pipe) |
| 122572                                                              | 0.5 lpm, Single w/M12 Top, Screw Cap                       |
| 122573                                                              | 0.5 lpm, Single w/M12 Top, Straight Connector (10 mm Pipe) |
| 122574                                                              | 0.2 lpm, Dual w/DIN, Screw Cap                             |
| 122575                                                              | 0.2 lpm, Dual w/DIN, Straight Connector (10 mm Pipe)       |
| 122576                                                              | 0.5 lpm, Dual w/DIN, Screw Cap                             |
| 122577                                                              | 0.5 lpm, Dual w/DIN, Straight Connector (10 mm Pipe)       |
| 122578                                                              | 0.2 lpm, Dual w/M12 Top, Screw Cap                         |
| 122579                                                              | 0.2 lpm, Dual w/M12 Top, Straight Connector (10 mm Pipe)   |
| 122580                                                              | 0.5 lpm, Dual w/M12 Top, Screw Cap                         |
| 15U860                                                              | 0.5 lpm, Dual w/M12 Top Straight Connector (10 mm Pipe)    |

# Electric Pumps

## Injecto-Flo® II

### Ordering Information

| Injecto-Flo II Fluid Grease Pumps - 3 liter Reservoirs (no control), 230 VAC |                                                                                                                                          |
|------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| 122581                                                                       | 0.2 lpm, Screw Cap                                                                                                                       |
| 563301                                                                       | 0.2 lpm, Straight Connector (10 mm Pipe)                                                                                                 |
| 122582                                                                       | 0.2 lpm, Single w/DIN, Screw Cap                                                                                                         |
| 122583                                                                       | 0.2 lpm, Single w/DIN, Straight Connector (10 mm Pipe)                                                                                   |
| 122584                                                                       | 0.2 lpm, Single w/M12 Top, Screw Cap                                                                                                     |
| 122585                                                                       | 0.2 lpm, Single w/M12 Top, Straight Connector (10 mm Pipe)                                                                               |
| 122586                                                                       | 0.2 lpm, Dual w/DIN, Screw Cap                                                                                                           |
| 122587                                                                       | 0.2 lpm, Dual w/DIN, Straight Connector (10 mm Pipe)                                                                                     |
| 122588                                                                       | 0.2 lpm, Dual w/M12 Top, Screw Cap                                                                                                       |
| 557547                                                                       | 0.2 lpm, Dual w/M12 Top, Straight Connector (10 mm Pipe)                                                                                 |
| Injecto-Flo II Fluid Grease Pumps - 6 liter Reservoirs (no control), 230 VAC |                                                                                                                                          |
| 122589                                                                       | 0.2 lpm, Screw Cap                                                                                                                       |
| 122590                                                                       | 0.2 lpm, Straight Connector (10 mm Pipe)                                                                                                 |
| 122591                                                                       | 0.2 lpm, Single w/DIN, Screw Cap                                                                                                         |
| 122592                                                                       | 0.2 lpm, Single w/DIN, Straight Connector (10 mm Pipe)                                                                                   |
| 122593                                                                       | 0.2 lpm, Single w/M12 Top, Screw Cap                                                                                                     |
| 122594                                                                       | 0.2 lpm, Single w/M12 Top, Straight Connector (10 mm Pipe)                                                                               |
| 122595                                                                       | 0.2 lpm, Dual w/DIN, Screw Cap                                                                                                           |
| 122596                                                                       | 0.2 lpm, Dual w/DIN, Straight Connector (10 mm Pipe)                                                                                     |
| 122597                                                                       | 0.2 lpm, Dual w/M12 Top, Screw Cap                                                                                                       |
| 122598                                                                       | 0.2 lpm, Dual w/M12 Top, Straight Connector (10 mm Pipe)                                                                                 |
| Injecto-Flo II Oil Pumps w/Integrated Control                                |                                                                                                                                          |
| 122895                                                                       | 3 liter, 0.2 lpm, 230 VAC w/Time or Pulse, Manual Lube, Level Switch, Pressure Gauge, Pressure Switch, Green Light, Red Light, Screw Cap |
| 122897                                                                       | 6 liter, 0.2 lpm, 230 VAC w/Time or Pulse, Manual Lube, Level Switch, Pressure Gauge, Pressure Switch, Green Light, Red Light, Screw Cap |
| 122898                                                                       | 6 liter, 0.5 lpm, 230 VAC w/Time or Pulse, Manual Lube, Level Switch, Pressure Gauge, Pressure Switch, Green Light, Red Light, Screw Cap |
| Injecto-Flo II Fluid Grease Pumps w/Integrated Control                       |                                                                                                                                          |
| 122896                                                                       | 3 liter, 0.2 lpm, 230 VAC w/Time or Pulse, Manual Lube, Level Switch, Pressure Gauge, Pressure Switch, Green Light, Red Light, Screw Cap |
| 122899                                                                       | 6 liter, 0.2 lpm, 230 VAC w/Time or Pulse, Manual Lube, Level Switch, Pressure Gauge, Pressure Switch, Green Light, Red Light, Screw Cap |

# Electric Pumps

## Thrif-T Luber®

### Low Pressure Orifice Lubrication

Big on features with a small price, the perfect fit for entry-level, Single Line Resistive orifice lubrication systems. A complete electric package includes pump, reservoir and integrated control (remote version optional) for fast and easy installation. Use with Thrif-T Luber orifice dispensers for a complete system.

### Typical Applications

- Small machine tools

### Lubrication Used

- Oil - 100-10,000 SUS

### Technical Specifications

|                                 |                                             |
|---------------------------------|---------------------------------------------|
| Max Output per Minute . . . . . | 0.42 in <sup>3</sup> (6.9 cm <sup>3</sup> ) |
| Max Output Pressure . . . . .   | 150 psi (10 bar)                            |
| Operating Temp . . . . .        | 0° F to 140° F (-18° C to 60° C)            |
| Motor . . . . .                 | 115 VAC                                     |
| Reservoir . . . . .             | 4 pint (1.9 Liters)                         |

### Ordering Information

| Thrif-T Luber Pumps w/Reservoir |                                                       |
|---------------------------------|-------------------------------------------------------|
| 564068                          | TLEP-10 - Thrif-T Luber Electric Pump, 115 VAC Timer  |
| 564067                          | TLEP-11 - Thrif-T Luber Electric Pump, 115 VAC Remote |
| Thrif-T Luber Replacement Parts |                                                       |
| 558031                          | Timer Replacement Board                               |
| 563162                          | Replacement Relief Valve                              |
| 564065                          | Replacement Pump                                      |
| 564439                          | Replacement Reservoir and Motor Housing               |
| 557641                          | Replacement Gearmotor, 115 VAC                        |
| 557826                          | Replacement Low Level Switch                          |
| 558296                          | 0-300 psi gauge                                       |



Machine Tool Lubrication with System Monitoring

Compact design with everything you need to get your single line resistive oil lubrication system installed and running quickly. A standard package comes complete with reservoir, pump, gear motor, and choice of internal or remote control. Simple slide switches allow for easy setup of pump run cycle time. Bright LED indicators for low level and power allow for easy troubleshooting and verification.

- Integrated control with manual run button for easy setup
- Compact design fits anywhere
- 500 psi (34 bar) rating for using with various orifice metering devices

Typical Applications

- Small machine tools

Lubrication Used

- Oil - 60-30,000 SUS

Technical Specifications

|                               |                                                                        |
|-------------------------------|------------------------------------------------------------------------|
| Max Output per Stroke         | 0.01 in³ (0.165 cm³)                                                   |
| Pump Output Volume per Minute | 12 rpm@60hz, 0.120 in³ (1.97 cm³)<br>10 rpm@50hz, 0.100 in³ (1.64 cm³) |
| Max Output Pressure           | 500 psi (34 bar)                                                       |
| Operating Temp                | 0° F to 140° F (-18° C to 60° C)                                       |
| Material                      | Plastic, Rectangular                                                   |
| Reservoir Size                | 4 pints (1.9 liters)                                                   |
| Motor                         | 115 VAC, 50/60 hz                                                      |
| Operating Air Required        | 40-150 psi (2.276-10.3)115 VAC                                         |

Ordering Information

| Maxi-Flo Packages |                                                                            |
|-------------------|----------------------------------------------------------------------------|
| 563379            | 115 VAC, 4 pt Plastic Rectangular Oil Reservoir, Solid State Timer Control |
| 563376            | 115 VAC, 4 pt Plastic Rectangular Oil Reservoir, Remote Control            |
| Accessories       |                                                                            |
| 564376            | High Pressure Switch                                                       |
| 558899            | Gauge, 0-1,000 psi                                                         |
| Replacement Parts |                                                                            |
| 558031            | Timer Replacement Board, 115 VAC                                           |
| 557641            | Replacement 115 VAC Gearmotor                                              |
| 563374            | Replacement Pump                                                           |
| 557826            | Replacement Low Level Switch                                               |
| 563930            | Replacement Reservoir/Timer Housing Kit                                    |
| 563375            | Replacement Relief Indicator                                               |



563379

# Barrel and Drum Pumps

## Electro-Hydraulic Barrel Pumps

### Features and Benefits

Heavy-duty drum pump requires no air supply, just plug it in and you're ready to go. Installs on a 400 pound grease or 55 gallon drum, eliminating the need to transfer lubricants. Sealed hydraulic power circuit ensures long trouble-free operation.

### Typical Applications

- Steel mills, pulp and paper, cement plants and other heavy-duty applications

### Typical Fluids Handled

- Oil and grease up to NLGI #2

### Technical Specifications

Output per Minute

H-430..... 6 in<sup>3</sup> (98 cm<sup>3</sup>)

H-420..... 11 in<sup>3</sup> (108 cm<sup>3</sup>)

H-410..... 22 in<sup>3</sup> (360 cm<sup>3</sup>)

H-411..... 38 in<sup>3</sup> (623 cm<sup>3</sup>)

1/2 HP Motor ..... 115/230 VAC, 1 phase or 230/460 VAC, 3 phase

Pressure ..... 3,500 psi (241 bar)

Reservoir ..... 400 pound for grease or 55 gallon for oil



### Ordering Information

| Electro-Hydraulic Barrel Pumps w/out Motor |                                     |
|--------------------------------------------|-------------------------------------|
| 564259                                     | H-420                               |
| 564260                                     | H-430                               |
| 564261                                     | H-411                               |
| 562863                                     | H-410                               |
| 564262                                     | H-430 w/out Pressure Switch         |
| Power Units                                |                                     |
| 564391                                     | H-420                               |
| 564392                                     | H-430                               |
| 564390                                     | H-411                               |
| 563406                                     | H-410                               |
| Motors                                     |                                     |
| 557271                                     | 1/2 HP, 115/230 Vac, 1 phase, 60 Hz |
| 557270                                     | 1/2 HP, 230/460 Vac, 3 phase, 60 Hz |
| Spare Parts and Kits                       |                                     |
| 563402                                     | H-400 Pump Only                     |
| 563922                                     | Pump Repair kit                     |
| 563404                                     | Pressure Switch                     |
| 557352                                     | Pressure Gauge                      |
| 557376                                     | Outlet Strainer                     |

# Pneumatic Pumps

## Modu-Flo®

### Features and Benefits

Mix and match pumps, reservoir and manifolds in any configuration to meet any application. Replace the pump or reservoir without disconnecting lubrication lines.

- Easy to standardize on components and reduce inventory
- Adjustable pump output for fast, convenient customizing

### Typical Applications

- In plant machinery, presses and mixers

### Lubrication Used

- Oil and Grease up to NLGI #2

### Technical Specifications

Output per Stroke

|                        |                                                        |
|------------------------|--------------------------------------------------------|
| AL-5                   | 0.01-0.03 in <sup>3</sup> (0.16-0.49 cm <sup>3</sup> ) |
| AL-25                  | 0.03-0.12 in <sup>3</sup> (0.49-1.96 cm <sup>3</sup> ) |
| AL-50                  | 0.06-0.24 in <sup>3</sup> (0.94-3.93 cm <sup>3</sup> ) |
| Max Strokes per Minute | 30                                                     |
| Max Output Pressure    | 3,500 psi (241 bar)                                    |
| Ratio                  | 30:1                                                   |

### Ordering Information

| Modu-Flo Pumps w/out Reservoirs              |                                                                                                                                 |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| 563304                                       | AL-5, Pneumatic 30:1, 0.010-0.030 in <sup>3</sup> /stroke, 0.164-0.492 cm <sup>3</sup>                                          |
| 563306                                       | AL-25, Pneumatic 30:1, 0.030-0.120 in <sup>3</sup> /stroke, 0.492-1.966 cm <sup>3</sup>                                         |
| 563308                                       | AL-50, Pneumatic 30:1, 0.060-0.240 in <sup>3</sup> /stroke, 0.938-3.933 cm <sup>3</sup>                                         |
| Modu-Flo Pump Assembly Repair Kits           |                                                                                                                                 |
| 563902                                       | AL-5, Single or Double Acting Repair Kit                                                                                        |
| 563903                                       | AL-25, Single or Double Acting Repair Kit                                                                                       |
| 563904                                       | AL-50, Single or Double Acting Repair Kit                                                                                       |
| 563337                                       | Modu-Flo Pump Mounting Kit - Mounting Screws, O-Rings                                                                           |
| Modu-Flo Manifold Assemblies and Accessories |                                                                                                                                 |
| 563329                                       | Pump/Reservoir Manifold only (npt)                                                                                              |
| 563324                                       | Pump/Reservoir Manifold (npt) w/Outlet Check Valve, System Fill Check Valve, Blowout Assembly, 0-3,000 psi Pressure Gauge       |
| 563331                                       | Pump/Reservoir Manifold (npt) w/Outlet Check Valve, System Fill Check Valve, Tubed Blowout Assembly, 0-3,000 psi Pressure Gauge |
| 563355                                       | Pump/Reservoir Manifold (sae) w/Outlet Check Valve, System Fill Check Valve, Blowout Assembly, Pressure Gauge                   |
| 563323                                       | Remote Pump Manifold (npt) w/Outlet Check Valve, System Fill Check Valve, Blowout Assembly                                      |
| 563330                                       | Remote Pump Manifold (npt) w/Outlet Check Valve, System Fill Check Valve, Tubed Blowout Assembly                                |
| Modu-Flo Oil Reservoirs                      |                                                                                                                                 |
| 562891                                       | 5 pt Plastic Cylindrical Reservoir                                                                                              |
| 562904                                       | 6 pt Plastic Cylindrical Reservoir                                                                                              |
| 562889                                       | 12 pt Plastic Cylindrical Reservoir                                                                                             |
| 562890                                       | 20 pt Plastic Cylindrical Reservoir                                                                                             |
| 563319                                       | 12 pt Tank                                                                                                                      |
| 563320                                       | 24 pt Tank                                                                                                                      |
| 563321                                       | 40 pt Tank                                                                                                                      |



Pump package shown with oil reservoir



Pump package shown with grease reservoir

# Pneumatic Pumps

## Modu-Flo®

### Ordering Information

| Modu-Flo Grease Reservoirs           |                                                                                            |
|--------------------------------------|--------------------------------------------------------------------------------------------|
| 562910                               | 3 lb Plastic Cylindrical Reservoir                                                         |
| 562911                               | 3 lb Plastic Cylindrical Reservoir w/Low Level Switch Actuator (order separately)          |
| 562888                               | 5 lb Plastic Cylindrical Reservoir                                                         |
| 562905                               | 6 lb Plastic Cylindrical Reservoir                                                         |
| 562884                               | 12 lb Plastic Cylindrical Reservoir                                                        |
| 562885                               | 20 lb Plastic Cylindrical Reservoir                                                        |
| 564267                               | 40 lb Plastic Cylindrical Reservoir                                                        |
| 564268                               | 40 lb Plastic Cylindrical Reservoir w/Low Level Switch                                     |
| 564264                               | 5 lb Metal Cylindrical Reservoir                                                           |
| 562906                               | 6 lb Metal Cylindrical Reservoir                                                           |
| 562886                               | 12 lb Metal Cylindrical Reservoir                                                          |
| 562887                               | 20 lb Metal Cylindrical Reservoir                                                          |
| Modu-Flo Low Level Switch Assemblies |                                                                                            |
| 563316                               | 15 amp Low Level Switch for 5 and 12 pt Cylindrical Oil Reservoirs, SPDT                   |
| 563318                               | 15 amp Low Level Switch for 6 pt Cylindrical Oil Reservoirs and all Tank Reservoirs, SPDT  |
| 563317                               | 15 amp Low Level Switch for 20 pt Cylindrical Oil Reservoirs, SPDT                         |
| 563014                               | 10 watt Low Level Switch for 6 pt Cylindrical Oil Reservoirs and all Tank Reservoirs, SPST |
| 563015                               | 10 watt Low Level Switch for 5 and 12 pt Cylindrical Oil Reservoirs, SPST                  |
| 563016                               | 10 watt Low Level Switch for 20 pt Cylindrical Oil Reservoirs, SPST                        |
| 564322                               | 10 watt Low Level Switch for 12, 24 and 40 pt Tanks, Dual SPST                             |
| 563322                               | Low Level Switch for 5, 6, 12 and 20 pt Cylindrical Grease Reservoirs                      |
| 557825                               | Replacement Low Level Switch for 563014, 563015, 563016                                    |
| 557781                               | Replacement Low Level Switch for 563322                                                    |
| Modu-Flo Pressure Switch Assemblies  |                                                                                            |
| 557829                               | Pressure Switch for all Reservoirs                                                         |
| 563325                               | High Pressure Blowout Switch for 5 pt or 5 lb Reservoirs                                   |
| 563326                               | High Pressure Blowout Switch for 12 and 20 pt or 12 and 20 lb Reservoirs                   |
| 563327                               | High Pressure Blowout Switch for all Rectangular Reservoirs                                |
| Modu-Flo Solenoid Valves             |                                                                                            |
| 563315                               | 3-Way Pneumatic Solenoid Valve, 115 VAC                                                    |
| 563332                               | 3-Way Pneumatic Solenoid Valve, 24 VDC                                                     |
| Modu-Flo Timer/Controller            |                                                                                            |
| 563339                               | Solid State AC Timer for all Tanks                                                         |
| 563340                               | Solid State AC Timer for 5 pt and 5 lb Cylindrical Reservoirs                              |
| 563341                               | Solid State AC Timer for 6, 12 and 20 pt, 6, 12 and 20 lb Cylindrical Reservoirs           |

# Pneumatic Pumps

## E-Series™

### Designed for Reliability

The E-Series pump is a great, minimum cost, entry level alternative to standard pneumatic pump products. This all-in-one pump package comes complete with no assembly required and is easy to install. All pump packages include high-pressure rupture disc assembly and lube outlet check valve. The E-Series offers many reservoir options for either grease or oil. Great for any application where price is a concern and installation time is at a premium.

- Easy field installation of accessories without disturbing existing plumbing
- Smart pump design with few moving parts ensures long-lasting dependability

### Typical Applications

- Presses and other In plant machines

### Lubrication Used

- Oil up to 30,000 SUS
- Grease up to NLGI #2

### Technical Specifications

|                     |                                                     |
|---------------------|-----------------------------------------------------|
| Output per Stroke   | 0.03 in <sup>3</sup> (0.49 cm <sup>3</sup> )        |
| Max Output Pressure | 2,000 psi (138 bar)                                 |
| Ratio               | 20:1                                                |
| Reservoir Material  | Plastic, Cylindrical or Rectangular                 |
| Reservoir Size      | 3 and 6 lb (1.36 kg and 2.72 kg), 4 pt (1.89 liter) |
| Air Pressure        | 40-150 psi                                          |
| Cycle Rate          | 10 CPM grease, 30 CPM oil                           |

### Ordering Information

| E-Series Assemblies w/Fixed Output Pump |                                                                                                                        |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| 563365                                  | E-Series Pump w/3 lb (1.36 kg) Plastic Cylindrical Grease Reservoir, Low Level Switch, Pressure Gauge                  |
| 563363                                  | E-Series Pump w/6 lb (2.72 kg) Plastic Cylindrical Grease Reservoir                                                    |
| 563364                                  | E-Series Pump w/6 lb (2.72 kg) Plastic Cylindrical Grease Reservoir, Low Level Switch                                  |
| 563361                                  | E-Series Pump w/4 pt (1.89 liter) Plastic Rectangular Oil Reservoir                                                    |
| 563362                                  | E-Series Pump w/4 pt (1.89 liter) Plastic Rectangular Oil Reservoir, Low Level Switch                                  |
| E-Series Components                     |                                                                                                                        |
| 563358                                  | Pump only - w/1750 psi (121 bar) rupture disc                                                                          |
| 563367                                  | Adjustable Output Pump .01- 0.03 in <sup>3</sup> (0.16-0.49 cm <sup>3</sup> ) (*not fitted with Rupture Disc Assembly) |
| E-Series Oil Reservoirs                 |                                                                                                                        |
| 563359                                  | 4 pt (1.89 liter) Plastic Rectangular Reservoir                                                                        |
| 562891                                  | 5 pt (2.36 liter) Plastic Cylindrical Reservoir                                                                        |
| 562904                                  | 6 pt (2.84 liter) Plastic Cylindrical Reservoir                                                                        |
| 562889                                  | 12 pt (5.67 liter) Plastic Cylindrical Reservoir                                                                       |
| 562890                                  | 20 pt (9.45 liter) Plastic Cylindrical Reservoir                                                                       |
| 564375                                  | 40 pt (18.93 liter) Cylindrical - Plastic                                                                              |
| 563319                                  | 12 pt (5.67 liter) Rectangular - Metal                                                                                 |
| 563320                                  | 24 pt (11.36 liter) Rectangular - Metal                                                                                |
| 563321                                  | 40 pt (18.93 liter) Rectangular - Metal                                                                                |
| E-Series Grease Reservoirs              |                                                                                                                        |
| 562910                                  | 3 lb (1.36 kg) Plastic Cylindrical Reservoir                                                                           |
| 562888                                  | 5 lb (2.26 kg) Plastic Cylindrical Reservoir                                                                           |
| 564264                                  | 5 lb (2.26 kg) Metal Cylindrical Reservoir                                                                             |



563365

# Pneumatic Pumps

## E-Series™

### Ordering Information

| E-Series Assemblies w/Fixed Output Pump                                    |                                                                                                       |
|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| 563365                                                                     | E-Series Pump w/3 lb (1.36 kg) Plastic Cylindrical Grease Reservoir, Low Level Switch, Pressure Gauge |
| 563363                                                                     | E-Series Pump w/6 lb (2.71 kg) Plastic Cylindrical Grease Reservoir                                   |
| 563364                                                                     | E-Series Pump w/6 lb (2.71 kg) Plastic Cylindrical Grease Reservoir, Low Level Switch                 |
| 563361                                                                     | E-Series Pump w/4 pt (1.89 liter) Plastic Rectangular Oil Reservoir                                   |
| 563362                                                                     | E-Series Pump w/4 pt (1.89 liter) Plastic Rectangular Oil Reservoir, Low Level Switch                 |
| E-Series Components                                                        |                                                                                                       |
| 563358                                                                     | Pump only                                                                                             |
| 563367                                                                     | Adjustable Output Pump (*not fitted with Rupture Disc Assembly)                                       |
| E-Series Oil Reservoirs                                                    |                                                                                                       |
| 563359                                                                     | 4 pt (1.89 liter) Plastic Rectangular Reservoir                                                       |
| 562891                                                                     | 5 pt (2.36 liter) Plastic Cylindrical Reservoir                                                       |
| 562904                                                                     | 6 pt (2.84 liter) Plastic Cylindrical Reservoir                                                       |
| 562889                                                                     | 12 pt (5.67 liter) Plastic Cylindrical Reservoir                                                      |
| 562890                                                                     | 20 pt (9.45 liter) Plastic Cylindrical Reservoir                                                      |
| E-Series Grease Reservoirs                                                 |                                                                                                       |
| 562910                                                                     | 3 lb (1.36 kg) Plastic Cylindrical Reservoir                                                          |
| 562888                                                                     | 5 lb (2.26 kg) Plastic Cylindrical Reservoir                                                          |
| 564264                                                                     | 5 lb (2.26 kg) Metal Cylindrical Reservoir                                                            |
| 562905                                                                     | 6 lb (2.71 kg) Plastic Cylindrical Reservoir                                                          |
| 562906                                                                     | 6 lb (2.71 kg) Metal Cylindrical Reservoir                                                            |
| 562884                                                                     | 12 lb (5.42 kg) Plastic Cylindrical Reservoir                                                         |
| 562886                                                                     | 12 lb (5.42 kg) Metal Cylindrical Reservoir                                                           |
| 562885                                                                     | 20 lb (9.04 kg) Plastic Cylindrical Reservoir                                                         |
| 562887                                                                     | 20 lb (9.04 kg) Metal Cylindrical Reservoir                                                           |
| E-Series Low Level Options - Not available for 3 lb Cylindrical Reservoirs |                                                                                                       |
| 563378                                                                     | 10 watt Low Level Switch for 4 pt (1.89 liter) Rectangular Oil Reservoirs                             |
| 563015                                                                     | 10 watt Low Level Switch for 5 pt (2.36 liter) and 12 pt (5.67 liter) Cylindrical Oil Reservoirs      |
| 563016                                                                     | 10 watt Low Level Switch for 20 pt (9.46 liter) Cylindrical Oil Reservoirs                            |
| 563316                                                                     | 15 amp Low Level Switch for 5 pt (2.37 liter) and 6 pt (2.84 liter) Cylindrical Oil Reservoirs        |
| 563317                                                                     | 15 amp Low Level Switch for 20 pt (9.45 liter) Cylindrical Oil Reservoirs                             |
| 563322                                                                     | 15 amp Low Level Switch for all Grease Reservoirs                                                     |
| 557826                                                                     | 10 watt Replacement Switch                                                                            |
| 557781                                                                     | 15 amp Replacement Switch                                                                             |
| E-Series Accessories - For Field Installation                              |                                                                                                       |
| 563315                                                                     | 3-Way Modular Pneumatic Valve - 115 VAC                                                               |
| 563332                                                                     | 3-Way Modular Pneumatic Valve - 24 VDC                                                                |
| 563909                                                                     | Pump Repair Kit (fixed output)                                                                        |
| 563945                                                                     | Pump Repair Kit (adjustable E-Series Pump)                                                            |

# Pneumatic Pumps

## MSA-10™ and MSA-100™

### Durable In-Line Pumps

MSA Series products are used together with main lubrication supply lines where the pump is fed directly with no additional reservoir required. No reservoir makes the MSA Series ideal for locations that are difficult to reach or undesirable to enter. Use the MSA-10 for standard applications and the MSA-100 when high operating pressures and larger outputs are required.

- Ideal for applications where space is a premium
- Handles high pressure lubricant feed of direct line intake
- Used with or without a reservoir for the ultimate flexibility

### Typical Applications

- In-plant manufacturing presses, machinery and processing equipment

### Lubrication Used

- Oil and Grease up to NLGI #2

### Technical Specifications

#### MSA-10

|                            |                                                    |
|----------------------------|----------------------------------------------------|
| Material                   | Steel                                              |
| Output per Stroke          | .04-.120in <sup>3</sup> (.66-1.97cm <sup>3</sup> ) |
| Max Pump Stroke per Minute | Single-Acting - 15                                 |
|                            | Double-Acting - 60                                 |
| Max Output Pressure        | 3,000 psi (207 bar)                                |
| Air Pressure               | 40-150 psi                                         |
| Max Lube Inlet             | 500 psi (34 bar)                                   |
| Ratio                      | 25:1                                               |

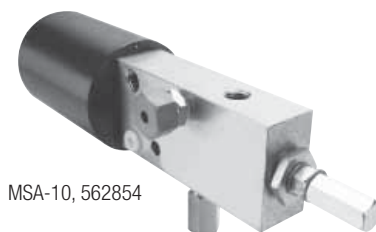
#### MSA-100

|                            |                                                       |
|----------------------------|-------------------------------------------------------|
| Material                   | Aluminum                                              |
| Seals                      | Buna-N and Fluoroelastomer                            |
| Output per Stroke          | .400-.800in <sup>3</sup> (6.57-13.11cm <sup>3</sup> ) |
| Max Pump Stroke per Minute | Single-Acting - 15                                    |
|                            | Double-Acting - 30                                    |
| Max Output Pressure        | 3,000 psi (207 bar)                                   |
| Air Pressure               | 60-140 psi                                            |
| Max Lube Inlet             | 500 psi (34 bar)                                      |
| Ratio                      | 25:1                                                  |

\*Supplied with Rupture-to-Atmosphere Indicator rated to 1,450 psi (100) (standard)

### Ordering Information

| MSA Pumps            |                                                   |
|----------------------|---------------------------------------------------|
| 562854               | MSA-10 Air Operated Pump                          |
| 562855               | MSA-100 Air Operated Pump                         |
| MSA Kits             |                                                   |
| 563912               | MSA-10 Repair Parts Kit                           |
| 563913               | MSA-100 Repair Parts Kit                          |
| MSA Restrictor Valve |                                                   |
| 563072               | Air Inlet Restrictor Valve for MSA-10 and MSA-100 |



MSA-10, 562854



MSA-100, 562855

# Pneumatic Pumps

## Injecto-Flo® AO-1

### Compact Air-Operated Oil Pump

The AO-1 pneumatic pumps are compact in size to fit into any application, but deliver higher pump output rates with its short pump off time between cycles. Great for applications using piston distributors for oil lubrication. Several reservoir sizes and materials to choose from. Has built-in vent valve to get you up and running fast.

### Typical Applications

- Small to medium machine tools

### Lubrication Used

- Oil (250-5,000 SUS)

### Technical Specifications

|                                      |                                         |
|--------------------------------------|-----------------------------------------|
| Output per Stroke (single shot only) | 0.80 in³ (13 cm³)                       |
| Max Output Pressure                  | 450 psi (31 bar)                        |
| Ratio                                | 4.5:1                                   |
| Reservoir Material                   | Plastic or Metal, Rectangular           |
| Reservoir Size                       | 4 pt (1.89 liter) or 10 pt (4.73 liter) |
| Minimum On-Time                      | .5 seconds                              |
| Minimum Off-Time                     | .15 seconds                             |

### Ordering Information

| Injecto-Flo AO-1 Pumps |                                                       |
|------------------------|-------------------------------------------------------|
| 562845                 | Pump, 4 pt (1.89 liter) Plastic Rectangular Reservoir |
| 562846                 | Pump, 10 pt (4.73 liter) Metal Rectangular Reservoir  |
| Low Level Switches     |                                                       |
| 556018                 | Low Level Switch                                      |
| 556019                 | Low Level Switch                                      |



562845

# Pneumatic Pumps

LubriSystem®

## Air Operated Pump for Single Line Parallel Systems

Easy to design, modify and adjust for oil or grease applications large or small. Great for operation of piston distributors. Rugged construction maximizes your productivity—upgrading to the internal timer control completely automates the system. All packages include internal pressure relief, so no need to install extra parts with additional costs. Combine with LubriSystem injectors for easy, low cost system design solutions.

- Ability to serve large systems—up to 100 lube points or more
- Efficient design promotes increase productivity and less downtime
- Several reservoir choices for both oil and grease applications

## Typical Applications

- In plant equipment and machinery

## Lubrication Used

- Oil and Grease up to NLGI #1

## Technical Specifications

|                     |                                                                                                                    |
|---------------------|--------------------------------------------------------------------------------------------------------------------|
| Output per Stroke   | 1.5 in <sup>3</sup> (24.6 cm <sup>3</sup> )                                                                        |
| Max Output Pressure | 360-1,350 psi (25-93 bar)                                                                                          |
| Air Inlet Pressure  | 40-150 psi (3-10 bar)                                                                                              |
| Ratio               | 9:1                                                                                                                |
| Reservoir Material  | Plastic, Cylindrical                                                                                               |
| Reservoir Size      | 6 lb (2.72 kg), 12 lb (5.44 kg) or 20 lb (9.06 kg),<br>6 pt (2.84 liter), 12 pt (5.68 liter) or 20 pt (9.46 liter) |



563575

## Ordering Information

| LubriSystem Pump w/out Reservoir                             |                                                                                               |
|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| 563579                                                       | Standard Pump                                                                                 |
| LubriSystem Standard Oil Pumps                               |                                                                                               |
| 563574                                                       | LubriSystem Pump w/6 pt (2.84 liter) Plastic Cylindrical Reservoir                            |
| 563575                                                       | LubriSystem Pump w/12 pt (5.68 liter) Plastic Cylindrical Reservoir                           |
| 563576                                                       | LubriSystem Pump w/20 pt (9.46 liter) Plastic Cylindrical Reservoir                           |
| 563577                                                       | LubriSystem Pump w/6 pt (2.84 liter) Plastic Cylindrical Reservoir, 10 watt Low Level Switch  |
| 563578                                                       | LubriSystem Pump w/12 pt (5.68 liter) Plastic Cylindrical Reservoir, 10 watt Low Level Switch |
| LubriSystem Standard Air Operated Pumps Reservoir Assemblies |                                                                                               |
| 563571                                                       | LubriSystem Pump w/6 lb (2.72 kg) Plastic Cylindrical Reservoir                               |
| 563572                                                       | LubriSystem Pump w/6 lb (2.72 kg) Plastic Cylindrical Reservoir, Low Level Switch             |
| 563573                                                       | LubriSystem Pump w/12 lb (5.44 kg) Plastic Cylindrical Reservoir, Low Level Switch            |
| LubriSystem Plastic Oil Reservoirs                           |                                                                                               |
| 562892                                                       | 12 pt (5.68 liter) Reservoir                                                                  |
| 562893                                                       | 20 pt (9.46 liter) Reservoir                                                                  |
| LubriSystem Plastic Grease Reservoirs                        |                                                                                               |
| 562907                                                       | 6 lb (2.72 kg) Reservoir                                                                      |
| 562896                                                       | 12 lb (5.44 kg) Reservoir                                                                     |
| 562897                                                       | 20 lb (9.06 kg) Reservoir                                                                     |

| LubriSystem Low Level Switches - Oil Reservoirs only    |                                                            |
|---------------------------------------------------------|------------------------------------------------------------|
| 563014                                                  | 10 watt Low Level Switch for 6 pt (2.84 liter) Reservoirs  |
| 563015                                                  | 10 watt Low Level Switch for 12 pt (5.68 liter) Reservoirs |
| 563016                                                  | 10 watt Low Level Switch for 20 pt (9.46 liter) Reservoirs |
| 563318                                                  | 15 amp Low Level Switch for 6 pt (2.84 liter) Reservoirs   |
| 563316                                                  | 15 amp Low Level Switch for 12 pt (5.68 liter) Reservoirs  |
| 563317                                                  | 15 amp Low Level Switch for 20 pt (9.46 liter) Reservoirs  |
| LubriSystem Low Level Switches - Grease Reservoirs only |                                                            |
| 563322                                                  | 15 amp Low Level Switch for all Grease Reservoirs          |
| LubriSystem Solenoid Valves                             |                                                            |
| 563315                                                  | 115 VAC Solenoid Valve                                     |
| 563332                                                  | 24 VDC Solenoid Valve                                      |
| LubriSystem Solid State Timer                           |                                                            |
| 562872                                                  | Solid State Timer, 115 VAC                                 |
| 557925                                                  | DC Timer                                                   |
| LubriSystem Repair Kits                                 |                                                            |
| 563762                                                  | Standard Pump Repair/Rebuild Kit - includes Pump Diaphragm |

# Manual Pumps

## Grease Gun

### Features and Benefits

A simple, compact, cost-effective way to deliver oil or grease. Ideal for purging existing centralized systems when changing lubrication or performing maintenance.

- Ideal for troubleshooting and system testing
- Handy carrying case for easy portability

### Lubrication Used

- Oil and Grease

### Technical Specifications

|                                  |                                                                    |
|----------------------------------|--------------------------------------------------------------------|
| Output per Stroke                | .009 cu.in. (1.5cc)                                                |
| Pressure Rating                  | 5,000 psi (345 bar)                                                |
| Reservoir Capacity               | 1 pint (500cc), 1 lb (0.453 kg) or use 14-14.5 oz grease cartridge |
| Pump body and Reservoir Material | Steel                                                              |
| Storage Case Material            | HDPE Plastic                                                       |

### Ordering Information

| Manual Grease Gun |                                 |
|-------------------|---------------------------------|
| 562857            | Pump package with carrying case |
| 558959            | Wall mount bracket              |
| 200389            | 6 inch rigid extension          |



562857

# Manual Pumps

## PH Pump™

### Versatile and Tough

Built with aluminum and steel components to meet the high standards of performance and quality you expect from Graco products. Available with a choice of standard clear plastic or metal Modu-Flo reservoirs for either oil or grease. Modular pump/reservoir design plus built-in features enable the PH Manual Pump to be customized for a wide range of applications.

- Built-in volume indicator provides easy verification that lubricant is being delivered to the system and that divider valves are completing lube cycles
- Wide applicability is provided by an optional two- or four-outlet valve that mounts under the pump outlet. This valve allows the pump to serve up to four different systems or to supply one or two separate manual reversing systems
- Single-acting positive displacement pump design minimizes the number of moving and wearing parts for extended pump life and reduced maintenance
- Built-in automatic relief valve protects system components from over-pressure
- Built-in outlet check valve prevents back pressure from damaging pump and minimizes chance for contaminants to get into the pump or the lube supply

### Typical Applications

- In-plant equipment and machinery

### Lubrication Used

- Oil and Grease

### Technical Specifications

Pump Output . . . . . 0.150 cu.in. (2.46 cm<sup>3</sup>) per full stroke  
Maximum Operating Pressure . . . . . 3,000 psi (207 bar)  
High Pressure Protection Relief Valve . . . . . Set @ 2,500 psi (172 bar)  
Force to Operate Handle . . . . . 29 lb (13.14 kg) per 1,000 psi @ rated pressure  
Reservoir Capacities . . . . . 5 pint (2.37 liter) or 5 lb (2.27 kg), 6 pint (2.84 liter) or 6 lb (2.72 kg),  
12 pint (5.68 liter) or 12 lb (5.44 kg), 20 pint (9.46 liter) or 20 lb (9.06 kg)

### Ordering Information

| PH Pump |                                                               |
|---------|---------------------------------------------------------------|
| 563393  | Pump (w/out reservoir)                                        |
| 564378  | Pump w/5 pint (2.37 liter) Plastic Cylindrical Oil Reservoir  |
| 564379  | Pump w/5 lb. (2.27 kg) Plastic Cylindrical Grease Reservoir   |
| 564381  | Pump w/5 lb. (2.27 kg) Metal Cylindrical Grease Reservoir     |
| 564389  | Pump w/6 lb. (2.72 kg) Plastic Cylindrical Grease Reservoir   |
| 564383  | Pump w/12 lb. (5.44 kg) Plastic Cylindrical Grease Reservoir  |
| 564386  | Pump w/20 lb. (9.06 kg) Plastic Cylindrical Grease Reservoir  |
| 564385  | Pump w/20 pint (9.46 liter) Plastic Cylindrical Oil Reservoir |
| 564384  | Pump w/12 lb. (5.44 kg) Metal Cylindrical Grease Reservoir    |
| 564387  | Pump w/6 pint (2.84 liters) Plastic Cylindrical Oil Reservoir |
| 564365  | Two-Outlet Valve                                              |
| 557864  | 3,000 psi (207 bar) Pressure Gauge                            |
| 563160  | Automatic 2,500 psi (172 bar) Relief Valve                    |
| 558906  | Coupler for Grease Fill Stud                                  |



564384

# Manual Pumps

## LubriSystem®

### Features and Benefits

The LubriSystem hand pump package offers versatility for use in any application, large or small. Great for operation with Injectors or Piston Distributors, with oil or grease. Sturdy construction of aluminum and steel to provide years of service. Compact design can be used in areas where space is limited. Rugged bracket allows the pump package to be mounted in place in any applications.

- Bracket-mount design for easy installation
- Rugged design for years of operation
- Built-in pressure venting for use with injectors

### Typical Applications

- General machinery lubrication where power is limited or not available

### Lubrication Used

- Oil
- Grease up to NLGI #1

### Technical Specifications

|                         |                                                                                                                         |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Output per Stroke       | 0.125 in <sup>3</sup> (2 cm <sup>3</sup> )                                                                              |
| Output Pressure         | 3,000 psi (207 bar)                                                                                                     |
| Force to Operate Handle | 20 lb (9 kg) per 1,000 psi (69 bar)                                                                                     |
| Reservoir               | Plastic, Cylindrical                                                                                                    |
| Reservoir Size          | 6 pint (2.84 liter) or 6 lb (2.72 kg), 12 pint (5.68 liter) or 12 lb (5.44 kg), 20 pint (9.46 liter) or 20 lb (9.06 kg) |



564422

### Ordering Information

| LubriSystem Hand-Operated Pumps               |                                                                       |
|-----------------------------------------------|-----------------------------------------------------------------------|
| 564419                                        | Hand Pump w/12 pt (5.86 liter) Plastic Oil Reservoir, 3,000 psi Gauge |
| 564420                                        | Hand Pump w/20 pt (9.46 liter) Plastic Oil Reservoir, 3,000 psi Gauge |
| 564421                                        | Hand Pump w/6 lb (2.72 kg) Plastic Grease Reservoir, 3,000 psi Gauge  |
| 564422                                        | Hand Pump w/12 lb (5.44 kg) Plastic Grease Reservoir, 3,000 psi Gauge |
| 564423                                        | Hand Pump w/20 lb (9.06 kg) Plastic Grease Reservoir, 3,000 psi Gauge |
| LubriSystem Hand-Operated Pump Components     |                                                                       |
| 563580                                        | Hand Pump Body w/out Reservoir                                        |
| LubriSystem Hand-Operated Pump Pressure Gauge |                                                                       |
| 557864                                        | 3,000 psi Gauge                                                       |
| LubriSystem Hand-Operated Pump Reservoirs     |                                                                       |
| 562904                                        | 6 pt (2.84 liter) Plastic Oil Reservoir                               |
| 562889                                        | 12 pt (5.68 liter) Plastic Oil Reservoir                              |
| 562890                                        | 20 pt (9.46 liter) Plastic Oil Reservoir                              |
| 562905                                        | 6 lb (2.72 kg) Plastic Grease Reservoir                               |
| 562884                                        | 12 lb (5.44 kg) Plastic Grease Reservoir                              |
| 562885                                        | 20 lb (9.06 kg) Plastic Grease Reservoir                              |

# Manual Pumps

## Thrif-T Luber®

### Features and Benefits

A simple and effective positive displacement pump that delivers up to 0.50 cubic inches per stroke. Compact design easily mounts on any piece of equipment. A spring return drives the piston for controlled lubrication delivery.

- Modular system design allows configurations to work in all applications
- Easy to standardize on components and reduce inventory
- Adjustable pump output for fast, convenient customizing

### Typical Applications

- Small machine tools

### Lubrication Used

- Oil (100-10,000 SUS)

### Technical Specifications

Output per Stroke . . . . . 0.50 in³ (8.2 cm³)  
Output Pressure . . . . . 75 psi (5 bar)  
Operating Temp . . . . . 0° F to 140° F (-17.8° C to 60° C)  
Reservoir Size . . . . . 4 pt (1.89 liter)

### Ordering Information

| Thrif-T Lube Pump |                                               |
|-------------------|-----------------------------------------------|
| 564012            | TLMP-00 - Thrif-T Luber Manual Pump, Standard |



564012

# Mechanical Pumps

## LubeMaster® Ratchet Drive Pump

### Features and Benefits

Lubricates only while the machine is running! The Lubemaster Clutch Drive is a rugged, reliable pump powered mechanically by the machine using the lubrication. This pump is ideal for applications where lubrication cycles vary and are unpredictable.

- Rugged design for harsh-duty applications
- Mechanical link to machine—lubricates only while machine is running
- No separate power supply required

### Typical Applications

- Presses, Banbury mixers, rubber mills, upsetters, heading machines, crane trolleys

### Lubrication Used

- Oil and Grease up to NLGI #2

### Technical Specifications

| Min./Max. Pump Output Chart |                 |                     |                       | Output Per Hour                                 |                                                  |
|-----------------------------|-----------------|---------------------|-----------------------|-------------------------------------------------|--------------------------------------------------|
| Degrees of Throw            | Effective Ratio | Impulses Per Minute | Pump Strokes Per Hour | Minimum                                         | Maximum                                          |
| 12°                         | 30:1            | 5 Min.              | 10                    | .100 in <sup>3</sup> (1.639 cm <sup>3</sup> )   | .500 in <sup>3</sup> (8.195 cm <sup>3</sup> )    |
| 60°                         | 6:1             | 150 Max.            | 1500                  | 15.00 in <sup>3</sup> (245.85 cm <sup>3</sup> ) | 75.00 in <sup>3</sup> (1229.25 cm <sup>3</sup> ) |



LM5214

### Ordering Information

| LubeMaster |                                                                                                                                                                |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LM6214     | 20 lb (9.06 kg) Plastic Grease Reservoir (562897), Clutch Drive w/Arm (563383), Individual Outputs (12 lb / 5.44 kg and 20 lb / 9.06 kg Grease, SPDT) (563322) |
| LM8211     | 20 lb (9.06 kg) Metal Grease Reservoir (562899), Clutch Drive w/Arm (563383)                                                                                   |
| LM4211     | 20 pt (9.46 liter) Metal Oil Reservoir (562895), Clutch Drive w/Arm (563383)                                                                                   |
| LM7211     | 12 lb (5.44 kg) Metal Grease Reservoir (562898), Clutch Drive w/Arm (563383)                                                                                   |
| LM5211     | 12 lb (5.44 kg) Plastic Grease Reservoir (562896), Clutch Drive w/Arm (563383)                                                                                 |
| LM5214     | 12 lb (5.44 kg) Plastic Grease Reservoir (562896), Clutch Drive w/Arm (563383), Individual Outputs (12 lb / 5.44 kg and 20 lb / 9.06 kg Grease, SPDT) (563322) |

# Mechanical Pumps

## LubeMaster® Ratchet Drive Pump

### LubeMaster Ordering Menu Code

NOTE: Utilize number code not lettered code from literature for ordering purposes.

|                             |                                                                   |    |                                              |   |   |   |   |   |   |   |
|-----------------------------|-------------------------------------------------------------------|----|----------------------------------------------|---|---|---|---|---|---|---|
|                             |                                                                   | LM | -                                            | X | - | X | - | X | - | X |
| <b>Pump</b>                 |                                                                   |    |                                              |   |   |   |   |   |   |   |
| LM LubeMaster pump - 563380 |                                                                   |    |                                              |   |   |   |   |   |   |   |
| <b>Reservoir Option</b>     |                                                                   |    |                                              |   |   |   |   |   |   |   |
| 1                           | OPA, 12 pt plastic oil reservoir - 562892                         | 6  | GPB, 20 lb plastic grease reservoir - 562897 |   |   |   |   |   |   |   |
| 2                           | OPB, 20 pt plastic oil reservoir - 562893                         | 7  | GMA, 12 lb metal grease reservoir - 562898   |   |   |   |   |   |   |   |
| 3                           | OMA, 12 pt metal oil reservoir - 562894                           | 8  | GMB, 20 lb metal grease reservoir - 562899   |   |   |   |   |   |   |   |
| 4                           | OMB, 20 pt metal oil reservoir - 562895                           | 9  | OHS, power prime reservoir assembly - 562908 |   |   |   |   |   |   |   |
| 5                           | GPA, 12 lb plastic grease reservoir - 562896                      |    |                                              |   |   |   |   |   |   |   |
| <b>Drive Option</b>         |                                                                   |    |                                              |   |   |   |   |   |   |   |
| 1                           | none                                                              | 4  | DOC, 10:1 reduction, wall-mounting - 563386  |   |   |   |   |   |   |   |
| 2                           | DOA, clutch drive w/arm - 563383                                  | 5  | DOD, 60:1 reduction, floor-mounting - 563389 |   |   |   |   |   |   |   |
| 3                           | DOB, 10:1 reduction, floor-mounting - 563388                      | 6  | DOE, 60:1 reduction, wall-mounting - 563387  |   |   |   |   |   |   |   |
| <b>Motor Option</b>         |                                                                   |    |                                              |   |   |   |   |   |   |   |
| 1                           | none                                                              |    |                                              |   |   |   |   |   |   |   |
| 2                           | MOA, 1/2 HP, 115/230 VAC, single phase, 60 Hz, 1,725 rpm - 557271 |    |                                              |   |   |   |   |   |   |   |
| 3                           | MOB, 1/2 HP, 230/460 VAC, 3-phase, 60 Hz, 1,725 rpm - 557270      |    |                                              |   |   |   |   |   |   |   |
| 4                           | MOC, 1/2 HP, 115/230 VAC, single phase, 60 Hz, 1,140 rpm - 557272 |    |                                              |   |   |   |   |   |   |   |
| 5                           | MOD, 1/2 HP, 230/460 VAC, 3-phase, 60 Hz, 1,140 rpm - 557273      |    |                                              |   |   |   |   |   |   |   |
| <b>Low Level Option</b>     |                                                                   |    |                                              |   |   |   |   |   |   |   |
| 1                           | LOO, none                                                         | 4  | LOC, 12 and 20 lb grease, SPDT - 563322      |   |   |   |   |   |   |   |
| 2                           | LOA, 12 pt oil, SPDT, 15 amps - 563316                            | 5  | LOD, 12 pt oil, SPST, 10 watts - 563015      |   |   |   |   |   |   |   |
| 3                           | LOB, 20 pt oil, SPDT, 15 amps - 563317                            | 6  | LOE, 20 pt oil, SPST, 10 watts - 563016      |   |   |   |   |   |   |   |

Note: Drive Options 3, 4, 5 and 6 contains all required mounting hardware (mounting plate, coupler, coupler guard, nuts, bolts and washers).

Pricing: In order to obtain Menu pricing for LubeMaster components, a pump must be ordered with each drive option on the same purchase order. All drives ordered w/out a pump on the same purchase order will be treated as a spare part and priced accordingly.

#### Pressure Indicator Option (sold seperately)

POA - Standard Blowout, 1450 psi (100 bar), Oil, 563179  
 POB - Standard Blowout, 2350 psi (162 bar) Grease, 563184  
 POC - High-Pressure Blowout Switch, 1450 psi (100 bar), Oil, 563384  
 POD - Standard Blowout, 2350 psi (162 bar), Grease, 563385

# Mechanical Pumps

## MLS Series™

### Simple Installation and Operation

MLS Mechanical Lube Pumps are designed for automatic lubrication of machinery where machine motion can be used as the power source for the pump. Two pump types are available where the mechanical action is transmitted directly to the pump piston, combining compactness and simplicity. RMLS Pumps are equipped with a cam roller for cam or stop actuation. The EMLS-5 Pump is furnished with a drive arm with adjustable clevis position for powering the pump via a connecting rod from an eccentric pin in the end of a rotating shaft or other back-and-forth movement.

### Typical Applications

- Where mechanical machine drive can be utilized

### Technical Specifications

#### Min. Piston Stroke Lube Discharge

RMLS-5 . . . . . 0.005 cu.in @ 3/16 in

RMLS-50 . . . . . 0.050 cu.in @ 5/16 in

#### Max Piston Stroke Lube Discharge

RMLS-5 . . . . . 0.012 cu.in. @ 3/8 in

RMLS-50 . . . . . 0.050 cu.in. @ 17/32 in

#### EMLS-5

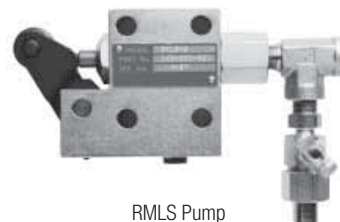
Arm Travel . . . . . 2-3/4 in, 2-1/16 in, 1-5/16 in

Piston Travel . . . . . 3/8 in, 9/32 in, 1-5/16 in

Lube Discharge. . . . . 0.012 cu.in., 0.008 cu.in., 0.005 cu.in.

### Ordering Information

| MLS Series Pumps |                        |
|------------------|------------------------|
| 562860           | RMLS-5                 |
| 562861           | EMLS-5                 |
| 562858           | EMLS-50                |
| 563900           | RMLS/EMLS-5 Repair Kit |
| 563901           | RMLS-50 Repair Kit     |



RMLS Pump



EMLS Pump

# Hydraulic Pumps

## Modu-Flo®

### Features and Benefits

The Modu-Flo system is ideal for applications where minimizing downtime is critical. Customizing is easy—just mix and match pumps, reservoir and manifolds in any configuration to meet any application. Replace the pump or reservoir without disconnecting lubrication lines. Choose from a wide variety of hydraulic pumps that operate with grease or oil.

- Modular system design allows configurations to work in all applications
- Easy to standardize on components and reduce inventory
- Adjustable pump output for fast, convenient customization



### Typical Applications

- General machinery lubrication where power is limited or not available

### Lubrication Used

- Oil
- Grease up to NLGI #2

### Technical Specifications

Output per Stroke . . . . .01- 0.125 in<sup>3</sup> (0.16-2.0 cm<sup>3</sup>)  
Output Pressure . . . . .3,000 psi (207 bar)

### Ordering Information

| Part Number | Model Description                         | Max Pump Output/Stroke<br>in <sup>3</sup> (cm <sup>3</sup> ) | Maximum<br>Cycles/Minute | Ratio | Max. Hydraulic Pressure,<br>psi (bar) | Lubrication Type               |
|-------------|-------------------------------------------|--------------------------------------------------------------|--------------------------|-------|---------------------------------------|--------------------------------|
| 563305      | HLJ-5 pump, double acting (no reservoir)  | 0.01-0.03 (0.16-0.49)                                        | 60                       | 5.5:1 | 200-2000<br>(14-138)                  | Oil or grease up to<br>NLGI #2 |
| 563345      | HLJ-5X pump, double acting (no reservoir) | 0.03-.09 (0.49-1.5)                                          | 50                       | 2.2:1 | 200-3000<br>(14-207)                  |                                |
| 563307      | HLJ-25 pump, double acting (no reservoir) | 0.03-0.12 (.49-2.0)                                          | 50                       | 5.5:1 | 200-2000<br>(14-138)                  |                                |

See pneumatic Modu-Flo section for a complete list of configurable parts.

# Single Point Lubricators

## Single Series™

### Easy to use with minimal up-front investment

Graco's Electrochemical (gas) and Electromechanical (motor-driven) Single Series lubricators automatically deliver small, predetermined amounts of lubricant at frequent intervals for an uninterrupted supply of fresh lubricant directly to your bearing or lubrication point. Prevents over and under lubrication problems associated with manual lubrication (grease gun) methods.

- Extend equipment life
- Reduce operating costs
- Increase productivity
- Less waste

### Typical Applications

#### EC-120™

A durable and reliable general purpose lubricator that installs easily, in almost any position. Suitable for use in potentially explosive atmospheres in Europe. ATEX Approvals: CE Ex I M2 c X, CE Ex II 2G c IIC 80°C X, CE Ex II 2D c 80°C X.

#### EP-120™

Transparent plastic gives you at-a-glance indication of the lubricant level. Ideal for hygienically clean and food safe locations. Also great for high corrosion locations. Suitable for use in potentially explosive atmospheres in Europe.

#### TC-130™

An electrochemical lubricator that features electronic temperature compensation. The discharge period is easy to program on the reusable control unit, and can be turned on/off at any time to stop the lube output. Suitable for use in potentially explosive atmospheres.

### Typical Fluids Handled

- Multi-use lithium EP-2™ grease
- Construction and off-highway grease
- Ball bearing and pillow-block grease
- Mill grease
- Food grade H1™ grease
- Synthetic industrial grease

### Technical Specifications

#### EC-120™

|                        |                           |
|------------------------|---------------------------|
| Housing Design.....    | Metal                     |
| Drive Type .....       | Electrochemical (gas)     |
| Discharge Time.....    | 1, 3, 6, or 12 months     |
| Lubricant Volume ..... | 120 cc                    |
| Operating Temp .....   | 0 to 40° C / 32 to 104° F |
| Max Pressure .....     | 4 bar / 58 psi            |

#### EP-120™

|                        |                           |
|------------------------|---------------------------|
| Housing Design.....    | Transparent Plastic       |
| Drive Type .....       | Electrochemical (gas)     |
| Discharge Time.....    | 1, 3, 6, or 12 months     |
| Lubricant Volume ..... | 120 cc                    |
| Operating Temp .....   | 0 to 40° C / 32 to 104° F |
| Max Pressure .....     | 4 bar / 58 psi            |

#### TC-130™

|                        |                             |
|------------------------|-----------------------------|
| Housing Design.....    | Transparent Plastic         |
| Drive Type .....       | Electrochemical (gas)       |
| Discharge Time.....    | 1-12 months                 |
| Lubricant Volume ..... | 130 cc                      |
| Operating Temp .....   | -20 to 60° C / -4 to 140° F |
| Max Pressure .....     | 6 bar / 87 psi              |



# Single Point Lubricators

## Single Series™

### Ordering Information

| EC-120 Lubricators |                             |
|--------------------|-----------------------------|
| 24D855             | EC-120, 1 Mo, Lithium EP-2  |
| 24D856             | EC-120, 1 Mo, Construction  |
| 24D857             | EC-120, 1 Mo, Bearing       |
| 24D858             | EC-120, 1 Mo, Milling       |
| 24D859             | EC-120, 1 Mo, Food          |
| 24D860             | EC-120, 1 Mo, Synthetic     |
| 24D861             | EC-120, 1 Mo, Ultra         |
| 24D862             | EC-120, 1 Mo, Lithium EP-1  |
| 24D863             | EC-120, 3 Mo, Lithium EP-2  |
| 24D864             | EC-120, 3 Mo, Construction  |
| 24D865             | EC-120, 3 Mo, Bearing       |
| 24D866             | EC-120, 3 Mo, Milling       |
| 24D867             | EC-120, 3 Mo, Food          |
| 24D868             | EC-120, 3 Mo, Synthetic     |
| 24D869             | EC-120, 3 Mo, Ultra         |
| 24D870             | EC-120, 3 Mo, Lithium EP-1  |
| 24D871             | EC-120, 6 Mo, Lithium EP-2  |
| 24D872             | EC-120, 6 Mo, Construction  |
| 24D873             | EC-120, 6 Mo, Bearing       |
| 24D874             | EC-120, 6 Mo, Milling       |
| 24D875             | EC-120, 6 Mo, Food          |
| 24D876             | EC-120, 6 Mo, Synthetic     |
| 24D877             | EC-120, 6 Mo, Ultra         |
| 24D878             | EC-120, 6 Mo, Lithium EP-1  |
| 24D879             | EC-120, 12 Mo, Lithium EP-2 |
| 24D880             | EC-120, 12 Mo, Construction |
| 24D881             | EC-120, 12 Mo, Bearing      |
| 24D882             | EC-120, 12 Mo, Milling      |
| 24D883             | EC-120, 12 Mo, Food         |
| 24D884             | EC-120, 12 Mo, Synthetic    |
| 24D885             | EC-120, 12 Mo, Ultra        |
| 24D886             | EC-120, 12 Mo, Lithium EP-1 |
| EP-120 Lubricators |                             |
| 24J949             | EP-120, 1 Mo, Lithium EP-2  |
| 24J950             | EP-120, 1 Mo, Construction  |
| 24J951             | EP-120, 1 Mo, Bearing       |
| 24J952             | EP-120, 1 Mo, Milling       |
| 24J953             | EP-120, 1 Mo, Food          |
| 24J954             | EP-120, 1 Mo, Synthetic     |
| 24J955             | EP-120, 1 Mo, Ultra         |
| 24J956             | EP-120, 1 Mo, Lithium EP-1  |
| 24J957             | EP-120, 3 Mo, Lithium EP-2  |
| 24J958             | EP-120, 3 Mo, Construction  |
| 24J959             | EP-120, 3 Mo, Bearing       |
| 24J960             | EP-120, 3 Mo, Milling       |

| 24J961                        | EP-120, 3 Mo, Food               |
|-------------------------------|----------------------------------|
| 24J962                        | EP-120, 3 Mo, Synthetic          |
| 24J963                        | EP-120, 3 Mo, Ultra              |
| 24J964                        | EP-120, 3 Mo, Lithium EP-1       |
| 24J965                        | EP-120, 6 Mo, Lithium EP-2       |
| 24J966                        | EP-120, 6 Mo, Construction       |
| 24J967                        | EP-120, 6 Mo, Bearing            |
| 24J968                        | EP-120, 6 Mo, Milling            |
| 24J969                        | EP-120, 6 Mo, Food               |
| 24J970                        | EP-120, 6 Mo, Synthetic          |
| 24J971                        | EP-120, 6 Mo, Ultra              |
| 24J972                        | EP-120, 6 Mo, Lithium EP-1       |
| 24J973                        | EP-120, 12 Mo, Lithium EP-2      |
| 24J974                        | EP-120, 12 Mo, Construction      |
| 24J975                        | EP-120, 12 Mo, Bearing           |
| 24J976                        | EP-120, 12 Mo, Milling           |
| 24J977                        | EP-120, 12 Mo, Food              |
| 24J978                        | EP-120, 12 Mo, Synthetic         |
| 24J979                        | EP-120, 12 Mo, Ultra             |
| 24J980                        | EP-120, 12 Mo, Lithium EP-1      |
| TC-130 Lubricators            |                                  |
| 24J981                        | TC-130, 1 to 12 Mo, Lithium EP-2 |
| 24J982                        | TC-130, 1 to 12 Mo, Construction |
| 24J983                        | TC-130, 1 to 12 Mo, Bearing      |
| 24J984                        | TC-130, 1 to 12 Mo, Milling      |
| 24J985                        | TC-130, 1 to 12 Mo, Food         |
| 24J986                        | TC-130, 1 to 12 Mo, Synthetic    |
| 24J987                        | TC-130, 1 to 12 Mo, Ultra        |
| 24J988                        | TC-130, 1 to 12 Mo, Lithium EP-1 |
| TC-130 Replacement Cartridges |                                  |
| 24M684                        | Lithium EP-2                     |
| 24M685                        | Construction                     |
| 24M686                        | Bearing                          |
| 24M687                        | Milling                          |
| 24M688                        | Food                             |
| 24M689                        | Synthetic                        |
| 24M690                        | Ultra                            |
| 24M691                        | Lithium EP-1                     |

# Single Point Lubricators

## Single Series™

### Easy to Use with Minimal Up-front Investment

Graco's Electrochemical (gas) and Electromechanical (motor-driven) Single Series lubricators automatically delivers small, predetermined amounts of lubricant at frequent intervals for an uninterrupted supply of fresh lubricant directly to your bearing or lubrication point. Prevents over and under lubrication problems associated with manual lubrication (grease gun) methods.

### Features and Benefits

- Extend equipment life
- Reduce operating costs
- Increase productivity
- Less waste

### Typical Applications

#### EM-Drive™

Battery-powered, motor-drive delivers precise lubrication, regardless of temperature and vibration. Easy-to-read LED feedback indicators ensure trouble-free operation. Suitable for Class I, Div 2 groups A,B,C,D, Class II, Div 2 groups F,G, and Class III hazardous locations. UL Listed.

#### EM-XP™

Delivers precise lubrication, regardless of temperature and vibration. External power turns on and off with the cycle of the machine it's lubricating—ideally suited for inconsistently used equipment.

#### EM-XC™

Delivers precise lubrication, regardless of temperature and vibration. Precisely match lubrication output with your machine's operating conditions—works with your PLC to lubricate only when you need it.

### Typical Fluids Handled

- Multi-use lithium EP-2™ grease
- Ball bearing and pillow-block grease
- Synthetic industrial grease
- Construction and off-highway grease
- Mill grease
- Food grade H1™ grease

### Technical Specifications

#### EM-Drive™

|                       |                                  |
|-----------------------|----------------------------------|
| Housing Design .....  | Plastic w/transparent reservoir  |
| Drive Type .....      | Electromechanical (motor-driven) |
| Discharge Time.....   | 1, 3, 6, or 12 months            |
| Lubricant Volume..... | 60, 120, or 250 cc               |
| Operating Temp .....  | -10 to 50° C / 14 to 122° F      |
| Max Pressure .....    | 5 bar / 75 psi                   |

#### EM-XP™

|                       |                                  |
|-----------------------|----------------------------------|
| Housing Design .....  | Plastic w/transparent reservoir  |
| Drive Type .....      | Electromechanical (motor-driven) |
| Discharge Time.....   | 1, 3, 6 or 12 months             |
| Lubricant Volume..... | 60, 120, or 250 cc               |
| Operating Temp .....  | -10 to 50° C / 14 to 122° F      |
| Max Pressure .....    | 5 bar / 75 psi                   |

#### EM-XC™

|                        |                                  |
|------------------------|----------------------------------|
| Housing Design.....    | Plastic w/transparent reservoir  |
| Drive Type .....       | Electromechanical (motor-driven) |
| Discharge amount.....  | 0.26 to 2.11 cc per activation   |
| Lubricant Volume ..... | 60, 120, or 250 cc               |
| Operating Temp .....   | -10 to 50° C / 14 to 122° F      |
| Max Pressure .....     | 5 bar / 75 psi                   |



# Single Point Lubricators

## Single Series™

### Ordering Information

| EM-Drive Lubricators |                                |
|----------------------|--------------------------------|
| 24E028               | EM-DRIVE, 60 cc, Lithium EP-2  |
| 24E029               | EM-DRIVE, 60 cc, Construction  |
| 24E030               | EM-DRIVE, 60 cc, Bearing       |
| 24E031               | EM-DRIVE, 60 cc, Milling       |
| 24E032               | EM-DRIVE, 60 cc, Food          |
| 24E033               | EM-DRIVE, 60 cc, Synthetic     |
| 24E034               | EM-DRIVE, 60 cc, Ultra         |
| 24E035               | EM-DRIVE, 60 cc, Lithium EP-1  |
| 24E036               | EM-DRIVE, 120 cc, Lithium EP-2 |
| 24E037               | EM-DRIVE, 120 cc, Construction |
| 24E038               | EM-DRIVE, 120 cc, Bearing      |
| 24E039               | EM-DRIVE, 120 cc, Milling      |
| 24E040               | EM-DRIVE, 120 cc, Food         |
| 24E041               | EM-DRIVE, 120 cc, Synthetic    |
| 24E042               | EM-DRIVE, 120 cc, Ultra        |
| 24E043               | EM-DRIVE, 120 cc, Lithium EP-1 |
| 24E044               | EM-DRIVE, 250 cc, Lithium EP-2 |
| 24E045               | EM-DRIVE, 250 cc, Construction |
| 24E046               | EM-DRIVE, 250 cc, Bearing      |
| 24E047               | EM-DRIVE, 250 cc, Milling      |
| 24E048               | EM-DRIVE, 250 cc, Food         |
| 24E049               | EM-DRIVE, 250 cc, Synthetic    |
| 24E050               | EM-DRIVE, 250 cc, Ultra        |
| 24E051               | EM-DRIVE, 250 cc, Lithium EP-1 |
| EM-XP Lubricators    |                                |
| 24E054               | EM-XP 60 cc, Lithium EP-2      |
| 24E055               | EM-XP 60 cc, Construction      |
| 24E056               | EM-XP 60 cc, Bearing           |
| 24E057               | EM-XP 60 cc, Milling           |
| 24E058               | EM-XP 60 cc, Food              |
| 24E059               | EM-XP 60 cc, Synthetic         |
| 24E060               | EM-XP 60 cc, Ultra             |
| 24E061               | EM-XP 60 cc, Lithium EP-1      |
| 24E062               | EM-XP 120 cc, Lithium EP-2     |
| 24E063               | EM-XP 120 cc, Construction     |
| 24E064               | EM-XP 120 cc, Bearing          |
| 24E065               | EM-XP 120 cc, Milling          |
| 24E066               | EM-XP 120 cc, Food             |
| 24E067               | EM-XP 120 cc, Synthetic        |
| 24E068               | EM-XP 120 cc, Ultra            |
| 24E069               | EM-XP 120 cc, Lithium EP-1     |
| 24E070               | EM-XP 250 cc, Lithium EP-2     |
| 24E071               | EM-XP 250 cc, Construction     |
| 24E072               | EM-XP 250 cc, Bearing          |
| 24E073               | EM-XP 250 cc, Milling          |

|        |                            |
|--------|----------------------------|
| 24E074 | EM-XP 250 cc, Food         |
| 24E075 | EM-XP, 250 cc, Synthetic   |
| 24E076 | EM-XP, 250 cc, Ultra       |
| 24E077 | EM-XP 250 cc, Lithium EP-1 |



# Single Point Lubricators

## Single Series™

### EM-XC Lubricators

|        |                              |
|--------|------------------------------|
| 24E080 | EM-XC 60 cc, Lithium EP-2    |
| 24E081 | EM-XC 60 cc, Construction    |
| 24E082 | EM-XC 60 cc, Bearing         |
| 24E083 | EM-XC 60 cc, Milling         |
| 24E084 | EM-XC 60 cc, Food            |
| 24E085 | EM-XC 60 cc, Synthetic       |
| 24E086 | EM-XC 60 cc, Ultra           |
| 24E087 | EM-XC 60 cc, Lithium EP-1    |
| 24E088 | EM-XC 120 cc, Lithium EP-2   |
| 24E089 | EM-XC 120 cc, Construction   |
| 24E090 | EM-XC 120 cc, Bearing        |
| 24E091 | EM-XC 120 cc, Milling        |
| 24E092 | EM-XC 120 cc, Food           |
| 24E093 | EM-XC 120 cc, Synthetic      |
| 24E094 | EM-XC 120 cc, Ultra          |
| 24E095 | EM-XC 120 cc, Lithium EP-1   |
| 24E096 | EM-XC 250 cc, Lithium EP-2   |
| 24E097 | EM-XC 250 cc, Construction   |
| 24E098 | EM-XC 250 cc, Bearing        |
| 24E099 | EM-XC 250 cc, Milling        |
| 24E100 | EM-XC 250 cc, Food           |
| 24E101 | EM-XC 250 cc, Synthetic      |
| 24E102 | EM-XC 250 cc, Ultra          |
| 24E103 | EM-XC 250 cc, Lithium EP-1   |
| 24E582 | Refill, 60 cc, Lithium EP-2  |
| 24E583 | Refill, 60 cc, Construction  |
| 24E584 | Refill, 60 cc, Bearing       |
| 24E585 | Refill, 60 cc, Milling       |
| 24E586 | Refill, 60 cc, Food          |
| 24E587 | Refill, 60 cc, Synthetic     |
| 24E588 | Refill, 60 cc, Ultra         |
| 24E589 | Refill, 60 cc, Lithium EP-1  |
| 24E590 | Refill, 120 cc, Lithium EP-2 |
| 24E591 | Refill, 120 cc, Construction |
| 24E592 | Refill, 120 cc, Bearing      |
| 24E593 | Refill, 120 cc, Milling      |
| 24E594 | Refill, 120 cc, Food         |
| 24E595 | Refill, 120 cc, Synthetic    |
| 24E596 | Refill, 120 cc, Ultra        |
| 24E597 | Refill, 120 cc, Lithium EP-1 |
| 24E598 | Refill, 250 cc, Lithium EP-2 |
| 24E599 | Refill, 250 cc, Construction |

|        |                              |
|--------|------------------------------|
| 24E600 | Refill, 250 cc, Bearing      |
| 24E601 | Refill, 250 cc, Milling      |
| 24E602 | Refill, 250 cc, Food         |
| 24E603 | Refill, 250 cc, Synthetic    |
| 24E604 | Refill, 250 cc, Ultra        |
| 24E605 | Refill, 250 cc, Lithium EP-1 |



# Single Point Lubricators

## Single Series™

### Mounting Hardware Ordering Information

| Model                                                                   | EM series | EC-120 | EP-120 |                                                    |
|-------------------------------------------------------------------------|-----------|--------|--------|----------------------------------------------------|
| 124086                                                                  | X         | X      | X      | Clip, Support, EM                                  |
| 124087                                                                  | X         | X      | X      | Bracket, Wall, Lubricator                          |
| 124088                                                                  |           | X      | X      | Fitting, Insert, 1/4 inch m x 1/4 inch f           |
| 124094                                                                  | X         | X      | X      | Bracket, Mounting, Small                           |
| 124095                                                                  | X         | X      | X      | Bracket, Mounting, Medium                          |
| 124096                                                                  | X         |        |        | Bracket, Mounting, Large                           |
| 124097                                                                  | X         | X      | X      | Bracket, Mounting, Flat                            |
| 124098                                                                  | X         | X      | X      | Bracket, Mounting, L                               |
| 124099                                                                  | X         | X      | X      | Bracket, Mounting, Bulkhead                        |
| 124100                                                                  | X         | X      | X      | Clamp, Beam, 1 inch (25.4 mm)                      |
| 124101                                                                  | X         | X      | X      | Bracket, Dual Unit                                 |
| 124105                                                                  | X         |        |        | Adapter, 1/4 fnpt x 1/4 mnpt                       |
| 124106                                                                  | X         |        |        | Adapter, 1/4 fnpt x 1/8 mnpt                       |
| <b>Brushes</b>                                                          |           |        |        |                                                    |
| 124089                                                                  | X         | X      | X      | Brush, Pighair, 1/4 fnpt x 3/4                     |
| 124090                                                                  | X         | X      | X      | Brush, Oil, 1 x 1.5                                |
| 124091                                                                  | X         | X      | X      | Brush, Oil, 1 x 2.4                                |
| 124092                                                                  | X         | X      | X      | Brush, Oil, 1 x 4                                  |
| 124114                                                                  | X         | X      | X      | Brush, Nylon, 1/8 mnpt x 5/8                       |
| 124115                                                                  | X         | X      | X      | Brush, Nylon, 1/8 mnpt x 2                         |
| <b>Electric Motor (Device Being Lubricated) Drain Plug Replacements</b> |           |        |        |                                                    |
| 124107                                                                  | X         | X      | X      | Valve, Relief, 1/8 m 5 lb                          |
| 124108                                                                  | X         | X      | X      | Valve, Relief, 1/8 m 1 lb                          |
| <b>Vibration Isolation</b>                                              |           |        |        |                                                    |
| 124116                                                                  | X         |        |        | Kit, Accessory, Heavy Spring                       |
| <b>Water Protection</b>                                                 |           |        |        |                                                    |
| 124110                                                                  | X         |        |        | Cap, Wet, EM-Drive                                 |
| 124111                                                                  | X         |        |        | Cap, Protection, 60-120 cc                         |
| 124112                                                                  | X         |        |        | Cap, Protection, 250 cc                            |
| <b>Replacement Parts</b>                                                |           |        |        |                                                    |
| 124279                                                                  | X         |        |        | Harness, Cable, Power, EM-XP/XC                    |
| 123951                                                                  | X         |        |        | Motor, EM-XC                                       |
| 123950                                                                  | X         |        |        | Motor, EM-XP                                       |
| 123949                                                                  | X         |        |        | Motor, EM-Drive                                    |
| <b>Accessories</b>                                                      |           |        |        |                                                    |
| 124113                                                                  | X         | X      | X      | Applicator, Felt Chain, 2 x .5                     |
| 124102                                                                  | X         | X      | X      | Oil Throttle Check Valve (1/4 inch m x 1/4 inch f) |
| 124109                                                                  | X         | X      | X      | Kit, Accessory, Purge                              |
| 124119                                                                  | X         |        |        | Paddle, Lube, Open Gear                            |
| 124304                                                                  |           | X      | X      | Explosive Atmospheres Grounding Clamp              |



124086



124087



124088



124095



124098



124099



124100



124101



124106



124089



124111



124090



124114



124116



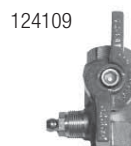
124119



124115



124113



124109

# Single Line Resistive

## Thrif-T Luber®

### Simple Solutions to Tight Spaces and Budgets

- Fast payback—easily pays for itself!
- Easy system design and modification
- Full range of metering amounts for lubricating almost any machine
- Available in three types and ten flow ranges to meet lube requirements
- Quality sintered bronze filters won't shred or clog like felt filters

### Typical Applications

- Simple time and flow metering system; ideal for small to medium-sized lathes or grinders

### Typical Fluids Handled

- Oil

### Technical Specifications

|                         |                          |
|-------------------------|--------------------------|
| Cracking Pressure ..... | 2 psi (0.1 bar)          |
| Maximum Pressure .....  | 150 psi (10 bar)         |
| Filter Rating .....     | 40 micron                |
| Orifice Type A .....    | Direct to bearing        |
| Orifice Type B .....    | Manifold                 |
| Orifice Type C .....    | Direct to bearing or Tee |



564020



564034

*Quality sintered bronze filters won't shred or clog like felt filters*

### Ordering Information

| Thrif-T Luber - Type A Orifice |          |
|--------------------------------|----------|
| 564019                         | TL0A-0   |
| 564020                         | TL0A-1   |
| 564021                         | TL0A-2   |
| 564022                         | TL0A-3   |
| 564023                         | TL0A-4   |
| 564024                         | TL0A-5   |
| 564025                         | TL0A-2/0 |
| 564026                         | TL0A-3/0 |
| 564027                         | TL0A-4/0 |
| 564028                         | TL0A-5/0 |
| Thrif-T Luber - Type B Orifice |          |
| 564038                         | TLOB-0   |
| 564039                         | TLOB-1   |
| 564040                         | TLOB-2   |
| 564041                         | TLOB-3   |
| 564042                         | TLOB-4   |
| 564043                         | TLOB-5   |
| 564044                         | TLOB-2/0 |
| 564045                         | TLOB-3/0 |
| 564046                         | TLOB-4/0 |
| 564047                         | TLOB-5/0 |
| Thrif-T Luber - Type C Orifice |          |
| 564029                         | TLOC-0   |
| 564030                         | TLOC-1   |
| 564031                         | TLOC-2   |

| Thrif-T Luber - Type C Orifice |                                                          |
|--------------------------------|----------------------------------------------------------|
| 564032                         | TLOC-3                                                   |
| 564033                         | TLOC-4                                                   |
| 564034                         | TLOC-5                                                   |
| 564035                         | TLOC-2/0                                                 |
| 564036                         | TLOC-3/0                                                 |
| Thrif-T Luber Hardware         |                                                          |
| 561217                         | TLMB-04 - 4-Port Manifold Bar                            |
| 561218                         | TLMB-06 - 6-Port Manifold Bar                            |
| 561219                         | TLMB-08 - 8-Port Manifold Bar                            |
| 561220                         | TLMB-10 - 10-Port Manifold Bar                           |
| 561215                         | TLTF-00 - Tee                                            |
| 561216                         | TLAB-00 - Anchor Block                                   |
| 558220                         | TLBF-00 - Bearing Fitting                                |
| 558189                         | TLCN-00 - Compression Nut                                |
| 558156                         | TLTC-01 - Tube Clip, 1-Tube                              |
| 558157                         | TLTC-02 - Tube Clip, 2-Tubes                             |
| 558158                         | TLTC-03 - Tube Clip, 3-Tubes                             |
| 558159                         | TLTC-04 - Tube Clip, 4-Tubes                             |
| Thrif-T Luber Accessories      |                                                          |
| 564053                         | TLLF-00 - In-Line Filter                                 |
| 558296                         | TLPG-00 - Pressure Gauge                                 |
| 561143                         | TLTP-25 - 5/32 inches (3.96 mm) Tubing, 25 feet (762 cm) |
| 563162                         | Relief Valve - 150 psi (10 bar)                          |
| 556677                         | Reservoir Plug                                           |

# Single Line Parallel

## Piston Distributors

### Features and Benefits

- Piston distributor style single line meters known world-wide for fast, simple installation
- Seven different groups with two different mounting types, thread to manifold or cast manifold to serve a broad range of lube point requirements
- Metering nipples can be changed to fine-tune your dispense volumes

### Typical Applications

- Compact metering system with a wide range of outputs; ideal for medium-sized cutting machine tools

### Typical Fluids Handled

- Oil - 32 to 2,000 cst
- Fluid grease up to NLGI #00

### Technical Specifications

|                         | 3400 Series                                                    | 3410 Series                                                    | 3500 Series                                                 | 3510 Series                                                 | 3900 Series                                                  | 3910 Series                                                 |
|-------------------------|----------------------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------|
| Oil/Fluid Grease        | Oil                                                            | Fluid grease                                                   | Oil                                                         | Fluid grease                                                | Oil                                                          | Fluid grease                                                |
| Reset Pressure          | 150 psi (10 bar)                                               | 150 psi (10 bar)                                               | 150 psi (10 bar)                                            | 150 psi (10 bar)                                            | 150 psi (10 bar)                                             | 150 psi (10 bar)                                            |
| Max. Operating Pressure | 650 psi (45 bar)                                               | 650 psi (45 bar)                                               | 650 psi (45 bar)                                            | 650 psi (45 bar)                                            | 650 psi (45 bar)                                             | 650 psi (45 bar)                                            |
| Output Range            | .0006 – .009 in <sup>3</sup><br>(0.01 – 0.16 cm <sup>3</sup> ) | .0006 – .006 in <sup>3</sup><br>(0.01 – 0.10 cm <sup>3</sup> ) | .006 – .036 in <sup>3</sup><br>(0.1 – 0.6 cm <sup>3</sup> ) | .006 – .018 in <sup>3</sup><br>(0.1 – 0.3 cm <sup>3</sup> ) | 0.012 – 0.09 in <sup>3</sup><br>(0.2 – 1.5 cm <sup>3</sup> ) | .006 – .018 in <sup>3</sup><br>(0.1 – 0.3 cm <sup>3</sup> ) |
| Metering Nipple Options | 5                                                              | 4                                                              | 4                                                           | 3                                                           | 5                                                            | 3                                                           |
| Cast Manifold Outlets   | 2, 3, or 5                                                     | 2, 3, or 5                                                     | 2, 3, or 5                                                  | 2, 3, or 5                                                  | 2 or 3                                                       | 2 or 3                                                      |

### Ordering Information

| 3400 Series Single Point Piston Distributors - Oil          |                         |
|-------------------------------------------------------------|-------------------------|
| 558306                                                      | 0.01 cc Output, M8 x 1  |
| 558307                                                      | 0.03 cc Output, M8 x 1  |
| 558308                                                      | 0.06 cc Output, M8 x 1  |
| 558309                                                      | 0.10 cc Output, M8 x 1  |
| 558310                                                      | 0.16 cc Output, M8 x 1  |
| 122804                                                      | 0.01 cc Output, M10 x 1 |
| 122805                                                      | 0.03 cc Output, M10 x 1 |
| 122806                                                      | 0.06 cc Output, M10 x 1 |
| 122807                                                      | 0.10 cc Output, M10 x 1 |
| 122808                                                      | 0.16 cc Output, M10 x 1 |
| 3410 Series Single Point Piston Distributors - Fluid Grease |                         |
| 121654                                                      | 0.01 cc Output, M8 x 1  |
| 121655                                                      | 0.03 cc Output, M8 x 1  |
| 121656                                                      | 0.06 cc Output, M8 x 1  |
| 121657                                                      | 0.10 cc Output, M8 x 1  |
| 122809                                                      | 0.01 cc Output, M10 x 1 |
| 122810                                                      | 0.03 cc Output, M10 x 1 |
| 122811                                                      | 0.06 cc Output, M10 x 1 |
| 122812                                                      | 0.10 cc Output, M10 x 1 |

| 3400/3410 Series Bar Manifolds                |                  |
|-----------------------------------------------|------------------|
| Inlet/Outlet, use with M8 Piston Distributors |                  |
| 15X624                                        | Tee M8/M8-1 Port |
| 15X667                                        | M10/M8-2 Port    |
| 15X668                                        | M10/M8-3 Port    |
| 15X669                                        | M10/M8-4 Port    |
| 15X670                                        | M10/M8-5 Port    |
| 15X671                                        | M10/M8-6 Port    |
| 15X672                                        | M10/M8-7 Port    |
| 15X673                                        | M10/M8-8 Port    |
| 15X674                                        | M10/M8-10 Port   |
| 15X683                                        | M14/M8-2 Port    |
| 15X684                                        | M14/M8-3 Port    |
| 15X685                                        | M14/M8-4 Port    |
| 15X686                                        | M14/M8-5 Port    |
| 15X687                                        | M14/M8-6 Port    |
| 15X688                                        | M14/M8-7 Port    |
| 15X689                                        | M14/M8-8 Port    |
| 15X690                                        | M14/M8-10 Port   |



# Single Line Parallel

## Piston Distributors

### Ordering Information

#### 3500 Series Single Point Piston Distributors - Oil

|        |                         |
|--------|-------------------------|
| 121658 | 0.10 cc Output, M10 x 1 |
| 121659 | 0.20 cc Output, M10 x 1 |
| 121660 | 0.40 cc Output, M10 x 1 |
| 121661 | 0.60 cc Output, M10 x 1 |
| 122813 | 0.10 cc Output, M12 x 1 |
| 122814 | 0.20 cc Output, M12 x 1 |
| 122815 | 0.40 cc Output, M12 x 1 |
| 122816 | 0.60 cc Output, M12 x 1 |

#### 3510 Series Single Point Piston Distributors - Fluid Grease

|        |                         |
|--------|-------------------------|
| 121662 | 0.10 cc Output, M10 x 1 |
| 121663 | 0.20 cc Output, M10 x 1 |
| 121664 | 0.30 cc Output, M10 x 1 |
| 122817 | 0.10 cc Output, M12 x 1 |
| 122818 | 0.20 cc Output, M12 x 1 |
| 122819 | 0.30 cc Output, M12 x 1 |

#### 3900 Series Single Point Piston Distributors - Oil

|        |                           |
|--------|---------------------------|
| 122820 | 0.20 cc Output, M12 x 1   |
| 122821 | 0.40 cc Output, M12 x 1   |
| 122822 | 0.60 cc Output, M12 x 1   |
| 122823 | 1.00 cc Output, M12 x 1   |
| 122824 | 1.50 cc Output, M12 x 1   |
| 121665 | 0.20 cc Output, M14 x 1.5 |
| 121666 | 0.40 cc Output, M14 x 1.5 |
| 121667 | 0.60 cc Output, M14 x 1.5 |
| 121668 | 1.00 cc Output, M14 x 1.5 |
| 121669 | 1.50 cc Output, M14 x 1.5 |

#### 3910 Series Single Point Piston Distributors - Fluid Grease

|        |                           |
|--------|---------------------------|
| 122825 | 0.10 cc Output, M12 x 1   |
| 122826 | 0.20 cc Output, M12 x 1   |
| 122827 | 0.30 cc Output, M12 x 1   |
| 121670 | 0.10 cc Output, M14 x 1.5 |
| 121671 | 0.20 cc Output, M14 x 1.5 |
| 121672 | 0.30 cc Output, M14 x 1.5 |

#### 3500/3510 Series Bar Manifolds

Inlet/Outlet, use with M10 Piston Distributors

|        |                    |
|--------|--------------------|
| 15X625 | Tee M10/M10-1 Port |
| 15X675 | M10/M10-2 Port     |
| 15X676 | M10/M10-3 Port     |
| 15X677 | M10/M10-4 Port     |
| 15X678 | M10/M10-5 Port     |
| 15X679 | M10/M10-6 Port     |
| 15X680 | M10/M10-7 Port     |
| 15X681 | M10/M10-8 Port     |
| 15X682 | M10/M10-10 Port    |
| 15X691 | M14/M10-2 Port     |
| 15X692 | M14/M10-3 Port     |
| 15X693 | M14/M10-4 Port     |
| 15X694 | M14/M10-5 Port     |
| 15X695 | M14/M10-6 Port     |
| 15X696 | M14/M10-7 Port     |
| 15X697 | M14/M10-8 Port     |
| 15X698 | M14/M10-10 Port    |

#### 3900/3910 Series Bar Manifolds

Inlet/Outlet, use with M14 Piston Distributors

|        |                    |
|--------|--------------------|
| 15X626 | Tee M14/M14-1 Port |
| 15X699 | M14/M14-2 Port     |
| 15X700 | M14/M14-3 Port     |
| 15X701 | M14/M14-4 Port     |
| 15X702 | M14/M14-5 Port     |
| 15X703 | M14/M14-6 Port     |
| 15X704 | M14/M14-7 Port     |
| 15X705 | M14/M14-8 Port     |
| 15X706 | M14/M14-10 Port    |

# Single Line Parallel

## Piston Distributors

### Ordering Information

| 3400 Cast Manifolds   |                                                            |
|-----------------------|------------------------------------------------------------|
| 122841                | 2 Outlets, Oil PD, Complete w/Red Plastic Cover            |
| 122861                | 3 Outlets, Oil PD, Complete w/Red Plastic Cover            |
| 122862                | 5 Outlets, Oil PD, Complete w/Red Plastic Cover            |
| 3400 Metering Nipples |                                                            |
| 122989                | 0.01 cc (#1)                                               |
| 558311                | 0.03 cc (#2)                                               |
| 558312                | 0.06 cc (#3)                                               |
| 558313                | 0.10 cc (#4)                                               |
| 558314                | 0.16 cc (#5)                                               |
| 3410 Cast Manifolds   |                                                            |
| 122863                | 2 Outlets, Fluid Grease PD, Complete w/White Plastic Cover |
| 122864                | 3 Outlets, Fluid Grease PD, Complete w/White Plastic Cover |
| 122865                | 5 Outlets, Fluid Grease PD, Complete w/White Plastic Cover |
| 3410 Metering Nipples |                                                            |
| 122990                | 0.01 cc (#1)                                               |
| 558324                | 0.03 cc (#2)                                               |
| 558325                | 0.06 cc (#3)                                               |
| 558326                | 0.10 cc (#4)                                               |
| 3500 Cast Manifolds   |                                                            |
| 122866                | 2 Outlets, Oil PD, Complete w/Red Plastic Cover            |
| 122868                | 3 Outlets, Oil PD, Complete w/Red Plastic Cover            |
| 122869                | 5 Outlets, Oil PD, Complete w/Red Plastic Cover            |
| 3500 Metering Nipples |                                                            |
| 558315                | 0.10 cc (#4)                                               |
| 558316                | 0.20 cc (#5)                                               |
| 558317                | 0.40 cc (#6)                                               |
| 558318                | 0.60 cc (#7)                                               |
| 3510 Cast Manifolds   |                                                            |
| 122885                | 2 Outlets, Fluid Grease PD, Complete w/White Plastic Cover |
| 122886                | 3 Outlets, Fluid Grease PD, Complete w/White Plastic Cover |
| 122887                | 5 Outlets, Fluid Grease PD, Complete w/White Plastic Cover |
| 3510 Metering Nipples |                                                            |
| 558327                | 0.10 cc (#4)                                               |
| 558328                | 0.20 cc (#5)                                               |
| 558329                | 0.30 cc (#6)                                               |

| 3900 Cast Manifolds                                  |                                                            |
|------------------------------------------------------|------------------------------------------------------------|
| 122888                                               | 2 Outlets, Oil PD, Complete w/Red Plastic Cover            |
| 122889                                               | 3 Outlets, Oil PD, Complete w/Red Plastic Cover            |
| 3900 Metering Nipples                                |                                                            |
| 558319                                               | 0.20 cc (#5)                                               |
| 558320                                               | 0.40 cc (#6)                                               |
| 558321                                               | 0.60 cc (#7)                                               |
| 558322                                               | 1.00 cc (#8)                                               |
| 558323                                               | 1.50 cc (#9)                                               |
| 3910 Cast Manifolds                                  |                                                            |
| 122890                                               | 2 Outlets, Fluid Grease PD, Complete w/White Plastic Cover |
| 122891                                               | 3 Outlets, Fluid Grease PD, Complete w/White Plastic Cover |
| 3910 Metering Nipples                                |                                                            |
| 558330                                               | 0.10 cc (#4)                                               |
| 558331                                               | 0.20 cc (#5)                                               |
| 558332                                               | 0.30 cc (#6)                                               |
| Direct-to-Bearing Piston Distributors - For Oil Only |                                                            |
| 122789                                               | Direct Type F (M14/D4/0.03 cc)                             |
| 122790                                               | Direct Type F (M14/D4/0.06 cc)                             |
| 122791                                               | Direct Type F (M14/D4/0.10 cc)                             |
| 122792                                               | Direct Type F (M14/D6/0.03 cc)                             |
| 122793                                               | Direct Type F (M14/D6/0.06 cc)                             |
| 122794                                               | Direct Type F (M14/D6/0.10 cc)                             |
| 122795                                               | Direct Type GB (D10.35/0.03 cc)                            |
| 122796                                               | Direct Type GB (D10.35/0.06 cc)                            |
| 122797                                               | Direct Type GB (D10.35/0.10 cc)                            |
| 122798                                               | Direct Type GC (D13.5/0.10 cc)                             |
| 122799                                               | Direct Type GC (D13.5/0.20 cc)                             |
| 122800                                               | Direct Type GC (D13.5/0.30 cc)                             |
| 122801                                               | Direct Type GC (D13.5/0.40 cc)                             |

Refer to Graco manual #313759 for more details on Piston Distributors.

# Single Line Parallel

## LubriSystem® Injectors

### Features and Benefits

- Two piece compression fitting included for fast, easy installation
- Bundled system tubing available for easy installation
- Threaded outlet allows for manifold or direct-to-bearing mounting
- Adjustable output volume

### Typical Applications

- Designed for frequent, medium-pressure metering; ideal for medium-sized forming or injection-molding machines. Includes system pressure monitoring

### Typical Fluids Handled

- Oil to NLGI #0

### Technical Specifications

|                                          |                                                               |
|------------------------------------------|---------------------------------------------------------------|
| Operating Pressure (max).....            | 2,500 psi (173 bar)                                           |
| Output Range .....                       | 0.002 – 0.26 in <sup>3</sup> (0.033 – 0.426 cm <sup>3</sup> ) |
| Minimum Pressure to Fire Injectors ..... | .450 psi (31 bar)                                             |
| Reset Pressure .....                     | .160 psi (11 bar)                                             |
| Minimum On-Time .....                    | 30 seconds                                                    |
| Minimum Off-Time .....                   | 3 minutes                                                     |



### Ordering Information

| Injectors                             |                                           |                    |                                |                                   |
|---------------------------------------|-------------------------------------------|--------------------|--------------------------------|-----------------------------------|
| Size #                                | Output cu.in. (cm <sup>3</sup> )          | Adjustment Spacers | Aluminum Alloy Injectors (Oil) | Aluminum Alloy Injectors (Grease) |
|                                       |                                           |                    | Part No.                       | Part No.                          |
| 0                                     | .002 (0.033)                              | —                  | 563628                         | 563627                            |
| 1                                     | .005 (0.082)                              | 1                  | 563630                         | 563629                            |
| 2                                     | .009 (0.148)                              | 2                  | 563632                         | 563631                            |
| 3                                     | .012 (0.197)                              | 3                  | 563634                         | 563633                            |
| 4                                     | .020 (0.328)                              | 4                  | 563636                         | 563635                            |
| 8                                     | .026 (0.426)                              | 4                  | 563638                         | 563637                            |
| Spare O-ring                          |                                           |                    | 556587                         | 556586                            |
| LubriSystem Manifolds and Accessories |                                           |                    |                                |                                   |
| 563769                                | Injector cycle Indicator                  |                    |                                |                                   |
| 15M038                                | Injector port plugs for aluminum manifold |                    |                                |                                   |
| 555808                                | End of line manifold plugs                |                    |                                |                                   |
| 557901                                | Manifold Injector Outlet Plug             |                    |                                |                                   |
| 557898                                | Aluminum output adjustment spacer         |                    |                                |                                   |

# Single Line Parallel

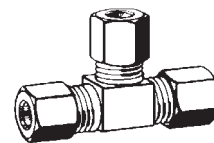
## LubriSystem® Accessories

### Ordering Information

| Heavy Wall Lube Lines (tubing)         |                                                                                                                                                                                       |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 561132                                 | Main Line (pump to manifold): 5/16 inches OD x .059 inches wall (7.9 mm x 1.5 mm), black, 60 feet (18.3 m) Burst Pressure Min. - 1,500 psi (103 bar) at 75° F (24° C)                 |
| 561131                                 | Point Distribution Line (injector to lube point): 3/16 in OD x .044 inches wall (4.8 mm x 1.1mm), black, 60 feet (18.3 m) Burst Pressure Min. - 2,000 psi (138 bar ) at 75° F (24° C) |
| Self-Aligning Ferrules And Nuts        |                                                                                                                                                                                       |
| 556660                                 | Brass Nut, w/captive ferrule, 3/16 inch (4.8 mm) tube                                                                                                                                 |
| 556666                                 | Brass Nut, w/captive ferrule, 5/16 inch (7.9 mm) tube                                                                                                                                 |
| 556651                                 | Stainless Steel Nut, 1/8 inch (3.2 mm) tube                                                                                                                                           |
| 556654                                 | Stainless Steel Ferrule, 1/8 inch (3.2 mm) tube                                                                                                                                       |
| 557963                                 | Brass Inserts for 5/16 inch (7.9 mm) tubing (pack of 20)                                                                                                                              |
| Tees And Unions                        |                                                                                                                                                                                       |
| 556636                                 | Male Branch Tee, 5/16 inch (7.94 mm) tube, 1/8 inch (3.2 mm) NPTF Brass                                                                                                               |
| 556637                                 | Union Tee, 5/16 (7.94 mm) tube, Brass                                                                                                                                                 |
| 556647                                 | Union, 3/16 (4.8 mm) tube, Brass                                                                                                                                                      |
| 556648                                 | Union, 5/16 (4.8 mm) tube, Brass                                                                                                                                                      |
| Brass Connectors                       |                                                                                                                                                                                       |
| 556642                                 | Female Connector, 3/16 inch (4.8 mm) tube x 1/8 inch (3.2 mm) NPTF                                                                                                                    |
| 556643                                 | Female Connector, 5/16 inch (7.94 mm) tube x 1/8 inch (3.2 mm) NPTF                                                                                                                   |
| 556644                                 | Male Connector, 3/16 inch (4.8 mm) tube x 1/8 inch (3.2 mm) NPTF                                                                                                                      |
| 556645                                 | Male Connector, 5/16 inch (7.94 mm) tube x 1/8 inch (3.2 mm) NPTF                                                                                                                     |
| 556646                                 | Male Connector, 5/16 inch (7.94 mm) tube x 1/4 inch (6.35 mm) NPTF                                                                                                                    |
| Tubing Straps                          |                                                                                                                                                                                       |
| 563770                                 | 100 pieces, 11-1/2 inch (292 mm)                                                                                                                                                      |
| Steel Pipe and Adapter Elbows          |                                                                                                                                                                                       |
| 15K740                                 | 1/4 inch-28 inch / 6.35 mm-711 cm (male) x 1/8 inch (3.2 mm) NPTF (female), 90° Adapter Elbow                                                                                         |
| 15K783                                 | 90° Street Elbow, 1/8 inch (3.2 mm) NPTF                                                                                                                                              |
| 557395                                 | 45° Street Elbow, 1/8 inch (3.2 mm) NPTF                                                                                                                                              |
| Brass Male Tube Elbows                 |                                                                                                                                                                                       |
| 556638                                 | 3/16 inch (4.8 mm) tube x 1/8 inch (3.2 mm) NPTF                                                                                                                                      |
| 556639                                 | 5/16 inch (7.94 mm) tube x 1/8 inch (3.2 mm) NPTF                                                                                                                                     |
| 556640                                 | 5/16 inch (7.94 mm) tube x 1/4 inch (6.35 mm) NPTF                                                                                                                                    |
| Harness Clamps and Brackets            |                                                                                                                                                                                       |
| 557943                                 | 5/16 inch (7.94 mm) diameter                                                                                                                                                          |
| 557946                                 | 3/8 inch (9.53 mm) diameter                                                                                                                                                           |
| 557944                                 | 7/16 inch (11.11 mm) diameter                                                                                                                                                         |
| 557947                                 | 1/2 inch (12.7 mm) diameter                                                                                                                                                           |
| 557945                                 | 5/8 inch (15.22 mm) diameter                                                                                                                                                          |
| Miscellaneous                          |                                                                                                                                                                                       |
| 561113                                 | Air Line Restrictor, 1/2 inch x 1/8 inch (12.7 mm x 3.2 mm), M to F Pipe                                                                                                              |
| 561114                                 | Air Line Restrictor, 3/8 inch x 1/8 inch (9.53 mm x 3.2 mm), M to F Pipe                                                                                                              |
| 557374                                 | Trabon Style Fill Stud                                                                                                                                                                |
| 557880                                 | Grease Jockey Style Fill Stud                                                                                                                                                         |
| Fill Couplers, mate w/above fill studs |                                                                                                                                                                                       |
| 558906                                 | Coupler for use with 557374                                                                                                                                                           |
| 557877                                 | Coupler for use with 557880                                                                                                                                                           |



561132



556637



556643



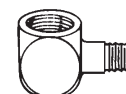
563770



15K783



556638



15K740



561132

# Single Line Parallel

## GL-32™ and GL-43™ Injector

### Features and Benefits

- Accurate, reliable and adjustable lubrication for each lube point. Systems are easy to design, fast to set up and allow you to add or subtract lube points without having to redesign your lubrication system
- Versatile high performance—works with oil and grease grades to NLGI #2
- All injectors come standard with fluoroelastomer seals for use with synthetic lubricants and high temperature applications—up to 350° F (176° C)

### Typical Applications

- In plant machinery, mobile equipment and anywhere adjustable lubrication output is desired

### Typical Fluids Handled

- Oil (10 weight minimum) and grease up to NLGI #2

### Technical Specifications

#### Grease

|                                      |                                                          |
|--------------------------------------|----------------------------------------------------------|
| Maximum Operating Pressure           | 3,500 psi (241 bar)                                      |
| Minimum Operating Pressure           | 1,200 psi (83 bar)                                       |
| Typical Operating Pressure           | 1,500 psi (103 bar)                                      |
| Reset Pressure                       | 200 psi (13.7 bar)                                       |
| Output Volume Per Cycle (adjustable) | 0.001–0.008 in <sup>3</sup> (0.02–0.13 cm <sup>3</sup> ) |
| Maximum Temperature Rating           | 350° F (176° C)                                          |
| Cycle Indication                     | Visual Pin                                               |
| Instruction Manual                   | 313798                                                   |

#### Oil

|                                      |                                                          |
|--------------------------------------|----------------------------------------------------------|
| Maximum Operating Pressure           | 1,000 psi (69 bar)                                       |
| Minimum Operating Pressure           | 750 psi (52 bar)                                         |
| Typical Operating Pressure           | 850 psi (59 bar)                                         |
| Reset Pressure                       | 150 psi (10 bar)                                         |
| Output Volume Per Cycle (adjustable) | 0.001–0.008 in <sup>3</sup> (0.02–0.13 cm <sup>3</sup> ) |
| Maximum Temperature Rating           | 350° F (176° C)                                          |
| Cycle Indication                     | Visual Pin                                               |
| Instruction Manual                   | 313798                                                   |

### Ordering Information (See graco.com for part numbers with metric threads)

| GL-32 Carbon Steel Grease        |                                                            |
|----------------------------------|------------------------------------------------------------|
| 24A920                           | Replacement Injector                                       |
| 24A921                           | 1-Injector Manifold                                        |
| 24A922                           | 2-Injector Manifold                                        |
| 24A923                           | 3-Injector Manifold                                        |
| 24A924                           | 4-Injector Manifold                                        |
| 24A919                           | Stand-Alone Injector                                       |
| 24B360                           | Repair Kit                                                 |
| 24B677                           | Injector Outlet Replacement Kit (nut, ferrule and adapter) |
| GL-32 304 Stainless Steel Grease |                                                            |
| 24E390                           | Replacement Injector                                       |
| 24E391                           | 1-Injector Manifold                                        |
| 24E392                           | 2-Injector Manifold                                        |
| 24E393                           | 3-Injector Manifold                                        |

| 24E394                 | 4-Injector Manifold                                        |
|------------------------|------------------------------------------------------------|
| 24E389                 | Stand-Alone Injector                                       |
| 24F944                 | Repair Kit                                                 |
| 24F943                 | Injector Outlet Replacement Kit (nut, ferrule and adapter) |
| GL-43 Carbon Steel Oil |                                                            |
| 24E245                 | Replacement Injector                                       |
| 24E241                 | 1-Injector Manifold                                        |
| 24E242                 | 2-Injector Manifold                                        |
| 24E243                 | 3-Injector Manifold                                        |
| 24E244                 | 4-Injector Manifold                                        |
| 24E240                 | Stand-Alone Injector                                       |
| 24F201                 | Repair Kit                                                 |
| 24B667                 | Injector Outlet Replacement Kit (nut, ferrule and adapter) |



24A923

# Single Line Parallel

## GL-1™ Injectors

### Features and Benefits

- Easy to change output volume in the field—no need to remove plumbing
- Innovative seal retention for long life
- Adjustable output to custom fit the system for each lube point
- Output from one or more injectors can be cross ported to another injector to increase output to a large bearing
- Visual indicator pin for quick and easy system diagnostics
- Zerk fitting for system diagnostic, trouble shooting and supply priming

### Typical Applications

Rugged, medium-pressure metering system for pumping grease; ideal for heavier-duty applications such as mobile mining vehicles, milling, cement batch plants or material processing equipment.

### Typical Fluids Handled

- Grease up to NLGI #2

### Technical Specifications

|                                    |                                   |
|------------------------------------|-----------------------------------|
| Reset Pressure .....               | 600 psi (41 bar)                  |
| Maximum Pressure .....             | 3,500 psi (241 bar)               |
| Suggested Operating Pressure ..... | 2,500 psi (172 bar)               |
| Minimum Operating Pressure .....   | 1,850 psi (128 bar)               |
| Output Range .....                 | 0.008 – 0.08 in3 (0.13 – 1.31 cc) |
| Number of Adjustment Turns .....   | 8                                 |
| Cycle Indicator .....              | Visual                            |

### Ordering Information

| GL Injectors and Manifold                    |                                     |
|----------------------------------------------|-------------------------------------|
| 114901                                       | GL-1 Injector, One Point            |
| 114902                                       | GL-1 Injector, Two Point            |
| 114903                                       | GL-1 Injector, Three Point          |
| 114904                                       | GL-1 Injector, Four Point           |
| 114905                                       | GL-1 Injector, Five Point           |
| 114909                                       | Replacement GL-1 Injector           |
| GL Injector Manifolds (no injector included) |                                     |
| 114911                                       | GL-1 Injector Manifold, One Point   |
| 114912                                       | GL-1 Injector Manifold, Two Point   |
| 114913                                       | GL-1 Injector Manifold, Three Point |
| 114914                                       | GL-1 Injector Manifold, Four Point  |
| 114915                                       | GL-1 Injector Manifold, Five Point  |
| GL Injector Accessories                      |                                     |
| 115119                                       | GL-1 Injector Cover Kit, Plastisol  |
| 115120                                       | GL-1 Injector Crossport Kit         |



114905

# Single Line Parallel

## GL-11™ Injectors

### Features and Benefits

- Adjustable output volumes to custom fit the system for each lube point
- Convenient top-mounted cycle pin indicator provides quick, at-a-glance confirmation that the injector is functioning properly
- Hex head adjustment for easy turning from most any orientation

### Typical Applications

Rugged, medium-pressure metering system for pumping grease; ideal for heavier-duty applications such as mobile mining vehicles, milling, cement batch plants or material processing equipment.

### Typical Fluids Handled

- Grease up to NLGI #2

### Technical Specifications

|                                    |                                                          |
|------------------------------------|----------------------------------------------------------|
| Reset Pressure .....               | 600 psi (41 bar)                                         |
| Maximum Pressure .....             | 3,500 psi (241 bar)                                      |
| Suggested Operating Pressure ..... | 2,500 psi (172 bar)                                      |
| Minimum Operating Pressure .....   | 1,000 psi (69 bar)                                       |
| Output Range .....                 | 0.05 – 0.5 in <sup>3</sup> (0.82 – 8.2 cm <sup>3</sup> ) |
| Number of Adjustment Turns .....   | 14                                                       |
| Cycle Indicator .....              | Visual                                                   |

### Ordering Information

| GL Injectors and Accessories |                           |
|------------------------------|---------------------------|
| 24A918                       | GL-11 Injector            |
| 24B359                       | GL-11 Injector Repair Kit |
| 114916                       | GL-11 Zerk and Cap Kit    |



24A918

# Series Progressive

## Trabon® USP Mono Block

### Features and Benefits

- Series progressive metering in a one piece block—no assembly required!
- Space efficient design with 6, 8, 10, 12, 14, or 16 outlets. Outlets can be combined to meet larger bearing needs
- Requires no special fittings, all fittings come with the valve block
- Built-in outlet check valves ensure accurate lube delivery every time
- Works with standard MSP magnetic and electronic proximity switch cycle indicators to provide positive assurance of a successful lube event
- Fluoroelastomer seals come standard, great for high temperature applications or synthetic lubricants

### Typical Applications

Mobile, industrial, food and beverage, wind, and many more

### Typical Fluids Handled

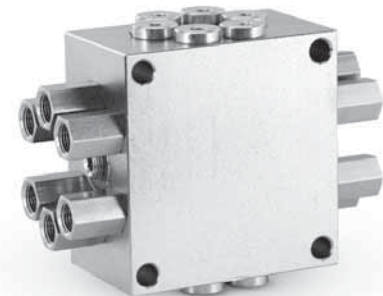
Oil or grease grades up to NLGI #2

### Technical Specifications

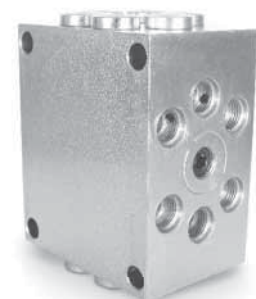
|                                                          |                                                        |
|----------------------------------------------------------|--------------------------------------------------------|
| Maximum Pressure, psi (bar)                              | 5,076 (350)                                            |
| Output Single Outlet, in <sup>3</sup> (cm <sup>3</sup> ) | 0.012 in <sup>3</sup> (.20 cm <sup>3</sup> )           |
| Cycle Indication                                         | Electronic proximity switch, magnetic visual indicator |
| Max Operating Temperature                                | 350° F (176° C)                                        |

### Ordering Information

| USP Valves w/Adapters        |                                      |
|------------------------------|--------------------------------------|
| 24E406                       | USP 6 Outlet Mono Block              |
| 24E407                       | USP 8 Outlet Mono Block              |
| 24E408                       | USP 10 Outlet Mono Block             |
| 24E409                       | USP 12 Outlet Mono Block             |
| 24E410                       | USP 14 Outlet Mono Block             |
| 24E411                       | USP 16 Outlet Mono Block             |
| USP Bare Blocks w/o Adapters |                                      |
| 24J331                       | USP 6 Outlet Mono Block              |
| 24J332                       | USP 8 Outlet Mono Block              |
| 24J333                       | USP 10 Outlet Mono Block             |
| 24J334                       | USP 12 Outlet Mono Block             |
| 24J335                       | USP 14 Outlet Mono Block             |
| 24J336                       | USP 16 Outlet Mono Block             |
| USP Accessories              |                                      |
| 24E857                       | Outlet Adapter and Seal              |
| 125011                       | Seal                                 |
| 24N007                       | Weld Bar for 6 and 8 Outlet Valves   |
| 24N008                       | Weld Bar for 10 and 12 Outlet Valves |
| 24N009                       | Weld Bar for 14 and 16 Outlet Valves |
| 24F467                       | Doubling Plug                        |



24E409



24J334



24E857

# Series Progressive

## Trabon® MD Divider Valve

### Features and Benefits

The Trabon MD Series is the most compact series progressive solution making it a perfect fit for tight spaced applications

- Available with 2, 3, 4, or 6 outlets
- Easy to install on new or existing equipment
- Use our cycle indicator pin models to provide positive assurance of a successful lube event
- Fluoroelastomer seals for high temperature applications or synthetic lubricants

### Typical Applications

- Industrial or mobile applications where space is at a premium

### Typical Fluids Handled

Oil or grease up to NLGI #2

### Technical Specifications

|                                                              |                                                                                                                         |
|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Material.....                                                | Steel                                                                                                                   |
| Pressure (max) .....                                         | 3,000 psi (207 bar)                                                                                                     |
| Net Weight (approx) .....                                    | 1 lb 8 oz (0.68 kg)                                                                                                     |
| Volume (Lubricant to cycle divider valve one complete cycle) |                                                                                                                         |
| MD-2.....                                                    | 0.040 in <sup>3</sup> (0.66 cm <sup>3</sup> ) each                                                                      |
| MD-3.....                                                    | 0.040 in <sup>3</sup> (0.66 cm <sup>3</sup> ) outlet 1 and 0.020 in <sup>3</sup> (0.33 cm <sup>3</sup> ) outlet 2 and 3 |
| MD-4.....                                                    | 0.020 in <sup>3</sup> (0.33 cm <sup>3</sup> ) each                                                                      |
| MD-6.....                                                    | 0.010 in <sup>3</sup> (0.16 cm <sup>3</sup> ) each                                                                      |
| Max Operating Temperature .....                              | 350° F (176° C)                                                                                                         |

|      | Output per Outlet, in <sup>3</sup> (cm <sup>3</sup> ) | Cycle Indication       |
|------|-------------------------------------------------------|------------------------|
| MD-2 | 0.04 (0.66)                                           | Cycle indicator switch |
| MD-3 | Outlet 1 - 0.04 (0.66)Outlet 2 and 3 - 0.02 (0.33)    |                        |
| MD-4 | 0.02 (0.33)                                           |                        |
| MD-6 | 0.01 (0.16)                                           | Not available          |

### Ordering Information

| MD Divider Valves |                                      |
|-------------------|--------------------------------------|
| 562656            | MD-2                                 |
| 562657            | MD-3                                 |
| 562658            | MD-4                                 |
| 562659            | MD-6                                 |
| 562653            | MD-2, Cycle Pin                      |
| 562654            | MD-3, Cycle Pin                      |
| 562655            | MD-4, Cycle Pin                      |
| 563270            | MD-2, Cycle Switch, Bracket Assembly |
| 563271            | MD-3, Cycle Switch, Bracket Assembly |
| 564356            | MD-4, Cycle Switch ,Bracket Assembly |
| MD Spare Parts    |                                      |
| 563555            | Cycle Indicator End Plug Assembly    |
| 556540            | Standard MD O-Ring                   |



562658

# Series Progressive

## Trabon® MJ Divider Valve

### Features and Benefits

The Trabon MJ series features a compact and easily customizable design that can be tailor fit to meet a variety of specific lube requirements. Capable of handling grease grades up to NLGI #1.

- Space efficient—from 6 to 16 points from one block assembly
- Built-in outlet check valves ensure accurate lube delivery, every time
- Alternate outlet on face of valves can be fitted with optional performance indicators, taking the guesswork out of troubleshooting
- Can be easily accessorized with magnetic and electronic proximity switch cycle indicators to provide positive assurance of a successful lube event

### Typical Applications

- Machine tools, textile, glass and can machinery, and mobile equipment

### Typical Fluids Handled

- Oil or Grease up to NLGI #1

### Technical Specifications

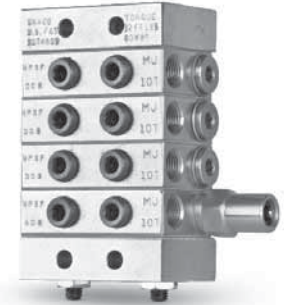
|                                    |                        |
|------------------------------------|------------------------|
| Material.....                      | Plated Steel           |
| Maximum Pressure .....             | 2,000 psi (137.89 bar) |
| Max Operating Temperature .....    | 200° F (93° C)         |
| Max Cycle Rate with Cycle Pin..... | 60 cycles/minute       |

|             | Output Twin Outlet, in³ (cm³) | Output Single Outlet, in³ (cm³) | Cycle Indication       |
|-------------|-------------------------------|---------------------------------|------------------------|
| <b>MJ5</b>  | 0.005 (0.08)                  | 0.010 (0.16)                    | Not available          |
| <b>MJ10</b> | 0.010 (0.16)                  | 0.020 (0.33)                    | Cycle indicator switch |
| <b>MJ15</b> | 0.015 (0.26)                  | 0.030 (0.49)                    |                        |

### Ordering Information

| MJ Tie Rods and Nut (Two required per assembly) |                                                              |
|-------------------------------------------------|--------------------------------------------------------------|
| 557515                                          | 3-Section Tie Rod                                            |
| 557516                                          | 4-Section Tie Rod                                            |
| 557517                                          | 5-Section Tie Rod                                            |
| 557518                                          | 6-Section Tie Rod                                            |
| 557519                                          | 7-Section Tie Rod                                            |
| 557520                                          | 8-Section Tie Rod                                            |
| 560649                                          | 9-Section Tie Rod                                            |
| 556371                                          | Tie Rod Nut                                                  |
| MJ Miscellaneous Accessories                    |                                                              |
| 562915                                          | Singling Kit                                                 |
| 562914                                          | Crossport Bar                                                |
| 557359                                          | Crossport Kit - Upper Seal                                   |
| 557503                                          | Crossport Kit - Lower Seal                                   |
| 561101                                          | Mounting Bar                                                 |
| MJ Spare Parts                                  |                                                              |
| 557514                                          | Replacement Gasket                                           |
| 563948                                          | Cycle Indicator Repair Kit                                   |
| 563272                                          | MJ Cycle Switch (SPDT) Bracket Assembly                      |
| 563273                                          | MJ Cycle Switch (SPDT) Bracket Assembly - Moisture Resistant |

| MJ Working Sections (Must be ordered in multiples of five)    |          |
|---------------------------------------------------------------|----------|
| 562500                                                        | MJ-5S    |
| 562501                                                        | MJ-10S   |
| 562502                                                        | MJ-15S   |
| 562503                                                        | MJ-5T    |
| 562504                                                        | MJ-10T   |
| 562505                                                        | MJ-15T   |
| MJ w/Cycle Pin - Right (Must be ordered in multiples of five) |          |
| 562508                                                        | MJ-10S   |
| 562509                                                        | MJ-15S   |
| 562510                                                        | MJ-10T   |
| 562511                                                        | MJ-15T   |
| MJ Inlet and End (Must be ordered in multiples of five)       |          |
| 560643                                                        | MJ Inlet |
| 560645                                                        | MJ End   |
| MJ w/Cycle Pin - Left (Must be ordered in multiples of five)  |          |
| 562512                                                        | MJ-10S   |
| 562513                                                        | MJ-10T   |
| 564205                                                        | MJ-15T   |



# Series Progressive

## Trabon® MSP Divider Valve

### Features and Benefits

The Trabon MSP Series sets the industry standard for quality, reliability, and ease of use features. It was the original modular-style series progressive divider valve—and is still the best!

- Quick change valve sections can be removed from the base assembly without disturbing any lube lines—minimizing labor cost and maximizing your machine uptime
- Accessories such as magnetic and electronic proximity switch cycle indicators provide positive assurance of a successful lube event
- Alternate outlet on face of valves can be fitted with optional performance indicators, taking the guesswork out of troubleshooting
- Built-in outlet check valves ensure accurate lube delivery, every time

### Typical Applications

- Mobile, industrial, food and beverage, wind, and many more

### Typical Fluids Handled

- Oil or Grease up to NLGI #2

### Technical Specifications

|                                       |                     |
|---------------------------------------|---------------------|
| Material.....                         | Plated Steel        |
| Maximum Pressure .....                | 3,500 psi (241 bar) |
| Max Operating Temperature .....       | 350° F (176 °C)     |
| Max Cycle Rate with Cycle Pin.....    | 60 cycles/minute    |
| Max Cycle Rate without Cycle Pin..... | 200 cycles/minute   |

|       | Output Twin Outlet, in³ (cm³) | Output Single Outlet, in³ (cm³) | Cycle Indication                                                                     |
|-------|-------------------------------|---------------------------------|--------------------------------------------------------------------------------------|
| MSP5  | 0.005 (0.08)                  | 0.010 (0.16)                    | Electronic proximity switch,<br>magnetic visual indicator                            |
| MSP10 | 0.010 (0.16)                  | 0.020 (0.33)                    |                                                                                      |
| MSP15 | 0.015 (0.26)                  | 0.030 (0.49)                    |                                                                                      |
| MSP20 | 0.020 (0.33)                  | 0.040 (0.66)                    |                                                                                      |
| MSP25 | 0.025 (0.41)                  | 0.050 (0.82)                    | Electronic proximity switch,<br>magnetic visual indicator,<br>cycle indicator switch |
| MSP30 | 0.030 (0.49)                  | 0.060 (0.98)                    |                                                                                      |
| MSP35 | 0.035 (0.57)                  | 0.070 (1.15)                    |                                                                                      |
| MSP40 | 0.040 (0.66)                  | 0.080 (1.31)                    |                                                                                      |

### Ordering Information

| MSP Working Sections (Must be ordered in multiples of five) |         |
|-------------------------------------------------------------|---------|
| 562711                                                      | MSP-5S  |
| 562712                                                      | MSP-10S |
| 562713                                                      | MSP-15S |
| 562714                                                      | MSP-20S |
| 562715                                                      | MSP-25S |
| 562716                                                      | MSP-30S |
| 562717                                                      | MSP-35S |
| 562718                                                      | MSP-40S |
| 562720                                                      | MSP-5T  |
| 562721                                                      | MSP-10T |
| 562722                                                      | MSP-15T |
| 562723                                                      | MSP-20T |
| 562724                                                      | MSP-25T |
| 562725                                                      | MSP-30T |

| 562726                                                         | MSP-35T             |
|----------------------------------------------------------------|---------------------|
| 562727                                                         | MSP-40T             |
| 562660                                                         | MSP By-Pass Section |
| MSP w/Cycle Pin - Right (Must be ordered in multiples of five) |                     |
| 562729                                                         | MSP-20S             |
| 562730                                                         | MSP-25S             |
| 562731                                                         | MSP-30S             |
| 562732                                                         | MSP-35S             |
| 562733                                                         | MSP-40S             |
| 562739                                                         | MSP-20T             |
| 562740                                                         | MSP-25T             |
| 562741                                                         | MSP-30T             |
| 562742                                                         | MSP-35T             |
| 562743                                                         | MSP-40T             |

*Pre-Assembled and  
Tested Base Plates  
Now Available!*



# Series Progressive

## Trabon® MSP Divider Valve

### Ordering Information

| MSP w/Cycle Pin - Left (Must be ordered in multiples of five)                            |                                                       |
|------------------------------------------------------------------------------------------|-------------------------------------------------------|
| 562734                                                                                   | MSP-20S                                               |
| 562735                                                                                   | MSP-25S                                               |
| 562736                                                                                   | MSP-30S                                               |
| 562737                                                                                   | MSP-35S                                               |
| 562738                                                                                   | MSP-40S                                               |
| 562744                                                                                   | MSP-20T                                               |
| 562745                                                                                   | MSP-25T                                               |
| 562746                                                                                   | MSP-30T                                               |
| 562747                                                                                   | MDS-35T                                               |
| 562748                                                                                   | MSP-40T                                               |
| MSP Inlets, Intermediate Base and End Sections<br>(Must be ordered in multiples of five) |                                                       |
| 560919                                                                                   | Inlet, 1/4-18 NPSF Ports (NPT)                        |
| 560936                                                                                   | Inlet, 1/4-19 BSPP (ISO 1179) Ports (BSP)             |
| 560943                                                                                   | Inlet, 7/16-20 UNF-2B Ports (SAE)                     |
| 560976                                                                                   | Inlet, ISO 6149-1-M12 x 1.5 Ports (MET)               |
| 563421                                                                                   | Inlet, NPSF, Bleed Ports                              |
| 563422                                                                                   | Inlet, SAE, Bleed Ports                               |
| 563425                                                                                   | Intermediate Base, 1/8-27 NPSF Ports (NPT)            |
| 563451                                                                                   | Intermediate Base, 7/16-20 UNF-2B Ports (SAE)         |
| 563447                                                                                   | Intermediate Base, 1/8-28 BSPP (ISO 1179) Ports (BSP) |
| 563479                                                                                   | Intermediate Base, No Outlets                         |
| 563424                                                                                   | Standard End                                          |
| 563279                                                                                   | End, Alternate Inlet Port Plug                        |
| 563280                                                                                   | "Bottom-Feed" End Section with Hydraulic Fitting      |
| 563480                                                                                   | MSP Modular Filter Block                              |
| MSP Base Plate Assemblies                                                                |                                                       |
| 24G485                                                                                   | MSP - 3 Section, NPSF                                 |
| 24G486                                                                                   | MSP - 4 Section, NPSF                                 |
| 24G487                                                                                   | MSP - 5 Section, NPSF                                 |
| 24G488                                                                                   | MSP - 6 Section, NPSF                                 |
| 24G489                                                                                   | MSP - 7 Section, NPSF                                 |
| 24G490                                                                                   | MSP - 8 Section, NPSF                                 |
| MSP Shunt Inlets                                                                         |                                                       |
| 563448                                                                                   | NPT, 115 VAC, Hirschmann Connection - Left (NC)       |
| 563452                                                                                   | NPT, 115 VAC, BH 3-Pin Connection - Right (NO)        |
| 563453                                                                                   | NPT, 115 VAC, BH 3-Pin Connection - Left (NC)         |
| 563454                                                                                   | NPT, 24 VDC, BH 3-Pin Connection - Right (NO)         |
| 563455                                                                                   | NPT, 24 VDC, BH 3-Pin Connection - Left (NC)          |
| 560953                                                                                   | SAE, 115 VAC, BH 3-Pin Connection - Right (NO)        |
| 563463                                                                                   | SAE, 115 VAC, BH 3-Pin Connection - Left (NC)         |
| 563482                                                                                   | SAE, 24 VDC, BH 3-Pin Connection - Right (NO)         |
| 563483                                                                                   | SAE, 24 VDC, BH 3-Pin Connection - Left (NC)          |
| 563493                                                                                   | BSPP, 24 VDC, BH 3-Pin Connection - Right (NO)        |
| 563494                                                                                   | BSPP, 24 VDC, BH 3-Pin Connection - Left (NC)         |
| 557213                                                                                   | Replacement Solenoid - 563452, 563453                 |
| 557215                                                                                   | Replacement Solenoid - 563454, 563455                 |

| 557214                        | Replacement Coil - 563452, 563453                                    |
|-------------------------------|----------------------------------------------------------------------|
| 563456                        | NPT Pneumatic Shunt Inlet                                            |
| MSP Zero-Leak Shut-Off Inlets |                                                                      |
| 563457                        | 115 VAC, 12 in. 2-Wire Lead Connection, 1/4-18 NPT Port Thread       |
| 563460                        | 115 VAC, BH 3-Pin Connection, 1/4-18 NPT Port Thread                 |
| 563468                        | 115 VAC, BH 3-Pin Connection, 9/16-18 SAE Port Thread                |
| 563464                        | 24 VDC, BH 3-Pin Connection, 1/4-18 NPT Port Thread                  |
| 563467                        | 24 VDC, BH 3-Pin Connection, 9/16-18 SAE Port Thread                 |
| 563074                        | Inlet restrictor                                                     |
| 558021                        | 6 ft (3 Pin) Mini-Straight Cable                                     |
| 558799                        | BSPP (ISO1170) plug                                                  |
| 558022                        | 12 ft (3 Pin) Mini-Straight Cable                                    |
| 567251                        | SAE plug with o-ring                                                 |
| 563481                        | MSP Zero-Leak (w/o Manual Override) Solenoid Valve Section, w/o Coil |
| 557349                        | NPT plug                                                             |
| 557226                        | Replacement Coil - 563460, 563468                                    |
| 557225                        | Replacement Coil - 563464, 563467                                    |
| MSP Repair and Zero-Leak Kits |                                                                      |
| 563933                        | Valve Repair Kit - Cartridge w/out Coil, Screws, Seat, Nut Wrench    |
| 563461                        | MSP Zero Leak/Shunt Inlet Mount Kit                                  |
| MSP Tie Rods and Nut          |                                                                      |
| 557731                        | 3-Section Tie Rod                                                    |
| 557732                        | 4-Section Tie Rod                                                    |
| 557733                        | 5-Section Tie Rod                                                    |
| 557734                        | 6-Section Tie Rod                                                    |
| 557735                        | 7-Section Tie Rod                                                    |
| 557736                        | 8-Section Tie Rod                                                    |
| 557738                        | 9-Section Tie Rod                                                    |
| 557739                        | 10-Section Tie Rod                                                   |
| 557740                        | 11-Section Tie Rod                                                   |
| 556371                        | Tie Rod Nut                                                          |
| Accessories                   |                                                                      |
| 563469                        | Crossport Bar, Right                                                 |
| 563470                        | Crossport Bar, Left                                                  |
| 563471                        | Crossport Bar, Right and Left                                        |
| 563472                        | Singling Bar                                                         |
| 563444                        | Counter                                                              |
| 563465                        | Weld Bar Kit                                                         |
| 563251                        | No Weep Cycle Indicator                                              |
| 556540                        | MSP standard o-ring (BUNA-N), black                                  |
| 557722                        | MSV high pressure o-ring (90 DURO Fluoroelastomer), green            |
| 556371                        | MSP tie rod nut (3 required per assembly)                            |
| 557776                        | MSP indicator port plug                                              |
| 563929                        | MSP Cycle pin indicator repair kit, o-ring                           |
| 563928                        | MSP Cycle pin indicator repair kit, gasket                           |

# Series Progressive

## MSP Modular Zero-Leak Valve

### Features and Benefits

- Enables customized, exact control for each individual zone, prevent over lubrication, reduce plumbing and installation costs
- The base plate/valve block design allows the removal and replacement of the shut-off valve module without disturbing line connections and introducing air or contamination into the system. Zones may be individually controlled and monitored to verify that the system's performance fulfills the system design requirements

### Typical Applications

- Automotive transfer lines, conveyor lines, flexible machining centers and complete plant lubrication systems

### Typical Fluids Handled

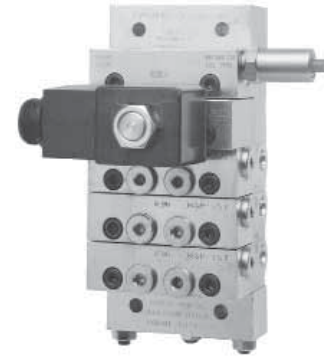
- Oil

### Technical Specifications

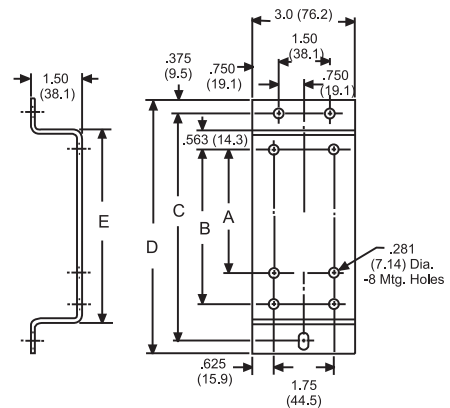
|                            |                                                                                                           |
|----------------------------|-----------------------------------------------------------------------------------------------------------|
| Position .....             | Normally Closed                                                                                           |
| Material .....             | Plated Steel                                                                                              |
| Pressure (max) .....       | 3,000 psi (207 bar)                                                                                       |
| Operating Temperature..... | -20° F to +130 °F (-29° C to +54° C)                                                                      |
| Lubricant .....            | Oil, ISO VGA 32-200                                                                                       |
| Electrical Rating:         |                                                                                                           |
| (AC) ...                   | 104-125 VAC at 55-65 Hz, 13w at 115 VAC, 0.130A Holding Current, Continuous Duty Coil, Class H Insulation |
| (DC) .....                 | 20-28 VDC, 13w at 24 VDC, Continuous Duty Coil, 0.500A Holding Current, Class H Insulation                |
| Filtration .....           | Use in conjunction with Modular 25 Micron Modular Filter Section (563480)                                 |
| Torque .....               | Valve Block Mounting Screw (556514)                                                                       |

### Ordering Information

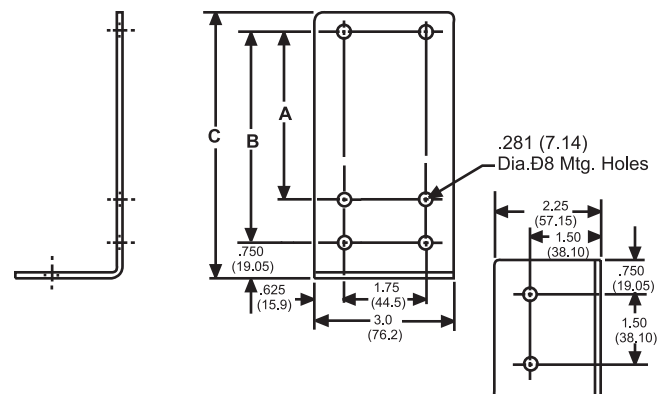
| MSP Modular Zero-Leak Components |                                                                                                                |
|----------------------------------|----------------------------------------------------------------------------------------------------------------|
| 563479                           | MSP Zero-Leak Solenoid Valve Base Plate                                                                        |
| 563481                           | MSP Zero-Leak (w/o Manual Override) Solenoid Valve Section, w/o Coil                                           |
| 558893                           | 3 Pin Mini Connector Adaptor w/Indicator Light - 120 VAC                                                       |
| 557226                           | Solenoid Coil - 120 VAC (3 Pin Mini)                                                                           |
| 557225                           | Solenoid Coil - 24 VDC (3 Pin Mini)                                                                            |
| 558886                           | Solenoid Coil - 24 VDC (4 Pin Micro)                                                                           |
| 558021                           | Brad Harrison Mating Cable, 6 ft / 183 cm (3 Pin) Mini-Straight                                                |
| 558022                           | Brad Harrison Mating Cable, 12 ft / 3.65 m (3 Pin) Mini-Straight                                               |
| 563279                           | "Bottom-Feed" End Section w/ Port Plug                                                                         |
| 557349                           | "Bottom-Feed" Port Plug                                                                                        |
| MSP Modular Filter Section       |                                                                                                                |
| 563479                           | MSP Modular Filter Base Plate                                                                                  |
| 563480                           | MSP Modular Filter Block, 25 microns nominal                                                                   |
| Mounting Accessories             |                                                                                                                |
| 560920                           | Mounting Bar 4 inch (101.6 mm) x 1-3/4 inch (44.5 mm)<br>(B) 1 inch (25.4 mm) with 1/4 inch (6.4 mm)-20 thread |
| 563435                           | Top Mounting Bracket (A) 3-37/64 inch (90.9 mm) (B) 4-1/2 inch (114.3 mm)<br>(C) 5-21/32 inch (143.7 mm)       |
| 563436                           | TOP Mounting Bracket (A) 5-27/64 inch (137.7 mm)<br>(B) 6-11/32 inch (161.1 mm) (C) 7-1/2 inch (190.5 mm)      |



Side Mount Hole Configuration



Top Mount Hole Configuration



# Series Progressive

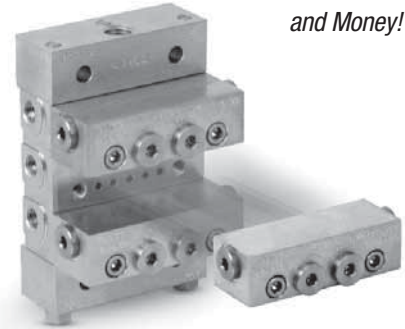
## Trabon® MSP Stainless Steel Divider Valves

### Features and Benefits

Trabon® MSP Series sets the industry standard for quality, reliability, and ease of use features. It was the original modular-style series progressive divider valve – and is still the best! Now get the same reliable valve in stainless steel.

- Face of valves can be fitted with optional performance indicators, taking the guesswork out of troubleshooting
- Can be easily accessorized with electronic proximity switches to provide positive assurance of a successful lube event
- Outlet checks ensure accurate lube delivery, every time
- Quick change valve sections can be removed from the base assembly without disturbing any lube lines—minimizing labor cost and maximizing your machine uptime
- Manufactured in our factory for quality and reliability. Each assembly is honed and match fitted for precise lube delivery every time

*Pre-Assembled and  
Tested Base Plates  
to Save You Time  
and Money!*



### Typical Applications

- Machine tools, textile, glass and can machinery and mobile equipment

### Typical Fluids Handled

- Oil or Grease up to NLGI #2

### Technical Specifications

|                                       |                    |
|---------------------------------------|--------------------|
| Material.....                         | Stainless Steel    |
| Maximum Pressure .....                | 3500 psi (241 bar) |
| Max Operating Temperature .....       | 140° F (60 °C)     |
| Max Cycle Rate with Cycle Pin.....    | 60 cycles/minute   |
| Max Cycle Rate without Cycle Pin..... | 200 cycles/minute  |

### Ordering Information

| MSP Working Sections<br>(Must be ordered in multiples of five) |            |
|----------------------------------------------------------------|------------|
| 24B479                                                         | MSP-5T-SS  |
| 24B474                                                         | MSP-5S-SS  |
| 562758                                                         | MSP-10T-SS |
| 562755                                                         | MSP-10S-SS |
| 24B480                                                         | MSP-15T-SS |
| 24B475                                                         | MSP-15S-SS |
| 562759                                                         | MSP-20T-SS |
| 562756                                                         | MSP-20S-SS |
| 24B481                                                         | MSP-25T-SS |
| 24B476                                                         | MSP-25S-SS |
| 24B482                                                         | MSP-30T-SS |
| 24B477                                                         | MSP-30S-SS |
| 24B483                                                         | MSP-35T-SS |
| 24B478                                                         | MSP-35S-SS |
| 562760                                                         | MSP-40T-SS |
| 562757                                                         | MSP-40S-SS |

| MSP Inlets, Intermediate Base and End Sections<br>(Must be ordered in multiples of five) |                                                   |
|------------------------------------------------------------------------------------------|---------------------------------------------------|
| 15Y070                                                                                   | MSP Inlet SS, 1/4-18 NPSF                         |
| 16P368                                                                                   | MSP Inlet SS, 1/4-19 BSPP                         |
| 24B497                                                                                   | MSP-SS Intermediate Base, 1/8-27 NPSF Ports (NPT) |
| 24N369                                                                                   | MSP-SS Intermediate Base, 1/8-28 BSPP Ports (BSP) |
| 24B498                                                                                   | MSP-SS Standard End                               |
| MSP Base Plate Assemblies                                                                |                                                   |
| 24N382                                                                                   | 3 Section Base Plate Assembly SS; NPSF            |
| 24N383                                                                                   | 4 Section Base Plate Assembly SS; NPSF            |
| 24N384                                                                                   | 5 Section Base Plate Assembly SS; NPSF            |
| 24N385                                                                                   | 6 Section Base Plate Assembly SS; NPSF            |
| 24N386                                                                                   | 7 Section Base Plate Assembly SS; NPSF            |
| 24N387                                                                                   | 8 Section Base Plate Assembly SS; NPSF            |
| 24N388                                                                                   | 3 Section Base Plate Assembly SS; BSPP            |
| 24N389                                                                                   | 4 Section Base Plate Assembly SS; BSPP            |
| 24N390                                                                                   | 5 Section Base Plate Assembly SS; BSPP            |
| 24N391                                                                                   | 6 Section Base Plate Assembly SS; BSPP            |
| 24N392                                                                                   | 7 Section Base Plate Assembly SS; BSPP            |
| 24N393                                                                                   | 8 Section Base Plate Assembly SS; BSPP            |

# Series Progressive

## Trabon® MSP Stainless Steel Divider Valves

### Ordering Information

| MSP Tie Rods and Nut |                                                |
|----------------------|------------------------------------------------|
| 126247               | 3 Section Tie Rod for MSP-SS                   |
| 126248               | 4 Section Tie Rod for MSP-SS                   |
| 126249               | 5 Section Tie Rod for MSP-SS                   |
| 126250               | 6 Section Tie Rod for MSP-SS                   |
| 126251               | 7 Section Tie Rod for MSP-SS                   |
| 126252               | 8 Section Tie Rod for MSP-SS                   |
| 15Y069               | 9 Section Tie Rod for MSP-SS                   |
| 560956               | 10 Section Tie Rod for MSP-SS                  |
| 558633               | Tie Rod Nut-SS                                 |
| Accessories          |                                                |
| 24B495               | 1000 psi Reset Indicator w/Memory, O-Ring Seal |
| 24B496               | 1500 psi Reset Indicator w/Memory, O-Ring Seal |
| 24N373               | 2000 psi Reset Indicator w/Memory, O-Ring Seal |
| 560974               | 303 SS MSP Indicator Port Plug                 |
| 560973               | 303 SS Piston Bore Plug                        |
| 555457               | SS Base closure plug accessory                 |
| 24N945               | Valve, Relief, 1/8 NPT, 750 psi SST            |
| 24N948               | Valve, Relief, 1/8 NPT, 1500 psi SST           |
| 24N949               | Valve, Relief, 1/8 NPT, 2000 psi SST           |
| 24N951               | Valve, Relief, 1/8 NPT, 2500 psi SST           |
| 24N952               | Valve, Relief, 1/8 NPT, 3000 psi SST           |
| 24R631               | Crossport Bar Both                             |
| 24R632               | Crossport Bar Right                            |
| 24R633               | Crossport Bar Left                             |

# Series Progressive

## Manzel® MHH Divider Valves

### Features and Benefits

Same capable design as the Trabon MSP Series, with even tighter and more exacting tolerances. The Manzel MHH Series delivers highly accurate lube delivery for demanding high pressure grease and oil applications.

- Quick change valve sections can be removed from the base assembly without disturbing any lube lines—minimizing labor cost and maximizing your machine uptime
- Can be easily accessorized with magnetic and electronic proximity switch cycle indicators to provide positive assurance of a successful lube event
- Alternate outlet on face of valves can be fitted with optional performance indicators, taking the guesswork out of troubleshooting
- Built-in outlet check valves ensure accurate lube delivery every time

### Typical Applications

- Compressors, industrial equipment and where high pressure lubrication is required

### Typical Fluids Handled

- Oil or Grease up to NLGI #2

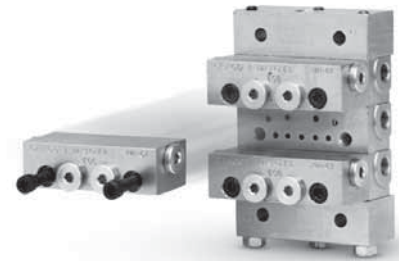
### Technical Specifications

|                                    |                     |
|------------------------------------|---------------------|
| Material.....                      | Plated Steel        |
| Maximum Pressure .....             | 7,500 psi (517 bar) |
| Maximum Operating Temperature..... | 350° F (176° C)     |
| Maximum Cycle Rate .....           | 200 cycles/minute   |

|       | Output Twin Outlet, in <sup>3</sup> (cm <sup>3</sup> ) | Output Single Outlet, in <sup>3</sup> (cm <sup>3</sup> ) |
|-------|--------------------------------------------------------|----------------------------------------------------------|
| MHH6  | 0.006 (0.098)                                          | 0.012 (0.197)                                            |
| MHH9  | 0.009 (0.149)                                          | 0.018 (0.295)                                            |
| MHH12 | 0.012 (0.197)                                          | 0.024 (0.393)                                            |
| MHH18 | 0.018 (0.295)                                          | 0.036 (0.590)                                            |
| MHH24 | 0.024 (0.393)                                          | 0.048 (0.787)                                            |
| MHH30 | 0.030 (0.492)                                          | 0.060 (0.983)                                            |

### Ordering Information

| MHH Working Sections (Must be ordered in multiples of five) |         |
|-------------------------------------------------------------|---------|
| 562679                                                      | MHH-6S  |
| 562680                                                      | MHH-9S  |
| 562681                                                      | MHH-12S |
| 562682                                                      | MHH-18S |
| 562683                                                      | MHH-24S |
| 562684                                                      | MHH-30S |
| 562685                                                      | MHH-6T  |
| 562686                                                      | MHH-9T  |
| 562687                                                      | MHH-12T |
| 562688                                                      | MHH-18T |
| 562689                                                      | MHH-24T |
| 562690                                                      | MHH-30T |



*Pre-Assembled and  
Tested Base Plates  
Now Available!*

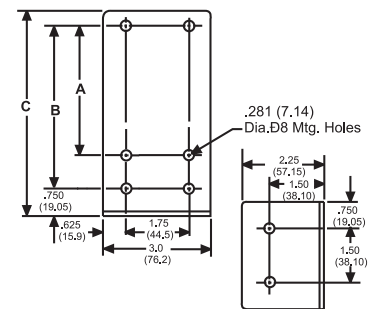
# Series Progressive

## Manzel® MHH Divider Valves

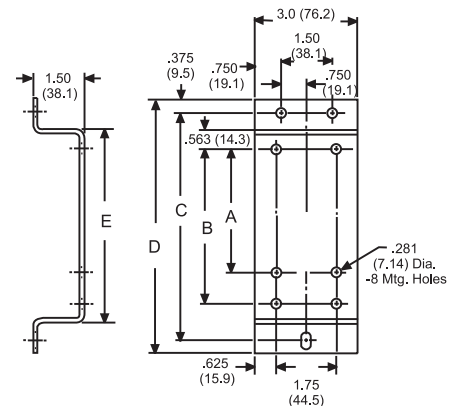
### Ordering Information

| MHH Base Plate Assemblies - Inlet, Intermediates, Ends and Tie Rods       |                                                                                                                                                              |
|---------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 24F596                                                                    | MHH - 3 Section, NPSF                                                                                                                                        |
| 24F597                                                                    | MHH - 4 Section, NPSF                                                                                                                                        |
| 24F598                                                                    | MHH - 5 Section, NPSF                                                                                                                                        |
| 24F599                                                                    | MHH - 6 Section, NPSF                                                                                                                                        |
| 24F600                                                                    | MHH - 7 Section, NPSF                                                                                                                                        |
| 24F601                                                                    | MHH - 8 Section, NPSF                                                                                                                                        |
| MHH Inlets, Intermediates and Ends (must be ordered in multiples of five) |                                                                                                                                                              |
| 560919                                                                    | Inlet, 1/4-18 NPSF (NPT)                                                                                                                                     |
| 560936                                                                    | Inlet, 1/4-19 BSPP                                                                                                                                           |
| 560943                                                                    | Inlet, 7/16-20 UNF-28 (SAE)                                                                                                                                  |
| 560976                                                                    | Inlet, 150 6149-1-M12X15                                                                                                                                     |
| 563421                                                                    | Inlet, NPSF, Bleed Ports                                                                                                                                     |
| 563422                                                                    | Inlet, SAE, Bleed Ports                                                                                                                                      |
| 563424                                                                    | End, NPSF                                                                                                                                                    |
| 563425                                                                    | Intermediate, 1/8-27 NPSF                                                                                                                                    |
| MHH Tie Rods and Nut                                                      |                                                                                                                                                              |
| 557731                                                                    | 3-Section Tie Rod                                                                                                                                            |
| 557732                                                                    | 4-Section Tie Rod                                                                                                                                            |
| 557733                                                                    | 5-Section Tie Rod                                                                                                                                            |
| 557734                                                                    | 6-Section Tie Rod                                                                                                                                            |
| 557735                                                                    | 7-Section Tie Rod                                                                                                                                            |
| 557736                                                                    | 8-Section Tie Rod                                                                                                                                            |
| 556371                                                                    | Tie Rod Nut                                                                                                                                                  |
| Accessories                                                               |                                                                                                                                                              |
| 563469                                                                    | Crossport Bar, Right                                                                                                                                         |
| 563470                                                                    | Crossport Bar, Left                                                                                                                                          |
| 563471                                                                    | Crossport Bar, Right and Left                                                                                                                                |
| 563472                                                                    | Singling Bar                                                                                                                                                 |
| 563444                                                                    | Counter                                                                                                                                                      |
| 563465                                                                    | Weld Bar Kit                                                                                                                                                 |
| 563251                                                                    | No Weep Cycle Indicator                                                                                                                                      |
| 556540                                                                    | Standard o-ring (BUNA-N), black                                                                                                                              |
| 122276                                                                    | High pressure o-ring (90 DURO Fluoroelastomer), green                                                                                                        |
| 556371                                                                    | Tie rod nut (3 required per assembly)                                                                                                                        |
| 557776                                                                    | Indicator port plug                                                                                                                                          |
| 558799                                                                    | BSPP (ISO1170) plug                                                                                                                                          |
| 567251                                                                    | SAE plug with o-ring                                                                                                                                         |
| 557349                                                                    | NPT plug                                                                                                                                                     |
| 563928                                                                    | Cycle pin indicator repair kit, gasket                                                                                                                       |
| 563929                                                                    | Cycle pin indicator repair kit, O-ring                                                                                                                       |
| Mounting                                                                  |                                                                                                                                                              |
| 560920                                                                    | Mounting Bar 4 inch (101.6 mm) x 1-3/4 inch (44.5 mm) (B) 1 inch (25.4 mm) with 1/4 inch (6.4 mm)-20 thread                                                  |
| 563435                                                                    | Top Mount Bracket (A) 3-37/64 inch (90.9 mm) (B) 4-1/2 inch (114.3 mm) (C) 5-21/32 inch (143.7 mm)                                                           |
| 563436                                                                    | Top Mount Bracket (A) 5-27/64 inch (137.7 mm) (B) 6-11/32 inch (161.1 mm) (C) 7-1/2 inch (190.5 mm)                                                          |
| 563437                                                                    | Top Mount Bracket (A) 7-17/64 inch (184.5 mm) (B) 8-3/16 inch (208.0 mm) (C) 9-11.32 inch (237.3 mm)                                                         |
| 563438                                                                    | Side Mount Bracket (A) 3-37/64 inch (90.9 mm) (B) 4-1/4 inch (114.3 mm) (C) 6-5/8 inch (168.3 mm) (D) 3-7/8 inch (187.3 mm) (E) 5-5/8 inch (142.9 mm)        |
| 563439                                                                    | Side Mnt. Bracket (A) 5-27/64 inch (137.7 mm) (B) 6-11/32 inch (161.1 mm) (C) 8-15.32 inch (215.5 mm) (D) 9-7/32 inch (234.2 mm) (E) 7-15/32 inch (198.7 mm) |
| 563440                                                                    | Side Mount Bracket (A) 7-17/64 inch (184.5 mm) (B) 8-3/16 inch (208.0 mm) (C) 10-5/8 inch (262.0 mm) (D) 11-1/16 inch (281.0 mm) (E) 9-5/16 inch (236.5 mm)  |

Top Mount Hole Configuration



Side Mount Hole Configuration



# Series Progressive

## Trabon® MX Divider Valve

### Features and Benefits

Greater output volumes for heavy service requirements make the Trabon MX Series ideal for steel and paper mill systems with it's economical and compact design.

- Durable design withstands harsh environments and operating conditions
- Built-in outlet check valves ensure accurate lube delivery every time
- Can be easily accessorized with magnetic and electronic proximity switch cycle indicators to provide positive assurance of a successful lube event
- Alternate outlet on face of valves can be fitted with optional performance indicators, taking the guesswork out of troubleshooting

### Typical Applications

Pulp and paper, steel mills, heavy and high volume industrial applications

### Typical Fluids Handled

- Oil or Grease up to NLGI #2

### Technical Specifications

|                                           |                     |
|-------------------------------------------|---------------------|
| Material.....                             | Plated Steel        |
| Maximum Pressure .....                    | 3,000 psi (207 bar) |
| Maximum Operating Temperature.....        | 200° F (93° C)      |
| Maximum Cycle Rate with Cycle Pin.....    | 60 cycles/minute    |
| Maximum Cycle Rate without Cycle Pin..... | 200 cycles/minute   |

|               | Output Twin Outlet, in³ (cm³) | Output Single Outlet, in³ (cm³) | Cycle Indication                                       |
|---------------|-------------------------------|---------------------------------|--------------------------------------------------------|
| <b>MX-25</b>  | 0.025 (0.41)                  | 0.050 (0.82)                    | Electronic proximity switch                            |
| <b>MX-50</b>  | 0.050 (0.82)                  | 0.100 (1.64)                    | Electronic proximity switch,<br>cycle indicator switch |
| <b>MX-75</b>  | 0.075 (1.23)                  | 0.150 (2.46)                    |                                                        |
| <b>MX-100</b> | 0.100 (1.64)                  | 0.200 (3.28)                    |                                                        |
| <b>MX-125</b> | 0.125 (2.05)                  | 0.250 (4.10)                    |                                                        |
| <b>MX-150</b> | 0.150 (2.46)                  | 0.300 (4.92)                    |                                                        |

### Ordering Information

| MX Working Sections |         |
|---------------------|---------|
| 562514              | MX-25S  |
| 562515              | MX-25T  |
| 562516              | MX-50S  |
| 562517              | MX-50T  |
| 562538              | MX-75S  |
| 562539              | MX-75T  |
| 562540              | MX-100S |
| 562541              | MX-100T |
| 562542              | MX-125S |
| 562543              | MX-125T |
| 562545              | MX-150S |
| 562546              | MX-150T |



# Series Progressive

## Trabon® MX Divider Valve

### Ordering Information

| MX w/Cycle Pin (Must be ordered in multiples of two) |                                                                            |
|------------------------------------------------------|----------------------------------------------------------------------------|
| 562523                                               | MX-50T, with Cycle Pin Indicator, Right                                    |
| 562518                                               | MX-50S, with Cycle Pin Indicator, Right                                    |
| 562524                                               | MX-75T, with Cycle Pin Indicator, Right                                    |
| 562519                                               | MX-75S, with Cycle Pin Indicator, Right                                    |
| 562525                                               | MX-100T, with Cycle Pin Indicator, Right                                   |
| 562520                                               | MX-100S, with Cycle Pin Indicator, Right                                   |
| 562526                                               | MX-125T, with Cycle Pin Indicator, Right                                   |
| 562521                                               | MX-125S, with Cycle Pin Indicator, Right                                   |
| 562527                                               | MX-150T, with Cycle Pin Indicator, Right                                   |
| 562522                                               | MX-150S, with Cycle Pin Indicator, Right                                   |
| 562533                                               | MX-50T, with Cycle Pin Indicator, Left                                     |
| 562528                                               | MX-50S, with Cycle Pin Indicator, Left                                     |
| 562534                                               | MX-75T, with Cycle Pin Indicator, Left                                     |
| 562529                                               | MX-75S, with Cycle Pin Indicator, Left                                     |
| 562569                                               | MX-100T, with Cycle Pin Indicator, Left                                    |
| 562530                                               | MX-100S, with Cycle Pin Indicator, Left                                    |
| 562535                                               | MX-125T, with Cycle Pin Indicator, Left                                    |
| 562531                                               | MX-125S, with Cycle Pin Indicator, Left                                    |
| 562536                                               | MX-150T, with Cycle Pin Indicator, Left                                    |
| 562532                                               | MX-150S, with Cycle Pin Indicator, Left                                    |
| MX Tie Rods and Nut                                  |                                                                            |
| 557488                                               | 3-Section Tie Rod                                                          |
| 557489                                               | 4-Section Tie Rod                                                          |
| 557490                                               | 5-Section Tie Rod                                                          |
| 557491                                               | 6-Section Tie Rod                                                          |
| 557492                                               | 7-Section Tie Rod                                                          |
| 557493                                               | 8-Section Tie Rod                                                          |
| 560576                                               | 9-Section Tie Rod                                                          |
| 560577                                               | 10-Section Tie Rod                                                         |
| 557494                                               | Tie Rod Nut                                                                |
| MX Inlet and End Sections                            |                                                                            |
| 560620                                               | MX Inlet                                                                   |
| 563287                                               | MX End                                                                     |
| Accessories                                          |                                                                            |
| 562916                                               | Singling Bar                                                               |
| 562917                                               | MX Cross Port Bar, RH or LH                                                |
| 561102                                               | MX Mounting Bar                                                            |
| 557509                                               | MX Intermediate Gasket (1 required per section)                            |
| 557494                                               | MX Tie Rod Nut (8 required per assembly)                                   |
| 557323                                               | MX Enclosure Plug Seal, Gasket                                             |
| 557391                                               | 1/4 inch (6.4 mm) NPT Outlet Plug for Singled and Cross Ported MX Sections |
| 563917                                               | MX Cycle Indicator Pin Repair Kit, Current Style                           |

# Series Progressive

## Trabon® MXP Divider Valves

### Features and Benefits

The Trabon MXP Series' greater output volume makes it easy to customize your assembly to meet larger machine requirements.

- Quick change valve sections can be removed from the base assembly without disturbing any lube lines—minimizing labor cost and maximizing your machine uptime
- Can be easily accessorized with magnetic and electronic proximity switch cycle indicators to provide positive assurance of a successful lube event
- Alternate outlet on face of valves can be fitted with optional performance indicators, taking the guesswork out of troubleshooting
- Built-in outlet check valves ensure accurate lube delivery every time

### Typical Applications

Pulp and paper, steel mills, heavy and high volume industrial applications

### Typical Fluids Handled

- Oil or Grease up to NLGI #2

### Technical Specifications

|                                           |                     |
|-------------------------------------------|---------------------|
| Material.....                             | Plated Steel        |
| Maximum Pressure .....                    | 3,000 psi (207 bar) |
| Maximum Operating Temperature .....       | 350° F (176° C)     |
| Maximum Cycle Rate with Cycle Pin.....    | 60 cycles/minute    |
| Maximum Cycle Rate without Cycle Pin..... | 200 cycles/minute   |

|         | Output Twin Outlet, in³ (cm³) | Output Single Outlet, in³ (cm³) | Cycle Indication                                       |
|---------|-------------------------------|---------------------------------|--------------------------------------------------------|
| MXP-25  | 0.025 (0.41)                  | 0.050 (0.82)                    | Electronic proximity switch                            |
| MXP-50  | 0.050 (0.82)                  | 0.100 (1.64)                    | Electronic proximity switch,<br>cycle indicator switch |
| MXP-75  | 0.075 (1.23)                  | 0.150 (2.46)                    |                                                        |
| MXP-100 | 0.100 (1.64)                  | 0.200 (3.28)                    |                                                        |
| MXP-125 | 0.125 (2.05)                  | 0.250 (4.10)                    |                                                        |
| MXP-150 | 0.150 (2.46)                  | 0.300 (4.92)                    |                                                        |

### Ordering Information

| MXP Working Sections (Must be ordered in multiples of two) |            |
|------------------------------------------------------------|------------|
| 562813                                                     | MXP-25T    |
| 562819                                                     | MXP-25S    |
| 562814                                                     | MXP-50T    |
| 562820                                                     | MXP-50S    |
| 562815                                                     | MXP-75T    |
| 562821                                                     | MXP-75S    |
| 562816                                                     | MXP-100T   |
| 562822                                                     | MXP-100S   |
| 562817                                                     | MXP-125T   |
| 562823                                                     | MXP-125S   |
| 562818                                                     | MXP-150T   |
| 562824                                                     | MXP-150S   |
| 562835                                                     | MXP bypass |



# Series Progressive

## Trabon® MXP Divider Valves

### Ordering Information

| MXP w/Cycle Pin - Right (Must be ordered in multiples of two)                        |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 562830                                                                               | MXP-50S                                                           |
| 562831                                                                               | MXP-75S                                                           |
| 562832                                                                               | MXP-100S                                                          |
| 562833                                                                               | MXP-125S                                                          |
| 562834                                                                               | MXP-150S                                                          |
| 562825                                                                               | MXP-50T                                                           |
| 562826                                                                               | MXP-75T                                                           |
| 562827                                                                               | MXP-100T                                                          |
| 562828                                                                               | MXP-125T                                                          |
| 562829                                                                               | MXP-150T                                                          |
| MXP Inlet, Intermediate Base and End Sections (Must be ordered in multiples of five) |                                                                   |
| 15R994                                                                               | Inlet, 3/4-16 SAE O-Ring Ports                                    |
| 15R993                                                                               | Inlet, 3/8-18 NPSF                                                |
| 561029                                                                               | Inlet, 3/8-19 BSPP (ISO 1179)                                     |
| 563519                                                                               | Intermediate Base, 1/4-18 NPSF                                    |
| 563521                                                                               | Intermediate Base, 9/16-18 SAE O-Ring                             |
| 563522                                                                               | Intermediate Base, 1/4-19 BSPP (ISO 1179)                         |
| 563527                                                                               | Intermediate Base w/out Outlet Check, 1/4-18 NPSF                 |
| 563518                                                                               | End Section                                                       |
| MXP Tie Rods and Nut (Three required per assembly)                                   |                                                                   |
| 557766                                                                               | 3-Section Tie Rod                                                 |
| 557767                                                                               | 4-Section Tie Rod                                                 |
| 557768                                                                               | 5-Section Tie Rod                                                 |
| 557769                                                                               | 6-Section Tie Rod                                                 |
| 557770                                                                               | 7-Section Tie Rod                                                 |
| 557771                                                                               | 8-Section Tie Rod                                                 |
| 557772                                                                               | 9-Section Tie Rod                                                 |
| 563520                                                                               | 10-Section Tie Rod                                                |
| 555406                                                                               | Tie Rod Nut                                                       |
| MXP Accessories                                                                      |                                                                   |
| 563524                                                                               | Cross Port, Left                                                  |
| 563525                                                                               | Cross Port, Right                                                 |
| 563526                                                                               | Cross Port, Left and Right                                        |
| 557773                                                                               | MXP Standard Valve Section Seal, O-ring (90 DURO Fluoroelastomer) |
| 555406                                                                               | MXP Tie Rod Nut (3 required per assembly)                         |
| 563917                                                                               | MXP Cycle Pin Indicator Repair Kit, New Style                     |
| 557774                                                                               | MXP Enclosure Plug                                                |
| 556572                                                                               | Enclosure Plug O-ring                                             |
| 557776                                                                               | MXP Indicator Port Plug                                           |
| 561102                                                                               | Mounting Bar                                                      |

# Series Progressive

## Trabon® MGO Divider Valves

### Features and Benefits

The Trabon MGO Series offers the largest output available in a series progressive system. Ideal for heavy-duty and large bearing applications with wide temperature variations and high volume requirements. Can be easily accessorized with magnetic and electronic proximity switch cycle indicators to provide positive assurance of a successful lube event.

- Alternate outlet on face of valves can be fitted with optional performance indicators, taking the guesswork out of troubleshooting
- Robust design is virtually indestructible and built to perform in extreme environments

### Typical Applications

Pulp and paper, steel mills, heavy and high volume industrial applications

### Typical Fluids Handled

- Oil or Grease up to NLGI #2

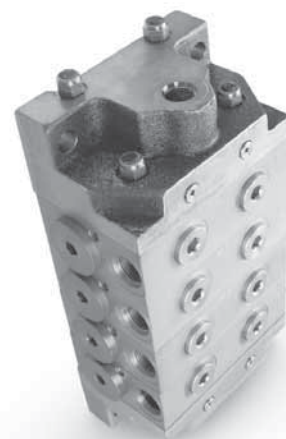
### Technical Specifications

|                                           |                     |
|-------------------------------------------|---------------------|
| Material.....                             | Plated Steel        |
| Maximum Pressure .....                    | 6,000 psi (413 bar) |
| Maximum Operating Temperature .....       | 350° F (176° C)     |
| Maximum Cycle Rate with Cycle Pin.....    | 60 cycles/minute    |
| Maximum Cycle Rate without Cycle Pin..... | 200 cycles/minute   |

|         | Output Twin Outlet, in <sup>3</sup> (cm <sup>3</sup> ) | Output Single Outlet, in <sup>3</sup> (cm <sup>3</sup> ) | Cycle Indication                                       |
|---------|--------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------|
| MGO-150 | 0.150 (2.46)                                           | 0.300 (4.92)                                             | Electronic proximity switch,<br>cycle indicator switch |
| MGO-300 | 0.300 (4.92)                                           | 0.600 (9.83)                                             |                                                        |
| MGO-450 | 0.450 (7.37)                                           | 0.900 (14.7)                                             |                                                        |
| MGO-600 | 0.600 (9.83)                                           | 1.200 (19.7)                                             |                                                        |

### Ordering Information

| MGO Working Sections |          |
|----------------------|----------|
| 562570               | MGO-150S |
| 562571               | MGO-300S |
| 562572               | MGO-450S |
| 562573               | MGO-600S |
| 562574               | MGO-150T |
| 562575               | MGO-300T |
| 562576               | MGO-450T |
| 562577               | MGO-600T |



# Series Progressive

## Trabon® MGO Divider Valves

### Ordering Information

| MGO with Cycle Pin - Right                                                                    |                                      |
|-----------------------------------------------------------------------------------------------|--------------------------------------|
| 562578                                                                                        | MGO-150S                             |
| 562579                                                                                        | MGO-300S                             |
| 562580                                                                                        | MGO-450S                             |
| 562581                                                                                        | MGO-600S                             |
| 562582                                                                                        | MGO-150T                             |
| 562583                                                                                        | MGO-300T                             |
| 562584                                                                                        | MGO-450T                             |
| 562585                                                                                        | MGO-600T                             |
| MGO Inlet and End                                                                             |                                      |
| 563277                                                                                        | MGO Inlet                            |
| 563278                                                                                        | MGO End                              |
| MGO Spare Parts                                                                               |                                      |
| 556424                                                                                        | Singled Ported Sections Port Plug    |
| 563926                                                                                        | 1-Section O-Ring Kit                 |
| MGO Tie Rods and Nut (Two (2) short tie rods and two (2) long tie rods required per assembly) |                                      |
| 560591                                                                                        | 3-Section Tie Rod - Short            |
| 560592                                                                                        | 4-Section Tie Rod - Short            |
| 560593                                                                                        | 5-Section Tie Rod - Short            |
| 560594                                                                                        | 6-Section Tie Rod - Short            |
| 560595                                                                                        | 7-Section Tie Rod - Short            |
| 560596                                                                                        | 8-Section Tie Rod - Short            |
| 560597                                                                                        | 9-Section Tie Rod - Short            |
| 560598                                                                                        | 10-Section Tie Rod - Short           |
| 560600                                                                                        | 3-Section Tie Rod - Long             |
| 560601                                                                                        | 4-Section Tie Rod - Long             |
| 560602                                                                                        | 5-Section Tie Rod - Long             |
| 560603                                                                                        | 6-Section Tie Rod - Long             |
| 15U857                                                                                        | 7-Section Tie Rod - Long             |
| 560604                                                                                        | 8-Section Tie Rod - Long             |
| 560605                                                                                        | 9-Section Tie Rod - Long             |
| 560606                                                                                        | 10-Section Tie Rod - Long            |
| 557494                                                                                        | Tie Rod Nut (2 required per tie rod) |

# Air Oil

## Air Oil Series Valves

### Features and Benefits

A Graco exclusive design! The Air Oil solution that detects air line or oil line faults in your system. Series progressive monitoring ensures your critical bearings are lubricated properly.

- Convenient manifold design mounts directly to the face of standard Graco series progressive divider valve assembly
- Check valve design prevents oil from being forced into the air system if lube lines get crushed or bearings get blocked
- Air combines with the oil after the fluid outlet check, preventing air from backing up into your source oil system
- Complete kits include manifold, air sensor, and check valves for easy installation

### Typical Applications

- Steel mills, pulp and paper processing, high temperature and dirty environments

### Typical Fluids Handled

- Oil

### Technical Specifications

|                           |                                               |
|---------------------------|-----------------------------------------------|
| Material.....             | Aluminum                                      |
| Minimum Air Pressure..... | 45 psi (3.1 bar)                              |
| Maximum Air Pressure..... | 250 psi (17 bar)                              |
| Output.....               | 3, 4, 5 or 6 Section Divider Valve Assemblies |

### Ordering Information

| AO Series Divider Valves |                                                         |
|--------------------------|---------------------------------------------------------|
| 24B237                   | Air/Oil Manifold Assembly, 3-Section                    |
| 24B239                   | Air/Oil Manifold Assembly, 4-Section                    |
| 24B240                   | Air/Oil Manifold Assembly, 5-Section                    |
| 24B241                   | Air/Oil Manifold Assembly, 6-Section                    |
| 24J814                   | Air/Oil Manifold Assembly, 3-Section without Air Sensor |
| 24J815                   | Air/Oil Manifold Assembly, 4-Section without Air Sensor |
| 24J816                   | Air/Oil Manifold Assembly, 5-Section without Air Sensor |
| 24J817                   | Air/Oil Manifold Assembly, 6-Section without Air Sensor |



24B240

*Shown installed on MSP  
divider valve assembly*

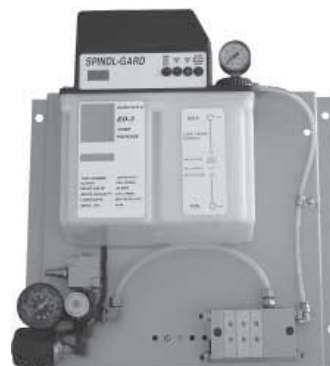
# Air Oil

## High Speed Spindl-Gard® Systems

### Features and Benefits

The High-Speed Spindl-Gard® System is a highly efficient, cost-effective method for lubricating spindle bearings, using air/oil technology. Components include an electric motor driven pump, with 3 liter (0.8 gallon) plastic reservoir, air/oil dispensing module, and an optional programmable timer/controller (AC models only).

- Advanced air/oil concept provides highly effective lubrication, reduces oil consumption, lowers operating temperature and protects spindle bearings from coolant ingress and minimizes thermal distortion resulting in improved production accuracy
- Thin oil film dramatically reduces viscous shear and hydrodynamic drag on the bearing, resulting in reduced friction and lower energy consumption
- Airflow adjustment for each bearing point provides better control
- Oil output selectable for each bearing point helps to customize the system
- Eliminates the clean up and environmental problems that result from mist systems



### Typical Applications

- Spindle Bearings

### Typical Fluids Handled

- Oils up to ISO 460 (2500 SUS)

### Technical Specifications

|                                                                                                                                                                                                                                                                |                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Pump Output .....                                                                                                                                                                                                                                              | 8.5 in <sup>3</sup> /minute (140 cc/minute)                                                                                                |
| Motor Power .....                                                                                                                                                                                                                                              | 1/8 HP                                                                                                                                     |
| Motor Voltage and Current Consumption .....                                                                                                                                                                                                                    | 115 ± 10% VAC, 50/60 Hz, 1 phase, 3.8 A in-rush, 1.8 A running, 230 ± 10% VAC, 50/60 Hz, 1 phase, 1.9A in-rush, 0.94A running, 24VDC, 60 w |
| Pressure Relief Setting .....                                                                                                                                                                                                                                  | 350 psi (34 bar)                                                                                                                           |
| Output Block Regulator .....                                                                                                                                                                                                                                   | 30-60 psi (2.07-4.14 bar)                                                                                                                  |
| Output Block Regulator .....                                                                                                                                                                                                                                   | 30-60 psi (2.07-4.14 bar)                                                                                                                  |
| Seals .....                                                                                                                                                                                                                                                    | Buna-N O-Rings                                                                                                                             |
| Plastic Reservoir .....                                                                                                                                                                                                                                        | 0.8 gal (3 liters)                                                                                                                         |
| Low-Level .....                                                                                                                                                                                                                                                | N.C. (held open), 115/230 VAC, 10 watt                                                                                                     |
| Controls Options Remote (External Control or Customer PLC) .....                                                                                                                                                                                               | 115/230 VAC, 1 ph, 50/60 Hz, 24 VDC                                                                                                        |
| *AC Timer .....                                                                                                                                                                                                                                                | 115/230 VAC, 1 ph, 50/60 Hz                                                                                                                |
| Work (On) Time .....                                                                                                                                                                                                                                           | 5-20 seconds                                                                                                                               |
| Pause (Off) Time .....                                                                                                                                                                                                                                         | 2.5-30 minute                                                                                                                              |
| Fault Output .....                                                                                                                                                                                                                                             | (Dry Contacts), 5 amp max up to 230 VAC                                                                                                    |
| Air Cleanliness .....                                                                                                                                                                                                                                          | 5 micron, 40° F (4° C) Dewpoint                                                                                                            |
| Operating Temperature .....                                                                                                                                                                                                                                    | 40° F to 120° F (4° C to 49° C)                                                                                                            |
| Lube Output .....                                                                                                                                                                                                                                              | 0.0015, 0.0030 and 0.005 cu in/cycle (0.025, 0.049 and 0.082 cc/cycle)                                                                     |
| Pressure Switch Set Points                                                                                                                                                                                                                                     |                                                                                                                                            |
| Air (N.C.) .....                                                                                                                                                                                                                                               | 25 psi (1.7 bar), nonadjustable                                                                                                            |
| Oil (N.O.) .....                                                                                                                                                                                                                                               | 320 psi (22 bar), nonadjustable                                                                                                            |
| Nozzles .....                                                                                                                                                                                                                                                  | Tube ID/Orifice Ratio (See Figure 2)                                                                                                       |
| Delivery Tube Length .....                                                                                                                                                                                                                                     | 24 in to 50 ft (0.6 m to 15.24 m)                                                                                                          |
| Lubricant Filtration: It is recommended that the lubricant in any lubrication system be filtered to the minimum level recommended by the Society of Automotive Engineers (SAE) which corresponds to the ISO Standard 4460 ratings/ specifications of ISO 18/14 |                                                                                                                                            |

# Air Oil

## High Speed Spindl-Gard® Systems

### Ordering Information

| High Speed Spindl-Gard Systems                                         |                                                                      |
|------------------------------------------------------------------------|----------------------------------------------------------------------|
| 24B219                                                                 | SPG-E-1-115-2-1-1                                                    |
| 258301                                                                 | SPG-E-1-115-6-33-3-3-3-3                                             |
| 258347                                                                 | SPG-E-1-115-6-3-3-3-1-1-3                                            |
| 564445                                                                 | SPG-E-0-024-3-3-3-3                                                  |
| High Speed Spindl-Gard (HSSG) Blocks                                   |                                                                      |
| 563130                                                                 | 0.0015 in <sup>3</sup> Displacement                                  |
| 563131                                                                 | 0.0030 in <sup>3</sup> Displacement                                  |
| 563132                                                                 | 0.0050 in <sup>3</sup> Displacement                                  |
| High Speed Spindl-Gard (HSSG) Components                               |                                                                      |
| 563489                                                                 | 10 micron Oil Filter Element                                         |
| 561031                                                                 | Inlet Block                                                          |
| 561032                                                                 | Outlet Block                                                         |
| Spindl-Gard Nozzles                                                    |                                                                      |
| 563127                                                                 | Nozzle Tube Adapter                                                  |
| 560478                                                                 | 10 in. Nozzle Tube - 2 Outlet, 180°                                  |
| 560477                                                                 | 10 in. Nozzle Tube - 1 Outlet, 90°                                   |
| 562994                                                                 | End Outlet Nozzle                                                    |
| 563128                                                                 | Spray Nozzle Assembly for Headwalls over 1 in. thick                 |
| Spindl-Gard Accessories                                                |                                                                      |
| 563048                                                                 | Injection Point Check Valve, 1/8 in. NPTF                            |
| 563049                                                                 | Discharge Point Check Valve, 1/8 in. NPTF                            |
| 564337                                                                 | Relief Valve, 2 psi                                                  |
| 563091                                                                 | In-Line Lube Filter, 2 micron, 1/4 in. NPSF (FM) to 1/4 in. NPTF (M) |
| 557134                                                                 | Replacement Filter Element - In-Line Lube Filter                     |
| 564348                                                                 | Air Flow Switch w/Lights                                             |
| 563129                                                                 | SG Air/Oil Mixing Tee                                                |
| High Speed Spindl-Gard (HSSG) Tie Rod Kits - Nuts and Washers included |                                                                      |
| 564443                                                                 | Tie Rod Kit - 1 Air/Oil Lube Point                                   |
| 563940                                                                 | Tie Rod Kit - 2 Air/Oil Lube Point                                   |
| 564444                                                                 | Tie Rod Kit - 3 Air/Oil Lube Point                                   |
| 15U854                                                                 | Tie Rod Kit - 4 Air/Oil Lube Point                                   |
| 15U855                                                                 | Tie Rod Kit - 5 Air/Oil Lube Point                                   |
| 563941                                                                 | Tie Rod Kit - 6 Air/Oil Lube Point                                   |
| 563942                                                                 | Tie Rod Kit - 7 Air/Oil Lube Point                                   |
| 15U856                                                                 | Tie Rod Kit - 8 Air/Oil Lube Point                                   |

### Spindl-Gard Ordering Menu Code

SPG – **X** – **XXX** – **X** – **X**

E – Electric Motor

**CONTROLLER OPTION**

0 – REMOTE (NO TIMER)  
1 – WITH TIMER (AC MODELS ONLY)

**VOLTAGE**

024 – 24 VDC  
115 – 115 VAC  
230 – 230 VAC

**NUMBER OF OUTLETS**

1 – ONE  
2 – TWO  
3 – THREE  
4 – FOUR  
5 – FIVE  
6 – SIX  
7 – SEVEN  
8 – EIGHT

**INDIVIDUAL OUTPUTS FROM INLET TO END CC/STROKE (CU IN/STROKE)**

0 – PLUGGED  
1 – 0.025 (0.0015)  
3 – 0.049 (0.0030)  
5 – 0.082 (0.0050)

# General Accessories

## Trabon® Spra-Control™ Valve

### Features and Benefits

- Conserves air—air required only during spray interval
- Versatile—can be used with any centralized lube system or mechanical oiler and will handle grease or oil
- External mix nozzle purges itself and prevents clogging
- Saves lubricant by spraying smaller amounts at frequent intervals, provides better film, with no waste

### Typical Fluids Handled

- Oil - minimum of 100 SUS at 100° F
- Grease - NLGI #1 at any temperature, NLGI #2 at 32° F or above

### Technical Specifications

|                      |                                       |
|----------------------|---------------------------------------|
| Minimum Air Pressure | 20 psi (1.4 bar)                      |
| Maximum Air Pressure | 150 psi 10.3 bar)                     |
| Spray Patterns       | 4 inch or 8 inch (10.2 cm or 20.3 cm) |

### Ordering Information

| Gear Spray Valves |                                                                           |
|-------------------|---------------------------------------------------------------------------|
| 563275            | Air-Lube Control Valve and Nozzle Assembly - 4 in. Spray Diameter, Normal |
| 563276            | Air-Lube Control Valve and Nozzle Assembly - 8 in. Spray Diameter, Wide   |



*Ball mills run at peak performance with Graco's Air-Lube Spra-Control Valve*

# General Accessories

## Reset Indicator

### Features and Benefits

- Provides quick troubleshooting tool with visual indication
- No tools for reset or parts to replace after indication
- Easy information on blocked lines, high system pressure or blocked bearings

### Technical Specifications

| Reset w/Memory<br>psi (bar) | 250<br>(17) | 500<br>(35) | 750<br>(52) | 1000<br>(69) | 1500<br>(103) | 2000<br>(138) | 2500<br>(172) |
|-----------------------------|-------------|-------------|-------------|--------------|---------------|---------------|---------------|
| MJ                          | ✓           | ✓           | ✓           | ✓            | ✓             | ✓             |               |
| MSP                         | ✓           | ✓           | ✓           | ✓            | ✓             | ✓             | ✓             |
| MXP                         | ✓           | ✓           | ✓           | ✓            | ✓             | ✓             | ✓             |
| MX                          | ✓           | ✓           | ✓           | ✓            | ✓             | ✓             | ✓             |
| MGO                         |             |             |             |              | ✓             |               |               |



Simple point troubleshooting with visual indication

### Ordering Information

| Divider Valve Reset Indicator w/Memory for MJ, MSP, MHH and MXP              |                     |
|------------------------------------------------------------------------------|---------------------|
| 563231                                                                       | 250 psi (17 bar)    |
| 563232                                                                       | 500 psi (35 bar)    |
| 563233                                                                       | 750 psi (52 bar)    |
| 563234                                                                       | 1,000 psi (69 bar)  |
| 563235                                                                       | 1,500 psi (103 bar) |
| 563236                                                                       | 2,000 psi (138 bar) |
| 563237                                                                       | 2,500 psi (172 bar) |
| 563238                                                                       | 3,500 psi (241 bar) |
| Divider Valve Reset Indicator w/Memory and O-Ring Seal for MX                |                     |
| 563239                                                                       | 250 psi (17 bar)    |
| 563240                                                                       | 500 psi (35 bar)    |
| 563241                                                                       | 750 psi (52 bar)    |
| 563242                                                                       | 1,000 psi (69 bar)  |
| 563243                                                                       | 1,500 psi (103 bar) |
| 563244                                                                       | 2,000 psi (138 bar) |
| 563245                                                                       | 2,500 psi (172 bar) |
| Divider Valve Reset Indicators w/Memory and O-Ring Seal for MSP, MHH and MXP |                     |
| 563252                                                                       | 250 psi (17 bar)    |
| 563253                                                                       | 500 psi (35 bar)    |
| 563254                                                                       | 750 psi (52 bar)    |
| 563255                                                                       | 1,000 psi (69 bar)  |
| 563256                                                                       | 1,500 psi (103 bar) |
| 563257                                                                       | 2,000 psi (138 bar) |
| 563258                                                                       | 2,500 psi (172 bar) |
| 563261                                                                       | 3,000 psi (207 bar) |
| 563262                                                                       | 5,000 psi (345 bar) |
| 563263                                                                       | 3,500 psi (241 bar) |
| Divider Valve Reset Indicators w/Memory and O-Ring Seal for MGO              |                     |
| 564200                                                                       | 1,500 psi (103 bar) |



# General Accessories

## Automatic Relief Indicator

### Features and Benefits

These performance indicators pinpoint lube line blockages but allow the lube system to continue to supply lubrication to points that are not blocked.

- Allows machine to continue to run while non-critical bearings are lubricated
- No time or effort required for reset after blockage is cleared
- Easy information on blocked lines, high system pressure or blocked bearings

### Typical Applications

- Works with MSP, MX, MXP, MJ and MHH divider valves

### Technical Specifications

563159

| Auto Relief<br>psi (bar) | 750<br>(52) | 1000<br>(69) | 1250<br>(86) | 1500<br>(103) | 2000<br>(138) | 2500<br>(172) | 3000<br>(207) |
|--------------------------|-------------|--------------|--------------|---------------|---------------|---------------|---------------|
| MJ                       | ✓           | ✓            |              | ✓             | ✓             |               |               |
| MSP                      | ✓           | ✓            | ✓            | ✓             | ✓             | ✓             | ✓             |
| MXP                      | ✓           | ✓            | ✓            | ✓             | ✓             | ✓             | ✓             |
| MX                       |             | ✓            |              | ✓             | ✓             | ✓             | ✓             |



*Keep your machine running while  
lubrication gets to critical points*

### Ordering Information

| Divider Valve Automatic Relief Indicators |                                                         |
|-------------------------------------------|---------------------------------------------------------|
| 563156                                    | Works with MX, 750 psi (52 bar)                         |
| 563157                                    | Works with MX, 1,000 psi (69 bar)                       |
| 563158                                    | Works with MX, 1,500 psi (103 bar)                      |
| 563159                                    | Works with MX, 2,000 psi (138 bar)                      |
| 563160                                    | Works with MX, 2,500 psi (172 bar)                      |
| 563161                                    | Works with MX, 3,000 psi (207 bar)                      |
| 563163                                    | Works with MSP, MXP, MHH, and MJ, 750 psi (52 bar)      |
| 563164                                    | Works with MSP, MXP, MHH, and MJ, 1,000 psi (69 bar)    |
| 563165                                    | Works with MSP, MXP, MHH, and MJ, 1,250 psi (86 bar)    |
| 563166                                    | Works with MSP, MXP, MHH, and MJ, 1,500 psi (103 bar)   |
| 563167                                    | Works with MSP, MXP, MHH, and MJ, 2,000 psi (138 bar)   |
| 563168                                    | Works with MSP, MXP, MHH, and MJ, 2,500 psi (172 bar)   |
| 563169                                    | Works with MSP, MXP, MHH, and MJ, 3,000 psi (207 bar)   |
| 563170                                    | MSP, MXP, and MHH, 750 psi (52 bar) with O-Ring Seal    |
| 563171                                    | MSP, MXP, and MHH, 1,000 psi (69 bar) with O-Ring Seal  |
| 563172                                    | MSP, MXP, and MHH, 1,250 psi (86 bar) with O-Ring Seal  |
| 563173                                    | MSP, MXP, and MHH, 1,500 psi (103 bar) with O-Ring Seal |
| 563174                                    | MSP, MXP, and MHH, 2,000 psi (138 bar) with O-Ring Seal |
| 563175                                    | MSP, MXP, and MHH, 2,500 psi (172 bar) with O-Ring Seal |
| 563176                                    | MSP, MXP, and MHH, 3,000 psi (207 bar) with O-Ring Seal |

# General Accessories

## Rupture Indicator

### Features and Benefits

Used on MH divider valve applications where lube system pressures exceed 2,500 psi.

- High pressure from blockage causes a disc to rupture
- Lubricant forces an indicator pin to protrude, indicating the blockage
- High pressure backs up through the system and trips a switch to shut the system off
- When fault is corrected, disc must be replaced and pin reset

### Typical Applications

- Works with MHH divider valves

### Ordering Information

| Divider Valve Rupture Indicators w/Memory |                                      |
|-------------------------------------------|--------------------------------------|
| 563220                                    | 3,700 psi (255 bar)                  |
| 563227                                    | 7,300 psi (503 bar)                  |
| 563228                                    | 2,800 psi (193 bar)                  |
| 564355                                    | 4,600 psi (317 bar)                  |
| 563223                                    | 5,500 psi (379 bar)                  |
| 563225                                    | 6,400 psi (441 bar)                  |
| 563229                                    | 2,800 psi (193 bar) with O-Ring Seal |
| 563221                                    | 3,700 psi (255 bar) with O-Ring Seal |
| 563222                                    | 4,600 psi (317 bar) with O-Ring Seal |
| 563224                                    | 5,500 psi (379 bar) with O-Ring Seal |
| 563226                                    | 6,400 psi (441 bar) with O-Ring Seal |
| Replacement Rupture Discs                 |                                      |
| 557422                                    | 2,800 psi (193 bar)                  |
| 557423                                    | 3,700 psi (255 bar)                  |
| 557424                                    | 4,600 psi (317 bar)                  |
| 557425                                    | 5,500 psi (379 bar)                  |
| 557427                                    | 6,400 psi (441 bar)                  |
| 557428                                    | 7,300 psi (503 bar)                  |
| 557429                                    | 8,200 psi (565 bar)                  |



563227

*Know quickly when  
critical bearings aren't  
getting lubricated*

# General Accessories

## Rupture to Atmosphere Indicator

### Features and Benefits

- Used in conjunction with system pressure switch—can warn of a fault while allowing lube system to continue to deliver to critical bearings
- Requires replacement of the rupture disc to restart the lube system
- Easy information on blocked lines, high system pressure or blocked bearings

| Rupture to Atmosphere<br>psi (bar) | 1,450<br>(100) | 1,750<br>(121) | 2,050<br>(141) | 2,350<br>(162) | 2,950<br>(203) | 3,250<br>(224) |
|------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| MJ                                 |                | ✓              |                | ✓              | ✓              | ✓              |
| MSP                                |                | ✓              |                | ✓              | ✓              | ✓              |
| MX                                 | ✓              | ✓              | ✓              | ✓              | ✓              |                |

### Ordering Information

| Rupture-to-Atmosphere Indicators for MJ, MSP, MHH and MXP            |                                                                                    |
|----------------------------------------------------------------------|------------------------------------------------------------------------------------|
| 564059                                                               | 1,750 psi (121 bar), 1/8 inch-27 inch (.3175 cm-68.6 cm) npt(f)                    |
| 563191                                                               | 2,350 psi (162 bar), 1/8 inch-27 inch (.3175 cm-68.6 cm) npt(f)                    |
| 563192                                                               | 2,950 psi (203 bar), 1/8 inch-27 inch (.3175 cm-68.6 cm) npt(f)                    |
| 563193                                                               | 3,250 psi (224 bar), 1/8 inch-27 inch (.3175 cm-68.6 cm) npt(f)                    |
| 563194                                                               | 5,000 psi (345 bar), 1/8 inch-27 inch (.3175 cm-68.6 cm) npt(f)                    |
| 563218                                                               | 6,400 psi (441 bar), 1/8 inch-27 inch (.3175 cm-68.6 cm) npt(f)                    |
| 563219                                                               | 7,300 psi (503 bar), 1/8 inch-27 inch (.3175 cm-68.6 cm) npt(f)                    |
| 563217                                                               | 5,500 psi (379 bar), 1/8 inch-27 inch (.3175 cm-68.6 cm) npt(f)                    |
| Rupture-to-Atmosphere Indicators for MX                              |                                                                                    |
| 563179                                                               | 1,450 psi (100 bar), 1/4 inch-18 inch (.635 cm-45.7 cm) npt(f)                     |
| 563182                                                               | 1,750 psi (121 bar), 1/4 inch-18 inch (.635 cm-45.7 cm) npt(f)                     |
| 563183                                                               | 2,050 psi (141 bar), 1/4 inch-18 inch (.635 cm-45.7 cm) npt(f)                     |
| 563184                                                               | 2,350 psi (162 bar), 1/4 inch-18 inch (.635 cm-45.7 cm) npt(f)                     |
| 563185                                                               | 2,950 psi (203 bar), 1/4 inch-18 inch (.635 cm-45.7 cm) npt(f)                     |
| 563186                                                               | 1,450 psi (100 bar), 1/4 inch-18 inch (.635 cm-45.7 cm) npt(f), with Spud Assembly |
| 563187                                                               | 1,750 psi (121 bar), 1/4 inch-18 inch (.635 cm-45.7 cm) npt(f), with Spud Assembly |
| 563188                                                               | 2,350 psi (162 bar), 1/4 inch-18 inch (.635 cm-45.7 cm) npt(f), with Spud Assembly |
| Replacement Rupture Packs of 6 (11/16 inch / 17.5 mm diameter discs) |                                                                                    |
| 563962                                                               | 1,450 psi (100 bar) - Yellow                                                       |
| 563963                                                               | 1,750 psi (121 bar) - Red                                                          |
| 563964                                                               | 2,050 psi (141 bar) - Orange                                                       |
| 563965                                                               | 2,350 psi (162 bar) - Aluminum                                                     |
| 563966                                                               | 2,940 psi (203 bar) - Blue                                                         |
| Replacement Rupture Packs of 25 (3/8 inch / 9.5 mm diameter discs)   |                                                                                    |
| 563952                                                               | 900 psi (62 bar) - Black                                                           |
| 563954                                                               | 1,450 psi (100 bar) - Yellow                                                       |
| 563955                                                               | 1,750 psi (121 bar) - Red                                                          |
| 563956                                                               | 2,050 psi (141 bar) - Orange                                                       |
| 563957                                                               | 2,350 psi (162 bar) - Aluminum                                                     |
| 563958                                                               | 2,650 psi (183 bar) - Pink                                                         |
| 563959                                                               | 2,950 psi (203 bar) - Blue                                                         |
| 563960                                                               | 3,250 psi (224 bar) - Purple                                                       |
| 563961                                                               | 5,000 psi (345 bar) - Brown                                                        |



563182

*Blockages are easy to detect with the simple Rupture to Atmosphere indicator*

# General Accessories

## Magnetic Visual Indicator

### Features and Benefits

Six steel balls in a clear sleeve follow a magnet which moves with the cycling piston, providing a clear visual indication of lube cycles.

### Ordering Information

| Divider Valve Cycle Indicators and Switches |                                                      |
|---------------------------------------------|------------------------------------------------------|
| 563251                                      | MS/MHH Visual Cycle Indicator Assembly - O-ring Seal |
| 563260                                      | MX/MXP Visual Cycle Indicator Assembly               |
| 563250                                      | MS/MHH Visual Cycle Indicator Assembly - Gasket Seal |



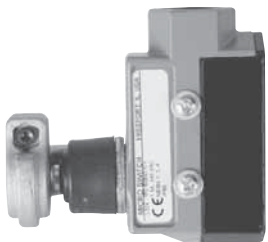
563251

### Cycle Switch

- Monitors piston movement to ensure completed lubrication cycle—must have cycle indicator pin
- Provides positive feedback based on actual metering piston movement
- Mounts to MJ, MSP, MXP, or MX divider with cycle pin option with simple install
- Able to be set for normally open or normally closed operation

### Technical Specifications

| Voltage              | Amp Rating |
|----------------------|------------|
| 125/250/480VAC ..... | 15A        |
| 125 VDC .....        | 1/2A       |
| 250 VDC .....        | 1/4A       |
| 24 VDC .....         | 6A*        |
| *non-inductive       |            |



563272

*Integrates to controllers, starters or PLCs*

### Ordering Information

| Cycle Switches |                                                                         |
|----------------|-------------------------------------------------------------------------|
| 563270         | MD-2, Cycle Switch, Bracket Assembly                                    |
| 563271         | MD-3, Cycle Switch, Bracket Assembly                                    |
| 564356         | MD-4, Cycle Switch ,Bracket Assembly                                    |
| 563269         | MGO Cycle Switch (SPDT) Bracket Assembly                                |
| 557781         | Replacement Cycle Switch for 563269, 563270, 563271, 564356, 563272     |
| 564357         | MHP Cycle Switch (DPDT) Bracket Assembly                                |
| 563272         | MJ/MS/MHH/MXP Cycle Switch (SPDT) Bracket Assembly                      |
| 563273         | MJ/MS/MHH/MXP Cycle Switch (SPDT) Bracket Assembly - Moisture Resistant |
| 557546         | Replacement Bracket - 563272, 563273, 564357                            |

# General Accessories

## Proximity Switches

### Features and Benefits

- Available in 115 VAC or 12-32 VDC
- Available for all series progressive families to provide cycle rates up to 200 CPM
- Pressure ratings up to 10,000 psi (690 bar)
- Variety of electrical connections and voltages with or without LED indication
- Select models available with UL and CSA approvals

### Ordering Information

| Divider Valve Proximity Switches  |                                                                            |
|-----------------------------------|----------------------------------------------------------------------------|
| 24K415                            | CD PNP, 10-36 VDC, 7/16 inch (11.1 mm) Thread, M12 Connection, USP/MSP/MHH |
| 558938                            | FSM., 115 VAC, 5-Pin BH - MXP/MX                                           |
| 563495                            | FSM., 20-28 VDC, 4-Pin CH - MGO                                            |
| 563970                            | FSM., 115 VAC, 3-Pin CH - MGO                                              |
| 564400                            | FSmech, 20-32 VDC, 5-Pin BH, LED - MXP/MX                                  |
| 564401                            | FSmech, 115 AC or 10-32 VDC, Explosion proof - MXP/MX                      |
| 557752                            | FSM., 20-28 VDC, 4-Pin CH - MXP/MX                                         |
| 563969                            | FSM., 115 VAC, 3-Pin BH - MXP/MX                                           |
| 563476                            | FSM., 115 VAC, 3-Pin PH - MXP/MX                                           |
| 557747                            | FSM., 12-23 VDC, 4-Pin CH - MSP/MHH                                        |
| 557741                            | FSM., 115 VAC, 3-Pin BH - MSP/MHH                                          |
| 557746                            | FSM., 115 VAC, 5-Pin BH - MSP/MHH                                          |
| 563486                            | FSmech, 12-32 VDC, 3-Pin BH, LED - MXP/MX                                  |
| 563478                            | FSmech, 12-32 VDC, 3-Pin BH, LED - MSP/MHH                                 |
| 563501                            | FSmech, 12-32 VDC, 4-Pin micro, LED - MSP/MHH                              |
| 563477                            | FSmech, 12-32 VDC, 5-Pin BH, LED - MSP/MHH                                 |
| 563484                            | FSmech, AC/DC, 5-Pin BH - MSP/MH                                           |
| 557745                            | FSM, Explosion Proof, 115 VAC, MSP/MHH                                     |
| 563485                            | FSmech, Explosion Proof, 115 VAC or 10-32 VDC, MSP/MHH                     |
| 563427                            | Reed Type, 115 VAC or 10-32 VDC, 1/2 inch (12.7 mm) NPT, MSP/MHH           |
| 564402                            | O-Ring Seal Style Cycle-Indicator Proximity Switch for MGO                 |
| 564399                            | O-Ring Seal Style Proximity Switch                                         |
| 564403                            | O-Ring Seal Style Cycle-Indicator Proximity Switch for MX and MXP          |
| 558933                            | Magnetic Proximity Cycle Switch                                            |
| 558018                            | Replacement Switch housing for 563427                                      |
| Proximity Switch Connector Cables |                                                                            |
| 124333                            | M12 Cable, Male and Female, 16 feet (4.88 m)                               |
| 558021                            | 3-Pin Cable, Straight Connector - 6 feet (1.83 m)                          |
| 558022                            | 3-Pin Cable, Straight Connector - 12 feet (3.66 m)                         |
| 558025                            | 4-Pin Cable, Straight Connector, Polarity - PNP - 12 feet (3.66 m)         |
| 558026                            | 4-Pin Cable, 90° Connector, Polarity - PNP - 12 feet (3.66 m)              |
| 558023                            | 5-Pin Cable, Straight Connector - 6 feet (1.83 m)                          |
| 558024                            | 5-Pin Cable, Straight Connector - 12 feet (3.66 m)                         |



557747

Magnetically-operated sensing devices for sending system data to the controller or PLC



24K415

# General Accessories

## Pressure Switches

### Features and Benefits

- Easy to visually adjust line pressure and reset pressure to ensure your lube system has vented properly
- LED lights visually display pressure switch functions
- Modern 4-pin M12 micro-connector easily connects to the G3 and other controllers
- Turns off your pump or controller and activates venting once the lube system reaches the desired pressure level
- 1/4 NPT thread allows quick connection to injector systems



24K414

*IP67 rated – Durable design allows it to operate in harsh environments*

### Ordering Information

| Pressure Switches |                                                                                                                                                                     |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 24K414            | Set pressure range 290-580 psi (20-40 bar), reset pressure range 175-5685 psi (12-392 bar), M12 connector (female), 9.6-32 VDC, 1/4 inch (7.6 cm) npt thread (male) |

### Features and Benefits

- Moisture resistant and factory set to ensure accuracy for long life and reliability
- Sends an alarm signal to alert either a high, or low pressure condition
- Available for hydraulic pressures from 10 to 4700 psi



557829

### Ordering Information

| Pressure Switches |                                                                                                                         |
|-------------------|-------------------------------------------------------------------------------------------------------------------------|
| 557830            | 1,500 psi (103 bar), 10-150 psi (.7-10 bar) Adjustable Range (Factory Set @ 50 psi / 10 bar ), Moisture Resistant       |
| 557828            | 4,700 psi (324 bar), 400-4,700 psi (28-324 bar) Adjustable Range (Factory Set @ 750 psi / 52 bar), Moisture Resistant   |
| 557829            | 4,700 psi (324 bar), 400-4,700 psi (28-324 bar) Adjustable Range (Factory Set @ 1,150 psi / 79 bar), Moisture Resistant |

### Features and Benefits

- High-low, adjustable pressure switches

### Ordering Information

| Pressure Switches |                                                                                                                                                                                                                                                |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 115124            | Single post pressure switch                                                                                                                                                                                                                    |
| 558947            | Dual post control pressure switch                                                                                                                                                                                                              |
| 24N181            | IP65 rated for harsh environments. Fluoroelastomer seals are suitable for use in high temperature environments and synthetic lubricants. Large orifice reduces grease solidification. Din connector. Adjustable from 580-5800 psi (40-400 bar) |



115124



24N181

# General Accessories

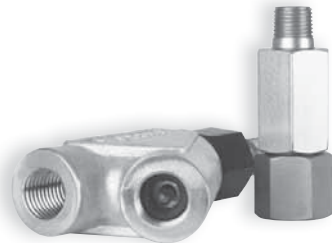
## Broken Line Indicators

### Features and Benefits

- Monitors lube line integrity to ensure lubricant is delivered to critical bearings
- Provides a visual or electronic indication
- Works with terminating oil or grease systems as well as recirculating systems

### Technical Specifications

|                       | BLI500               | BLI1000               | BLI1500               |
|-----------------------|----------------------|-----------------------|-----------------------|
| Simulator Pressure    | 60 psi (4.1 bar)     | 100 psi (6.9 bar)     | 150 psi (10.3 bar)    |
| Maximum Pump Pressure | 1,000 psi (69.0 bar) | 1,500 psi (103.4 bar) | 2,500 psi (172.4 bar) |



563078

*The only device that provides visual indication that bearing lines are intact*

### Ordering Information

| Broken Line Indicators |                                            |
|------------------------|--------------------------------------------|
| 563068                 | 500 psi (34.5 bar) Indicator               |
| 563069                 | 1,000 psi (68.9 bar) Indicator             |
| 563070                 | 1,500 psi (103.4 bar) Indicator            |
| 563075                 | 60 psi (4.1 bar) Simulator                 |
| 563076                 | 100 psi (6.9 bar) Simulator                |
| 563077                 | 150 psi (10.3 bar) Simulator               |
| 563078                 | Broken Line Indicator Kit - 563068, 563075 |
| 563079                 | Broken Line Indicator Kit - 563069, 563076 |
| 563080                 | Broken Line Indicator Kit - 563070, 563077 |

# General Accessories

## Filters

### Ordering Information

| Inlet and In-Line Oil Filters - Non-Replaceable Elements            |                                                                                 |
|---------------------------------------------------------------------|---------------------------------------------------------------------------------|
| 563091                                                              | MSP Standard Inlet 10 micron Oil Filter, NPT                                    |
| 563094                                                              | MSP Standard Zero Leak Shunt Valve Inlet 90 micron Oil Filter, NPT              |
| 563074                                                              | MSP Standard Zero Leak Inlet 90 micron Oil Filter/Restrictor, NPT               |
| 563073                                                              | MSP Zero Leak Shunt Valve Inlet 90 micron Oil Filter, SAE                       |
| 563480                                                              | MSP Modular Zero Leak Valve 25 micron Oil Filter                                |
| Single and Dual Cartridge Filter and Replacement Filter Spare Parts |                                                                                 |
| 557803                                                              | 10 micron Replacement Filter Element - 564004, 183-000-141                      |
| 557806                                                              | 10 micron Replacement Filter Element - 183-000-071, 183-000-201                 |
| 557804                                                              | 25 micron Replacement Filter Element - 562883, 183-000-051, 183-000-151         |
| 557807                                                              | 25 micron Replacement Filter Element - 183-000-081, 183-000-121, 183-000-211    |
| 557811                                                              | 1-2 micron Extra-Long Replacement Filter Cartridge                              |
| Spin-On Oil Filters                                                 |                                                                                 |
| 563092                                                              | 10 micron Spin-On Filter Assembly, NPT, Internal 25 psi (1.7 bar) By-Pass       |
| 563095                                                              | 10 micron Spin-On Filter Assembly, NPT, External 150 psi (10.3 bar) Relief      |
| 564343                                                              | 10 micron Remote Mount Spin-On Filter Assembly, NPT, Fill Stud                  |
| 563096                                                              | 25 micron Spin-On Filter Assembly, NPT, External 150 psi (10.3 bar) Relief      |
| 563100                                                              | 25 micron Spin-On Filter Assembly, ISO 6149, External 150 psi (10.3 bar) Relief |
| 563093                                                              | 10 micron Replacement Filter Element - 563092, 563095, 564343                   |
| 563097                                                              | 25 micron Replacement Filter Element - 563096, 563100                           |
| In-Line Oil Filters - High-Pressure                                 |                                                                                 |
| 563511                                                              | 10 micron In-Line Oil Filter, NPT                                               |
| 563512                                                              | 25 micron In-Line Oil Filter, NPT                                               |
| 563513                                                              | 10 micron In-Line Oil Filter, SAE                                               |
| 563514                                                              | 25 micron In-Line Oil Filter, SAE                                               |
| 563516                                                              | 10 micron In-Line Oil Filter, BSPP (ISO 1179)                                   |
| 563515                                                              | 25 micron In-Line Oil Filter, BSPP (ISO 1179)                                   |
| 563509                                                              | 10 micron Replacement Filter Element - 563511, 563513, 563516                   |
| 563510                                                              | 25 micron Replacement Filter Element - 563512, 563514, 563515                   |
| In-Line Oil/Grease Filters - High-Pressure                          |                                                                                 |
| 563508                                                              | 44 micron, 325 Mesh In-Line Block Strainer (NPT)                                |
| 563507                                                              | 149 micron, 100 Mesh In-Line Block Strainer (NPT)                               |
| 564406                                                              | 149 micron, 100 Mesh In-Line Block Strainer, BSPP (ISO 1179)                    |
| 557701                                                              | 44 micron Replacement Filter Element - 563508                                   |
| 557700                                                              | 149 micron Replacement Filter Element - 563507, 564406                          |
| In-Line Oil Filters - Low-Pressure, Thrif-T Luber Orifice System    |                                                                                 |
| 564053                                                              | Thrif-T Luber (TLLF-00) 25 micron In-Line Oil Filter, NPT                       |
| 557132                                                              | Replacement Filter Element - 564053                                             |

| Oil/Grease Strainers                                            |                                                |
|-----------------------------------------------------------------|------------------------------------------------|
| 563103                                                          | 44 micron, 325 Mesh Fill-Point Strainer        |
| 563102                                                          | 149 micron, 100 Mesh Fill-Point Strainer       |
| 563145                                                          | 350 micron, 40 Mesh Fill-Point Strainer        |
| 557154                                                          | 44 micron Replacement Filter Element - 563103  |
| 557153                                                          | 149 micron Replacement Filter Element - 563102 |
| 557779                                                          | 350 micron Replacement Filter Element - 563145 |
| Single Cartridge Type Filters w/Electrical and Visual Indicator |                                                |
| 564003                                                          | 10 micron Filter, BSPP Thread                  |
| 564004                                                          | 20 micron Filter, BSPP Thread                  |
| 564005                                                          | 10 micron Filter, ISO 6149 Thread              |
| 564006                                                          | 20 micron Filter, ISO 6149 Thread              |
| 562880                                                          | 10 micron Filter, SAE ISO 11026 Thread         |
| 564007                                                          | 20 micron Filter, SAE ISO 11926 Thread F865    |
| Single Cartridge Type Filters w/Visual Indicator                |                                                |
| 562881                                                          | 10 micron Filter, BSPP Thread                  |
| 564008                                                          | 20 micron Filter, BSPP Thread                  |
| 564009                                                          | 10 micron Filter, ISO 6149 Thread              |
| 564010                                                          | 20 micron Filter, ISO 6149 Thread              |
| 562882                                                          | 10 micron Filter, SAE ISO 11026 Thread         |
| 562883                                                          | 20 micron Filter, SAE ISO 11926 Thread F865    |

# General Accessories

## Fittings

### Ordering Information

| Pipe Fittings              |                                                                                                         |
|----------------------------|---------------------------------------------------------------------------------------------------------|
| 560532                     | 45° Street Elbow - 1/4 inch (6.4 mm) Female x 1/4 inch (6.4 mm) Male, Steel                             |
| 560530                     | 90° Street Elbow - 1/4 inch (6.4 mm) Female x 1/8 inch (3.2 mm) Male, Steel                             |
| 15M045                     | 90° Street Elbow - 1/4 inch (6.4 mm) Female x 1/4 inch (6.4 mm) Male, Steel                             |
| 560533                     | 90° Street Elbow - 1/8 inch (3.2 mm) Female x 1/4 inch (6.4 mm) Male, Steel                             |
| 560534                     | Fitting - Street Elbow, 3/8 inch (9.5 mm) Male x 3/8 inch (9.5 mm) Female                               |
| 560528                     | Hex Coupling - 1/8 inch (3.2 mm) Female, Steel                                                          |
| 556402                     | Reducing Brushing - 1/4 inch (6.4 mm) Male x 1/8 inch (6.4 mm) Female, Steel                            |
| 563178                     | Extension Nipple - 1/8 inch (6.4 mm) Female x 1/8 inch (6.4 mm) Male, 2-1/4 inch (5.7 cm) Length, Steel |
| 556632                     | Male Connector - 1/4 inch (6.4 mm) T x 1/8 inch (3.2 mm) Male, Brass                                    |
| 556633                     | Male Connector - 1/4 inch (6.4 mm) T x 1/4 inch (6.4 mm) Male, Brass                                    |
| 556634                     | Male Elbow - 1/4 inch (6.4 mm) T x 1/8 inch (3.2 mm) Male, Brass                                        |
| 555726                     | Male Elbow - 1/4 inch (6.4 mm) T x 1/4 inch (6.4 mm) Male, Brass                                        |
| 555727                     | Tube Sleeve - 3/16 inch (4.8 mm) T, Brass                                                               |
| 556635                     | Tube Sleeve - 1/4 inch (6.4 mm) T, Brass                                                                |
| Straight and Angle Swivels |                                                                                                         |
| 563212                     | 90° Angle Swivel - 1/8 inch (3.2 mm)                                                                    |
| 563214                     | 90° Angle Swivel - 1/4 inch (6.4 mm)                                                                    |
| 564350                     | 90° Angle Swivel - 1/2 inch (12.7 mm)                                                                   |
| 563213                     | 180° Straight Swivel - 1/8 inch (3.2 mm)                                                                |
| 563215                     | 180° Straight Swivel - 1/4 inch (6.4 mm)                                                                |
| 563154                     | 180° Straight Swivel - 1/2 inch (12.7 mm)                                                               |
| 564352                     | 180° Straight Swivel - 1 inch (2.5 cm)                                                                  |
| 563146                     | 90° Compact Swivel - 1/4 inch (6.4 mm)                                                                  |
| 563147                     | 180° Compact Swivel - 1/4 inch (6.4 mm)                                                                 |
| 563150                     | 180° Compact Swivel - 1/8 inch (3.2 mm)                                                                 |
| 563148                     | 90° Swivel Adapter - 1/8 inch (3.2 mm) NPT x 1/8 inch (3.2 mm) NPT Female                               |
| Tube Fittings              |                                                                                                         |
| 556448                     | Zerk Adapter Quick Fitting                                                                              |
| 556636                     | Male Tee - 5/16 inch (7.9 mm) Tube, 1/8 inch (3.2 mm) NPTF                                              |
| 556637                     | Union Tee - 5/16 inch (7.9 mm) Tube                                                                     |
| 556638                     | Male Elbow - 3/16 inch (4.8 mm) Tube 1/8 inch (3.2 mm) NPTF                                             |
| 556639                     | Male Elbow - 5/16 inch (7.9 mm) Tube, 1/8 inch (3.2 mm) NPTF                                            |
| 556640                     | Male Elbow - 5/16 inch (7.9 mm) Tube, 1/4 inch (6.4 mm) NPT                                             |
| 556642                     | Female Connector - 3/16 inch (4.8 mm) Tube, 1/8 inch (3.2 mm) NPT                                       |
| 556643                     | Female Connector - 5/16 inch (7.9 mm) Tube, 1/8 inch (3.2 mm) NPT                                       |
| 556644                     | Male Connector - 3/16 inch (4.8 mm) Tube, 1/8 inch (3.2 mm) NPTF                                        |
| 556645                     | Male Connector - 5/16 inch (7.9 mm) Tube, 1/8 inch (3.2 mm) NPTF                                        |
| 556646                     | Male Connector - 5/16 inch (7.9 mm) Tube, 1/4 inch (6.4 mm) NPT                                         |
| 556647                     | Union - 3/16 inch (4.8 mm) Tube                                                                         |
| 556648                     | Union - 5/16 inch (7.9 mm) Tube                                                                         |
| 556649                     | Nut - 3/16 inch (4.8 mm) Tube                                                                           |

| 556650                              | Nut - 5/16 inch (7.9 mm) Tube                                                                |
|-------------------------------------|----------------------------------------------------------------------------------------------|
| 556652                              | Sleeve - 3/16 inch (4.8 mm) Tube                                                             |
| 556653                              | Sleeve - 5/16 inch (7.9 mm) Tube                                                             |
| 556656                              | 5/16 inch (7.9 mm) Tube Brass Insert - Minimum Order of 20 (Price Each)                      |
| 556660                              | 3/16 inch (4.8 mm) Tube Nut and Sleeve                                                       |
| 562995                              | Male Connector - 3/16 inch (4.8 mm) Tube, 1/4-28 inch (6.4 mm-71.1 cm) SAE Male              |
| 556661                              | Straight Connector - Push-to-Connect 3/16 inch (4.8 mm) Tube, 1/8 inch (3.2 mm) PM           |
| 556662                              | Elbow - 90 feet (27.4 m), Push-to-Connect 3/16 inch (4.8 mm) Tube, 1/8 inch (3.2 mm) PM      |
| 556666                              | 5/16 inch (7.9 mm) Tube Nut and Sleeve                                                       |
| 556670                              | 90° Elbow - 3/16 inch (4.8 mm) Tube, 1/8 inch (3.2 mm) NPT Female                            |
| 15K783                              | 90° Elbow - 1/8 inch (3.2 mm) NPTF Male/Female                                               |
| 557395                              | 45° Street Elbow - 1/8 inch (3.2 mm) NPTF Male/Female                                        |
| 560534                              | Street Elbow Fitting - 3/8 inch (9.5 mm) Male, 3/8 inch (9.5 mm) Female                      |
| 563759                              | Air-Operated Tractor Hardware Package - 30 Point                                             |
| 557954                              | Adapter - 45° Elbow, 1/4-28 inch (6.4 mm-71.1 cm) SAE Male x 1/8 inch (3.2 mm) NPTF Female   |
| 557968                              | Zerk Fitting - 1/8 inch (3.2 mm) NPT @ 65° Angle                                             |
| 563776                              | Zerk Adapter - 90°                                                                           |
| 563777                              | Zerk Adapter - Straight                                                                      |
| Miscellaneous Adapters and Fittings |                                                                                              |
| 556403                              | Reducing Bushing - 3/8 inch (9.5 mm) NPT x 1/8 inch (3.2 mm) NPT Female                      |
| 556407                              | Fitting Tee - 1/4 inch (6.4 mm) Male x (2) 1/4 inch (6.4 mm) Female                          |
| 556420                              | Fitting Tee - 1/4 inch (6.4 mm) Male x (2) 1/4 inch (6.4 mm) Female                          |
| 15M037                              | Press-to-Fit - 1/8 inch (3.2 mm) NPSF                                                        |
| 563148                              | 90° Swivel Adapter - 1/8 inch (3.2 mm) NPT x 1/8 inch (3.2 mm) NPT Female                    |
| 557392                              | Extension - 1/8 inch (3.2 mm) NPT x 1/8 inch (3.2 mm) NPTF, 3/4 inch (19 mm) Long            |
| 557393                              | Extension - 1/8 inch (3.2 mm) NPT x 1/8 inch (3.2 mm) NPTF, 1-1/4 inch (3.18 cm) Long        |
| 557950                              | Bulkhead FTG - 1/8 inch (3.2 mm) NPT                                                         |
| 15K740                              | Elbow Adapter - 1/4-28 inch (6.4 mm-71.1 cm) SAE Male x 1/8 inch (3.2 mm) NPTF Female        |
| 15K784                              | Elbow Adapter - 1/4-28 inch (6.4 mm-71.1 cm) SAE Male x 1/8 inch (3.2 mm) NPTF Female, Short |
| 557955                              | Straight Adapter - 1/4-28 inch (6.4 mm-71.1 cm) SAE Male x 1/8 inch (3.2 mm) NPTF Female     |
| Hose Fittings                       |                                                                                              |
| 555749                              | Connector - 1/8 inch (3.2 mm) NPT, #4 JIC                                                    |
| 556762                              | Connector - 1/4 inch (6.4 mm) NPT, #4 JIC                                                    |
| 556763                              | 90° Elbow - 1/8 inch (3.2 mm) NPT, #4 JIC                                                    |
| 556764                              | 90° Elbow - 1/4 inch (6.4 mm) NPT, #4 JIC                                                    |
| 556773                              | Hose End - Field Installed, Swivel End, #4 JIC                                               |

# General Accessories

## Pressure Gauges and Check Valves

### Ordering Information

| Pressure Gauges - Bottom and Back Mounted    |                                                                                                                                                           |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 557866                                       | 0-3,000 psi (0-206.8 bar) - Standard                                                                                                                      |
| 558948                                       | 0-150 psi (0-10.3 bar), 1/4 inch (6.4 mm) NPT Brass Bottom Mount Connection - Standard                                                                    |
| 557559                                       | 0-3,000 psi (0-206.8 bar), 1/4 inch (6.4 mm) NPT Brass Bottom Mount Connection - Standard                                                                 |
| 557352                                       | 0-5,000 psi (0-344.7 bar), 1/4 inch (6.4 mm) NPT Brass Bottom Mount Connection - Standard                                                                 |
| 557278                                       | 0-1,500 psi (0-103.4 bar), 1/4 inch (6.4 mm) NPT Brass Back Mount Connection - Standard                                                                   |
| 557864                                       | 0-3,000 psi (0-206.8 bar), 1/4 inch (6.4 mm) NPT Brass Back Mount Connection - Standard                                                                   |
| 558297                                       | 0-10,000 psi, 1/4 in. NPT Brass Back Mount Connection - Standard                                                                                          |
| 557713                                       | 0-3,000 psi (0-206.8 bar), 1/4 inch (6.4 mm) NPT Brass Bottom Mount Connection - Liquid Filled                                                            |
| 558298                                       | 0-10,000 psi (0-689.5 bar), 1/4 inch (6.4 mm) NPT Steel Back Mount Connection - Liquid Filled                                                             |
| Outlet Check Valves                          |                                                                                                                                                           |
| 563196                                       | Single Check Valve - 1/8-27 inch (3.2 mm-68.6 cm) NPTF x 1/8-27 inch (3.2 mm-68.6 cm) NPSF Carbon Steel, Steel Ball, 5,000 psi (344.7 bar) max            |
| 563052                                       | Single Check Valve - 7/16-20 inch (11.1 mm-50.8 cm) x 7/16-20 inch (11.1 mm-50.8 cm) SAE Stainless Steel, Fluoroelastomer Ball, 7,500 psi (517.1 bar) max |
| 563054                                       | Single Check Valve - 7/16-20 inch (11.1 mm-50.8 cm) x 7/16-20 inch (11.1 mm-50.8 cm) SAE Stainless Steel, Steel Ball, 3,500 psi (241.3 bar) max           |
| Maxi-Flo Relief Valve - Field Installed Only |                                                                                                                                                           |
| 563375                                       | 600 psi (41.4 bar)                                                                                                                                        |
| Single Ball Check Valves                     |                                                                                                                                                           |
| 563195                                       | 10 psi (.69 bar) 1/8 inch (3.2 mm) NPTF (M) x 1/8 inch (3.2 mm) NPSF (F), Steel Body/Ball                                                                 |
| 563199                                       | 15 psi (1.03 bar), 1/8 inch (3.2 mm) NPSF (F) x 1/8 inch (3.2 mm) NPTF (M), Steel Body/Ball                                                               |
| 563196                                       | 35 psi (2.4 bar), 1/8 inch (3.2 mm) NPTF (M) x 1/8 inch (3.2 mm) NPSF (F), Steel Body/Ball                                                                |
| 563200                                       | 35 psi (2.4 bar), 1/8 inch (3.2 mm) NPSF (F) x 1/8 inch (3.2 mm) NPTF (M), Steel Body/Ball                                                                |
| 563201                                       | 60 psi (4.1 bar), 1/8 inch (3.2 mm) NPSF (F) x 1/8 inch (3.2 mm) NPTF (M), Steel Body/Ball                                                                |
| 563197                                       | 125 psi (8.6 bar), 1/8 inch (3.2 mm) NPTF (M) x 1/8 inch (3.2 mm) NPSF (F), Steel Body/Ball                                                               |
| 563198                                       | 250 psi (17.2 bar), 1/8 inch (3.2 mm) NPTF (M) x 1/8 inch (3.2 mm) NPSF (F), Steel Body/Ball                                                              |
| 563202                                       | 250 psi (17.2 bar), 1/8 inch (3.2 mm) NPSF (F) x 1/8 inch (3.2 mm) NPTF (M), Steel Body/Ball                                                              |
| 563051                                       | 360 psi (24.8 bar), 1/8 inch (3.2 mm) NPTF (M) x 1/8 inch (3.2 mm) NPSF (F), Steel Body/Ball                                                              |
| 563206                                       | 8-15 psi (.5-1.03 bar), 1/4 inch (6.4 mm) (M) x 1/4 inch (6.4 mm) (F), Steel Body/Ball                                                                    |
| 563210                                       | 10 psi (.69 bar), 1/4 inch (6.4 mm) NPSF (F) x 1/4 inch (6.4 mm) NPTF (M), Steel Body/Ball                                                                |

| 563207                   | 35 psi (2.4 bar), 1/4 inch (6.4 mm) NPTF (M) x 1/4 inch (6.4 mm) NPSF (F), Steel Body/Ball                                   |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------|
| 563211                   | 35 psi (2.4 bar), 1/4 inch (6.4 mm) NPSF (F) x 1/4 inch (6.4 mm) NPTF (M), Steel Body/Ball                                   |
| 563208                   | 100 psi (6.9 bar), 1/4 inch (6.4 mm) NPTF (M) x 1/4 inch (6.4 mm) NPSF (F), Steel Body/Ball                                  |
| 563209                   | 250 psi (17.2 bar), 1/4 inch (6.4 mm) NPSF (F) x 1/4 inch (6.4 mm) NPTF (M), Steel Body/Ball                                 |
| 563054                   | 20-50 psi (1.4-3.4 bar), 7/16-20 inch (14.3 mm-50.8 cm) SAE (M) x 7/16-20 inch (14.3 mm-50.8 cm) SAE (F), SS Body/Steel Ball |
| 563055                   | 20-50 psi (1.4-3.4 bar), 9/16-18 inch (14.3 mm-45.7 cm) SAE (M) x 9/16-18 inch (14.3 mm-45.7 cm) SAE (F), SS Body/Steel Ball |
| 563052                   | 20-50 psi (1.4-3.4 bar), 7/16-20 inch (14.3 mm-50.8 cm) SAE (M) x 7/16-20 inch (14.3 mm-50.8 cm) SAE (F), SS Body/FKM Ball   |
| 563047                   | 35-50 psi (2.4-3.4 bar), 1/4 inch (6.4 mm) NPSF (F) x 1/4 inch (6.4 mm) NPSF (F), SS Body/NBR Ball                           |
| 563046                   | 35-60 psi (2.4-4.1 bar), 1/4 inch (6.4 mm) NPSF (F) x 1/4 inch (6.4 mm) NPSF (F), SS Body/FKM Ball                           |
| 563048                   | 35 psi (2.4 bar), 1/8 inch (3.2 mm) NPSF (F) x 1/8 inch (3.2 mm) NPTF (M), Steel Body/FKM Ball                               |
| 563049                   | 35 psi (2.4 bar), 1/8 inch (3.2 mm) NPTF (M) x 1/8 inch (3.2 mm) NPSF (F), Steel Body/FKM Ball                               |
| Double Ball Check Valves |                                                                                                                              |
| 563203                   | 60-90 psi (4.1-6.2 bar), Twin Tandem, 1/4 inch (6.4 mm) NPTF (M) x 1/8 inch (3.2 mm) NPTF (M), SS Body/Ball                  |
| 563205                   | 60-90 psi (4.1-6.2 bar), Twin Tandem, 1/4 inch (6.4 mm) NPTF (M) x 1/4 inch (6.4 mm) NPTF (M), SS Body/Ball                  |
| 563058                   | 25-45 psi (1.7-3.1 bar), 1/4 inch (6.4 mm) IP (F) x 1/4 inch (6.4 mm) IP (M), Brass Body/Ball                                |
| 563059                   | 25-45 psi (1.7-3.1 bar), 1/4 inch (6.4 mm) in O.D. Pipe Inlet (F), 1/4 inch (6.4 mm) NPT (M) Outlet, Brass Body/Ball         |
| 563061                   | 35-60 psi (2.4-4.1 bar), 1/4 inch (6.4 mm) NPSF (F) x 1/4 inch (6.4 mm) NPSF (F), SS Body/FKM Ball                           |
| 563060                   | 35-60 psi (2.4-4.1 bar), 1/4 inch (6.4 mm) NPSF (F) x 1/4 inch (6.4 mm) NPSF (F), SS Body/NBR Ball                           |

# Controllers GLC 2200™ Controller

## Features and Benefits

- Easy to mount without having to open up the control box
- LEDs let you know what your system is doing at a glance
- Easy to read digital display makes it simple to program and monitor your equipment
- In-cab visual and audible alarms let the operator know your equipment needs attention. Or set up a remote alarm to alert service or maintenance staff
- Simple icon based push buttons make programming easy
- Color coded wiring harness with flying leads and easy to follow wiring diagrams makes installations efficient

## Available Inputs

- Pressure/cycle switch
- Low level switch

## Available Outputs

- Pump power control
- External alarms—both low level and pressure/cycle faults

## Typical Applications

- Heavy construction, mining, other mobile on-road and off-road equipment

## Technical Specifications

|                            |                                    |
|----------------------------|------------------------------------|
| Height.....                | 5.53 inch (140 mm)                 |
| Width.....                 | 2.75 inch (70 mm)                  |
| Depth.....                 | 1.38 inch (35 mm)                  |
| Protection Grade.....      | IP54                               |
| Operating Temperature..... | -40° F to 176° F (-40° C to 80° C) |
| Standards.....             | CE Marked                          |
| Power Source DC.....       | 9 - 30 VDC                         |
| Manual.....                | 3A2960A                            |

## Ordering Information

| GLC 2200 |                                                             |
|----------|-------------------------------------------------------------|
| 24N468   | GLC 2200 Controller                                         |
| 24P314   | GLC 2200 Wiring Harness — 5 feet (150 cm) with flying leads |
| 24P686   | GLC 2200 Connector (1) and Pins (12)                        |
| 24P687   | GLC 2200 Connectors (5) and Pins (60)                       |
| 16T671   | Crimper                                                     |



24N468

# Controllers

## GLC 4400™ Controller

### Features and Benefits

- Customize your lubrication time, pressure, cycle counts and machine counts for maximum precision and productivity
- Simple icon- and menu-based user interface is easy to setup and operate, saving valuable technician time
- Special operation modes save setup and inspection time
- Rugged and weatherproof, meeting stringent IP69K protection requirements
- Works with single line resistive, single line parallel, series progressive and dual line systems



24B591

### Available Inputs

- Pressure/cycle switch
- Machine count switch
- Reservoir level switch
- Remote manual run switch

### Available Outputs

- Pump control signal
- Low level alarm signal
- Pressure/cycle alarm
- System okay signal

### Typical Applications

- Heavy construction, mining, other mobile off-road equipment
- In plant machinery, food and beverage, wind energy

### Technical Specifications

|                            |                                    |
|----------------------------|------------------------------------|
| Height.....                | 4.7 in (120 mm)                    |
| Width.....                 | 4.8 in (122 mm)                    |
| Depth.....                 | 3.6 in (91 mm)                     |
| Protection Grade.....      | IP 69K                             |
| Operating Temperature..... | -40° F to 145° F (-40° C to 63° C) |
| Net Weight.....            | 2 lbs (0.9 kg)                     |
| Standards.....             | CE Marked                          |
| Manual .....               | 313855                             |

### Ordering Information

| GLC 4400 |             |
|----------|-------------|
| 24B591   | 9-30 VDC    |
| 24B596   | 100-240 VAC |

# Controllers Solid-State Timer

## Features and Benefits

The Solid-State Timer from Graco operates on standard 115/230 VAC 50/60 Hz input power, and provides a total on and off cycle with “on” periods to meet your specific lubrication system’s requirements. Total cycle times can be set from 1/2 minute to 32 hours. “On” time during the total cycle time can be set from 12 seconds to 13 minutes. The “on” time occurs at the beginning of each period.

- Solid-state technology combined with multiple-level protection ensures dependable performance
- Exceptional flexibility of settings allows this timer to be used with many types of simple or sophisticated lubrication systems
- Manual run button can be used to check system integrity as well as to simplify system filling and air purging
- Face-mounted LED displays timer status at a glance
- Tamper-resistant design puts cycle setting controls inside the covered case
- Easy mounting and installation
- Built-in memory keeps the timer “alive” for 1-1/2 hours during power failures and machine shutdown



562872

## Technical Specifications

|                                            |                                        |
|--------------------------------------------|----------------------------------------|
| Electrical .....                           | 115/230 VAC; 50/60 hz; 3 ampere (max.) |
| Temperature Range:                         |                                        |
| Operating .....                            | 0° to 131° F (-18° to 55° C)           |
| Storage .....                              | -67° to 185° F (-55° to 85° C)         |
| Enclosure .....                            | High Impact Plastic                    |
| Component Technology .....                 | Solid-State CMOS                       |
| Cycle Interval, Adjustable:                |                                        |
| Range 1 .....                              | 0.5 - 30 minutes                       |
| Range 2 .....                              | 0.5 - 32 hours                         |
| “On” Time .....                            | 0.2 - 13 minutes                       |
| Vibration .....                            | 5g's 50 Hz                             |
| Standard: LED Indicator, Manual Run Button |                                        |

## Ordering Information

| Solid State Timer |                                                   |
|-------------------|---------------------------------------------------|
| 562872            | 115/230 VAC                                       |
| 558031            | Solid State (SS) Timer Board Only w/out Enclosure |
| DC Timer          |                                                   |
| 557925            | DC Timer                                          |
| 557926            | DC Timer for Grease Jockey Systems                |

# Controllers

## WMP III Maxi-Monitor®

### Features and Benefits

The WMP III Maxi-Monitor is a micro processor based controller, dedicated to the operation and monitoring of a centralized lubrication system. WMP III is designed to schedule lube intervals and monitor the operation of Trabon pumps and divider valves in intermittent operating systems.

- Lube programs can be changed to meet changing conditions or work schedules
- High flexibility means you can handle a variety of applications with the same basic WMP Controller
- By working with one basic unit, operating and maintenance personnel quickly become familiar with the WMP and use it more effectively
- Programming is done thru the keypad mounted on the face of the enclosure



556023

### Technical Specifications

|                                      |                                                                                                                                       |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Power Supply .....                   | 115 + 15 % VAC, 50/60 Hz; 230 + 15% VAC, 50/90 Hz;<br>24 + 15% VDC; 12 + 10% VDC. Voltage must be specified when ordering             |
| Inputs .....                         | Same voltage of WMP III in use                                                                                                        |
| Current Consumptions.....            | 0.1 amp for AC (less external loads); 0.4 amp for DC (less external loads);<br>0.5 amp 3AG fuse supplied; 115, 230 VAC and 12, 24 VDC |
| External Pump Load .....             | 115, 230 VAC or 12, 24 VDC; 2 amp max(4 amp typical inrush),<br>AC; 2 amp AGC fuse supplied; Determined by input power supply         |
| Fault Relay .....                    | 2 isolated, non-fused, double-pole, doublethrow form, C contacts, 5 amp resistive                                                     |
| Count Rate .....                     | 15 CTS/SEC max @ 50% duty cycle; min.                                                                                                 |
| Transient Withstanding Capacity..... | 2000 Volts for 1 millisecond (typical); Joule Max                                                                                     |
| Temperature Range (LCD limited)      |                                                                                                                                       |
| Ambient.....                         | 10° F to 113° F (-21° C to 45° C)                                                                                                     |
| Storage .....                        | -8° F to 140° F (-25° C to 60° C)                                                                                                     |
| Time Base .....                      | Crystal Controller Time Base                                                                                                          |
| Weight.....                          | 9.3 lbs (4.2 kg)                                                                                                                      |
| Programming Selections               |                                                                                                                                       |
| Program Range .....                  | 2-9999 sec; 1-9999 min.; 1-9999 hrs; 2-9999 stroke counts                                                                             |
| Monitor Range.....                   | 1-9999 sec; 1-9999 min.; 1-9998 hrs; 1-9998 stroke counts                                                                             |
| System Cycle Range.....              | 1-9999 counts                                                                                                                         |

### Ordering Information

| WMP III Maxi-Monitor |                 |
|----------------------|-----------------|
| 556023               | 115 VAC         |
| 556024               | 230 VAC         |
| 556025               | 24 VDC          |
| 563914               | Shock Mount Kit |

# On-Road Mobile Lubrication Systems

## Grease Jockey®

### Features and Benefits

- Keeps your chassis operating, even in harsh on-road conditions
- Lubricant goes where it's supposed to, automatically, with little or no waste
- Field-proven—some of the largest fleets have been using Grease Jockey for decades!
- A full range of options to choose from

### Typical Applications

Truck and tractor lubrication, class 4, 5, 6, 7 and 8 vehicles

### Typical Fluids Handled

NLGI #0, #00 or #000 Grease

### Technical Specifications

|                                               |                                                |
|-----------------------------------------------|------------------------------------------------|
| Construction.....                             | Cast aluminum body and bracket                 |
| Lubricant.....                                | NLGI #0, #00 or #000 grease                    |
| Output per Cycle.....                         | 1.5 cu. in (24.6 cm <sup>3</sup> )             |
| Reservoir Capacity (rubber bag) .....         | 10 lbs. (4.5 kg)                               |
| Reservoir Capacity (rigid clear plastic)..... | 6 lbs. (2.7 kg), 12 lbs. (5.4 kg)              |
| Inlet supply (dry) (air pump).....            | 150 psi (1034 kPa) max; 60 psi (414 kPa) min.. |
| Air-to-lube Ratio (max.) .....                | 9:1                                            |
| Solenoid Voltage (air).....                   | 12 or 24 VDC                                   |
| Electrical .....                              | 9 to 32 VDC (12 or 24 VDC Nominal)             |
| Enclosure (air pump) .....                    | High-impact sealed plastic                     |
| Component Technology .....                    | Solid-state                                    |
| Lube Cycle Frequency .....                    | 7 Adjustable settings: 1/2 to 6 hours          |
| Main Supply to Modules .....                  | 5/16 in O.D. heavywall nylon                   |
| Module to Point .....                         | 3/16 in O.D. heavywall nylon                   |
| Operating Pressure (nylon lines) .....        | 1,350 psi (9,310 kPa)                          |



### Grease Jockey Pump Kits

|                                  | Part # | Fill Port | Solenoid | Timer    | Wiring Harness | Mounting Plate | Mainline and Hardware | Extra Fittings Kit |
|----------------------------------|--------|-----------|----------|----------|----------------|----------------|-----------------------|--------------------|
| <b>Pneumatic</b>                 |        |           |          |          |                |                |                       |                    |
| Pump Only, No Reservoir          | 563625 | Straight  |          |          |                |                |                       |                    |
| Pump with 6# Rigid Reservoir     | 563589 | Straight  |          |          |                |                |                       |                    |
| Pump with 10# Flexible Reservoir | 563570 | Straight  |          |          |                |                |                       |                    |
| Pump with 12# Rigid Reservoir    | 563590 | Straight  |          |          |                |                |                       |                    |
| Pump with 6# Rigid Reservoir     | 563593 | Elbow     |          |          |                |                |                       |                    |
| Pump with 10# Flexible Reservoir | 563594 | Elbow     |          |          |                |                |                       |                    |
| Pump with 10# Flexible Reservoir | 563886 | Elbow     | 12 VDC   |          |                |                |                       |                    |
| Pump with 6# Rigid Reservoir     | 563888 | Elbow     | 12 VDC   |          |                |                |                       |                    |
| Pump with 10# Flexible Reservoir | 563847 | Straight  | 12 VDC   | External | Yes            | Yes            | Yes                   | Yes                |
| Pump with 6# Rigid Reservoir     | 563854 | Straight  | 12 VDC   | External | Yes            | Yes            | Yes                   | Yes                |
| Pump with 12# Rigid Reservoir    | 563874 | Straight  | 12 VDC   | External | Yes            | Yes            | Yes                   | Yes                |
| Pump with 10# Flexible Reservoir | 563882 | Straight  | 12 VDC   | External | Yes            | Yes            | Yes                   | Yes                |

# On-Road Mobile Lubrication Systems

Grease Jockey®

## Grease Jockey Right and Left Front Kits for Trucks

|                 | # of Grease Points | Part Number | Upper King Pin | Lower King Pin | Drag Link | Drag Link | Slack Adjuster | S-Cam | Tie Rod | Spring Pin | Spring Hanger-Upper | Spring Hanger-Lower | Steer Assist | Steer Assist | Clutch Pedal | Clutch Cross Shaft-Right | Clutch Cross Shaft-Left | Clutch Throw Out Bearing |
|-----------------|--------------------|-------------|----------------|----------------|-----------|-----------|----------------|-------|---------|------------|---------------------|---------------------|--------------|--------------|--------------|--------------------------|-------------------------|--------------------------|
|                 |                    |             | Right Front    |                |           |           |                |       |         |            |                     |                     |              |              |              |                          |                         |                          |
|                 |                    |             | Injector Size  |                |           |           |                |       |         |            |                     |                     |              |              |              |                          |                         |                          |
| Right Front Kit | 5                  | 563727      | 3              | 3              |           |           |                |       | 2       |            |                     |                     |              |              |              | 0                        | 0                       |                          |
| Right Front Kit | 5                  | 563860      | 3              | 3              |           |           | 1              | 0     | 2       |            |                     |                     |              |              |              |                          |                         |                          |
| Right Front Kit | 7                  | 563859      | 3              | 3              |           |           | 1              | 0     | 2       |            |                     |                     |              |              |              | 0                        | 0                       |                          |
| Right Front Kit | 8                  | 563652      | 3              | 3              |           |           | 1              | 0     | 2       | 3          | 3                   | 3                   |              |              |              |                          |                         |                          |
| Right Front Kit | 8                  | 563715      | 3              | 3              |           |           | 1              | 0     | 2       |            |                     |                     |              |              |              | 0                        | 0                       | 0                        |
| Right Front Kit | 8                  | 563858      | 3              | 3              |           |           | 1              | 0     | 2       | 3          | 3                   | 3                   |              |              |              |                          |                         |                          |
| Right Front Kit | 10                 | 563645      | 3              | 3              |           |           | 1              | 0     | 2       | 3          | 3                   | 3                   |              |              |              | 0                        | 0                       |                          |
|                 |                    |             | Left Front     |                |           |           |                |       |         |            |                     |                     |              |              |              |                          |                         |                          |
| Left Front Kit  | 5                  | 563728      | 3              | 3              | 2         | 2         |                |       | 2       |            |                     |                     |              |              |              |                          |                         |                          |
| Left Front Kit  | 7                  | 563706      | 3              | 3              | 2         | 2         | 1              | 0     | 2       |            |                     |                     |              |              |              |                          |                         |                          |
| Left Front Kit  | 8                  | 563716      | 3              | 3              | 2         | 2         | 1              | 0     | 2       |            |                     |                     |              | 0            |              |                          |                         |                          |
| Left Front Kit  | 10                 | 563644      | 3              | 3              | 2         | 2         | 1              | 0     | 2       | 3          | 3                   | 3                   |              |              |              |                          |                         |                          |

## Grease Jockey Rear Axle Modules Truck and Tractor Kits

| Grease Jockey<br>Rear Axle Modules<br>Truck and Tractor Kits |  |  | # of Grease Points |  | Part Number |  | Slack Adjuster |  | S-Cam |  | Slack Adjuster |  | S-Cam     |  | Rear Spring |  | Slack Adjuster |  | S-Cam     |  | Slack Adjuster |  | S-Cam |  | Rear Spring |  | 5th Wheel Pivot-Right |  | 5th Wheel Pivot-Left |  | 5th Wheel Pivot Inner-Right |  | 5th Wheel Pivot Inner-Left |  | Boom Pivot-Right |  | Boom Pivot-Left |  | 5th Wheel Cylinder Upper-Right |  | 5th Wheel Cylinder Upper-Left |  | 5th Wheel Interlock |  | 5th Wheel Plate |  | Front Right |  | Front Left |  | Rear Right and Left |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|                                                              |  |  |                    |  |             |  | Right Rear     |  |       |  |                |  | Left Rear |  |             |  |                |  | 5th Wheel |  |                |  |       |  |             |  |                       |  |                      |  |                             |  |                            |  |                  |  |                 |  |                                |  |                               |  |                     |  |                 |  |             |  |            |  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                              |  |  |                    |  |             |  | Injector Size  |  |       |  |                |  |           |  |             |  |                |  |           |  |                |  |       |  |             |  |                       |  |                      |  |                             |  |                            |  |                  |  |                 |  |                                |  |                               |  |                     |  |                 |  |             |  |            |  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                              |  |  |                    |  |             |  |                |  |       |  |                |  |           |  |             |  |                |  |           |  |                |  |       |  |             |  |                       |  |                      |  |                             |  |                            |  |                  |  |                 |  |                                |  |                               |  |                     |  |                 |  |             |  |            |  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

# On-Road Mobile Lubrication Systems

Grease Jockey®

## Grease Jockey Pneumatic Universal Truck Kits

|                                |       | # of Grease Points | Part Number | Upper King Pin | Lower King Pin | Slack Adjuster | S-Cam | Tie Rod | Spring Pin | Spring Hanger-Upper | Spring Hanger-Lower | Clutch Cross Shaft | Clutch Cross Shaft | Clutch Throw Out Bearing | "A" Frame Pivot | Lift Cylinder Top Pivot | Lift Cylinder Bottom Pivot | Slack Adjuster | S-Cam | Slack Adjuster | S-Cam | Rear Spring | Lift Cylinder Top Pivot |
|--------------------------------|-------|--------------------|-------------|----------------|----------------|----------------|-------|---------|------------|---------------------|---------------------|--------------------|--------------------|--------------------------|-----------------|-------------------------|----------------------------|----------------|-------|----------------|-------|-------------|-------------------------|
|                                |       |                    |             | Right Front    |                |                |       |         |            |                     |                     |                    |                    |                          |                 |                         |                            | Right Rear     |       |                |       |             |                         |
|                                |       |                    |             | Injector Size  |                |                |       |         |            |                     |                     |                    |                    |                          |                 |                         |                            |                |       |                |       |             |                         |
|                                |       |                    |             |                |                |                |       |         |            |                     |                     |                    |                    |                          |                 |                         |                            |                |       |                |       |             |                         |
| Single Axle Tractor Kit w/ 6#  | Rigid | 27                 | 563897      | 3              | 3              | 1              | 0     | 2       |            |                     |                     | 0                  | 0                  | 0                        |                 |                         |                            | 1              | 0     |                |       | 3           |                         |
| Single Axle Tractor Kit w/ 6#  | Rigid | 28                 | 563891      | 3              | 3              | 1              | 0     | 2       |            |                     |                     | 0                  | 0                  | 0                        |                 |                         |                            | 1              | 0     |                |       | 3           |                         |
| Spotter Truck Kit w/ 6#        | Rigid | 35                 | 563823      | 3              | 3              | 1              | 0     | 2       | 3          | 3                   | 3                   |                    |                    |                          | 8               | 8                       | 3                          | 1              | 1     |                |       |             | 3                       |
| Tandem Axle Tractor Kit w/ 6#  | Rigid | 33                 | 563846      | 3              | 3              | 1              | 0     | 2       | 3          | 3                   | 3                   | 0                  | 0                  |                          |                 |                         |                            | 1              | 0     | 1              | 0     |             |                         |
| Tandem Axle Tractor Kit w/ 6#  | Rigid | 34                 | 563809      | 3              | 3              | 1              | 0     | 2       | 3          | 3                   | 3                   |                    |                    |                          |                 |                         |                            | 1              | 0     |                |       |             |                         |
| Tandem Axle Tractor Kit w/ 6#  | Rigid | 34                 | 563814      | 3              | 3              | 1              | 0     | 2       | 3          | 3                   | 3                   | 0                  | 0                  |                          |                 |                         |                            | 1              | 0     | 1              | 0     |             |                         |
| Single Axle Tractor Kit w/ 10# | Flex  | 30                 | 563801      | 3              | 3              | 1              | 0     | 2       | 3          | 3                   | 3                   | 0                  | 0                  |                          |                 |                         |                            | 1              | 0     |                |       |             |                         |
| Single Axle Tractor Kit w/ 10# | Flex  | 34                 | 563836      | 3              | 3              | 1              | 0     | 2       | 3          | 3                   | 3                   |                    |                    |                          |                 |                         |                            | 1              | 0     |                |       |             |                         |
| Spotter Truck Kit w/10#        | Flex  | 35                 | 563826      | 3              | 3              | 1              | 0     | 2       | 3          | 3                   | 3                   |                    |                    |                          | 8               | 8                       | 3                          | 1              | 1     |                |       |             | 3                       |
| Tandem Axle Tractor Kit w/ 10# | Flex  | 24                 | 563839      | 3              | 3              |                |       | 2       |            |                     |                     | 0                  | 0                  |                          |                 |                         |                            | 1              | 0     | 1              | 0     |             |                         |
| Tandem Axle Tractor Kit w/ 10# | Flex  | 29                 | 563827      | 3              | 3              | 1              | 0     | 2       |            |                     |                     |                    | 0                  | 0                        |                 |                         |                            | 1              | 0     | 1              | 0     |             |                         |
| Tandem Axle Tractor Kit w/ 10# | Flex  | 34                 | 563802      | 3              | 3              | 1              | 0     | 2       | 3          | 3                   | 3                   | 0                  | 0                  |                          |                 |                         |                            | 1              | 0     | 1              | 0     |             |                         |
| Tandem Axle Tractor Kit w/ 10# | Flex  | 34                 | 563812      | 3              | 3              | 1              | 0     | 2       | 3          | 3                   | 3                   |                    |                    |                          |                 |                         |                            | 1              | 0     |                |       |             |                         |
| Tandem Axle Tractor Kit w/ 10# | Flex  | 38                 | 563813      | 3              | 3              | 1              | 0     | 2       | 3          | 3                   | 3                   |                    |                    |                          |                 |                         |                            | 1              | 0     | 1              | 0     |             |                         |

### Injector Size Key

|                       |       |       |       |       |       |       |
|-----------------------|-------|-------|-------|-------|-------|-------|
| Injector Size         | 0     | 1     | 2     | 3     | 4     | 8     |
| Output Volume (cu in) | 0.002 | 0.005 | 0.009 | 0.012 | 0.020 | 0.026 |

# On-Road Mobile Lubrication Systems

Grease Jockey®

| Upper King Pin | Lower King Pin | Drag Link-Front | Drag Link-Back | Slack Adjuster | S-Cam | Tie Rod | Spring Pin | Spring Hanger-Upper | Spring Hanger-Lower | Clutch Pedal | Clutch Cross Shaft | Clutch Throw Out Bearing | Lift Cylinder Top Pivot | Lift Cylinder Bottom Pivot | Slack Adjuster | S-Cam | Slack Adjuster | S-Cam | Rear Spring | Lift Cylinder Top Pivot | 5th Wheel Pivot-Right | 5th Wheel Pivot-Left | Boom Pivot-Right | Boom Pivot-Left | 5th Wheel Cylinder (Up.R.) | 5th Wheel Cylinder (Low. R.) | 5th Wheel Cylinder (Up. L.) | 5th Wheel Cylinder (Low. L.) | 5th Wheel Interlock | 5th Wheel Plate | 5th Wheel Plate | 5th Wheel Plate | 5th Wheel Plate |   |
|----------------|----------------|-----------------|----------------|----------------|-------|---------|------------|---------------------|---------------------|--------------|--------------------|--------------------------|-------------------------|----------------------------|----------------|-------|----------------|-------|-------------|-------------------------|-----------------------|----------------------|------------------|-----------------|----------------------------|------------------------------|-----------------------------|------------------------------|---------------------|-----------------|-----------------|-----------------|-----------------|---|
| Left Front     |                |                 |                |                |       |         |            |                     |                     |              |                    |                          |                         |                            | Left Rear      |       |                |       |             | 5th Wheel               |                       |                      |                  |                 |                            |                              |                             |                              |                     |                 |                 |                 |                 |   |
| Injector Size  |                |                 |                |                |       |         |            |                     |                     |              |                    |                          |                         |                            |                |       |                |       |             |                         |                       |                      |                  |                 |                            |                              |                             |                              |                     |                 |                 |                 |                 |   |
| 3              | 3              | 2               | 2              | 1              | 0     | 2       |            |                     |                     | 0            |                    |                          |                         |                            | 1              | 0     |                |       | 3           |                         |                       |                      |                  |                 |                            |                              |                             |                              |                     | 2               | 8               | 8               | 8               | 8 |
| 3              | 3              | 2               | 2              | 1              | 0     | 2       |            |                     |                     | 0            |                    |                          |                         |                            | 1              | 0     |                |       | 3           | 1                       | 1                     |                      |                  |                 |                            |                              |                             |                              |                     | 8               | 8               | 8               | 8               |   |
| 3              | 3              | 2               | 2              | 1              | 0     | 2       | 3          | 3                   | 3                   |              |                    |                          | 8                       | 3                          | 1              | 1     |                |       |             | 3                       | 1                     | 1                    |                  |                 |                            |                              |                             |                              |                     | 8               | 8               | 8               | 8               |   |
| 3              | 3              | 2               | 2              | 1              | 0     | 2       | 3          | 3                   | 3                   |              |                    | 0                        |                         |                            | 1              | 0     | 1              | 0     |             |                         | 1                     | 1                    |                  |                 |                            |                              |                             |                              |                     | 8               | 8               |                 |                 |   |
| 3              | 3              | 2               | 2              | 1              | 0     | 2       | 3          | 3                   | 3                   |              |                    |                          |                         |                            | 1              | 0     |                |       |             |                         | 4                     | 4                    | 4                | 4               | 4                          | 4                            | 4                           | 4                            |                     | 8               | 8               | 8               | 8               |   |
| 3              | 3              | 2               | 2              | 1              | 0     | 2       | 3          | 3                   | 3                   |              |                    |                          |                         |                            | 1              | 0     | 1              | 0     |             |                         | 1                     | 1                    |                  |                 |                            |                              |                             |                              |                     | 8               | 8               | 8               | 8               |   |
| 3              | 3              | 2               | 2              | 1              | 0     | 2       | 3          | 3                   | 3                   |              |                    |                          |                         |                            | 1              | 0     |                |       |             |                         | 1                     | 1                    |                  |                 |                            |                              |                             |                              |                     | 8               | 8               | 8               | 8               |   |
| 3              | 3              | 2               | 2              | 1              | 0     | 2       | 3          | 3                   | 3                   |              |                    |                          |                         |                            | 1              | 0     |                |       |             |                         | 4                     | 4                    | 4                | 4               | 4                          | 4                            | 4                           | 4                            |                     | 8               | 8               | 8               | 8               |   |
| 3              | 3              | 2               | 2              | 1              | 0     | 2       | 3          | 3                   | 3                   |              |                    |                          | 8                       | 3                          | 1              | 1     |                |       |             | 3                       | 1                     | 1                    |                  |                 |                            |                              |                             |                              |                     | 8               | 8               | 8               | 8               |   |
| 3              | 3              | 2               | 2              |                |       | 2       |            |                     |                     |              |                    |                          |                         |                            | 1              | 0     | 1              | 0     |             |                         | 1                     | 1                    |                  |                 |                            |                              |                             |                              |                     | 8               | 8               | 8               | 8               |   |
| 3              | 3              | 2               | 2              | 1              | 1     | 2       |            |                     |                     | 0            |                    |                          |                         |                            | 1              | 0     | 1              | 0     |             |                         | 1                     | 1                    |                  |                 |                            |                              |                             |                              |                     | 8               | 8               | 8               | 8               |   |
| 3              | 3              | 2               | 2              | 1              | 0     | 2       | 3          | 3                   | 3                   |              |                    |                          |                         |                            | 1              | 0     | 1              | 0     |             |                         | 1                     | 1                    |                  |                 |                            |                              |                             |                              |                     | 8               | 8               | 8               | 8               |   |
| 3              | 3              | 2               | 2              | 1              | 0     | 2       | 3          | 3                   | 3                   |              |                    |                          |                         |                            | 1              | 0     |                |       |             |                         | 4                     | 4                    | 4                | 4               | 4                          | 4                            | 4                           | 4                            |                     | 8               | 8               | 8               | 8               |   |
| 3              | 3              | 2               | 2              | 1              | 0     | 2       | 3          | 3                   | 3                   |              |                    |                          |                         |                            | 1              | 0     | 1              | 0     |             |                         | 4                     | 4                    | 4                | 4               | 4                          | 4                            | 4                           | 4                            |                     | 8               | 8               | 8               | 8               |   |

# On-Road Mobile Lubrication Systems

## Trailer Lubrication Systems

### Features and Benefits

- Smooth landing gear operation
- Innovative design works with your parking or service brakes—no electrical power needed
- Adjustable pump output volume puts you in control
- Slack adjuster and S-Cam lubrication help stop brakes from sticking —improves brake operation and extends component life

### Typical Applications

- Pre-designed kits for all popular trailer types
- Tractors with 1, 2, 3, 4, 5, and 6 axles

### Typical Fluids Handled

Grease up to NLGI #2

### Technical Specifications

|                                               |                                                  |
|-----------------------------------------------|--------------------------------------------------|
| Construction.....                             | Cast aluminum body and steel mounting bracket    |
| Lubricant.....                                | NLGI #2 or lower                                 |
| Output per Cycle.....                         | 0.010-0.030 cu. inch (0.16-.49 cm <sup>3</sup> ) |
| Reservoir Capacity (rigid clear plastic)..... | 4 lb (1.8 kg)                                    |
| Inlet supply (dry) (air pump).....            | 40-150 psi (3-10 bar)                            |
| Air-to-lube Ratio (max.).....                 | 20:1                                             |
| Main Supply to Modules.....                   | 1/4 inch I.D. hose                               |
| Module to Point.....                          | 3/16 inch O.D. heavywall nylon                   |
| Operating Pressure (nylon lines).....         | 1,350 psi (9,310 kPa)                            |



563842

### Universal Trailer Kits Ordering Information

*Pneumatic (Trailer Pump Included)*

|                                                      | Part # | Grease points covered in kit |       |            |              | Total # of Grease Points |
|------------------------------------------------------|--------|------------------------------|-------|------------|--------------|--------------------------|
|                                                      |        | Slack Adjuster               | S-Cam | Clevis Pin | Landing Gear |                          |
| One Axle w/ Inner and Outer S-Cams                   | 563829 | 2                            | 4     | -          | -            | 6                        |
| Two Axle w/ Enclosed S-Cams                          | 563850 | 4                            | 4     | -          | -            | 8                        |
| Two Axle w/ Inner and Outer S-Cams                   | 563842 | 4                            | 8     | -          | -            | 12                       |
| Two Axle w/ Enclosed S-Cams and Clevis Pins          | 563878 | 4                            | 4     | 4          | -            | 12                       |
| Two Axle w/ Inner and Outer S-Cams and Clevis Pins   | 563851 | 4                            | 8     | 4          | -            | 16                       |
| Two Axle w/ Inner and Outer S-Cams and Landing Gear  | 563840 | 4                            | 8     | -          | 5            | 17                       |
| Three Axle w/ Enclosed S-Cams                        | 563880 | 6                            | 6     | -          | -            | 12                       |
| Three Axle w/ Enclosed S-Cams and Clevis Pins        | 563884 | 6                            | 6     | 6          | -            | 18                       |
| Three Axle w/ Inner and Outer S-Cams and Clevis Pins | 563849 | 6                            | 12    | 6          | -            | 24                       |
| Four Axle w/ Enclosed S-Cams and Clevis Pins         | 563881 | 8                            | 8     | 8          | -            | 24                       |
| Five Axle w/ Enclosed S-Cams                         | 563866 | 10                           | 10    | -          | -            | 20                       |
| Five Axle w/ Inner and Outer S-Cams and Clevis Pins  | 563848 | 10                           | 20    | 10         | -            | 40                       |
| Six Axle w/ Enclosed S-Cams                          | 563865 | 12                           | 12    | -          | -            | 24                       |
| Six Axle w/ Inner and Outer S-Cams and Clevis Pins   | 563852 | 12                           | 24    | 12         | -            | 48                       |

# On-Road Mobile Lubrication Systems

## Easy Greaser®

### Features and Benefits

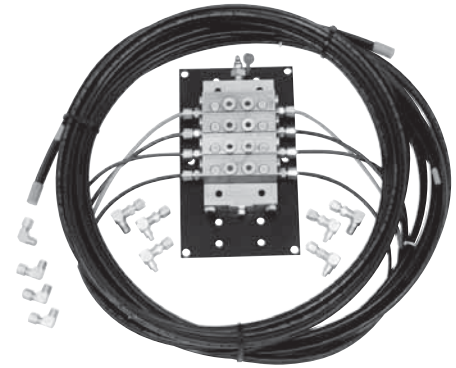
- 11 different kits let you customize your EZ Greaser system
- Once installed, use your manual grease gun to lubricate multiple lube points from one fitting

### Typical Applications

- Truck, tractor and trailer chassis lubrication

### Typical Fluids Handled

- Grease up to NLGI #2



563853

### Technical Specifications

Recommended Fluids..... Grease up to NLGI #2

Maximum Operating Pressure.....3,500 psi (241 bar)

### Truck kit Ordering Information

| Truck kit Ordering Information              | # of Grease Points | Part Number | Upper King Pin          | Lower King Pin | Drag Link | Slack Adjuster | S-Cam | Tie Rod | Spring Pin | Spring Hanger-Upper | Spring Hanger-Lower | Steer Assist | Steer Assist | Upper King Pin | Lower King Pin | Drag Link | Slack Adjuster | S-Cam | Tie Rod | Spring Pin | Spring Hanger-Upper | Spring Hanger-Lower | Slack Adjuster | S-Cam | Slack Adjuster      | S-Cam |  |  |
|---------------------------------------------|--------------------|-------------|-------------------------|----------------|-----------|----------------|-------|---------|------------|---------------------|---------------------|--------------|--------------|----------------|----------------|-----------|----------------|-------|---------|------------|---------------------|---------------------|----------------|-------|---------------------|-------|--|--|
|                                             |                    |             | Left Front              |                |           |                |       |         |            |                     |                     |              |              |                | Right Front    |           |                |       |         |            |                     |                     |                |       | Left and Right Rear |       |  |  |
|                                             |                    |             | Number of Grease Points |                |           |                |       |         |            |                     |                     |              |              |                |                |           |                |       |         |            |                     |                     |                |       |                     |       |  |  |
|                                             |                    |             |                         |                |           |                |       |         |            |                     |                     |              |              |                |                |           |                |       |         |            |                     |                     |                |       |                     |       |  |  |
| Front Brakes                                | 4                  | 563895      |                         |                |           | 1              | 1     |         |            |                     |                     |              |              |                |                |           | 1              | 1     |         |            |                     |                     |                |       |                     |       |  |  |
| Front Left and Right                        | 8                  | 563853      | 1                       | 1              | 1         |                |       | 1       |            |                     |                     |              |              | 1              | 1              | 1         |                |       | 1       |            |                     |                     |                |       |                     |       |  |  |
| Front Left and Right                        | 14                 | 563855      | 1                       | 1              | 1         |                |       | 1       | 1          | 1                   | 1                   |              |              | 1              | 1              | 1         |                |       | 1       | 1          | 1                   | 1                   |                |       |                     |       |  |  |
| Front Left and Right                        | 16                 | 563864      | 1                       | 1              | 1         |                |       | 1       | 1          | 1                   | 1                   | 1            | 1            | 1              | 1              | 1         |                |       | 1       | 1          | 1                   | 1                   |                |       |                     |       |  |  |
| Tandem Axle w/Spring Trunnions - Dump Truck | 10                 | 563893      |                         |                |           |                |       |         | 1          |                     |                     |              |              |                |                |           |                |       |         | 1          |                     |                     | 2              | 2     | 2                   | 2     |  |  |
| Tandem Axle w/Spring Pivots - Dump Truck    | 10                 | 563896      |                         |                |           |                |       |         | 1          |                     |                     |              |              |                |                |           |                |       |         | 1          |                     |                     | 2              | 2     | 2                   | 2     |  |  |

### Trailer Kit Ordering Information

| Trailer Kit Ordering Information                                | # of Grease Points | Part Number | Slack Adjuster          | S-Cam | S-Cam | Slack Adjuster | S-Cam | S-Cam | Slack Adjuster | S-Cam       | S-Cam | Slack Adjuster | S-Cam | S-Cam | Bearing             | Bearing | Gear Nut | Gear Nut | Crank |  |
|-----------------------------------------------------------------|--------------------|-------------|-------------------------|-------|-------|----------------|-------|-------|----------------|-------------|-------|----------------|-------|-------|---------------------|---------|----------|----------|-------|--|
|                                                                 |                    |             | Left Front              |       |       |                |       |       |                | Right Front |       |                |       |       | Left and Right Rear |         |          |          |       |  |
|                                                                 |                    |             | Number of Grease Points |       |       |                |       |       |                |             |       |                |       |       |                     |         |          |          |       |  |
|                                                                 |                    |             |                         |       |       |                |       |       |                |             |       |                |       |       |                     |         |          |          |       |  |
| EZ Greaser Landing Gear Kit                                     | 5                  | 563824      |                         |       |       |                |       |       |                |             |       |                |       |       | 1                   | 1       | 1        | 1        | 1     |  |
| Single Axle Trailer Kit - EZ Greaser MSP Manual w/ Std Fittings | 6                  | 563810      | 1                       | 1     | 1     | 1              | 1     | 1     |                |             |       |                |       |       |                     |         |          |          |       |  |
| EZ Greaser Tandem Axle with Enclosed S-Cams                     | 8                  | 563863      | 1                       | 1     |       | 1              | 1     |       | 1              | 1           |       | 1              | 1     | 1     |                     |         |          |          |       |  |
| EZ Greaser Trailer Tandem Axle Kit w/ Non-enclosed S-Cams       | 12                 | 563877      | 1                       | 1     | 1     | 1              | 1     | 1     | 1              | 1           | 1     | 1              | 1     | 1     |                     |         |          |          |       |  |

# On-Road Mobile Lubrication Systems

## Manual Hand Pump

### Features and Benefits

- Heavy-duty materials and construction ensures reliability and long life
- Fill reservoirs in half the number of strokes of light-duty hand pumps
- Two stroke settings for high-pressure/low-volume and high-volume/low-pressure pumping
- Compact 35 lb or 5 gal (16 kg or 20 L) pail pump for greater mobility
- Pumps NLGI #2 grease and lower viscosities
- Follower plate keeps grease at the foot of the pump
- Dual-action pump delivers grease on both up and down strokes
- Delivers 2.3 oz (65 g) of grease per stroke when using the high-pressure/lowervolume setting
- Delivers 3.0 oz (85 g) of grease per stroke when using the high-volume/lowpressure setting
- 5 ft (1.5 m) hose length with female quick-coupling



### Typical Applications

- Filling grease reservoir on automatic lubrication systems including Grease Jockey®, G3™, and more!

### Ordering Information

|        |                                                                              |
|--------|------------------------------------------------------------------------------|
| 247886 | Filler Pump Assembly—Includes Pump, Cover, Follower Plate, Hose and Coupling |
| 557941 | Grease, 35 lb (16 kg) Pail of NLGI #00                                       |

# Off-Road Mobile Lubrication Systems

## Dyna-Star® 10:1 High Ratio Hydraulically-Powered Lubrication Pump

### Features and Benefits

- Achieve full pressure performance by safely tapping low pressure hydraulics
- Pre-packaged modules ready-to-work with both injector and divider valve systems
- Multiple pump and accessory options for use with refinery drum and custom tank installations
- Self-lubricating vertical design for long life and reliable operation in high vibration environments
- Ultra-quiet hydraulic motor—no need for add-on mufflers
- High efficiency motor design uses less hydraulic oil

### Typical Applications

- Heavy-duty construction and mining equipment
- Any application requiring durable, high-performing grease delivery

### Typical Fluids Handled

- NLGI #2 grade grease

### Technical Specifications

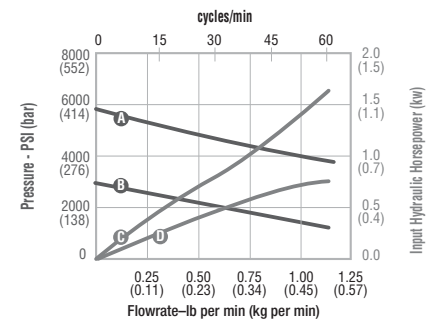
| Part Number                            | 247540                            | 247443                      | 247450                      |
|----------------------------------------|-----------------------------------|-----------------------------|-----------------------------|
| Drum Size                              | 60 lb (27 kg)                     | 120 lb (55 kg)              | 400 lb (180 kg)             |
| Overall Pump Length                    | 33.9 inch (861 mm)                | 41.5 inch (1054 mm)         | 48.5 inch (1232 mm)         |
| Pump Lower Length                      | 19.75 inch (501 mm)               | 26.75 inch (679 mm)         | 33.75 inch (857 mm)         |
| Maximum Hydraulic Input Pressure       | 600 psi (41 bar)                  | 600 psi (41 bar)            | 600 psi (41 bar)            |
| Maximum Hydraulic Fluid Input Volume   | 3 gpm (11.4 lpm)                  | 3 gpm (11.4 lpm)            | 3 gpm (11.4 lpm)            |
| Maximum Flow Output Rate               | 1.1 lb/min. (0.5 kg/min.)         | 1.1 lb/min. (0.5 kg/min.)   | 1.1 lb/min. (0.5 kg/min.)   |
| Maximum CPM                            | 60                                | 60                          | 60                          |
| Maximum Fluid Output Pressure          | 7500 psi (517 bar)                | 7500 psi (517 bar)          | 7500 psi (517 bar)          |
| Hydraulic Supply Inlet                 | 3/4 inch—16 JIC (37° Flare)       | 3/4 inch—16 JIC (37° Flare) | 3/4 inch—16 JIC (37° Flare) |
| Hydraulic Return Outlet                | 3/4 inch npt                      | 3/4 inch npt                | 3/4 inch npt                |
| Fluid Outlet                           | 1/2 inch npt                      | 1/2 inch npt                | 1/2 inch npt                |
| Maximum Incoming Hydraulic Fluid Temp. | 200° F (93° C)                    | 200° F (93° C)              | 200° F (93° C)              |
| 312350                                 | Manual for 247540, 247443, 247450 |                             |                             |

### Ordering Information

|        |                                      |
|--------|--------------------------------------|
| 247540 | Dyna-Star 10:1, 60 lb (27 kg) Pump   |
| 247443 | Dyna-Star 10:1, 120 lb (55 kg) Pump  |
| 247450 | Dyna-Star 10:1, 400 lb (180 kg) Pump |



### Pump Performance



- Ⓐ 600 psi hydraulic inlet pressure
- Ⓑ 300 psi hydraulic inlet pressure
- Ⓒ Hp (600 psi hydraulic input)
- Ⓓ Hp (300 psi hydraulic input)

Test Fluid: NLGI #1 grade grease

# Off-Road Mobile Lubrication Systems

## Dyna-Star® 10:1, 5:1 and Fire-Ball® 300 50:1

### Ordering Information

| Dyna-Star 10:1 Modules And Kits |                                                                                                                                                                                                                                    |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 247574                          | Dyna-Star 10:1 60 lb (27 kg) Pump Module - Injector - Overall height 35.15 in (842mm). Includes pump (247540), reservoir assembly (247575), hydraulic control assembly (247538) and vent valve assembly (243170) fully assembled   |
| 247706                          | Dyna-Star 10:1 60 lb (27 kg) Pump Kit - Divider Valve (DV) - Overall height 35.15 in (842mm). Includes pump (247540), reservoir assembly (247575) and hydraulic control assembly (247538) not assembled                            |
| 247444                          | Dyna-Star 10:1 90 lb (41 kg) Pump Module - Injector - Overall height 42.75 in (1086 mm). Includes pump (247443), reservoir assembly (241486), hydraulic control assembly (247538) and vent valve assembly (243170) fully assembled |
| 247707                          | Dyna-Star 10:1 90 lb (41 kg) Pump Kit - DV - Overall height 42.75 in (1086 mm). Includes pump (247443), reservoir assembly (241486) and hydraulic control assembly (247538) not assembled                                          |
| 247902                          | Pressure relief kit for 247706 and 247707                                                                                                                                                                                          |
| 312349                          | Manual for 247574, 247706, 247444, 247707                                                                                                                                                                                          |

| Dyna-Star 10:1 Refinery Drum And Custom Tank Applications |                |           |                          |         |          |          |           |           |
|-----------------------------------------------------------|----------------|-----------|--------------------------|---------|----------|----------|-----------|-----------|
| Description                                               | Refinery Drums |           | Custom Tank Applications |         |          |          |           |           |
| Weight lbs (kg)                                           | 120 (55)       | 400 (180) | 60 (27)                  | 60 (27) | 120 (55) | 120 (55) | 400 (180) | 400 (180) |
| Divider Valve (DV) or Injector Based                      | DV             | DV        | Injector                 | DV      | Injector | DV       | Injector  | DV        |
| Pump                                                      | 247443         | 247450    | 247540                   | 247540  | 247443   | 247443   | 247450    | 247450    |
| Hydraulic Control (1)                                     | 247705         | 247705    | 247538                   | 247538  | 247538   | 247538   | 247538    | 247538    |
| Vent Valve                                                |                |           | 243170                   |         | 243170   |          | 243170    |           |
| Cover                                                     | 247703         | 247704    |                          |         |          |          |           |           |
| Pump Gasket                                               | 15M442         | 15M442    | 15M442                   | 15M442  | 15M442   | 15M442   | 15M442    | 15M442    |
| Custom Tank Kit (2)                                       |                |           | 247970                   |         | 247456   |          | 247457    |           |

(1) Hydraulic control assembly (247705) includes longer hoses to enable remote mounting.

(2) Kits include pump (24750, 247443 or 247450), hydraulic control assembly (247538), vent valve (243170) and pump gasket (15M442).

| Dyna-Star 10:1 Module Accessories |                                                              |
|-----------------------------------|--------------------------------------------------------------|
| 243170                            | Vent valve                                                   |
| 247538                            | Hydraulic control module                                     |
| 247700                            | Follower plate for 60 lb (27 kg) and 90 lb (41 kg) modules   |
| 244023                            | Level indicator for 60 lb (27 kg) and 90 lb (41 kg) modules* |
| 24B591                            | GLC 4400, 12/24 VDC controller                               |
| 115124                            | Pressure switch                                              |
| 247575                            | Reservoir - 60 lb (27 kg)                                    |
| 241486                            | Reservoir - 90 lb (41 kg)                                    |

| Fireball 300 And Dyna-Star 5:1 Modules and Accessories |                                                                                                                                                                    |
|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 241573                                                 | Fireball 300, 50:1 90 lb (41 kg) Pump Module. Includes pump (239887), reservoir assembly (241486) and vent valve assembly (241572)                                 |
| 241485                                                 | Follower plate (fits 241573)                                                                                                                                       |
| 243159                                                 | Dyna-Star 5:1 90 lb (41 kg) Pump Module. Includes pump (224751), reservoir assembly (241486), hydraulic control assembly (243501) and vent valve assembly (243170) |
| 243191                                                 | Follower plate (fits 243159)                                                                                                                                       |

| GL Injectors |                                   |
|--------------|-----------------------------------|
| 114901       | One GL-1 injector and manifold    |
| 114902       | Two GL-1 injectors and manifold   |
| 114903       | Three GL-1 injectors and manifold |
| 114904       | Four GL-1 injectors and manifold  |
| 114905       | Five GL-1 injectors and manifold  |
| 114909       | Replacement GL-1 injector         |
| 24A918       | GL-11 injector                    |



247574



241573



24B591



114905



24A918

# Compressor Lubrication

## Manzel® Model 25 Lubricator

### Features and Benefits

- General-Purpose Lubrication: automatic, precision metering for all types of machinery
- Type Pumping Unit: Clear-Vue. sight feed chamber functions at atmospheric pressure. Shows amount of lubricant being pumped
- Unitized Construction: Contains complete feed regulating mechanism with inlet strainer
- Number of Feeds: 1 to 20 per lubricator, standard
- Available drives: Direct rotary (1:1), ratchet, 37.5:1 and 75:1 internal gear reductions
- Reservoirs: Single compartment, sheet metal construction
- Feed regulator: External screw-type precisely adjustable while idle or in operation
- Removable Pumping Unit: Self contained. All units interchangeable—remove two pump screws and lift out
- Hand Crank: Standard. Convenient for rapid priming of lines before start-up or for momentarily increasing supply of lubricant. Does not affect adjustment or individual pumping units. Direct replacement for Kipp Model 50 Box Lubricators



562949

### Typical Applications

- Provide lubrication to cylinder walls, bearings and other moving parts of equipment such as sugar mills, steam engines, presses and general machinery

### Typical Fluids Handled

- Mineral oil base or synthetics

### Technical Specifications

| Piston Size<br>inches (mm) | Max Pressure<br>psi (bar) | Drops Per<br>Stroke |     | Cubic Inches<br>Per Stroke |       | Cubic cm Per<br>Stroke |      | Strokes Per<br>Minute |     |
|----------------------------|---------------------------|---------------------|-----|----------------------------|-------|------------------------|------|-----------------------|-----|
|                            |                           | Min.                | Max | Min.                       | Max   | Min.                   | Max  | Min.                  | Max |
| 3/16 (4.8)                 | 1,000 (69)                | 1/6                 | 6   | .0003                      | .0122 | .008                   | .399 | 3                     | 490 |
| 5/16 (7.9)                 | 1,000 (69)                | 1/4                 | 12  | .0005                      | .0245 | .005                   | .199 | 3                     | 490 |

### Ordering Information

| Model 25 Pumps |                                  |
|----------------|----------------------------------|
| 562949         | 3/16 inch (4.8 mm) diameter pump |
| 562950         | 5/16 inch (7.9 mm) diameter pump |
| 564317         | Ratchet Arm Assembly             |
| 562988         | Replacement Handle               |
| 563939         | Low Level, Fits into a Pump Slot |

| Feeds | Sight Glass | Gasket |
|-------|-------------|--------|
| 1     | 556687      | 556721 |
| 2     | 556688      | 556722 |
| 3     | 556689      | 555741 |
| 4     | 556690      | 556723 |
| 5     | 556691      | 555742 |
| 6     | 556692      | 556724 |
| 7     | 556693      | 555743 |
| 8     | 556694      | 556725 |



# Compressor Lubrication

## Manzel® Model 25 Box Lubricator Configurator

### Ordering Information

MA - X - X - X - X

#### Reservoir

##### Code Former Codes and Descriptions

- A R1 - 6.25 pt, 4 pump stations max
- B R2 - 9.25 pt, 8 pump stations max
- C R3 - 13 pt, 12 pump stations max
- D R4 - 16 pt, 16 pump stations max
- E R5 - 19.75 pt, 20 pump stations max

**NOTE : Unused pump stations covered with blanking plate(s)**

#### Pump Size

##### Code Former Codes and Descriptions

- A P-1 - 3/16 inch (4.8 mm) Diameter Plunger, 1,000 psi (68.9 bar) max Operating Pressure
- B P-2 - 5/16 inch (7.9 mm) Diameter Plunger, 1,000 psi (68.9 bar) max Operating Pressure

#### Pump Quantity

| Code | Qty | Code | Qty | Code | Qty | Code | Qty |
|------|-----|------|-----|------|-----|------|-----|
| A    | 0   | G    | 6   | N    | 12  | V    | 18  |
| B    | 1   | H    | 7   | P    | 13  | W    | 19  |
| C    | 2   | J    | 8   | R    | 14  | X    | 20  |
| D    | 3   | K    | 9   | S    | 15  |      |     |
| E    | 4   | L    | 10  | T    | 16  |      |     |
| F    | 5   | M    | 11  | U    | 17  |      |     |

#### Drive Options

##### Code Former Codes and Descriptions

- A D1R - Direct Rotary Right Hand Mount
- B D2R - Standard Ratchet (w/out drive arm) - Right Hand Mount
- C D3R - 37.5:1 Ratio - Right Hand Mount
- D D4R - 75:1 Ratio - Right Hand Mount
- E D1L - Direct Rotary Left Hand Mount
- F D2L - Standard Ratchet (w/out drive arm) - Left Hand Mount
- G D3L - 37.5:1 Ratio - Left Hand Mount
- H D4L - 75:1 Ratio - Left Hand Mount

# Compressor Lubrication

## Manzel® Model 25 Box Lubricators

### Ordering Information

| MAA - Up to 4 pumps |                |
|---------------------|----------------|
| MAAACB              | R1-P1-2-D2R-L0 |
| MAAADB              | R1-P1-3-D2R-L0 |
| MAAAEB              | R1-P1-4-D2R-L0 |
| MAAAEC              | R1-P1-4-D3R-L0 |
| MAABBB              | R1-P2-1-D2R-L0 |
| MAABBC              | R1-P2-1-D3R-L0 |
| MAABBF              | R1-P2-1-D2L-L0 |
| MAABBG              | R1-P2-1-D3L-L0 |
| MAABDB              | R1-P2-3-D2R-L0 |
| MAABDC              | R1-P2-3-D3R-L0 |
| MAABEB              | R1-P2-4-D2R-L0 |
| MAABEF              | R1-P2-4-D2L-L0 |
| MAB - Up to 8 pumps |                |
| MABAAB              | R2-P1-0-D2R-L0 |
| MABACH              | R2-P1-2-D4L-L0 |
| MABAFC              | R2-P1-5-D3R-L0 |
| MABAFG              | R2-P1-5-D3L-L0 |
| MABAHC              | R2-P1-7-D3R-L0 |
| MABAHG              | R2-P1-7-D3L-L0 |
| MABAJA              | R2-P1-8-D1R-L0 |
| MABBAC              | R2-P2-0-D3R-L0 |
| MABBCG              | R2-P2-2-D3L-L0 |
| MABBEC              | R2-P2-4-D3R-L0 |
| MABBEE              | R2-P2-4-D1L-L0 |
| MABBFF              | R2-P2-5-D2L-L0 |
| MABBFG              | R2-P2-5-D3L-L0 |
| MABBGA              | R2-P2-6-D1R-L0 |
| MABBGB              | R2-P2-6-D2R-L0 |
| MABBGC              | R2-P2-6-D3R-L0 |
| MABBGF              | R2-P2-6-D2L-L0 |
| MABBHC              | R2-P2-7-D3R-L0 |
| MABBHG              | R2-P2-7-D3L-L0 |

| MAC - Up to 12 pumps |                 |
|----------------------|-----------------|
| MACAAA               | R3-P1-0-D1R-L0  |
| MACAEH               | R3-P1-4-D4L-L0  |
| MACAGH               | R3-P1-6-D4L-L0  |
| MACAHF               | R3-P1-7-D2L-L0  |
| MACAKE               | R3-P1-9-D1L-L0  |
| MACALC               | R3-P1-10-D3R-L0 |
| MACANB               | R3-P1-12-D2R-L0 |
| MACBJB               | R3-P2-8-D2R-L0  |
| MACBKA               | R3-P2-9-D1R-L0  |
| MACBLC               | R3-P2-10-D3R-L0 |
| MACBLG               | R3-P2-10-D3L-L0 |
| MAD - Up to 16 pumps |                 |
| MADBCC               | R4-P2-2-D3R-L0  |
| MADBLH               | R4-P2-10-D4L-L0 |
| MADBSG               | R4-P2-15-D3L-L0 |
| MAE - Up to 20 pumps |                 |
| MAEAAB               | R5-P1-0-D2R-L0  |
| MAEBGE               | R5-P2-6-D1L-L0  |

# Compressor Lubrication

## Manzel® MBL Box Lubricators

### Features and Benefits

- Provide a proven, cost-effective way to assemble customized oil systems that meet specific requirements by using standard modular components
- Increase opportunities to standardize lube system components and reduce lube maintenance and service costs
- Are dependable and backed by the industry's most comprehensive international distributor network—with application expertise, parts stocks and factory-trained service nearby, wherever you are located

### Typical Applications

- Provide lubrication to cylinder walls, bearings and other moving parts of equipment such as refineries, injection and storage, general manufacturing, air systems, and food processing equipment

### Typical Fluids Handled

- Mineral oil base or synthetics



### Ordering Information

| Manzel® MBL Box Lubricators |                                                                                               |
|-----------------------------|-----------------------------------------------------------------------------------------------|
| MBA0AA                      | 4 pint reservoir (2 pump stations max), no pumps installed, 1:1 Direct Drive RH               |
| MBA0AM                      | 4 pint reservoir (2 pump stations max), no pumps installed, 200:1 End Rotary RH               |
| MBA0AN                      | 4 pint reservoir (2 pump stations max), no pumps installed, 400:1 End Rotary RH               |
| MBA1BA                      | 4 pint reservoir (2 pump stations max), 3/16 inch GBL 7500 pump (qty 1), 1:1 Direct Drive RH  |
| MBA1CB                      | 4 pint reservoir (2 pump stations max), 3/16 inch GBL 7500 pump (qty 2), End Ratchet RH       |
| MBA1CF                      | 4 pint reservoir (2 pump stations max), 3/16 inch GBL 7500 pump (qty 2), End Ratchet LH       |
| MBA1CM                      | 4 pint reservoir (2 pump stations max), 3/16 inch GBL 7500 pump (qty 2), 200:1 End Rotary RH  |
| MBA2BF                      | 4 pint reservoir (2 pump stations max), 1/4 inch GBL 7500 pump (qty 1), End Ratchet LH        |
| MBA2BR                      | 4 pint reservoir (2 pump stations max), 1/4 inch GBL 7500 pump (qty 1), 50:1 Right Angle RH   |
| MBA2CE                      | 4 pint reservoir (2 pump stations max), 1/4 inch GBL 7500 pump (qty 2), 1:1 Direct Drive LH   |
| MBA2CR                      | 4 pint reservoir (2 pump stations max), 1/4 inch GBL 7500 pump (qty 2), 50:1 Right Angle RH   |
| MBA3CD                      | 4 pint reservoir (2 pump stations max), 3/8 inch GBL 7500 pump (qty 2), 75:1 Ratchet RH       |
| MBB0AA                      | 6 pint reservoir (3 pump stations max), no pumps installed, 1:1 Direct Drive RH               |
| MBB0AB                      | 6 pint reservoir (3 pump stations max), no pumps installed, End Ratchet RH                    |
| MBB0AC                      | 6 pint reservoir (3 pump stations max), no pumps installed, 37.5:1 Ratchet RH                 |
| MBB0AG                      | 6 pint reservoir (3 pump stations max), no pumps installed, 37.5:1 Ratchet LH                 |
| MBB0AH                      | 6 pint reservoir (3 pump stations max), no pumps installed, 75:1 Ratchet LH                   |
| MBB0AM                      | 6 pint reservoir (3 pump stations max), no pumps installed, 200:1 End Rotary RH               |
| MBB0AN                      | 6 pint reservoir (3 pump stations max), no pumps installed, 400:1 End Rotary RH               |
| MBB1CM                      | 6 pint reservoir (3 pump stations max), 3/16 inch GBL 7500 pump (qty 2), 200:1 End Rotary RH  |
| MBB1CZ                      | 6 pint reservoir (3 pump stations max), 3/16 inch GBL 7500 pump (qty 2), 188:1 Right Angle LH |
| MBB1DA                      | 6 pint reservoir (3 pump stations max), 3/16 inch GBL 7500 pump (qty 3), 1:1 Direct Drive RH  |
| MBB1DM                      | 6 pint reservoir (3 pump stations max), 3/16 inch GBL 7500 pump (qty 3), 200:1 End Rotary RH  |
| MBB2BB                      | 6 pint reservoir (3 pump stations max), 1/4 inch GBL 7500 pump (qty 1), End Ratchet RH        |
| MBB2CA                      | 6 pint reservoir (3 pump stations max), 1/4 inch GBL 7500 pump (qty 2), 1:1 Direct Drive RH   |
| MBB2CB                      | 6 pint reservoir (3 pump stations max), 1/4 inch GBL 7500 pump (qty 2), End Ratchet RH        |
| MBB2CD                      | 6 pint reservoir (3 pump stations max), 1/4 inch GBL 7500 pump (qty 2), 75:1 Ratchet RH       |

# Compressor Lubrication

## Manzel® MBL Box Lubricators

### Ordering Information

| Manzel® MBL Box Lubricators |                                                                                                                                                      |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| MBB2CE                      | 6 pint reservoir (3 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 2), 1:1 Direct Drive LH                                                 |
| MBB2CM                      | 6 pint reservoir (3 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 2), 200:1 End Rotary RH                                                 |
| MBB2CN                      | 6 pint reservoir (3 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 2), 400:1 End Rotary RH                                                 |
| MBB2DC                      | 6 pint reservoir (3 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 3), 37.5:1 Ratchet RH                                                   |
| MBB2DG                      | 6 pint reservoir (3 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 3), 37.5:1 Ratchet LH                                                   |
| MBB2DM                      | 6 pint reservoir (3 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 3), 200:1 End Rotary RH                                                 |
| MBB3CA                      | 6 pint reservoir (3 pump stations max), 3/8 inch (9.5 mm) GBL 7500 pump (qty 2), 1:1 Direct Drive RH                                                 |
| MBC0AA                      | 8 pint reservoir (5 pump stations max), no pumps installed, 1:1 Direct Drive RH                                                                      |
| MBC0AC                      | 8 pint reservoir (5 pump stations max), no pumps installed, 37.5:1 Ratchet RH                                                                        |
| MBC0AE                      | 8 pint reservoir (5 pump stations max), no pumps installed, 1:1 Direct Drive LH                                                                      |
| MBC0AG                      | 8 pint reservoir (5 pump stations max), no pumps installed, 37.5:1 Ratchet LH                                                                        |
| MBC0AL                      | 8 pint reservoir (5 pump stations max), no pumps installed, 100:1 End Rotary RH                                                                      |
| MBC0AS                      | 8 pint reservoir (5 pump stations max), no pumps installed, 188:1 Right Angle RH                                                                     |
| MBC1EB                      | 8 pint reservoir (5 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 4), End Ratchet RH                                                     |
| MBC1EE                      | 8 pint reservoir (5 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 4), 1:1 Direct Drive LH                                                |
| MBC1EJ                      | 8 pint reservoir (5 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 4), 25:1 End Rotary RH                                                 |
| MBC1FE                      | 8 pint reservoir (5 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 5), 1:1 Direct Drive LH                                                |
| MBC2BL                      | 8 pint reservoir (5 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 1), 100:1 End Rotary RH                                                 |
| MBC2CM                      | 8 pint reservoir (5 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 2), 200:1 End Rotary RH                                                 |
| MBC2CN                      | 8 pint reservoir (5 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 2), 400:1 End Rotary RH                                                 |
| MBC2DB                      | 8 pint reservoir (5 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 3), End Ratchet RH                                                      |
| MBC2EA                      | 8 pint reservoir (5 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 4), 1:1 Direct Drive RH                                                 |
| MBC2EB                      | 8 pint reservoir (5 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 4), End Ratchet RH                                                      |
| MBC2ED                      | 8 pint reservoir (5 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 4), 75:1 Ratchet RH                                                     |
| MBC2EF                      | 8 pint reservoir (5 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 4), End Ratchet LH                                                      |
| MBC2FB                      | 8 pint reservoir (5 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 5), End Ratchet RH                                                      |
| MBC2FE                      | 8 pint reservoir (5 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 5), 1:1 Direct Drive LH                                                 |
| MBC2FG                      | 8 pint reservoir (5 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 5), 37.5:1 Ratchet LH                                                   |
| MBC2FL                      | 8 pint reservoir (5 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 5), 100:1 End Rotary RH                                                 |
| MBC3EB                      | 8 pint reservoir (5 pump stations max), 3/8 inch (9.5 mm) GBL 7500 pump (qty 4), End Ratchet RH                                                      |
| MBC5DE                      | 8 pint reservoir (5 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 3), Rens Level Controller "F3", 1:1 Direct Drive LH                     |
| MBC7CM                      | 8 pint reservoir (5 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 2), Garza Level Controller "F4" (Class 1 Group D), 200:1 End Rotary RH |
| MBD0AA                      | 12 pint reservoir (8 pump stations max), no pumps installed, 1:1 Direct Drive RH                                                                     |
| MBD0AE                      | 12 pint reservoir (8 pump stations max), no pumps installed, 1:1 Direct Drive LH                                                                     |
| MBD0AH                      | 12 pint reservoir (8 pump stations max), no pumps installed, 75:1 Ratchet LH                                                                         |
| MBD0AL                      | 12 pint reservoir (8 pump stations max), no pumps installed, 100:1 End Rotary RH                                                                     |
| MBD0AM                      | 12 pint reservoir (8 pump stations max), no pumps installed, 200:1 End Rotary RH                                                                     |
| MBD0AN                      | 12 pint reservoir (8 pump stations max), no pumps installed, 400:1 End Rotary RH                                                                     |
| MBD1DN                      | 12 pint reservoir (8 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 3), 400:1 End Rotary RH                                               |
| MBD1EE                      | 12 pint reservoir (8 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 4), 1:1 Direct Drive LH                                               |
| MBD1EM                      | 12 pint reservoir (8 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 4), 200:1 End Rotary RH                                               |
| MBD1EN                      | 12 pint reservoir (8 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 4), 400:1 End Rotary RH                                               |

# Compressor Lubrication

## Manzel® MBL Box Lubricators

### Ordering Information

| Manzel® MBL Box Lubricators |                                                                                                                                                      |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| MBD1FA                      | 12 pint reservoir (8 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 5), 1:1 Direct Drive RH                                               |
| MBD1FN                      | 12 pint reservoir (8 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 5), 400:1 End Rotary RH                                               |
| MBD1GL                      | 12 pint reservoir (8 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 6), 100:1 End Rotary RH                                               |
| MBD1GN                      | 12 pint reservoir (8 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 6), 400:1 End Rotary RH                                               |
| MBD1GT                      | 12 pint reservoir (8 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 6), 375:1 Right Angle RH                                              |
| MBD1JA                      | 12 pint reservoir (8 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 8), 1:1 Direct Drive RH                                               |
| MBD2BR                      | 12 pint reservoir (8 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 1), 50:1 Right Angle RH                                                |
| MBD2DA                      | 12 pint reservoir (8 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 3), 1:1 Direct Drive RH                                                |
| MBD2DD                      | 12 pint reservoir (8 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 3), 75:1 Ratchet RH                                                    |
| MBD2DF                      | 12 pint reservoir (8 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 3), End Ratchet LH                                                     |
| MBD2DM                      | 12 pint reservoir (8 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 3), 200:1 End Rotary RH                                                |
| MBD2FF                      | 12 pint reservoir (8 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 5), End Ratchet LH                                                     |
| MBD2FR                      | 12 pint reservoir (8 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 5), 50:1 Right Angle RH                                                |
| MBD2GA                      | 12 pint reservoir (8 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 6), 1:1 Direct Drive RH                                                |
| MBD2GK                      | 12 pint reservoir (8 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 6), 50:1 End Rotary RH                                                 |
| MBD2GL                      | 12 pint reservoir (8 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 6), 100:1 End Rotary RH                                                |
| MBD2GR                      | 12 pint reservoir (8 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 6), 50:1 Right Angle RH                                                |
| MBD2GZ                      | 12 pint reservoir (8 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 6), 188:1 Right Angle LH                                               |
| MBD2JA                      | 12 pint reservoir (8 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 8), 1:1 Direct Drive RH                                                |
| MBD2JB                      | 12 pint reservoir (8 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 8), End Ratchet RH                                                     |
| MBD2JE                      | 12 pint reservoir (8 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 8), 1:1 Direct Drive LH                                                |
| MBD3FC                      | 12 pint reservoir (8 pump stations max), 3/8 inch (9.5 mm) GBL 7500 pump (qty 5), 37.5:1 Ratchet RH                                                  |
| MBD3GA                      | 12 pint reservoir (8 pump stations max), 3/8 inch (9.5 mm) GBL 7500 pump (qty 6), 1:1 Direct Drive RH                                                |
| MBD5GE                      | 12 pint reservoir (8 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 6), Rens Level Contoller "F3", 1:1 Direct Drive LH                     |
| MBD7HN                      | 12 pint reservoir (8 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 7), Garza Level Contoller "F4" (Class 1 Group D), 400:1 End Rotary RH |
| MBE0AA                      | 16 pint reservoir (12 pump stations max), no pumps installed, 1:1 Direct Drive RH                                                                    |
| MBE0AC                      | 16 pint reservoir (12 pump stations max), no pumps installed, 37.5:1 Ratchet RH                                                                      |
| MBE0AE                      | 16 pint reservoir (12 pump stations max), no pumps installed, 1:1 Direct Drive LH                                                                    |
| MBE0AG                      | 16 pint reservoir (12 pump stations max), no pumps installed, 37.5:1 Ratchet LH                                                                      |
| MBE0AH                      | 16 pint reservoir (12 pump stations max), no pumps installed, 75:1 Ratchet LH                                                                        |
| MBE1FJ                      | 16 pint reservoir (12 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 5), 25:1 End Rotary RH                                               |
| MBE1HN                      | 16 pint reservoir (12 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 7), 400:1 End Rotary RH                                              |
| MBE1JA                      | 16 pint reservoir (12 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 8), 1:1 Direct Drive RH                                              |
| MBE1JE                      | 16 pint reservoir (12 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 8), 1:1 Direct Drive LH                                              |
| MBE1JM                      | 16 pint reservoir (12 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 8), 200:1 End Rotary RH                                              |
| MBE1KM                      | 16 pint reservoir (12 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 9), 200:1 End Rotary RH                                              |
| MBE1MC                      | 16 pint reservoir (12 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 11), 37.5:1 Ratchet RH                                               |
| MBE1ME                      | 16 pint reservoir (12 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 11), 1:1 Direct Drive LH                                             |
| MBE1NG                      | 16 pint reservoir (12 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 12), 37.5:1 Ratchet LH                                               |
| MBE1NR                      | 16 pint reservoir (12 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 12), 50:1 Right Angle RH                                             |
| MBE2ER                      | 16 pint reservoir (12 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 4), 50:1 Right Angle RH                                               |
| MBE2JM                      | 16 pint reservoir (12 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 8), 200:1 End Rotary RH                                               |

# Compressor Lubrication

## Manzel® MBL Box Lubricators

### Ordering Information

| Manzel® MBL Box Lubricators |                                                                                                                                    |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| MBE2KA                      | 16 pint reservoir (12 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 9), 1:1 Direct Drive RH                             |
| MBE2KG                      | 16 pint reservoir (12 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 9), 37.5:1 Ratchet LH                               |
| MBE2KL                      | 16 pint reservoir (12 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 9), 100:1 End Rotary RH                             |
| MBE2KN                      | 16 pint reservoir (12 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 9), 400:1 End Rotary RH                             |
| MBE2KZ                      | 16 pint reservoir (12 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 9), 188:1 Right Angle LH                            |
| MBE2LA                      | 16 pint reservoir (12 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 10), 1:1 Direct Drive RH                            |
| MBE2LL                      | 16 pint reservoir (12 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 10), 100:1 End Rotary RH                            |
| MBE2NA                      | 16 pint reservoir (12 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 12), 1:1 Direct Drive RH                            |
| MBE2NE                      | 16 pint reservoir (12 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 12), 1:1 Direct Drive LH                            |
| MBE2NM                      | 16 pint reservoir (12 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 12), 200:1 End Rotary RH                            |
| MBE2NT                      | 16 pint reservoir (12 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 12), 375:1 Right Angle RH                           |
| MBE4EN                      | 16 pint reservoir (12 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 4), Rens Level Controller "F3",                    |
| MBE5CA                      | 16 pint reservoir (12 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 2), Rens Level Controller "F3", 1:1 Direct Drive RH |
| MBF0AA                      | 24 pint reservoir (16 pump stations max), no pumps installed, 1:1 Direct Drive RH                                                  |
| MBF0AE                      | 24 pint reservoir (16 pump stations max), no pumps installed, 1:1 Direct Drive LH                                                  |
| MBF0AG                      | 24 pint reservoir (16 pump stations max), no pumps installed, 37.5:1 Ratchet RH                                                    |
| MBF0AH                      | 24 pint reservoir (16 pump stations max), no pumps installed, 75:1 Ratchet LH                                                      |
| MBF1RA                      | 24 pint reservoir (16 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 14), 1:1 Direct Drive RH                           |
| MBF1SA                      | 24 pint reservoir (16 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 15), 1:1 Direct Drive RH                           |
| MBF2JA                      | 24 pint reservoir (16 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 8), 1:1 Direct Drive RH                             |
| MBF2MD                      | 24 pint reservoir (16 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 11), 75:1 Ratchet RH                                |
| MBF2NB                      | 24 pint reservoir (16 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 12), End Ratchet RH                                 |
| MBF2NE                      | 24 pint reservoir (16 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 12), 1:1 Direct Drive LH                            |
| MBF2PA                      | 24 pint reservoir (16 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 13), 1:1 Direct Drive RH                            |
| MBF2PE                      | 24 pint reservoir (16 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 13), 1:1 Direct Drive LH                            |
| MBF2RC                      | 24 pint reservoir (16 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 14), 37.5:1 Ratchet LH                              |
| MBF2TE                      | 24 pint reservoir (16 pump stations max), 1/4 inch (6.4 mm) GBL 7500 pump (qty 16), 1:1 Direct Drive LH                            |
| MBF3CA                      | 24 pint reservoir (16 pump stations max), 3/8 inch (9.5 mm) inch GBL 7500 pump (qty 2), 1:1 Direct Drive RH                        |
| MBF3NA                      | 24 pint reservoir (16 pump stations max), 3/8 inch (9.5 mm) GBL 7500 pump (qty 12), 1:1 Direct Drive RH                            |
| MBF3PA                      | 24 pint reservoir (16 pump stations max), 3/8 inch (9.5 mm) GBL 7500 pump (qty 13), 1:1 Direct Drive RH                            |
| MBG0AA                      | 32 pint reservoir (20 pump stations max), with motor mount base, no pumps installed, 1:1 Direct Drive RH                           |
| MBG0AC                      | 32 pint reservoir (20 pump stations max), with motor mount base, no pumps installed, 37.5:1 Ratchet LH                             |
| MBG0AE                      | 32 pint reservoir (20 pump stations max), with motor mount base, no pumps installed, 1:1 Direct Drive LH                           |
| MBG0AG                      | 32 pint reservoir (20 pump stations max), with motor mount base, no pumps installed, 37.5:1 Ratchet RH                             |
| MBG0AH                      | 32 pint reservoir (20 pump stations max), with motor mount base, no pumps installed, 75:1 Ratchet LH                               |
| MBG1VA                      | 32 pint reservoir (20 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 18), 1:1 Direct Drive RH                           |
| MBG1WA                      | 32 pint reservoir (20 pump stations max), 3/16 inch (4.8 mm) GBL 7500 pump (qty 19), 1:1 Direct Drive RH                           |
| MBG2TE                      | 32 pint reservoir (20 pump stations max), 1/4 (6.4 mm) inch GBL 7500 pump (qty 16), 1:1 Direct Drive LH                            |
| MBH0AA                      | 40 pint reservoir (24 pump stations max), with motor mount base, no pumps installed, 1:1 Direct Drive RH                           |
| MBH0AE                      | 40 pint reservoir (24 pump stations max), with motor mount base, no pumps installed, 1:1 Direct Drive LH                           |
| MBH2UA                      | 40 pint reservoir (24 pump stations max), 1/4 (6.4 mm) GBL 7500 pump (qty 17), 1:1 Direct Drive RH                                 |
| MBH2ZE                      | 40 pint reservoir (24 pump stations max), 1/4 (6.4 mm) GBL 7500 pump (qty 22), 1:1 Direct Drive LH                                 |

# Compressor Lubrication

## Manzel® MBL Box Lubricators

### Ordering Information

| Manzel® MBL Box Lubricators |                                                                                                                                                                            |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MBH3ZA                      | 40 pint reservoir (24 pump stations max), 3/8 inch (9.5 mm) GBL 7500 pump (qty 22), 1:1 Direct Drive RH                                                                    |
| MBJ1BM                      | 4 pint reservoir (2 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 1), 200:1 End Rotary RH                                               |
| MBJ1CN                      | 4 pint reservoir (2 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 2), 400:1 End Rotary RH                                               |
| MBK0AL                      | 6 pint reservoir (3 pump stations max), with motor mount base, no pumps installed, 100:1 End Rotary RH                                                                     |
| MBK0AN                      | 6 pint reservoir (3 pump stations max), with motor mount base, no pumps installed, 400:1 End Rotary RH                                                                     |
| MBK1BN                      | 6 pint reservoir (3 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 1), 400:1 End Rotary RH                                               |
| MBK1CM                      | 6 pint reservoir (3 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 2), 200:1 End Rotary RH                                               |
| MBK1CN                      | 6 pint reservoir (3 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 2), 400:1 End Rotary RH                                               |
| MBK2CN                      | 6 pint reservoir (3 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 2), 400:1 End Rotary RH                                               |
| MBK2DA                      | 6 pint reservoir (3 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 3), 1:1 Direct Drive RH                                               |
| MBK2DC                      | 6 pint reservoir (3 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 3), 37.5:1 Ratchet RH                                                 |
| MBK2DF                      | 6 pint reservoir (3 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 3), End Ratchet LH                                                    |
| MBK3CL                      | 6 pint reservoir (3 pump stations max), with motor mount base, 3/8 inch (9.5 mm) GBL 7500 pump (qty 2), 100:1 End Rotary RH                                                |
| MBK3DK                      | 6 pint reservoir (3 pump stations max), with motor mount base, 3/8 inch (9.5 mm) GBL 7500 pump (qty 3), 50:1 End Rotary RH                                                 |
| MBLOAA                      | 8 pint reservoir (5 pump stations max), with motor mount base, no pumps installed, 1:1 Direct Drive RH                                                                     |
| MBLOAM                      | 8 pint reservoir (5 pump stations max), with motor mount base, no pumps installed, 200:1 End Rotary RH                                                                     |
| MBLOAN                      | 8 pint reservoir (5 pump stations max), with motor mount base, no pumps installed, 400:1 End Rotary RH                                                                     |
| MBL1EA                      | 8 pint reservoir (5 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 4), 1:1 Direct Drive RH                                               |
| MBL1EN                      | 8 pint reservoir (5 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 4), 400:1 End Rotary RH                                               |
| MBL2EA                      | 8 pint reservoir (5 pump stations max), with motor mount base, 1/4 inch (6.4 mm) GBL 7500 pump (qty 4), 1:1 Direct Drive RH                                                |
| MBL2EN                      | 8 pint reservoir (5 pump stations max), with motor mount base, 1/4 inch (6.4 mm) GBL 7500 pump (qty 4), 400:1 End Rotary RH                                                |
| MBL2FN                      | 8 pint reservoir (5 pump stations max), with motor mount base, 1/4 inch (6.4 mm) GBL 7500 pump (qty 5), 400:1 End Rotary RH                                                |
| MBL3CN                      | 8 pint reservoir (5 pump stations max), with motor mount base, 3/8 inch (9.5 mm) GBL 7500 pump (qty 2), 400:1 End Rotary RH                                                |
| MBL7CM                      | 8 pint reservoir (5 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 2), Garza Level Contoller "F4" (Class 1 Group D), 200:1 End Rotary RH |
| MBM1HN                      | 12 pint reservoir (8 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 7), 400:1 End Rotary RH                                              |
| MBM1JM                      | 12 pint reservoir (8 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 8), 200:1 End Rotary RH                                              |
| MBM2EK                      | 12 pint reservoir (8 pump stations max), with motor mount base, 1/4 inch (6.4 mm) GBL 7500 pump (qty 4), 50:1 End Rotary RH                                                |
| MBM2EM                      | 12 pint reservoir (8 pump stations max), with motor mount base, 1/4 inch (6.4 mm) GBL 7500 pump (qty 4), 200:1 End Rotary RH                                               |

# Compressor Lubrication

## Manzel® MBL Box Lubricators

### Ordering Information

| Manzel® MBL Box Lubricators |                                                                                                                                                                               |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MBM2FN                      | 12 pint reservoir (8 pump stations max), with motor mount base, 1/4 inch (6.4 mm) GBL 7500 pump (qty 5), 400:1 End Rotary RH                                                  |
| MBM2GM                      | 12 pint reservoir (8 pump stations max), with motor mount base, 1/4 inch (6.4 mm) GBL 7500 pump (qty 6), 200:1 End Rotary RH                                                  |
| MBM2GN                      | 12 pint reservoir (8 pump stations max), with motor mount base, 1/4 inch (6.4 mm) GBL 7500 pump (qty 6), 400:1 End Rotary RH                                                  |
| MBM2JL                      | 12 pint reservoir (8 pump stations max), with motor mount base, 1/4 inch (6.4 mm) GBL 7500 pump (qty 8), 100:1 End Rotary RH                                                  |
| MBM3FL                      | 12 pint reservoir (8 pump stations max), with motor mount base, 3/8 inch (9.5 mm) GBL 7500 pump (qty 5), 100:1 End Rotary RH                                                  |
| MBM4EM                      | 12 pint reservoir (8 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 4), Rens Level Contoller "F3", 200:1 End Rotary RH                      |
| MBN1BM                      | 16 pint reservoir (12 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 1), 200:1 End Rotary RH                                                |
| MBN1JM                      | 16 pint reservoir (12 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 8), 200:1 End Rotary RH                                                |
| MBN1KM                      | 16 pint reservoir (12 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 9), 200:1 End Rotary RH                                                |
| MBN1LN                      | 16 pint reservoir (12 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 10), 400:1 End Rotary RH                                               |
| MBN1MN                      | 16 pint reservoir (12 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 11), 400:1 End Rotary RH                                               |
| MBN1NK                      | 16 pint reservoir (12 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 12), 50:1 End Rotary RH                                                |
| MBN2JK                      | 16 pint reservoir (12 pump stations max), with motor mount base, 1/4 inch (6.4 mm) GBL 7500 pump (qty 9), 50:1 End Rotary RH                                                  |
| MBN2MN                      | 16 pint reservoir (12 pump stations max), with motor mount base, 1/4 inch (6.4 mm) GBL 7500 pump (qty 11), 400:1 End Rotary RH                                                |
| MBN3DN                      | 16 pint reservoir (12 pump stations max), with motor mount base, 3/8 inch (9.5 mm) GBL 7500 pump (qty 3), 400:1 End Rotary RH                                                 |
| MBN3NK                      | 16 pint reservoir (12 pump stations max), with motor mount base, 3/8 inch (9.5 mm) GBL 7500 pump (qty 12), 50:1 End Rotary RH                                                 |
| MBP0AW                      | 24 pint reservoir (16 pump stations max), with motor mount base, no pumps installed, 200:1 Heavy Duty RH                                                                      |
| MBP1RU                      | 24 pint reservoir (16 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 14), 100:1 Heavy Duty RH                                               |
| MBP1SU                      | 24 pint reservoir (16 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 15), 100:1 Heavy Duty RH                                               |
| MBP2NW                      | 24 pint reservoir (16 pump stations max), with motor mount base, 1/4 inch (6.4 mm) GBL 7500 pump (qty 12), 200:1 Heavy Duty RH                                                |
| MBP2NY                      | 24 pint reservoir (16 pump stations max), with motor mount base, 1/4 inch (6.4 mm) GBL 7500 pump (qty 12), 400:1 Heavy Duty RH                                                |
| MBR0AY                      | 32 pint reservoir (20 pump stations max), with motor mount base, no pumps installed, 400:1 Heavy Duty RH                                                                      |
| MBR1UY                      | 32 pint reservoir (20 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 17), 400:1 Heavy Duty RH                                               |
| MBR1VU                      | 32 pint reservoir (20 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 18), 100:1 Heavy Duty RH                                               |
| MBR1WU                      | 32 pint reservoir (20 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 19), 100:1 Heavy Duty RH                                               |
| MBR7VY                      | 32 pint reservoir (20 pump stations max), with motor mount base, 3/16 inch (4.8 mm) GBL 7500 pump (qty 18), Garza Level Contoller "F4" (Class 1 Group D), 400:1 Heavy Duty RH |
| MBS0AU                      | 40 pint reservoir (24 pump stations max), with motor mount base, no pumps installed, 100:1 Heavy Duty RH                                                                      |

# Compressor Lubrication

## Manzel® MBL Box Lubricators

### Ordering Information

| Manzel® MBL Box Lubricators |                                                                                                                                |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| MBS0AX                      | 40 pint reservoir (24 pump stations max), with motor mount base, no pumps installed, 300:1 Heavy Duty RH                       |
| MBS0AY                      | 40 pint reservoir (24 pump stations max), with motor mount base, no pumps installed, 400:1 Heavy Duty RH                       |
| MBS2XA                      | 40 pint reservoir (24 pump stations max), with motor mount base, 1/4 inch (6.4 mm) GBL 7500 pump (qty 20), 1:1 Direct Drive RH |
| MBS2ZA                      | 40 pint reservoir (24 pump stations max), with motor mount base, 1/4 inch (6.4 mm) GBL 7500 pump (qty 22), 1:1 Direct Drive RH |
| MBS3LY                      | 40 pint reservoir (24 pump stations max), with motor mount base, 3/8 inch (9.5 mm) GBL 7500 pump (qty 10), 400:1 Heavy Duty RH |

# Compressor Lubrication

## Manzel® MBL Box Lubricator Configurator

### Ordering Menu Code

MB – X – X – X – X

#### Reservoir

| Code | Former Codes and Descriptions    | Code | Former Codes and Descriptions                              |
|------|----------------------------------|------|------------------------------------------------------------|
| A    | T1 - 4 pt, 2 pump stations max   | J    | T1 and P1 - 4 pt, 2 pump stations max, motor mount base    |
| B    | T2 - 6 pt, 3 pump stations max   | K    | T2 and P2 - 6 pt, 3 pump stations max, motor mount base    |
| C    | T3 - 8 pt, 5 pump stations max   | L    | T3 and P3 - 8 pt, 5 pump stations max, motor mount base    |
| D    | T4 - 12 pt, 8 pump stations max  | M    | T4 and P4 - 12 pt, 8 pump stations max, motor mount base   |
| E    | T5 - 16 pt, 12 pump stations max | N    | T5 and P5 - 16 pt, 12 pump stations max, motor mount base  |
| F    | T6 - 24 pt, 16 pump stations max | P    | T6 and P6 - 24 pt, 16 pump stations max, motor mount base* |
| G    | T7 - 32 pt, 20 pump stations max | R    | T7 and P7 - 32 pt, 20 pump stations max, motor mount base* |
| H    | T8 - 40 pt, 24 pump stations max | S    | T8 and P8 - 40 pt, 24 pump stations max, motor mount base* |

\*Cannot use double reduction or right angle drives

#### Pump Size – GBL 7500 Suction Pumps

| Code | Former Code and Description                                             |
|------|-------------------------------------------------------------------------|
| 0    | No Pump                                                                 |
| 1    | GBL 7500 3/16 Suction                                                   |
| 2    | GBL 7500 1/4 Suction                                                    |
| 3    | GBL 7500 3/8 Suction                                                    |
| 4    | GBL 7500 3/16 and F3, RENS Level Controller - 556808                    |
| 5    | GBL 7500 1/4 and F3, RENS Level Controller                              |
| 6    | GBL 7500 3/8 and F3, RENS Level Controller                              |
| 7    | GBL 7500 3/16 and F4, GARZA Level Controller (Class 1 Group D) - 558221 |
| 8    | GBL 7500 1/4 and F4, GARZA Level Controller (Class 1 Group D)           |
| 9    | GBL 7500 3/8 and F4, GARZA Level Controller (Class 1 Group D)           |

#### Pump Quantity

| Code | Qty | Code | Qty | Code | Qty | Code | Qty | Code | Qty | Code | Qty |
|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|
| A    | 0   | E    | 4   | J    | 8   | N    | 12  | T    | 16  | X    | 20  |
| B    | 1   | F    | 5   | K    | 9   | P    | 13  | U    | 17  | Y    | 21  |
| C    | 2   | G    | 6   | L    | 10  | R    | 14  | V    | 18  | Z    | 22  |
| D    | 3   | H    | 7   | M    | 11  | S    | 15  | W    | 19  |      |     |

\$ - Multiply the number of pumps by the pump price and add level control price adder. All unused pump stations are covered with a removable blanking plate

#### Drive Options

| Code | Former Code and Description                              | Code | Former Code and Description              | Code | Former Code and Description     |
|------|----------------------------------------------------------|------|------------------------------------------|------|---------------------------------|
| A    | G01R - Direct End Rotary                                 | J    | G05R - Double Reduction End Rotary 25:1  | T    | G13R - RT Angle Rotary 375:1    |
| B    | G02R - End Ratchet (w/out drive arm) - 800 rpm max input | K    | G06R - Double Reduction End Rotary 50:1  | U    | G14R - 100:1 Ratio Gear Reducer |
| C    | G03R - End Rotary Ratchet 37.5:1 - 800 rpm max input     | L    | G07R - Double Reduction End Rotary 100:1 | V    | G15R - 150:1 Ratio Gear Reducer |
| D    | G04R - End Rotary Ratchet 75:1 - 800 rpm max input       | M    | G08R - Double Reduction End Rotary 200:1 | W    | G16R - 200:1 Ratio Gear Reducer |
| E    | G01L - Direct End Rotary                                 | N    | G09R - Double Reduction End Rotary 400:1 | X    | G17R - 300:1 Ratio Gear Reducer |
| F    | G02L - End Ratchet (w/out drive arm) - 800 rpm max input | P    | G10R - RT Angle Rotary 25:1              | Y    | G18R - 400:1 Ratio Gear Reducer |
| G    | G03L - End Rotary Ratchet 37.5:1 - 800 rpm max input     | R    | G11R - RT Angle Rotary 50:1              | Z    | G12L - Left Angel Rotary 188:1  |
| H    | G04L - End Rotary Ratchet 75:1 - 800 rpm max input       | S    | G12R - RT Angle Rotary 188:1             |      |                                 |



# Compressor Lubrication

## Manzel® GBL 7500 Pump

### Features and Benefits

Each GBL 7500 single-piston pump is mechanically driven from a camshaft in the reservoir. They are adjustable from 1 to 27 drops per stroke and develop pressures up to 7500 psi (517 bar), depending on the piston size. All working parts are totally enclosed away from dirt, water, and impurities and are self-lubricated at all times by the fluid in the reservoir. Rugged construction for high performance and durability with easy to adjust pump output.

### Typical Applications

- Compressors

### Typical Fluids Handled

- Mineral or synthetics oil

### Technical Specifications

| Piston Size |     | Max Outlet Pressure |      |     | Drops/Stroke |      | Cubic Inch/Stroke |       | Cubic cm/Stroke |       | Strokes/minute |      |
|-------------|-----|---------------------|------|-----|--------------|------|-------------------|-------|-----------------|-------|----------------|------|
| inches      | mm  | PSI                 | MPa  | bar | Min.         | Max. | Min.              | Max.  | Min.            | Max.  | Min.           | Max. |
| 3/16        | 4.8 | 7500                | 51.7 | 517 | 0            | 7    | 0                 | 0.014 | 0               | 0.229 | 3              | 50   |
| 1/4         | 6.4 | 6000                | 41.4 | 414 | 0            | 12   | 0                 | 0.024 | 0               | 0.393 | 3              | 50   |
| 3/8         | 9.5 | 3500                | 24.1 | 241 | 0            | 27   | 0                 | 0.054 | 0               | 0.885 | 3              | 50   |

### Ordering Information

| GBL 7500 |                             |
|----------|-----------------------------|
| 24J391   | 3/16 inch (4.8 mm) Suction  |
| 24J392   | 3/4 inch (19.1 mm) Suction  |
| 24J393   | 3/8 inch (9.5 mm) Suction   |
| 24J394   | 3/16 inch (4.8 mm) Gravity  |
| 24J395   | 1/4 inch (6.4 mm) Gravity   |
| 24J396   | 3/8 inch (9.5 mm) Gravity   |
| 24J397   | 3/16 inch (4.8 mm) Pressure |
| 24J398   | 1/4 inch (6.4 mm) Pressure  |
| 24J399   | 3/8 inch (9.5 mm) Pressure  |
| 24K466   | Suction Alarm Pump          |



Suction  
24J391



Gravity  
24J394



Pressure  
24J397



Alarm  
24K466

# Compressor Lubrication

## Manzel® DSL Lubricators and Pumps

### Features and Benefits

- Rugged construction for high performance and durability
- Complete assembly—includes level sight gauge, fill cup and drain plug
- Precise camshaft alignment insures proper lubrication by all pumps
- Can be used in outdoor and ammonia (sour gas) environment
- Easy serviceability-pumps can be added or replaced quickly
- Pump output is easily adjustable

### Typical Applications

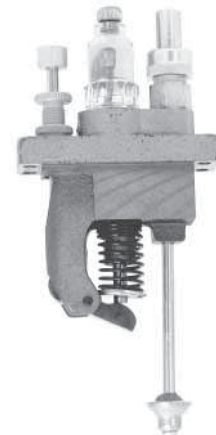
- Compressors and industrial equipment

### Typical Fluids Handled

- Mineral or synthetic oil

### Technical Specifications

| Ordering Code | Piston Size (inches) | Max. Pressure psi | Drops Per Stroke |      | Cubic Inches Per Stroke |      | Cubic cm Per Stroke |      | Strokes Per Minute |      |
|---------------|----------------------|-------------------|------------------|------|-------------------------|------|---------------------|------|--------------------|------|
|               |                      |                   | Min.             | Max. | Min.                    | Max. | Min.                | Max. | Min.               | Max. |
| D1            | 9/32                 | 3,000             | 2.0              | 6.25 | .0048                   | 0.15 | .079                | .245 | 3                  | 25   |
| D2            | 9/32                 | 3,000             | 2.0              | 6.25 | .0048                   | 0.15 | .079                | .245 | 3                  | 25   |



### Ordering Information

|        |                                                         |
|--------|---------------------------------------------------------|
| 256907 | (D1) 9/32 Vacuum Inlet Pump                             |
| 256908 | (D2) 9/32 Pressurized Inlet Pump                        |
| 256929 | Vacuum Inlet Pump w/Suction Tube length reduced by 1 in |
| 24A453 | 3 station, 4 pt, 283:1 - Right Drive                    |
| 24A454 | 9 station, 12 pt, 283:1 - Right Drive                   |
| 24A455 | 3 station, 4 pt, 1:1 - Left Drive                       |
| 24A456 | 3 station, 4 pt, 1:1 - Right Drive                      |
| 24A457 | 6 station, 4 pt, 1:1 - Left Drive                       |
| 24A458 | 6 station, 8 pt, 1:1 - Right Drive                      |
| 24A459 | 9 station, 12 pt, 1:1 - Left Drive                      |
| 24A460 | 9 station, 12 pt, 1:1 - Right Drive                     |
| 24A461 | 3 station, 4 pt, 37.5:1 - Left Drive                    |
| 24A462 | 3 station, 4 pt, 37.5:1 - Right Drive                   |
| 24A463 | 3 station, 4 pt, 75:1 - Left Drive                      |
| 24A464 | 3 station, 4 pt, 57:1 - Right Drive                     |
| 24A465 | 6 station, 8 pt, 37.5:1 - Left Drive                    |
| 24A466 | 6 station, 8 pt, 37.5:1 - Right Drive                   |
| 24A467 | 6 station, 8 pt, 75:1 - Left Drive                      |
| 24A468 | 6 station, 8 pt, 75:1 - Right Drive                     |
| 24A469 | 9 station, 12 pt, 37.5:1 - Left Drive                   |
| 24A470 | 9 station, 12 pt, 37.5:1 - Right Drive                  |
| 24A471 | 9 station, 12 pt, 75:1 - Left Drive                     |
| 24A472 | 9 station, 12 pt, 75:1 - Right Drive                    |

|        |                                            |
|--------|--------------------------------------------|
| 24A473 | 12 station, 16 pt, 37.5:1 - Left Drive     |
| 24A474 | 12 station, 16 pt, 37.5:1 - Right Drive    |
| 24A475 | 12 station, 16 pt, 75:1 - Left Drive       |
| 24A476 | 12 station, 16 pt, 75:1 - Right Drive      |
| 24A477 | 3 station, 4 pt, 40:1 - Left Front Drive   |
| 24A478 | 3 station, 4 pt, 40:1 - Right Front Drive  |
| 24A479 | 3 station, 4 pt, 60:1 - Left Front Drive   |
| 24A480 | 3 station, 4 pt, 60:1 - Right Front Drive  |
| 24A481 | 3 station, 4 pt, 40:1 - Left Rear Drive    |
| 24A482 | 3 station, 4 pt, 40:1 - Right Rear Drive   |
| 24A483 | 3 station, 4 pt, 60:1 - Left Rear Drive    |
| 24A484 | 3 station, 4 pt, 60:1 - Right Rear Drive   |
| 24A485 | 6 station, 8 pt, 40:1 - Left Front Drive   |
| 24A486 | 6 station, 8 pt, 40:1 - Right Front Drive  |
| 24A487 | 6 station, 8 pt, 60:1 - Left Front Drive   |
| 24A488 | 6 station, 8 pt, 60:1 - Right Front Drive  |
| 24A489 | 6 station, 8 pt, 40:1 - Left Rear Drive    |
| 24A490 | 6 station, 8 pt, 40:1 - Right Rear Drive   |
| 24A491 | 6 station, 8 pt, 60:1 - Left Rear Drive    |
| 24A492 | 6 station, 8 pt, 60:1 - Right Rear Drive   |
| 24A493 | 9 station, 12 pt, 40:1 - Left Front Drive  |
| 24A494 | 9 station, 12 pt, 40:1 - Right Front Drive |
| 24A495 | 9 station, 12 pt, 60:1 - Left Front Drive  |

# Compressor Lubrication

## Manzel® DSL Lubricators and Pumps

### Ordering Information

|        |                                             |
|--------|---------------------------------------------|
| 24A496 | 9 station, 12 pt, 60:1 - Right Front Drive  |
| 24A497 | 9 station, 12 pt, 40:1 - Left Rear Drive    |
| 24A498 | 9 station, 12 pt, 40:1 - Right Rear Drive   |
| 24A499 | 9 station, 12 pt, 60:1 - Left Rear Drive    |
| 24A501 | 9 station, 12 pt, 60:1 - Right Rear Drive   |
| 24A502 | 15 station, 20 pt, 60:1 - Left Front Drive  |
| 24A503 | 15 station, 20 pt, 60:1 - Right Front Drive |
| 24A504 | 15 station, 20 pt, 60:1 - Left Rear Drive   |
| 24A505 | 15 station, 20 pt, 60:1 - Right Rear Drive  |
| 24A506 | 3 station, 4 pt, 1:1 - Right Bottom Drive   |
| 24A507 | 3 station, 4 pt, 2.5:1 - Right Bottom Drive |
| 24A508 | 6 station, 8 pt, 1:1 - Right Bottom Drive   |
| 24A509 | 6 station, 8 pt, 2.5:1 - Right Bottom Drive |
| 562547 | DSL 4 pt Bot Rot 2.5 3FD                    |
| 562548 | DSL 8 pt Bot Rot 2.5 4FD                    |
| 562549 | DSL 4 pt LH Rear Rot 60 1FD                 |
| 562550 | DSL 4 pt LH Rear Rot 60 2FD                 |
| 562551 | DSL 4 pt LH Rear Rot 60 3FD                 |
| 562552 | DSL 8 pt LH Rear Rot 60 0FD                 |
| 562553 | DSL 12 pt LH Rear Rot 60 7FD                |
| 562554 | DSL 4 pt LH Rot 37.5 3FD                    |
| 562555 | DSL 4 pt LH Rot 37.5 6FD                    |
| 562561 | DSL 8 pt LH Rot 75 5FD                      |
| 562562 | DSL 16 pt LH Rot DL CAM 10FD                |
| 562563 | DSL 20 pt LH Rear Rot 60 10FD               |
| 562564 | DSL 4 pt Bot Rot 2.5 3FD                    |
| 562565 | DSL 8 pt Bot 060371 2.5 4FD                 |
| 562566 | DSL 8 pt RH Rear Rot 40 6FD                 |
| 562567 | DSL 8 pt RH Front Rot 40 5FD                |
| 564210 | DSL 4 pt LH Rot 75 3FD                      |
| 564211 | DSL 4 pt Bot Rot 2.5 2FD                    |
| 564212 | DSL-R6-D1-04-BS2-L                          |
| 564213 | DSL 4 pt RH Rear Rot 60                     |
| 564214 | DSL 8 pt 4FD RH Rot 37.5:1                  |
| 564219 | DSL 12 pt RH RR Recip 60                    |
| 564222 | DSL 8 pt LH Rear Rot 60                     |
| 564223 | DSL-R9-D1-5-ER4-L-P9                        |
| 564225 | DSL 12 pt LH Rear Rot 7FD                   |
| 564226 | DSL SST, 60:1 LH SPEC                       |
| 564227 | DSL-R6-D1-06-ER3-R-P06-M1                   |
| 564229 | DSL-R3-D1-2-SF0-ER4-L-P3                    |
| 256929 | DSL, 9/32                                   |
| 256907 | DSL, 9/32                                   |
| 256908 | DSL, 9/32, w/out Suction                    |

# Compressor Lubrication

## Model HP-15™ High Pressure Lubricators

### Features and Benefits

The high pressure lubricator comprises one to six integral sight and pump assemblies in a cast iron reservoir. The unit is designed for direct connection to an electric motor/speed reducer power source. A Manzel® terminal check valve is recommended in the lubrication system. When required to maintain proper oil viscosity, the reservoir can be fitted with an electric heater.

### Typical Applications

- Multi-stage gas compression

### Typical Fluids Handled

- Mineral or synthetic oil

### Technical Specifications

| Number of Feeds | Max. Pressure | Reservoir Capacity (Quarts) (1) | Plunger Diameter (inches) | Drops Per Stroke |      | Cubic Inches Per Stroke |       | Cubic cm Per Stroke |       | Strokes Per Minute |      |
|-----------------|---------------|---------------------------------|---------------------------|------------------|------|-------------------------|-------|---------------------|-------|--------------------|------|
|                 |               |                                 |                           | Min.             | Max. | Min.                    | Max.  | Min.                | Max.  | Min.               | Max. |
| 1-6             | 18,000        | 7                               | 1/4                       | 1                | 4    | 0.002                   | 0.008 | 0.033               | 0.113 | 3                  | 36   |

### Ordering Information

|        |                                             |
|--------|---------------------------------------------|
| 562918 | HP-15 6 Feed Gear Box Without Pumps         |
| 562919 | HP-15 6 Feed Gear Box With Pumps            |
| 564272 | HP-15 6 Feed Gear Box With Pumps And Heater |
| 562951 | HP-15 Pump                                  |
| 556700 | HP-15 Sight Glass                           |
| 563113 | HP-15 Plunger And Cylinder Assembly         |
| 564334 | In-line Check Valve                         |



562951

# Compressor Lubrication

## Manzel® HP-50™ High Pressure Lubricators

### Features and Benefits

- Operating pressures to 50,000 psi for lubricating compressor and circulator cylinder walls, heavily loaded bearings and other moving parts
- Single plunger force feed design is highly efficient for injecting lubricants and/or compatible fluids into high pressure systems
- Vacuum sight feeds on self-contained pumping units show output of lubricant to individual lubrication points
- All working parts are totally enclosed and self-lubricated
- Individual pumping units easily removed for service
- Feed rate infinitely variable from minimum to maximum with simple hand adjustment



### Typical Applications

- Compressors and industrial equipment

### Typical Fluids Handled

- Mineral or synthetic oil

### Technical Specifications

| Number of Feeds | Max. Pressure | Reservoir Capacity (Quarts) (1) | Plunger Diameter (inches) | Drops Per Stroke |      | Cubic Inches Per Stroke |       | Cubic cm Per Stroke |       | Strokes Per Minute |      |
|-----------------|---------------|---------------------------------|---------------------------|------------------|------|-------------------------|-------|---------------------|-------|--------------------|------|
|                 |               |                                 |                           | Min.             | Max. | Min.                    | Max.  | Min.                | Max.  | Min.               | Max. |
| 1-4             | 50,000        | 9                               | 1/4                       | 1                | 4    | 0.002                   | 0.008 | 0.033               | 0.113 | 3                  | 36   |

### Ordering Information

| HP-50 Pump             |                                                                                                                                  |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| 562952                 | HP-50 Pump Assembly                                                                                                              |
| HP-50 Lubricator Boxes |                                                                                                                                  |
| 564276                 | HP-50 Lubricator without Pumps or Options                                                                                        |
| 562925                 | HP-50 Lubricator with 4 Pumps                                                                                                    |
| 562926                 | HP-50 Lubricator with 2 Pumps                                                                                                    |
| 562927                 | HP-50 Lubricator with 4 Pumps, Provision for Flange Mounted Auto Fill, and Nitrogen Purge Port                                   |
| 562928                 | HP-50 Lubricator with 4 Pumps, Low Level and Shaft Rotation Alarm                                                                |
| 562929                 | HP-50 Lubricator with 4 Pumps, Provisions for Flange Mounted Auto Fill and Low Level in Fill Plate                               |
| 564277                 | HP-50 Lubricator with 4 Pumps and Steam Heater                                                                                   |
| 564278                 | HP-50 Lubricator with 3 Pumps and Steam Heater                                                                                   |
| 564279                 | HP-50 Lubricator with 4 Pumps, Provision for Flange Mounted Auto Fill, Nitrogen Purge and Shaft Rotation/Low Level Alarm on Left |

| 564280            | HP-50 Lubricator with 4 Pumps, Provision for Flange Mounted Auto Fill, Nitrogen Purge and Shaft Rotation/Low Level Alarm on Right                     |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| 564282            | HP-50 Lubricator with 4 Pumps, Shaft Rotation and Low Level Alarm                                                                                     |
| 564283            | HP-50 Lubricator with 4 Lubricator Boxes with 15 Pumps, Provision for Center Mounted Motor and Base                                                   |
| 258262            | HP-50 Lubricator with 4 Pumps and Low Level                                                                                                           |
| 258263            | HP-50 Lubricator with 4 Pumps, Provisions for Flange Mounted Auto Fill and Low Level in Fill Plate, and Prox Switch Shaft Rotation Indicator on Right |
| HP-50 Accessories |                                                                                                                                                       |
| 563111            | HP-50 plunger and cylinder                                                                                                                            |
| 564336            | HP-50 check valve                                                                                                                                     |
| 558881            | Electric heater, 120/240 VAC                                                                                                                          |
| 563020            | Shaft rotation alarm                                                                                                                                  |
| 563024            | Low level                                                                                                                                             |

# Compressor Lubrication

## Manzel® MVB Pump

### Features and Benefits

The MVB lubrication system is a single line, series progressive system which divides pump output into predetermined proportional amounts and distributes these amounts to points of lubrication.

- One main supply from single pump
- Central monitoring of normal operation
- Automatic proportioning of lubricant through positive displacement valves
- Quick indication of problem areas

### Typical Applications

- Compressors and reciprocating engines

### Typical Fluids Handled

- Oil

### Technical Specifications

| Single Camshaft<br>rpm (pump strokes<br>per min..) | 1/4 piston         |        |                  |         | 3/8 piston         |        |                  |         |
|----------------------------------------------------|--------------------|--------|------------------|---------|--------------------|--------|------------------|---------|
|                                                    | Min. Output Adj.   |        | Max. Output Adj. |         | Min. Output Adj.   |        | Max. Output Adj. |         |
|                                                    | 0.12456*(constant) |        | 0.59832          |         | 0.29909*(constant) |        | 1.4902           |         |
| 20                                                 | 2.49               | (1.18) | 11.97            | (5.66)  | 5.98               | (2.83) | 29.92            | (14.15) |
| 30                                                 | 3.74               | (1.77) | 17.95            | (8.49)  | 8.97               | (4.24) | 44.88            | (21.23) |
| 40                                                 | 4.98               | (2.36) | 23.93            | (11.32) | 11.96              | (5.66) | 59.84            | (28.30) |
| 50                                                 | 6.23               | (2.95) | 29.92            | (14.15) | 14.95              | (7.07) | 74.80            | (35.38) |
| 60                                                 | 7.47               | (3.53) | 35.90            | (16.98) | 17.95              | (8.49) | 89.76            | (42.46) |
| 70                                                 | 8.72               | (4.12) | 41.88            | (19.81) | 20.94              | (9.90) | 104.72           | (49.53) |

### Ordering Information

|        |                                        |
|--------|----------------------------------------|
| 563565 | MVB 0.250 inch (6.35 mm) Piston Pump   |
| 563566 | MVB 0.375 inch (9.53 mm) Piston Pump   |
| 563920 | Seal kit for MVB pump                  |
| 563919 | 3/8 inch piston and sleeve replacement |
| 563918 | 1/4 inch piston and sleeve replacement |
| 557824 | 25 micron filter                       |
| 557827 | 10 micron filter                       |



563565



MVB Box lubricator

# Compressor Lubrication

## Manzel® MVB Box Lubricators

### Ordering Menu Code

| MVB -                                                                                                                                                                                                                                         | XXX | - | XXX | - | XXX | - | XXX | - | XXX | - | XXX | - | XXX | - | XXX | - | XXX | - | XXX | - | XXX | - | XXX | - | XXX |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|
| <b>DRIVE OPTION</b>                                                                                                                                                                                                                           |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |
| DAA - RATCHET DRIVE, 102-2<br>DAB - STANDARD DRIVE, 203-2<br>DAC - STANDARD DRIVE, 207-2<br>DAD - REVERSE DRIVE, 303-2<br>DAE - 90° DRIVE, 401-2<br>DAF - VERTICAL DRIVE, 501-2<br>D99 - SPECIAL SPECIFY PART NUMBER                          |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |
| <b>RATIO OPTION</b>                                                                                                                                                                                                                           |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |
| RAA - 1:1   RAD - 1:3   RAG - 4:1   RAK - 16:1<br>RAB - 1:2   RAE - 3:1   RAH - 1:8   RAC - 2:1<br>RAF - 1:4   RAJ - 8:1                                                                                                                      |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |
| <b>CAM OPTION STATION 1</b>                                                                                                                                                                                                                   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |
| CAA - SINGLE-LOBE<br>CAB - DOUBLE-LOBE<br>CAC - TRIPLE-LOBE                                                                                                                                                                                   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |
| <b>CAM OPTION STATION 2</b>                                                                                                                                                                                                                   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |
| FAA - SINGLE-LOBE<br>FAB - DOUBLE-LOBE<br>FAC - TRIPLE-LOBE                                                                                                                                                                                   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |
| <b>PUMP OPTION STATION 1</b>                                                                                                                                                                                                                  |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |
| AOO - NONE<br>AOA - 1/4 DIA PUMP ONLY, (542-999-050)<br>AOB - 3/8 DIA PUMP ONLY, (542-999-060)<br>AOC - 1/4 DIA PUMP W/SYSTEM FILL, (542-999-070)<br>AOD - 3/8 DIA PUMP W/SYSTEM FILL, (542-999-080)                                          |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |
| <b>PUMP OPTION STATION 2</b>                                                                                                                                                                                                                  |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |
| BOO - NONE   BOC - 1/4 DIA PUMP W/SYSTEM FILL, (542-999-070)   BOA - 1/4 DIA PUMP ONLY, (542-999-050)<br>BOD - 3/8 DIA PUMP W/SYSTEM FILL, (542-999-080)   BOB - 3/8 DIA PUMP ONLY, (542-999-060)                                             |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |
| <b>*PRESSURE INDICATOR OPTION STATION 1</b>                                                                                                                                                                                                   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |
| POA - STANDARD BLOWOUT, 2350 PSI, (509-230-160)<br>P99 - SPECIAL SPECIFY PART NUMBER                                                                                                                                                          |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |
| <b>*PRESSURE INDICATOR OPTION STATION 2</b>                                                                                                                                                                                                   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |
| HOA - STANDARD BLOWOUT, 2350 PSI, (509-230-160)   H99 - SPECIAL SPECIFY PART NUMBER                                                                                                                                                           |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |
| <b>*GAUGE OPTION STATION 1</b>                                                                                                                                                                                                                |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |
| GOA - GAUGE 0-3000 PSI, DRY, (543-362-000)   GOD - GAUGE 0-10000 PSI, LIQUID FILLED, (493-020-207)<br>GOB - GAUGE 0-3000 PSI, LIQUID FILLED, (510-770-240)   G99 - SPECIAL SPECIFY PART NUMBER<br>GOC - GAUGE 0-10000 PSI, DRY, (493-020-206) |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |
| <b>*GAUGE OPTION STATION 2</b>                                                                                                                                                                                                                |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |
| JOA - GAUGE 0-3000 PSI, DRY, (543-362-000)   JOD - GAUGE 0-10000 PSI, LIQUID FILLED, (493-020-207)<br>JOB - GAUGE 0-3000 PSI, LIQUID FILLED, (510-770-240)   J99 - SPECIAL SPECIFY PART NUMBER<br>JOC - GAUGE 0-10000 PSI, DRY, (493-020-206) |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |
| <b>*BASE OPTION</b>                                                                                                                                                                                                                           |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |
| KOA - STANDARD, SEE NOTE 1                                                                                                                                                                                                                    |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |
| <b>*MOTOR OPTION</b>                                                                                                                                                                                                                          |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |
| MOA - 1/4 HP, 115/230 VAC, 60 HZ, SINGLE-PHASE, 1725 RPM, TENV, 56 FRAME<br>MOB - 1/4 HP, 230/460 VAC, 60 HZ, THREE-PHASE, 1725 RPM, TENV, 56 FRAME<br>M99 - SPECIAL SPECIFY PART NUMBER                                                      |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |

\*OMIT IF NOT REQUIRED

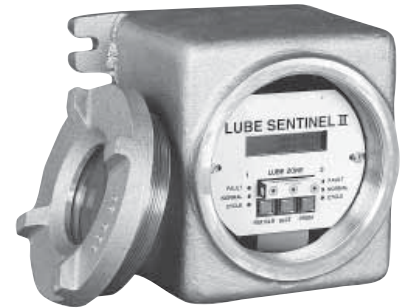
**NOTE:** (1) Base option KOA allows for mounting of a 56 frame motor to MVB package and includes coupling and coupling guard. When base option KOA is ordered drive option DAC is to be ordered, along with either gear ratio RAJ (8:1) or RAK (16:1). This is to ensure that motor is properly mounted and maximum input rpm is not exceeded.

# Compressor Lubrication Accessories

## Lube Sentinel II Monitor™

### Features and Benefits

- Same unit is configurable to monitor one or two zones
- Monitors net lube flow to the machine and recognizes both low-lube and high-lube faults
- Displays “per 24 hour lube rates” in pints, gallons, milliliters, liters, ounces and counts
- Displays instantaneous (last cycle) rate, average (last 10 cycles) rate and cumulative lube total - updated with every cycle
- Fault times and rates are automatically recalculated if displayed unit of measure is altered
- Fault times and rates can be automatically proportioned as machine speeds change using a tach pulse sensor (nonprovided)
- Fault enunciation can be delayed to avoid nuisance alarms shutdowns
- Faults can be reset and zones can be bypassed remotely
- Suitable for use in fast cycling applications
- Includes highly reliable electronic circuitry, packaged to resist the influence of electrical noise



562870



563932

### Technical Specifications

#### Input Power Requirements

115 VAC ..... 100 mA  
Fuses FU-1 and FU-2 ..... 1/4 x 1 in - 0.5 amp, 250 VAC, medium lag (buss # AGC, or equivalent;  
5 x 20 mm - 0.5 amp, 250 VAC, medium lag (buss # GMA, or equivalent;  
Uses Medium Lag Fuses Only. Do Not Use Fast Acting Fuses

Proximity Switch Pulse Inputs ..... 24 VDC/12 mA each  
Tach Sensor or Pulse Input ..... 24 VDC/12 mA  
Zone Bypass and Alarm Inputs ..... 24 VDC/12 mA each

#### Relay Outputs (Zone Fault and Power Failure)

Rated Load ..... 0.5 A @ 125 VAC, 1 A @ 30 VDC  
Max Carry Current ..... 2A  
Max Operating Voltage ..... 250 VAC, 220 VDC  
Max Switching Capacity ..... 62.5 VA, 60W  
Min. Permissible Load ..... 10 µA, 10 mVDC

Current Consumption ..... 70 mA @ 115 VAC, 150 mA @ 24 VDC  
RS232 Communications Port Adapter ..... (Inter connection wire supplied by others); Waldom  
- Molex Housing # 22-01-2067; Waldom - Molex Pins # 08-50-0114

Max Pulse Rate ..... 300 per min. (150 divider cpm) @ 50% duty cycle

Max Cycle Time ..... 10.9 min.

Ambient/Storage Temperature Range (LCD Limited) ..... -4° F to 158° F (-20° C to 70° C)

Net Weight (approx) ..... JIC - 8.4 lbs; Explosion-Proof - 18.3 lbs

### Ordering Information

| Lube Sentinel II Monitor and Accessories |                                                                                    |
|------------------------------------------|------------------------------------------------------------------------------------|
| 562870                                   | JIC Enclosure                                                                      |
| 562871                                   | Hazardous Area Enclosure (Class 1, Groups B-D, Div 1) (Class 2, Groups E-G, Div 1) |
| 563936                                   | Pre-Existing JIC Enclosure                                                         |
| 563937                                   | Pre-Existing Enclosure (Class 1, Groups C-D)                                       |
| 558045                                   | SLS Logic Module                                                                   |
| 558046                                   | SLS Power Module w/I/O                                                             |
| 563927                                   | Safety Set Module Kit                                                              |
| 563932                                   | Data Wand Only                                                                     |

# Compressor Lubrication Accessories

## Manzel® Lube-Line Alert™

### Features and Benefits

- Indicates Flow or No-Flow at any point in the system ahead of the Lube-Line Alert inlet.  
Not affected by discharge pressure
- Operates under continuous or intermittent low-flow rates
- Universal use—operates in any air free force feed lubrication system—any make lubricator
- Sensitive to a wide range of flow from .006 cubic inches to 190 cubic inches per minute
- Many type lubricants and viscosities—mineral or synthetic
- Time delay adjustment to compensate for viscosity and/or flow rate. Quick and easy to adjust
- Explosion-proof—UL and CSA Listed for Class I Groups C and D and Class II Groups E, F and G. Division 1 and 2 when installed as per NEC 501
- For connection to any electrical warning system—lights, sound devices, machinery shut-off relays, telephones, etc.
- A low-level and shaft rotation



563030

### Technical Specifications

|                                      |                                                                                                                                  |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| UL and CSA Electrical Ratings .....  | Single pole, Throw magnetically operated switch,<br>115 VAC, 60Hz, 10 watt, 28 VDC, 0.5 amp Resistive, 28 VDC, 0.5 amp Inductive |
| Max Switch Rating .....              | 350 VAC/VDC, 50 watt, 2 amp                                                                                                      |
| Max Operating Pressure .....         | 10,000 psi                                                                                                                       |
| Min. Pressure Drop Access Alert..... | 150 psi                                                                                                                          |
| Flow Rate .....                      | 0.006 cu.in. to 190 cu.in. per minute @ 100 SUS<br>0.006 cu.in. to 75 cu.in. per minute @ 2000 SUS                               |
| Fluid Viscosity .....                | 100 to 9000 SUS                                                                                                                  |
| Weight.....                          | 0.6 lbs                                                                                                                          |

### Ordering Information

| Lube-Line Alert     |                                                                                                                 |
|---------------------|-----------------------------------------------------------------------------------------------------------------|
| 563030              | N.C. Configuration w/Check Valves for 1/4 inch O.D. Tube, Standard Spring (installed), w/ Light Spring (loose)* |
| 563033              | N.O. Configuration w/Check Valves for 1/4 inch O.D. Tube, Standard Spring (installed), w/ Light Spring (loose)* |
| 563032              | N.O. Configuration w/Check Valves and Fittings for 1/8 inch NPTF Connections, Standard Spring (installed)       |
| Inlet Check Valves  |                                                                                                                 |
| 563042              | w/ 1/4 inch O.D. Tube Inlet (supplied w/1 and 2)                                                                |
| 563041              | w/ 7/16-20 Straight Female Thread Outlet (supplied w/3)                                                         |
| Outlet Check Valves |                                                                                                                 |
| 563044              | w/ 1/4 inch O.D. Tube Inlet (supplied w/1 and 2)                                                                |
| 563043              | w/ 7/16-20 Straight Female Thread Outlet (supplied w/3)                                                         |
| Fittings            |                                                                                                                 |
| 556624              | (w/Check Valves 4 and 5), 7/16-20 Straight Male Thread x 1/8 inch NPTF (2 supplied w/3)                         |
| Springs             |                                                                                                                 |
| 556944              | Standard Springs (installed at factory in 1 and 3)                                                              |
| 556939              | Light Spring for Low Flow Applicator (supplied loose w/1, installed in 2)*                                      |
| Repair Parts        |                                                                                                                 |
| 556812              | Switch Assembly                                                                                                 |
| 563031              | Plunger and Bushing Assembly                                                                                    |

\*When using the Light Spring 556939 (458-005-220), fluid viscosity should not exceed 350 SUS

# Compressor Lubrication Accessories

## Pneumatic/Electric Lube Sentry Valve

### Features and Benefits

The Lube Sentry Valve provides automatic warning and shutdown of compressors, pumps and engines when oil is not flowing properly to primary dividers in series type lube systems.

- Absence of check valves to avoid trapping contamination from included solids in the lubricant
- Bolted-together components simplifying maintenance. The microswitch assembly on the pneumatic valve can be removed without disturbing existing lines or shutting down the equipment being lubricated

### Technical Specifications

|                                                                                       |                                    |
|---------------------------------------------------------------------------------------|------------------------------------|
| Material .....                                                                        | Steel                              |
| Max Pressure .....                                                                    | 6,000 psi (414 bar)                |
| Flow Rate (per day) .....                                                             | 4-400 pints (1.89-189.2 liters)    |
| Pressure Drop .....                                                                   | 250 psi (17 bar)                   |
| Seals .....                                                                           | Fluoroelastomer                    |
| Lubricant .....                                                                       | Oil (450-2000 SUS)                 |
| Net Weight .....                                                                      | 0.5 lb (2.265 kg)                  |
| Operating Temperature .....                                                           | -20° F to 180° F (-29° C to 82° C) |
| Air Pressure (Max Pneumatic Valve) .....                                              | 125 psi (9 bar)                    |
| Electrical Rating .....                                                               | 5 amps @ 125/250 VAC               |
| A,B or C @ 28 VDC, A- Inductive - 3 amp, B- Resistive - 5 amp, C- Max Inrush - 15 amp |                                    |



### Ordering Information

|        |                                 |
|--------|---------------------------------|
| 563506 | Pneumatic Lube Sentry, Complete |
| 563503 | Pneumatic Valve                 |
| 563502 | Actuator                        |
| 563505 | Electric Lube Sentry, Complete  |
| 563504 | Switch Assembly                 |

# Compressor Lubrication Accessories

## Balancing Valve

### Features and Benefits

The Graco® Balancing Valve assists divider valves to accurately proportion lubricant at high differential pressures. It is recommended for use when a pressure difference greater than 1,000 PSI exists between two or more of the points in a Graco divider valve system.

- Balancing valve is not affected by downstream pressure, assures accurate flow to all lubrication points
- Balancing valve is field adjustable. Reduces on-site inventory costs as one model meets all your system needs
- Balancing valve is in-line mounted, so it lowers installation costs
- Balancing valve uses a wear-resistant tungsten-carbide ball to reduce maintenance costs



### Technical Specifications

|                             |                                                    |
|-----------------------------|----------------------------------------------------|
| Material.....               | Steel                                              |
| Max Operating Pressure..... | 6,500 psi                                          |
| Adjustable .....            | From 1,000 to 6,500 psi (Factory set at 2,000 psi) |
| Operating Temperature.....  | -10° F to 250° F (-23° C to 121° C)                |
| Lubricant.....              | Oil                                                |
| Seals .....                 | Fluoroelastomer                                    |
| Net Weight.....             | 1.19 lb (0.54 kg)                                  |

### Ordering Information

|        |                 |
|--------|-----------------|
| 563230 | Balancing Valve |
| 563911 | Valve Seal Kit  |

# Index

| Part No.    | Page No. | Part No.    | Page No. | Part No.    | Page No. | Part No.    | Page No. |
|-------------|----------|-------------|----------|-------------|----------|-------------|----------|
| 15K740..... | 57, 90   | 24A472..... | 117      | 24D879..... | 47       | 24E103..... | 50       |
| 15K783..... | 57, 90   | 24A473..... | 117      | 24D880..... | 47       | 24E240..... | 58       |
| 15K784..... | 90       | 24A474..... | 117      | 24D881..... | 47       | 24E241..... | 58       |
| 15M037..... | 90       | 24A475..... | 117      | 24D882..... | 47       | 24E242..... | 58       |
| 15M038..... | 56       | 24A476..... | 117      | 24D883..... | 47       | 24E243..... | 58       |
| 15M045..... | 90       | 24A477..... | 117      | 24D884..... | 47       | 24E244..... | 58       |
| 15M442..... | 104      | 24A478..... | 117      | 24D885..... | 47       | 24E245..... | 58       |
| 15R993..... | 74       | 24A479..... | 117      | 24D886..... | 47       | 24E389..... | 58       |
| 15R994..... | 74       | 24A480..... | 117      | 24E028..... | 49       | 24E390..... | 58       |
| 15U854..... | 79       | 24A481..... | 117      | 24E029..... | 49       | 24E391..... | 58       |
| 15U855..... | 79       | 24A482..... | 117      | 24E030..... | 49       | 24E392..... | 58       |
| 15U856..... | 79       | 24A483..... | 117      | 24E031..... | 49       | 24E393..... | 58       |
| 15U857..... | 76       | 24A484..... | 117      | 24E032..... | 49       | 24E394..... | 58       |
| 15U858..... | 26       | 24A485..... | 117      | 24E033..... | 49       | 24E406..... | 61       |
| 15U859..... | 26       | 24A486..... | 117      | 24E034..... | 49       | 24E407..... | 61       |
| 15U860..... | 26       | 24A487..... | 117      | 24E035..... | 49       | 24E408..... | 61       |
| 15X624..... | 53       | 24A488..... | 117      | 24E036..... | 49       | 24E409..... | 61       |
| 15X625..... | 54       | 24A489..... | 117      | 24E037..... | 49       | 24E410..... | 61       |
| 15X626..... | 54       | 24A490..... | 117      | 24E038..... | 49       | 24E411..... | 61       |
| 15X667..... | 53       | 24A491..... | 117      | 24E039..... | 49       | 24E582..... | 50       |
| 15X668..... | 53       | 24A492..... | 117      | 24E040..... | 49       | 24E583..... | 50       |
| 15X669..... | 53       | 24A493..... | 117      | 24E041..... | 49       | 24E584..... | 50       |
| 15X670..... | 53       | 24A494..... | 117      | 24E042..... | 49       | 24E585..... | 50       |
| 15X671..... | 53       | 24A495..... | 117      | 24E043..... | 49       | 24E586..... | 50       |
| 15X672..... | 53       | 24A496..... | 118      | 24E044..... | 49       | 24E587..... | 50       |
| 15X673..... | 53       | 24A497..... | 118      | 24E045..... | 49       | 24E588..... | 50       |
| 15X674..... | 53       | 24A498..... | 118      | 24E046..... | 49       | 24E589..... | 50       |
| 15X675..... | 54       | 24A499..... | 118      | 24E047..... | 49       | 24E590..... | 50       |
| 15X676..... | 54       | 24A501..... | 118      | 24E048..... | 49       | 24E591..... | 50       |
| 15X677..... | 54       | 24A502..... | 118      | 24E049..... | 49       | 24E592..... | 50       |
| 15X678..... | 54       | 24A503..... | 118      | 24E050..... | 49       | 24E593..... | 50       |
| 15X679..... | 54       | 24A504..... | 118      | 24E051..... | 49       | 24E594..... | 50       |
| 15X680..... | 54       | 24A505..... | 118      | 24E054..... | 49       | 24E595..... | 50       |
| 15X681..... | 54       | 24A506..... | 118      | 24E055..... | 49       | 24E596..... | 50       |
| 15X682..... | 54       | 24A507..... | 118      | 24E056..... | 49       | 24E597..... | 50       |
| 15X683..... | 53       | 24A509..... | 118      | 24E057..... | 49       | 24E598..... | 50       |
| 15X684..... | 53       | 24A918..... | 60, 104  | 24E058..... | 49       | 24E599..... | 50       |
| 15X685..... | 53       | 24A919..... | 58       | 24E059..... | 49       | 24E600..... | 50       |
| 15X686..... | 53       | 24A920..... | 58       | 24E060..... | 49       | 24E601..... | 50       |
| 15X687..... | 53       | 24A921..... | 58       | 24E061..... | 49       | 24E602..... | 50       |
| 15X688..... | 53       | 24A922..... | 58       | 24E062..... | 49       | 24E603..... | 50       |
| 15X689..... | 53       | 24A923..... | 58       | 24E063..... | 49       | 24E604..... | 50       |
| 15X690..... | 53       | 24A924..... | 58       | 24E064..... | 49       | 24E605..... | 50       |
| 15X691..... | 54       | 24B219..... | 79       | 24E065..... | 49       | 24E857..... | 61       |
| 15X692..... | 54       | 24B237..... | 77       | 24E066..... | 49       | 24F201..... | 58       |
| 15X693..... | 54       | 24B239..... | 77       | 24E067..... | 49       | 24F467..... | 61       |
| 15X694..... | 54       | 24B240..... | 77       | 24E068..... | 49       | 24F596..... | 70       |
| 15X695..... | 54       | 24B241..... | 77       | 24E069..... | 49       | 24F597..... | 70       |
| 15X696..... | 54       | 24B359..... | 60       | 24E070..... | 49       | 24F598..... | 70       |
| 15X697..... | 54       | 24B360..... | 58       | 24E071..... | 49       | 24F599..... | 70       |
| 15X698..... | 54       | 24B427..... | 16, 25   | 24E072..... | 49       | 24F600..... | 70       |
| 15X699..... | 54       | 24B591..... | 93, 104  | 24E073..... | 49       | 24F601..... | 70       |
| 15X700..... | 54       | 24B596..... | 93       | 24E074..... | 49       | 24F943..... | 58       |
| 15X701..... | 54       | 24B667..... | 58       | 24E075..... | 49       | 24F944..... | 58       |
| 15X702..... | 54       | 24B677..... | 58       | 24E076..... | 49       | 24G485..... | 65       |
| 15X703..... | 54       | 24D855..... | 47       | 24E077..... | 49       | 24G486..... | 65       |
| 15X704..... | 54       | 24D856..... | 47       | 24E080..... | 50       | 24G487..... | 65       |
| 15X705..... | 54       | 24D857..... | 47       | 24E081..... | 50       | 24G488..... | 65       |
| 15X706..... | 54       | 24D858..... | 47       | 24E082..... | 50       | 24G489..... | 65       |
| 16T671..... | 92       | 24D859..... | 47       | 24E083..... | 50       | 24G490..... | 65       |
| 24A453..... | 117      | 24D860..... | 47       | 24E084..... | 50       | 24J331..... | 61       |
| 24A454..... | 117      | 24D861..... | 47       | 24E085..... | 50       | 24J332..... | 61       |
| 24A455..... | 117      | 24D862..... | 47       | 24E086..... | 50       | 24J333..... | 61       |
| 24A456..... | 117      | 24D863..... | 47       | 24E087..... | 50       | 24J334..... | 61       |
| 24A457..... | 117      | 24D864..... | 47       | 24E088..... | 50       | 24J335..... | 61       |
| 24A458..... | 117      | 24D865..... | 47       | 24E089..... | 50       | 24J336..... | 61       |
| 24A459..... | 117      | 24D866..... | 47       | 24E090..... | 50       | 24J391..... | 116      |
| 24A460..... | 117      | 24D867..... | 47       | 24E091..... | 50       | 24J392..... | 116      |
| 24A461..... | 117      | 24D868..... | 47       | 24E092..... | 50       | 24J393..... | 116      |
| 24A462..... | 117      | 24D869..... | 47       | 24E093..... | 50       | 24J394..... | 116      |
| 24A463..... | 117      | 24D870..... | 47       | 24E094..... | 50       | 24J395..... | 116      |
| 24A464..... | 117      | 24D871..... | 47       | 24E095..... | 50       | 24J396..... | 116      |
| 24A465..... | 117      | 24D872..... | 47       | 24E096..... | 50       | 24J397..... | 116      |
| 24A466..... | 117      | 24D873..... | 47       | 24E097..... | 50       | 24J398..... | 116      |
| 24A467..... | 117      | 24D874..... | 47       | 24E098..... | 50       | 24J399..... | 116      |
| 24A468..... | 117      | 24D875..... | 47       | 24E099..... | 50       | 24J949..... | 47       |
| 24A469..... | 117      | 24D876..... | 47       | 24E100..... | 50       | 24J950..... | 47       |
| 24A470..... | 117      | 24D877..... | 47       | 24E101..... | 50       | 24J951..... | 47       |
| 24A471..... | 117      | 24D878..... | 47       | 24E102..... | 50       | 24J952..... | 47       |

# Index

| Part No. | Page No. | Part No. | Page No. | Part No. | Page No. | Part No. | Page No. |
|----------|----------|----------|----------|----------|----------|----------|----------|
| 24J953   | 47       | 94G012   | 8        | 96G018   | 13       | 96G118   | 13       |
| 24J954   | 47       | 94G013   | 9        | 96G019   | 13       | 96G119   | 14       |
| 24J955   | 47       | 94G014   | 9        | 96G020   | 13       | 96G120   | 14       |
| 24J956   | 47       | 94G015   | 8        | 96G021   | 13       | 96G121   | 14       |
| 24J957   | 47       | 94G016   | 9        | 96G023   | 13       | 96G122   | 14       |
| 24J958   | 47       | 94G017   | 9        | 96G024   | 13       | 96G123   | 14       |
| 24J959   | 47       | 94G018   | 7        | 96G025   | 13       | 96G124   | 14       |
| 24J960   | 47       | 94G019   | 7        | 96G026   | 13       | 96G125   | 14       |
| 24J961   | 47       | 94G020   | 7        | 96G027   | 12       | 96G126   | 14       |
| 24J962   | 47       | 94G021   | 7        | 96G028   | 12       | 96G127   | 14       |
| 24J963   | 47       | 94G022   | 7        | 96G029   | 12       | 96G132   | 14       |
| 24J964   | 47       | 94G023   | 7        | 96G030   | 13       | 96G133   | 14       |
| 24J965   | 47       | 94G024   | 8        | 96G031   | 13       | 96G135   | 12       |
| 24J966   | 47       | 94G025   | 9        | 96G032   | 13       | 96G136   | 12       |
| 24J967   | 47       | 94G026   | 9        | 96G033   | 12       | 96G137   | 12       |
| 24J968   | 47       | 94G027   | 8        | 96G034   | 12       | 96G138   | 12       |
| 24J969   | 47       | 94G028   | 9        | 96G035   | 13       | 96G139   | 12       |
| 24J970   | 47       | 94G029   | 9        | 96G036   | 13       | 96G140   | 12       |
| 24J971   | 47       | 94G030   | 9        | 96G037   | 13       | 96G141   | 13       |
| 24J972   | 47       | 94G031   | 9        | 96G038   | 11       | 96G142   | 14       |
| 24J973   | 47       | 94G032   | 9        | 96G039   | 11       | 96G143   | 13       |
| 24J974   | 47       | 94G033   | 9        | 96G040   | 11       | 96G144   | 14       |
| 24J975   | 47       | 94G034   | 9        | 96G041   | 11       | 96G145   | 13       |
| 24J976   | 47       | 94G035   | 9        | 96G042   | 11       | 96G146   | 14       |
| 24J977   | 47       | 94G036   | 7        | 96G043   | 11       | 96G147   | 12       |
| 24J978   | 47       | 94G037   | 7        | 96G044   | 11       | 96G148   | 12       |
| 24J979   | 47       | 94G038   | 7        | 96G045   | 11       | 96G149   | 12       |
| 24J980   | 47       | 94G039   | 7        | 96G048   | 11       | 96G150   | 12       |
| 24J981   | 47       | 94G040   | 7        | 96G049   | 11       | 96G151   | 13       |
| 24J982   | 47       | 94G041   | 7        | 96G050   | 11       | 96G152   | 14       |
| 24J983   | 47       | 94G042   | 8        | 96G051   | 11       | 96G153   | 14       |
| 24J984   | 47       | 94G043   | 8        | 96G052   | 11       | 96G154   | 14       |
| 24J985   | 47       | 94G044   | 8        | 96G053   | 11       | 96G155   | 13       |
| 24J986   | 47       | 94G045   | 8        | 96G055   | 11       | 96G156   | 14       |
| 24J987   | 47       | 94G046   | 8        | 96G056   | 11       | 96G157   | 14       |
| 24J988   | 47       | 94G047   | 8        | 96G057   | 11       | 96G158   | 14       |
| 24K414   | 15, 87   | 94G048   | 8        | 96G058   | 11       | 96G159   | 13       |
| 24K415   | 15, 86   | 94G049   | 9        | 96G059   | 11       | 96G160   | 13       |
| 24K466   | 116      | 94G050   | 9        | 96G060   | 11       | 96G161   | 14       |
| 24K466   | 116      | 94G051   | 8        | 96G061   | 11       | 96G162   | 14       |
| 24M466   | 15       | 94G052   | 9        | 96G062   | 11       | 96G163   | 12       |
| 24M480   | 16       | 94G053   | 9        | 96G068   | 12       | 96G164   | 14       |
| 24M684   | 47       | 94G054   | 8        | 96G069   | 12       | 96G165   | 14       |
| 24M685   | 47       | 94G055   | 9        | 96G070   | 13       | 96G166   | 14       |
| 24M686   | 47       | 94G056   | 9        | 96G071   | 13       | 96G167   | 12       |
| 24M687   | 47       | 94G057   | 9        | 96G072   | 13       | 96G168   | 14       |
| 24M688   | 47       | 94G058   | 9        | 96G073   | 12       | 96G169   | 14       |
| 24M689   | 47       | 94G059   | 9        | 96G075   | 12       | 96G174   | 14       |
| 24M690   | 47       | 94G060   | 9        | 96G076   | 12       | 96G175   | 14       |
| 24M691   | 47       | 94G061   | 9        | 96G077   | 12       | 96G176   | 14       |
| 24N007   | 61       | 94G062   | 9        | 96G078   | 12       | 96G182   | 11       |
| 24N008   | 61       | 94G063   | 7        | 96G079   | 13       | 96G183   | 13       |
| 24N009   | 61       | 94G064   | 7        | 96G080   | 13       | 96G184   | 11       |
| 24N181   | 87       | 94G065   | 7        | 96G081   | 13       | 114901   | 59, 104  |
| 24N351   | 16       | 94G066   | 7        | 96G082   | 12       | 114902   | 59, 104  |
| 24N402   | 16       | 94G067   | 7        | 96G088   | 13       | 114903   | 59, 104  |
| 24N405   | 24       | 94G068   | 7        | 96G089   | 14       | 114904   | 59, 104  |
| 24N406   | 24       | 94G069   | 7        | 96G090   | 13       | 114905   | 59, 104  |
| 24N407   | 24       | 94G070   | 7        | 96G092   | 13       | 114909   | 59, 104  |
| 24N408   | 24       | 94G071   | 7        | 96G093   | 14       | 114911   | 59       |
| 24N409   | 24       | 94G072   | 8        | 96G094   | 13       | 114912   | 59       |
| 24N468   | 92       | 94G073   | 8        | 96G096   | 13       | 114913   | 59       |
| 24P295   | 15       | 94G074   | 8        | 96G097   | 14       | 114914   | 59       |
| 24P296   | 15       | 94G075   | 8        | 96G098   | 14       | 114915   | 59       |
| 24P314   | 92       | 94G076   | 8        | 96G099   | 14       | 114916   | 60       |
| 24P686   | 92       | 94G077   | 8        | 96G100   | 14       | 115119   | 59       |
| 24P687   | 92       | 96G000   | 11       | 96G103   | 13       | 115120   | 59       |
| 94G000   | 8        | 96G001   | 11       | 96G104   | 14       | 115124   | 87, 104  |
| 94G001   | 9        | 96G002   | 11       | 96G105   | 14       | 121474   | 15       |
| 94G002   | 9        | 96G003   | 11       | 96G106   | 14       | 121654   | 53       |
| 94G003   | 8        | 96G005   | 11       | 96G107   | 14       | 121655   | 53       |
| 94G004   | 9        | 96G006   | 11       | 96G108   | 14       | 121656   | 53       |
| 94G005   | 9        | 96G007   | 11       | 96G109   | 14       | 121657   | 53       |
| 94G006   | 7        | 96G008   | 11       | 96G110   | 14       | 121658   | 54       |
| 94G007   | 7        | 96G011   | 12       | 96G111   | 14       | 121659   | 54       |
| 94G008   | 7        | 96G012   | 12       | 96G112   | 14       | 121660   | 54       |
| 94G009   | 7        | 96G013   | 12       | 96G113   | 13       | 121661   | 54       |
| 94G010   | 7        | 96G014   | 12       | 96G115   | 14       | 121662   | 54       |
| 94G011   | 7        | 96G017   | 13       | 96G116   | 14       | 121663   | 54       |

# Index

| Part No.    | Page No. | Part No.    | Page No. | Part No.    | Page No.   | Part No.    | Page No.               |
|-------------|----------|-------------|----------|-------------|------------|-------------|------------------------|
| 121664..... | 54       | 122806..... | 53       | 124279..... | 51         | 556540..... | 62, 65, 70             |
| 121665..... | 54       | 122807..... | 53       | 124300..... | 15         | 556572..... | 74                     |
| 121666..... | 54       | 122808..... | 53       | 124301..... | 15         | 556586..... | 56                     |
| 121667..... | 54       | 122809..... | 53       | 124304..... | 51         | 556587..... | 56                     |
| 121668..... | 54       | 122810..... | 53       | 124333..... | 15, 86     | 556624..... | 124                    |
| 121669..... | 54       | 122811..... | 53       | 124594..... | 15         | 556632..... | 90                     |
| 121670..... | 54       | 122812..... | 53       | 124595..... | 15         | 556633..... | 90                     |
| 121671..... | 54       | 122813..... | 54       | 124640..... | 15         | 556634..... | 90                     |
| 121672..... | 54       | 122814..... | 54       | 125011..... | 61         | 556635..... | 90                     |
| 122276..... | 70       | 122815..... | 54       | 126217..... | 8, 9       | 556636..... | 57, 90                 |
| 122545..... | 26       | 122816..... | 54       | 126219..... | 9          | 556637..... | 57, 90                 |
| 122546..... | 26       | 122817..... | 54       | 126220..... | 9          | 556638..... | 57, 90                 |
| 122547..... | 26       | 122818..... | 54       | 126331..... | 15         | 556639..... | 57, 90                 |
| 122548..... | 26       | 122819..... | 54       | 200389..... | 38         | 556640..... | 57, 90                 |
| 122549..... | 26       | 122820..... | 54       | 224751..... | 104        | 556642..... | 57, 90                 |
| 122550..... | 26       | 122821..... | 54       | 239887..... | 104        | 556643..... | 57, 90                 |
| 122551..... | 26       | 122822..... | 54       | 241485..... | 104        | 556644..... | 57, 90                 |
| 122552..... | 26       | 122823..... | 54       | 241486..... | 104        | 556645..... | 57, 90                 |
| 122553..... | 26       | 122824..... | 54       | 241572..... | 104        | 556646..... | 57, 90                 |
| 122554..... | 26       | 122825..... | 54       | 241573..... | 104        | 556647..... | 57, 90                 |
| 122555..... | 26       | 122826..... | 54       | 243159..... | 104        | 556648..... | 57, 90                 |
| 122556..... | 26       | 122827..... | 54       | 243170..... | 104        | 556649..... | 90                     |
| 122557..... | 26       | 122841..... | 55       | 243191..... | 104        | 556650..... | 90                     |
| 122558..... | 26       | 122861..... | 55       | 243501..... | 104        | 556651..... | 57                     |
| 122559..... | 26       | 122862..... | 55       | 244023..... | 104        | 556652..... | 90                     |
| 122560..... | 26       | 122863..... | 55       | 247443..... | 103, 104   | 556653..... | 90                     |
| 122561..... | 26       | 122864..... | 55       | 247444..... | 104        | 556654..... | 57                     |
| 122562..... | 26       | 122865..... | 55       | 247450..... | 103, 104   | 556656..... | 90                     |
| 122563..... | 26       | 122866..... | 55       | 247456..... | 104        | 556660..... | 57, 90                 |
| 122564..... | 26       | 122868..... | 55       | 247457..... | 104        | 556661..... | 90                     |
| 122565..... | 26       | 122869..... | 55       | 247538..... | 104        | 556662..... | 90                     |
| 122566..... | 26       | 122885..... | 55       | 247540..... | 103, 104   | 556666..... | 57, 90                 |
| 122567..... | 26       | 122886..... | 55       | 247574..... | 104        | 556670..... | 90                     |
| 122568..... | 26       | 122887..... | 55       | 247575..... | 104        | 556677..... | 52                     |
| 122569..... | 26       | 122888..... | 55       | 247700..... | 104        | 556700..... | 119                    |
| 122570..... | 26       | 122889..... | 55       | 247703..... | 104        | 556762..... | 90                     |
| 122571..... | 26       | 122890..... | 55       | 247704..... | 104        | 556763..... | 90                     |
| 122572..... | 26       | 122891..... | 55       | 247705..... | 104        | 556764..... | 90                     |
| 122573..... | 26       | 122895..... | 26, 27   | 247706..... | 104        | 556773..... | 90                     |
| 122574..... | 26       | 122896..... | 27       | 247707..... | 104        | 556812..... | 124                    |
| 122575..... | 26       | 122897..... | 27       | 247886..... | 15, 102    | 556939..... | 124                    |
| 122576..... | 26       | 122898..... | 27       | 247902..... | 104        | 556944..... | 124                    |
| 122577..... | 26       | 122899..... | 27       | 247970..... | 104        | 557132..... | 89                     |
| 122578..... | 26       | 122989..... | 55       | 256778..... | 17         | 557134..... | 79                     |
| 122579..... | 26       | 122990..... | 55       | 256907..... | 117, 118   | 557153..... | 89                     |
| 122580..... | 26       | 123358..... | 8, 9, 16 | 256908..... | 117, 118   | 557154..... | 89                     |
| 122581..... | 27       | 123750..... | 9        | 256929..... | 117, 118   | 557213..... | 65                     |
| 122582..... | 27       | 123949..... | 51       | 258248..... | 97         | 557214..... | 65                     |
| 122583..... | 27       | 123950..... | 51       | 258262..... | 120        | 557215..... | 65                     |
| 122584..... | 27       | 123951..... | 51       | 258263..... | 120        | 557225..... | 65, 66                 |
| 122585..... | 27       | 124086..... | 51       | 258301..... | 79         | 557226..... | 65, 66                 |
| 122586..... | 27       | 124087..... | 51       | 258347..... | 79         | 557270..... | 18, 19, 20, 21, 30, 43 |
| 122587..... | 27       | 124088..... | 51       | 312349..... | 104        | 557271..... | 18, 19, 20, 21, 30, 43 |
| 122588..... | 27       | 124089..... | 51       | 313855..... | 93         | 557272..... | 18, 19, 20, 21, 43     |
| 122589..... | 27       | 124090..... | 51       | 553322..... | 19         | 557273..... | 19, 20, 21, 43         |
| 122590..... | 27       | 124091..... | 51       | 555406..... | 74         | 557278..... | 91                     |
| 122591..... | 27       | 124092..... | 51       | 555726..... | 90         | 557285..... | 17                     |
| 122592..... | 27       | 124094..... | 51       | 555727..... | 90         | 557286..... | 22                     |
| 122593..... | 27       | 124095..... | 51       | 555749..... | 90         | 557287..... | 17                     |
| 122594..... | 27       | 124096..... | 51       | 555808..... | 56         | 557293..... | 22                     |
| 122595..... | 27       | 124097..... | 51       | 556011..... | 25         | 557323..... | 72                     |
| 122596..... | 27       | 124098..... | 51       | 556012..... | 25         | 557349..... | 65, 66, 70             |
| 122597..... | 27       | 124099..... | 51       | 556013..... | 25         | 557352..... | 30, 91                 |
| 122598..... | 27       | 124100..... | 51       | 556014..... | 25         | 557359..... | 63                     |
| 122789..... | 55       | 124101..... | 51       | 556015..... | 25         | 557374..... | 57                     |
| 122790..... | 55       | 124102..... | 51       | 556016..... | 25         | 557376..... | 30                     |
| 122791..... | 55       | 124105..... | 51       | 556018..... | 25, 36     | 557391..... | 72                     |
| 122792..... | 55       | 124106..... | 51       | 556019..... | 25, 36     | 557392..... | 90                     |
| 122793..... | 55       | 124107..... | 51       | 556023..... | 95         | 557393..... | 90                     |
| 122794..... | 55       | 124108..... | 51       | 556024..... | 95         | 557395..... | 57, 90                 |
| 122795..... | 55       | 124109..... | 51       | 556025..... | 95         | 557422..... | 83                     |
| 122796..... | 55       | 124110..... | 51       | 556026..... | 116        | 557423..... | 83                     |
| 122797..... | 55       | 124111..... | 51       | 556371..... | 63, 65, 70 | 557488..... | 72                     |
| 122798..... | 55       | 124112..... | 51       | 556402..... | 90         | 557489..... | 72                     |
| 122799..... | 55       | 124113..... | 51       | 556403..... | 90         | 557490..... | 72                     |
| 122800..... | 55       | 124114..... | 51       | 556407..... | 90         | 557491..... | 72                     |
| 122801..... | 55       | 124115..... | 51       | 556420..... | 90         | 557492..... | 72                     |
| 122804..... | 53       | 124116..... | 51       | 556424..... | 76         | 557493..... | 72                     |
| 122805..... | 53       | 124119..... | 51       | 556448..... | 90         | 557494..... | 72, 76                 |

# Index

| Part No.    | Page No.   | Part No.    | Page No.   | Part No.    | Page No. | Part No.    | Page No. |
|-------------|------------|-------------|------------|-------------|----------|-------------|----------|
| 557503..... | 63         | 557963..... | 57         | 560593..... | 76       | 562543..... | 71       |
| 557509..... | 72         | 557968..... | 90         | 560594..... | 76       | 562545..... | 71       |
| 557514..... | 63         | 557997..... | 24         | 560595..... | 76       | 562546..... | 71       |
| 557515..... | 63         | 557998..... | 24         | 560596..... | 76       | 562547..... | 118      |
| 557516..... | 63         | 558018..... | 86         | 560597..... | 76       | 562548..... | 118      |
| 557517..... | 63         | 558021..... | 65, 66, 86 | 560598..... | 76       | 562549..... | 118      |
| 557518..... | 63         | 558022..... | 65, 66, 86 | 560600..... | 76       | 562550..... | 118      |
| 557519..... | 63         | 558023..... | 86         | 560601..... | 76       | 562551..... | 118      |
| 557520..... | 63         | 558024..... | 86         | 560602..... | 76       | 562552..... | 118      |
| 557546..... | 85         | 558025..... | 86         | 560603..... | 76       | 562553..... | 118      |
| 557547..... | 27         | 558026..... | 86         | 560604..... | 76       | 562554..... | 118      |
| 557559..... | 91         | 558031..... | 28, 29, 94 | 560605..... | 76       | 562555..... | 118      |
| 557641..... | 28, 29     | 558045..... | 123        | 560606..... | 76       | 562561..... | 118      |
| 557700..... | 89         | 558046..... | 123        | 560620..... | 72       | 562562..... | 118      |
| 557701..... | 89         | 558156..... | 52         | 560643..... | 63       | 562563..... | 118      |
| 557713..... | 20, 91     | 558157..... | 52         | 560645..... | 63       | 562564..... | 118      |
| 557722..... | 65         | 558158..... | 52         | 560649..... | 63       | 562565..... | 118      |
| 557731..... | 65, 70     | 558159..... | 52         | 560919..... | 65, 70   | 562566..... | 118      |
| 557732..... | 65, 70     | 558189..... | 52         | 560920..... | 66, 70   | 562567..... | 118      |
| 557733..... | 65, 70     | 558220..... | 52         | 560936..... | 65, 70   | 562569..... | 72       |
| 557734..... | 65, 70     | 558296..... | 28, 52     | 560943..... | 65, 70   | 562570..... | 75       |
| 557735..... | 65, 70     | 558297..... | 91         | 560953..... | 65       | 562571..... | 75       |
| 557736..... | 65, 70     | 558298..... | 91         | 560976..... | 65, 70   | 562572..... | 75       |
| 557741..... | 86         | 558306..... | 53         | 561029..... | 74       | 562573..... | 75       |
| 557745..... | 86         | 558307..... | 53         | 561031..... | 79       | 562574..... | 75       |
| 557746..... | 86         | 558308..... | 53         | 561032..... | 79       | 562575..... | 75       |
| 557747..... | 86         | 558309..... | 53         | 561101..... | 63       | 562576..... | 75       |
| 557752..... | 86         | 558310..... | 53         | 561102..... | 72, 74   | 562577..... | 75       |
| 557766..... | 74         | 558311..... | 55         | 561113..... | 57       | 562578..... | 76       |
| 557767..... | 74         | 558312..... | 55         | 561114..... | 57       | 562579..... | 76       |
| 557768..... | 74         | 558313..... | 55         | 561131..... | 57       | 562580..... | 76       |
| 557769..... | 74         | 558314..... | 55         | 561132..... | 57       | 562581..... | 76       |
| 557770..... | 74         | 558315..... | 55         | 561143..... | 52       | 562582..... | 76       |
| 557771..... | 74         | 558316..... | 55         | 561215..... | 52       | 562583..... | 76       |
| 557772..... | 74         | 558317..... | 55         | 561216..... | 52       | 562584..... | 76       |
| 557773..... | 74         | 558318..... | 55         | 561217..... | 52       | 562585..... | 76       |
| 557774..... | 74         | 558319..... | 55         | 561218..... | 52       | 562627..... | 117      |
| 557776..... | 65, 70, 74 | 558320..... | 55         | 561219..... | 52       | 562629..... | 117      |
| 557779..... | 89         | 558321..... | 55         | 561220..... | 52       | 562653..... | 62       |
| 557781..... | 32, 34, 85 | 558322..... | 55         | 562500..... | 63       | 562654..... | 62       |
| 557803..... | 89         | 558323..... | 55         | 562501..... | 63       | 562655..... | 62       |
| 557804..... | 89         | 558324..... | 55         | 562502..... | 63       | 562656..... | 62       |
| 557806..... | 89         | 558325..... | 55         | 562503..... | 63       | 562657..... | 62       |
| 557807..... | 89         | 558326..... | 55         | 562504..... | 63       | 562658..... | 62       |
| 557810..... | 22         | 558327..... | 55         | 562505..... | 63       | 562659..... | 62       |
| 557811..... | 89         | 558328..... | 55         | 562508..... | 63       | 562660..... | 64       |
| 557813..... | 24         | 558329..... | 55         | 562509..... | 63       | 562679..... | 69       |
| 557814..... | 24         | 558330..... | 55         | 562510..... | 63       | 562680..... | 69       |
| 557815..... | 24         | 558331..... | 55         | 562511..... | 63       | 562681..... | 69       |
| 557816..... | 24         | 558332..... | 55         | 562512..... | 63       | 562682..... | 69       |
| 557817..... | 24         | 558799..... | 65, 70     | 562513..... | 63       | 562683..... | 69       |
| 557818..... | 24         | 558881..... | 120        | 562514..... | 71       | 562684..... | 69       |
| 557819..... | 24         | 558886..... | 66         | 562515..... | 71       | 562685..... | 69       |
| 557820..... | 24         | 558893..... | 66         | 562516..... | 71       | 562686..... | 69       |
| 557821..... | 22         | 558895..... | 24         | 562517..... | 71       | 562687..... | 69       |
| 557822..... | 22         | 558899..... | 29         | 562518..... | 72       | 562688..... | 69       |
| 557824..... | 121        | 558906..... | 57         | 562519..... | 72       | 562689..... | 69       |
| 557825..... | 22, 32     | 558933..... | 86         | 562520..... | 72       | 562690..... | 69       |
| 557826..... | 28, 29, 34 | 558938..... | 86         | 562521..... | 72       | 562711..... | 64       |
| 557827..... | 121        | 558947..... | 87         | 562522..... | 72       | 562712..... | 64       |
| 557828..... | 87         | 558948..... | 91         | 562523..... | 72       | 562713..... | 64       |
| 557829..... | 15, 32, 87 | 558949..... | 24         | 562524..... | 72       | 562714..... | 64       |
| 557830..... | 87         | 558950..... | 24         | 562525..... | 72       | 562715..... | 64       |
| 557864..... | 39, 40, 91 | 558951..... | 24         | 562526..... | 72       | 562716..... | 64       |
| 557866..... | 91         | 558953..... | 24         | 562527..... | 72       | 562717..... | 64       |
| 557877..... | 57         | 558954..... | 24         | 562528..... | 72       | 562718..... | 64       |
| 557880..... | 57         | 558955..... | 24         | 562529..... | 72       | 562720..... | 64       |
| 557898..... | 56         | 558959..... | 38         | 562530..... | 72       | 562721..... | 64       |
| 557901..... | 56         | 560477..... | 79         | 562531..... | 72       | 562722..... | 64       |
| 557925..... | 37, 94     | 560478..... | 79         | 562532..... | 72       | 562723..... | 64       |
| 557941..... | 102        | 560528..... | 90         | 562533..... | 72       | 562724..... | 64       |
| 557943..... | 57         | 560530..... | 90         | 562534..... | 72       | 562725..... | 64       |
| 557944..... | 57         | 560532..... | 90         | 562535..... | 72       | 562726..... | 64       |
| 557945..... | 57         | 560533..... | 90         | 562536..... | 72       | 562727..... | 64       |
| 557946..... | 57         | 560534..... | 90         | 562538..... | 71       | 562729..... | 64       |
| 557947..... | 57         | 560576..... | 72         | 562539..... | 71       | 562730..... | 64       |
| 557950..... | 90         | 560577..... | 72         | 562540..... | 71       | 562731..... | 64       |
| 557954..... | 90         | 560591..... | 76         | 562541..... | 71       | 562732..... | 64       |
| 557955..... | 90         | 560592..... | 76         | 562542..... | 71       | 562733..... | 64       |

# Index

| Part No.    | Page No.           | Part No.    | Page No.               | Part No.    | Page No.       | Part No.    | Page No.                           |
|-------------|--------------------|-------------|------------------------|-------------|----------------|-------------|------------------------------------|
| 562734..... | 65                 | 562896..... | 18, 19, 21, 37, 42, 43 | 563129..... | 79             | 563237..... | 81                                 |
| 562735..... | 65                 | 562897..... | 19, 20, 21, 37, 42, 43 | 563130..... | 79             | 563239..... | 81                                 |
| 562736..... | 65                 | 562898..... | 19, 20, 21, 42, 43     | 563131..... | 79             | 563240..... | 81                                 |
| 562737..... | 65                 | 562899..... | 19, 20, 21, 42, 43     | 563132..... | 79             | 563241..... | 81                                 |
| 562738..... | 65                 | 562904..... | 31, 33, 34, 40         | 563137..... | 17             | 563242..... | 81                                 |
| 562739..... | 64                 | 562905..... | 32, 34, 40             | 563145..... | 89             | 563243..... | 81                                 |
| 562740..... | 64                 | 562906..... | 32, 34                 | 563146..... | 90             | 563244..... | 81                                 |
| 562741..... | 64                 | 562907..... | 37                     | 563147..... | 90             | 563245..... | 81                                 |
| 562742..... | 64                 | 562908..... | 19, 20, 21, 43         | 563148..... | 90             | 563250..... | 85                                 |
| 562743..... | 64                 | 562910..... | 32, 33, 34             | 563150..... | 90             | 563251..... | 65, 70, 85                         |
| 562744..... | 65                 | 562911..... | 32                     | 563154..... | 90             | 563252..... | 81                                 |
| 562745..... | 65                 | 562914..... | 63                     | 563156..... | 15, 82         | 563253..... | 81                                 |
| 562746..... | 65                 | 562915..... | 63                     | 563157..... | 15, 82         | 563254..... | 81                                 |
| 562747..... | 65                 | 562916..... | 72                     | 563158..... | 15, 82         | 563255..... | 81                                 |
| 562748..... | 65                 | 562917..... | 72                     | 563159..... | 15, 82         | 563256..... | 81                                 |
| 562813..... | 73                 | 562918..... | 119                    | 563160..... | 15, 39, 82     | 563257..... | 81                                 |
| 562814..... | 73                 | 562919..... | 119                    | 563161..... | 15, 82         | 563258..... | 81                                 |
| 562815..... | 73                 | 562925..... | 120                    | 563162..... | 28, 52, 82     | 563260..... | 85                                 |
| 562816..... | 73                 | 562926..... | 120                    | 563164..... | 82             | 563269..... | 85                                 |
| 562817..... | 73                 | 562927..... | 120                    | 563165..... | 82             | 563270..... | 62, 85                             |
| 562818..... | 73                 | 562928..... | 120                    | 563166..... | 82             | 563271..... | 62, 85                             |
| 562819..... | 73                 | 562929..... | 120                    | 563167..... | 82             | 563272..... | 63, 85                             |
| 562820..... | 73                 | 562949..... | 105                    | 563168..... | 82             | 563273..... | 63, 85                             |
| 562821..... | 73                 | 562950..... | 105                    | 563169..... | 82             | 563275..... | 80                                 |
| 562822..... | 73                 | 562951..... | 119                    | 563170..... | 82             | 563276..... | 80                                 |
| 562823..... | 73                 | 562952..... | 120                    | 563171..... | 82             | 563277..... | 76                                 |
| 562824..... | 73                 | 562988..... | 105                    | 563172..... | 82             | 563278..... | 76                                 |
| 562825..... | 74                 | 562994..... | 79                     | 563173..... | 82             | 563279..... | 65, 66                             |
| 562826..... | 74                 | 562995..... | 90                     | 563174..... | 82             | 563280..... | 65                                 |
| 562827..... | 74                 | 563014..... | 23, 32, 37             | 563175..... | 82             | 563287..... | 72                                 |
| 562828..... | 74                 | 563015..... | 20, 21, 32, 34, 37, 43 | 563176..... | 82             | 563301..... | 27                                 |
| 562829..... | 74                 | 563016..... | 20, 21, 32, 34, 37, 43 | 563178..... | 90             | 563304..... | 31                                 |
| 562830..... | 74                 | 563020..... | 120                    | 563179..... | 20, 21, 43, 84 | 563305..... | 45                                 |
| 562831..... | 74                 | 563024..... | 120                    | 563182..... | 84             | 563306..... | 31                                 |
| 562832..... | 74                 | 563030..... | 124                    | 563183..... | 84             | 563307..... | 45                                 |
| 562833..... | 74                 | 563031..... | 124                    | 563184..... | 20, 21, 43, 84 | 563308..... | 31                                 |
| 562834..... | 74                 | 563032..... | 124                    | 563185..... | 84             | 563315..... | 32, 34, 37                         |
| 562835..... | 73                 | 563033..... | 124                    | 563186..... | 84             | 563316..... | 20, 21, 32, 34, 37, 43             |
| 562837..... | 16, 25             | 563041..... | 124                    | 563187..... | 84             | 563317..... | 18, 20, 21, 32, 34, 37, 43         |
| 562838..... | 25                 | 563042..... | 124                    | 563188..... | 84             | 563318..... | 32, 37                             |
| 562839..... | 25                 | 563043..... | 124                    | 563191..... | 84             | 563319..... | 31, 33                             |
| 562840..... | 25                 | 563044..... | 124                    | 563192..... | 84             | 563320..... | 31, 33                             |
| 562841..... | 25                 | 563046..... | 91                     | 563193..... | 84             | 563321..... | 31, 33                             |
| 562842..... | 25                 | 563047..... | 91                     | 563194..... | 84             | 563322..... | 18, 19, 20, 21, 32, 34, 37, 42, 43 |
| 562843..... | 25                 | 563048..... | 79, 91                 | 563195..... | 91             | 563323..... | 17, 31                             |
| 562844..... | 25                 | 563049..... | 79, 91                 | 563196..... | 91             | 563324..... | 17, 31                             |
| 562845..... | 36                 | 563051..... | 91                     | 563197..... | 91             | 563325..... | 32                                 |
| 562846..... | 36                 | 563052..... | 91                     | 563198..... | 91             | 563326..... | 32                                 |
| 562847..... | 16, 25             | 563054..... | 91                     | 563199..... | 91             | 563327..... | 32                                 |
| 562849..... | 25                 | 563055..... | 91                     | 563200..... | 91             | 563329..... | 31                                 |
| 562850..... | 16, 25             | 563058..... | 91                     | 563201..... | 91             | 563330..... | 17, 31                             |
| 562851..... | 16, 25             | 563060..... | 91                     | 563202..... | 91             | 563331..... | 17, 31                             |
| 562852..... | 16, 25             | 563061..... | 91                     | 563203..... | 91             | 563332..... | 32, 34, 37                         |
| 562854..... | 35                 | 563068..... | 88                     | 563205..... | 91             | 563337..... | 31                                 |
| 562855..... | 35                 | 563069..... | 88                     | 563206..... | 91             | 563339..... | 32                                 |
| 562857..... | 38                 | 563070..... | 88                     | 563207..... | 91             | 563340..... | 32                                 |
| 562858..... | 44                 | 563072..... | 35                     | 563208..... | 91             | 563341..... | 32                                 |
| 562860..... | 44                 | 563073..... | 89                     | 563209..... | 91             | 563345..... | 45                                 |
| 562861..... | 44                 | 563074..... | 65, 89                 | 563210..... | 91             | 563346..... | 17                                 |
| 562863..... | 30                 | 563075..... | 88                     | 563211..... | 91             | 563355..... | 17, 31                             |
| 562870..... | 123                | 563076..... | 88                     | 563212..... | 90             | 563356..... | 17                                 |
| 562871..... | 123                | 563077..... | 88                     | 563213..... | 90             | 563358..... | 33, 34                             |
| 562872..... | 37, 94             | 563078..... | 88                     | 563214..... | 90             | 563359..... | 33, 34                             |
| 562880..... | 89                 | 563079..... | 88                     | 563215..... | 90             | 563361..... | 33, 34                             |
| 562881..... | 89                 | 563080..... | 88                     | 563221..... | 83             | 563362..... | 33, 34                             |
| 562882..... | 89                 | 563091..... | 79, 89                 | 563222..... | 83             | 563363..... | 33, 34                             |
| 562883..... | 89                 | 563092..... | 89                     | 563223..... | 83             | 563364..... | 33, 34                             |
| 562884..... | 32, 34, 40         | 563093..... | 89                     | 563224..... | 83             | 563365..... | 33, 34                             |
| 562885..... | 32, 34, 40         | 563094..... | 89                     | 563225..... | 83             | 563367..... | 33, 34                             |
| 562886..... | 32, 34             | 563095..... | 89                     | 563226..... | 83             | 563374..... | 29                                 |
| 562887..... | 32, 34             | 563096..... | 89                     | 563228..... | 83             | 563375..... | 29, 91                             |
| 562888..... | 32, 33, 34         | 563097..... | 89                     | 563229..... | 83             | 563376..... | 29                                 |
| 562889..... | 31, 33, 34, 40     | 563100..... | 89                     | 563230..... | 126            | 563378..... | 34                                 |
| 562890..... | 31, 33, 34, 40     | 563102..... | 89                     | 563231..... | 81             | 563379..... | 29                                 |
| 562891..... | 31, 33, 34         | 563103..... | 89                     | 563232..... | 81             | 563380..... | 20, 43                             |
| 562892..... | 18, 19, 21, 37, 43 | 563111..... | 120                    | 563233..... | 81             | 563383..... | 19, 20, 21, 42, 43                 |
| 562893..... | 18, 19, 21, 37, 43 | 563113..... | 119                    | 563234..... | 81             | 563384..... | 20, 21, 43                         |
| 562894..... | 19, 21, 43         | 563127..... | 79                     | 563235..... | 81             | 563385..... | 20, 21, 43                         |
| 562895..... | 18, 19, 21, 42, 43 | 563128..... | 79                     | 563236..... | 81             | 563386..... | 19, 20, 21, 43                     |

# Index

| Part No. | Page No.           | Part No. | Page No. | Part No. | Page No. | Part No. | Page No.   |
|----------|--------------------|----------|----------|----------|----------|----------|------------|
| 563387   | 19, 20, 21, 43     | 563555   | 62       | 563852   | 100      | 564007   | 89         |
| 563388   | 18, 19, 20, 21, 43 | 563557   | 24       | 563853   | 101      | 564008   | 89         |
| 563389   | 18, 19, 20, 21, 43 | 563558   | 22       | 563854   | 96       | 564009   | 89         |
| 563393   | 39                 | 563565   | 121      | 563855   | 101      | 564010   | 89         |
| 563402   | 30                 | 563566   | 121      | 563858   | 97       | 564012   | 41         |
| 563404   | 30                 | 563570   | 96       | 563859   | 97       | 564019   | 52         |
| 563406   | 30                 | 563571   | 37       | 563860   | 97       | 564020   | 52         |
| 563421   | 65, 70             | 563572   | 37       | 563863   | 101      | 564021   | 52         |
| 563422   | 65, 70             | 563573   | 37       | 563864   | 101      | 564022   | 52         |
| 563424   | 65, 70             | 563574   | 37       | 563865   | 100      | 564023   | 52         |
| 563425   | 65, 70             | 563575   | 37       | 563866   | 100      | 564024   | 52         |
| 563427   | 86                 | 563576   | 37       | 563874   | 96       | 564025   | 52         |
| 563435   | 66, 70             | 563577   | 37       | 563877   | 101      | 564026   | 52         |
| 563436   | 66, 70             | 563578   | 37       | 563878   | 100      | 564027   | 52         |
| 563437   | 66, 70             | 563579   | 37       | 563880   | 100      | 564028   | 52         |
| 563438   | 66, 70             | 563580   | 40       | 563881   | 100      | 564029   | 52         |
| 563439   | 66, 70             | 563589   | 96       | 563882   | 96       | 564030   | 52         |
| 563440   | 66, 70             | 563590   | 96       | 563884   | 100      | 564031   | 52         |
| 563444   | 65, 70             | 563593   | 96       | 563886   | 96       | 564032   | 52         |
| 563447   | 65                 | 563594   | 96       | 563888   | 96       | 564033   | 52         |
| 563448   | 65                 | 563625   | 96       | 563891   | 98       | 564034   | 52         |
| 563451   | 65                 | 563627   | 56       | 563893   | 101      | 564035   | 52         |
| 563452   | 65                 | 563628   | 56       | 563895   | 101      | 564036   | 52         |
| 563453   | 65                 | 563629   | 56       | 563896   | 101      | 564038   | 52         |
| 563454   | 65                 | 563630   | 56       | 563897   | 98       | 564039   | 52         |
| 563455   | 65                 | 563631   | 56       | 563898   | 19       | 564040   | 52         |
| 563456   | 65                 | 563632   | 56       | 563900   | 44       | 564041   | 52         |
| 563457   | 65                 | 563633   | 56       | 563901   | 44       | 564042   | 52         |
| 563460   | 65                 | 563634   | 56       | 563902   | 31       | 564043   | 52         |
| 563461   | 65                 | 563635   | 56       | 563903   | 31       | 564044   | 52         |
| 563463   | 65                 | 563636   | 56       | 563904   | 31       | 564045   | 52         |
| 563464   | 65                 | 563637   | 56       | 563909   | 34       | 564046   | 52         |
| 563465   | 65, 70             | 563638   | 56       | 563911   | 126      | 564047   | 52         |
| 563467   | 65                 | 563644   | 97       | 563912   | 35       | 564053   | 52, 89     |
| 563468   | 65                 | 563645   | 97       | 563913   | 35       | 564059   | 84         |
| 563469   | 65, 70             | 563646   | 97       | 563914   | 95       | 564065   | 28         |
| 563470   | 65, 70             | 563647   | 97       | 563915   | 20       | 564067   | 28         |
| 563471   | 65, 70             | 563652   | 97       | 563916   | 20       | 564068   | 28         |
| 563472   | 65, 70             | 563653   | 97       | 563917   | 72, 74   | 564138   | 26         |
| 563476   | 86                 | 563659   | 97       | 563918   | 121      | 564200   | 81         |
| 563477   | 86                 | 563706   | 97       | 563919   | 121      | 564205   | 63         |
| 563478   | 86                 | 563715   | 97       | 563920   | 121      | 564210   | 118        |
| 563479   | 65, 66             | 563716   | 97       | 563921   | 20       | 564211   | 118        |
| 563480   | 65, 66, 89         | 563717   | 97       | 563922   | 30       | 564212   | 118        |
| 563481   | 65, 66             | 563727   | 97       | 563926   | 76       | 564213   | 118        |
| 563482   | 65                 | 563728   | 97       | 563927   | 123      | 564214   | 118        |
| 563483   | 65                 | 563737   | 97       | 563928   | 65, 70   | 564219   | 118        |
| 563484   | 86                 | 563738   | 97       | 563929   | 65, 70   | 564222   | 118        |
| 563485   | 15, 86             | 563743   | 97       | 563930   | 29       | 564223   | 118        |
| 563486   | 86                 | 563744   | 97       | 563932   | 123      | 564225   | 118        |
| 563489   | 79                 | 563748   | 97       | 563933   | 65       | 564226   | 118        |
| 563493   | 65                 | 563759   | 90       | 563936   | 123      | 564227   | 118        |
| 563494   | 65                 | 563762   | 37       | 563937   | 123      | 564229   | 118        |
| 563495   | 86                 | 563769   | 56       | 563938   | 20       | 564244   | 117        |
| 563501   | 15, 86             | 563770   | 57       | 563939   | 105      | 564259   | 30         |
| 563502   | 125                | 563776   | 90       | 563940   | 79       | 564260   | 30         |
| 563503   | 125                | 563777   | 90       | 563941   | 79       | 564261   | 30         |
| 563504   | 125                | 563801   | 98       | 563942   | 79       | 564262   | 30         |
| 563505   | 125                | 563802   | 98       | 563945   | 34       | 564264   | 32, 33, 34 |
| 563506   | 125                | 563809   | 98       | 563948   | 63       | 564267   | 32         |
| 563507   | 89                 | 563810   | 101      | 563952   | 84       | 564268   | 32         |
| 563508   | 89                 | 563812   | 98       | 563954   | 84       | 564272   | 119        |
| 563509   | 89                 | 563813   | 98       | 563955   | 84       | 564276   | 120        |
| 563510   | 89                 | 563814   | 98       | 563956   | 84       | 564277   | 120        |
| 563511   | 89                 | 563823   | 98       | 563957   | 84       | 564278   | 120        |
| 563512   | 89                 | 563824   | 101      | 563959   | 84       | 564279   | 120        |
| 563513   | 89                 | 563826   | 98       | 563960   | 84       | 564280   | 120        |
| 563514   | 89                 | 563827   | 98       | 563961   | 84       | 564282   | 120        |
| 563515   | 89                 | 563829   | 100      | 563962   | 20, 84   | 564283   | 120        |
| 563516   | 89                 | 563836   | 98       | 563963   | 84       | 564317   | 105        |
| 563518   | 74                 | 563839   | 98       | 563964   | 84       | 564322   | 32         |
| 563519   | 74                 | 563840   | 100      | 563965   | 20, 84   | 564334   | 119        |
| 563520   | 74                 | 563842   | 100      | 563966   | 84       | 564336   | 120        |
| 563521   | 74                 | 563846   | 98       | 563969   | 86       | 564337   | 79         |
| 563522   | 74                 | 563847   | 96       | 563970   | 86       | 564343   | 89         |
| 563524   | 74                 | 563848   | 100      | 564003   | 89       | 564348   | 79         |
| 563525   | 74                 | 563849   | 100      | 564004   | 89       | 564350   | 90         |
| 563526   | 74                 | 563850   | 100      | 564005   | 89       | 564352   | 90         |
| 563527   | 74                 | 563851   | 100      | 564006   | 89       | 564355   | 83         |

# Index

| Part No.    | Page No. | Part No.     | Page No. | Part No.    | Page No. | Part No.    | Page No. |
|-------------|----------|--------------|----------|-------------|----------|-------------|----------|
| 564356..... | 62, 85   | LM6524.....  | 18       | MBB0AB..... | 108      | MBD5GE..... | 110      |
| 564357..... | 85       | LM6534.....  | 19       | MBB0AC..... | 108      | MBD7HN..... | 110      |
| 564365..... | 39       | LM6544.....  | 18       | MBB0AG..... | 108      | MBE0AA..... | 110      |
| 564375..... | 33       | LM7211.....  | 42       | MBB0AH..... | 108      | MBE0AC..... | 110      |
| 564376..... | 29       | LM7214.....  | 19       | MBB0AM..... | 108      | MBE0AE..... | 110      |
| 564377..... | 20       | LM7344.....  | 19       | MBB0AN..... | 108      | MBE0AG..... | 110      |
| 564378..... | 39       | LM7514.....  | 19       | MBB1CM..... | 108      | MBE0AH..... | 110      |
| 564379..... | 39       | LM7534.....  | 19       | MBB1CZ..... | 108      | MBE1FJ..... | 110      |
| 564381..... | 39       | LM7614.....  | 19       | MBB1DA..... | 108      | MBE1HN..... | 110      |
| 564383..... | 39       | LM7654.....  | 19       | MBB1DM..... | 108      | MBE1JA..... | 110      |
| 564384..... | 39       | LM8211.....  | 42       | MBB2BB..... | 108      | MBE1JE..... | 110      |
| 564385..... | 39       | LM8314.....  | 19       | MBB2CA..... | 108      | MBE1JM..... | 110      |
| 564386..... | 39       | LM8334.....  | 19       | MBB2CB..... | 108      | MBE1KM..... | 110      |
| 564387..... | 39       | LM8354.....  | 19       | MBB2CD..... | 108      | MBE1MC..... | 110      |
| 564389..... | 39       | LM8454.....  | 19       | MBB2CE..... | 109      | MBE1ME..... | 110      |
| 564390..... | 30       | LM8531.....  | 19       | MBB2CM..... | 109      | MBE1NG..... | 110      |
| 564391..... | 30       | LM8534.....  | 19       | MBB2CN..... | 109      | MBE1NR..... | 110      |
| 564392..... | 30       | LM8554.....  | 19       | MBB2DC..... | 109      | MBE2ER..... | 110      |
| 564399..... | 86       | LM9511.....  | 19       | MBB2DG..... | 109      | MBE2JM..... | 110      |
| 564400..... | 86       | LM9521.....  | 19       | MBB2DM..... | 109      | MBE2KA..... | 111      |
| 564401..... | 86       | MAAACB.....  | 107      | MBB3CA..... | 109      | MBE2KG..... | 111      |
| 564402..... | 86       | MAAADB.....  | 107      | MBC0AA..... | 109      | MBE2KL..... | 111      |
| 564403..... | 86       | MAAAEB.....  | 107      | MBC0AC..... | 109      | MBE2KN..... | 111      |
| 564406..... | 89       | MAAAEC.....  | 107      | MBC0AE..... | 109      | MBE2KZ..... | 111      |
| 564411..... | 24       | MAABBB.....  | 107      | MBC0AG..... | 109      | MBE2LA..... | 111      |
| 564412..... | 22       | MAABBC.....  | 107      | MBC0AL..... | 109      | MBE2LL..... | 111      |
| 564413..... | 22       | MAABBF.....  | 107      | MBC0AS..... | 109      | MBE2NA..... | 111      |
| 564414..... | 22       | MAABBG.....  | 107      | MBC1EB..... | 109      | MBE2NE..... | 111      |
| 564415..... | 22       | MAABDB.....  | 107      | MBC1EE..... | 109      | MBE2NM..... | 111      |
| 564419..... | 40       | MAABDC.....  | 107      | MBC1EJ..... | 109      | MBE2NT..... | 111      |
| 564420..... | 40       | MAABEB.....  | 107      | MBC1FE..... | 109      | MBE4EN..... | 111      |
| 564421..... | 40       | MAABEF.....  | 107      | MBC2BL..... | 109      | MBE5CA..... | 111      |
| 564422..... | 40       | MABAAB.....  | 107      | MBC2CM..... | 109      | MBFOAA..... | 111      |
| 564423..... | 40       | MABACH.....  | 107      | MBC2CN..... | 109      | MBFOAE..... | 111      |
| 564439..... | 28       | MABAFC.....  | 107      | MBC2DB..... | 109      | MBFOAG..... | 111      |
| 564443..... | 79       | MABAFG.....  | 107      | MBC2EA..... | 109      | MBFOAH..... | 111      |
| 564444..... | 79       | MABAHG.....  | 107      | MBC2EB..... | 109      | MBF1RA..... | 111      |
| 564445..... | 79       | MABAHG.....  | 107      | MBC2ED..... | 109      | MBF1SA..... | 111      |
| 567251..... | 65, 70   | MABAJA.....  | 107      | MBC2EF..... | 109      | MBF2JA..... | 111      |
| 567270..... | 19       | MABBAC.....  | 107      | MBC2FB..... | 109      | MBF2MD..... | 111      |
| 567272..... | 19       | MABBAG.....  | 107      | MBC2FE..... | 109      | MBF2NB..... | 111      |
| 568906..... | 39       | MABBEC.....  | 107      | MBC2FG..... | 109      | MBF2NE..... | 111      |
| 571026..... | 15       | MABBEE.....  | 107      | MBC2FL..... | 109      | MBF2PA..... | 111      |
| 571028..... | 15       | MABBFF.....  | 107      | MBC3EB..... | 109      | MBF2PE..... | 111      |
| 571030..... | 15       | MABBFG.....  | 107      | MBC5DE..... | 109      | MBF2RC..... | 111      |
| 571031..... | 15       | MABBGA.....  | 107      | MBC7CM..... | 109      | MBF2TE..... | 111      |
| 571032..... | 15       | MABBGB.....  | 107      | MBD0AA..... | 109      | MBF3CA..... | 111      |
| 571033..... | 15       | MABBGC.....  | 107      | MBD0AE..... | 109      | MBF3AN..... | 111      |
| 571036..... | 15       | MABBGF.....  | 107      | MBD0AH..... | 109      | MBF3PA..... | 111      |
| 571041..... | 15       | MABBHC.....  | 107      | MBD0AL..... | 109      | MBG0AA..... | 111      |
| 571058..... | 15       | MABHAG.....  | 107      | MBD0AM..... | 109      | MBG0AC..... | 111      |
| 571063..... | 15       | MACAEH.....  | 107      | MBD0AN..... | 109      | MBG0AE..... | 111      |
| 571064..... | 15       | MACAGH.....  | 107      | MBD1DN..... | 109      | MBG0AG..... | 111      |
| 571162..... | 15       | MACAHF.....  | 107      | MBD1EE..... | 109      | MBG0AH..... | 111      |
| 966171..... | 11       | MACAKE.....  | 107      | MBD1EM..... | 109      | MBG1VA..... | 111      |
| 966172..... | 11       | MACALC.....  | 107      | MBD1EN..... | 109      | MBG1WA..... | 111      |
| BN1KM.....  | 113      | MACANB.....  | 107      | MBD1FA..... | 110      | MBG2TE..... | 111      |
| LM2323..... | 18       | MACBIB.....  | 107      | MBD1FN..... | 110      | MBH0AA..... | 111      |
| LM2533..... | 18       | MACBKA.....  | 107      | MBD1GL..... | 110      | MBH0AE..... | 111      |
| LM4211..... | 42       | MACBLC.....  | 107      | MBD1GN..... | 110      | MBH2UA..... | 111      |
| LM4451..... | 19       | MACBLG.....  | 107      | MBD1GT..... | 110      | MBH2ZE..... | 111      |
| LM4523..... | 18       | MADBCC.....  | 107      | MBD1JA..... | 110      | MBH3ZA..... | 112      |
| LM4533..... | 18       | MADBLH.....  | 107      | MBD2BR..... | 110      | MBJ1BM..... | 112      |
| LM5111..... | 18       | MADBSG.....  | 107      | MBD2DA..... | 110      | MBJ1CN..... | 112      |
| LM5114..... | 19       | MAEAAAB..... | 107      | MBD2DD..... | 110      | MBK0AL..... | 112      |
| LM5211..... | 42       | MAEBGE.....  | 107      | MBD2DF..... | 110      | MBK0AN..... | 112      |
| LM5214..... | 42       | MBA0AA.....  | 108      | MBD2DM..... | 110      | MBK1BN..... | 112      |
| LM5311..... | 18       | MBA0AM.....  | 108      | MBD2FF..... | 110      | MBK1CM..... | 112      |
| LM5331..... | 18       | MBA0AN.....  | 108      | MBD2FR..... | 110      | MBK1CN..... | 112      |
| LM5514..... | 19       | MBA1BA.....  | 108      | MBD2GA..... | 110      | MBK2CN..... | 112      |
| LM5521..... | 19       | MBA1CB.....  | 108      | MBD2GK..... | 110      | MBK2DA..... | 112      |
| LM5544..... | 18       | MBA1CF.....  | 108      | MBD2GL..... | 110      | MBK2DC..... | 112      |
| LM5644..... | 19       | MBA1CM.....  | 108      | MBD2GR..... | 110      | MBK2DF..... | 112      |
| LM6214..... | 42       | MBA2BF.....  | 108      | MBD2GZ..... | 110      | MBK3CL..... | 112      |
| LM6311..... | 19       | MBA2BR.....  | 108      | MBD2JA..... | 110      | MBK3DK..... | 112      |
| LM6314..... | 19       | MBA2CE.....  | 108      | MBD2JB..... | 110      | MBLOAA..... | 112      |
| LM6334..... | 18       | MBA2CR.....  | 108      | MBD2JE..... | 110      | MBLOAM..... | 112      |
| LM6344..... | 18       | MBA3CD.....  | 108      | MBD3FC..... | 110      | MBLOAN..... | 112      |
| LM6514..... | 19       | MBB0AA.....  | 108      | MBD3GA..... | 110      | MBL1EA..... | 112      |

Index

| Part No.    | Page No. | Part No. | Page No. | Part No. | Page No. | Part No. | Page No. |
|-------------|----------|----------|----------|----------|----------|----------|----------|
| MBL1EN..... | 112      |          |          |          |          |          |          |
| MBL2EA..... | 112      |          |          |          |          |          |          |
| MBL2EN..... | 112      |          |          |          |          |          |          |
| MBL2FN..... | 112      |          |          |          |          |          |          |
| MBL3CN..... | 112      |          |          |          |          |          |          |
| MBL7CM..... | 112      |          |          |          |          |          |          |
| MBM1HN..... | 112      |          |          |          |          |          |          |
| MBM1JM..... | 112      |          |          |          |          |          |          |
| MBM2EK..... | 112      |          |          |          |          |          |          |
| MBM2EM..... | 112      |          |          |          |          |          |          |
| MBM2FN..... | 113      |          |          |          |          |          |          |
| MBM2GM..... | 113      |          |          |          |          |          |          |
| MBM2GN..... | 113      |          |          |          |          |          |          |
| MBM2JL..... | 113      |          |          |          |          |          |          |
| MBM3FL..... | 113      |          |          |          |          |          |          |
| MBM4EM..... | 113      |          |          |          |          |          |          |
| MBN1BM..... | 113      |          |          |          |          |          |          |
| MBN1JM..... | 113      |          |          |          |          |          |          |
| MBN1LN..... | 113      |          |          |          |          |          |          |
| MBN1MN..... | 113      |          |          |          |          |          |          |
| MBN1NK..... | 113      |          |          |          |          |          |          |
| MBN2JK..... | 113      |          |          |          |          |          |          |
| MBN2MN..... | 113      |          |          |          |          |          |          |
| MBN3DN..... | 113      |          |          |          |          |          |          |
| MBN3NK..... | 113      |          |          |          |          |          |          |
| MBP0AW..... | 113      |          |          |          |          |          |          |
| MBP1RU..... | 113      |          |          |          |          |          |          |
| MBP1SU..... | 113      |          |          |          |          |          |          |
| MBP2NW..... | 113      |          |          |          |          |          |          |
| MBP2NY..... | 113      |          |          |          |          |          |          |
| MBR0AY..... | 113      |          |          |          |          |          |          |
| MBR1UY..... | 113      |          |          |          |          |          |          |
| MBR1VU..... | 113      |          |          |          |          |          |          |
| MBR1WU..... | 113      |          |          |          |          |          |          |
| MBR7VY..... | 113      |          |          |          |          |          |          |
| MBS0AU..... | 113      |          |          |          |          |          |          |
| MBS0AX..... | 114      |          |          |          |          |          |          |
| MBS0AY..... | 114      |          |          |          |          |          |          |
| MBS2XA..... | 114      |          |          |          |          |          |          |
| MBS2ZA..... | 114      |          |          |          |          |          |          |
| MBS3LY..... | 114      |          |          |          |          |          |          |
| MM1111..... | 22       |          |          |          |          |          |          |
| MM1112..... | 22       |          |          |          |          |          |          |
| MM1121..... | 22       |          |          |          |          |          |          |
| MM1122..... | 22       |          |          |          |          |          |          |
| MM1212..... | 22       |          |          |          |          |          |          |
| MM1222..... | 22       |          |          |          |          |          |          |
| MM1311..... | 22       |          |          |          |          |          |          |
| MM1312..... | 22       |          |          |          |          |          |          |
| MM1322..... | 22       |          |          |          |          |          |          |
| MM1411..... | 22       |          |          |          |          |          |          |
| MM1412..... | 22       |          |          |          |          |          |          |
| MM1422..... | 22       |          |          |          |          |          |          |
| MM2112..... | 22       |          |          |          |          |          |          |
| MM2122..... | 22       |          |          |          |          |          |          |
| MM2211..... | 22       |          |          |          |          |          |          |
| MM2212..... | 22       |          |          |          |          |          |          |
| MM2221..... | 22       |          |          |          |          |          |          |
| MM2222..... | 22       |          |          |          |          |          |          |
| MM2312..... | 22       |          |          |          |          |          |          |
| MM2322..... | 22       |          |          |          |          |          |          |
| MM2411..... | 22       |          |          |          |          |          |          |
| MM2412..... | 22       |          |          |          |          |          |          |
| MM3112..... | 22       |          |          |          |          |          |          |
| MM3122..... | 22       |          |          |          |          |          |          |
| MM3211..... | 22       |          |          |          |          |          |          |
| MM3212..... | 22       |          |          |          |          |          |          |
| MM3322..... | 22       |          |          |          |          |          |          |
| MM3411..... | 22       |          |          |          |          |          |          |
| MM3412..... | 22       |          |          |          |          |          |          |
| MM3422..... | 22       |          |          |          |          |          |          |

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