



# Graco Automatic Lubrication Systems

Durable and Dependable Systems Designed for Industrial Equipment



PROVEN QUALITY. LEADING TECHNOLOGY.

# Accurate, Dependable Lubrication Systems

When it comes to lubrication, Graco has the answers!

While critical bearings are hard at work on your machine tool, production and press equipment, Graco's line of centralized and automatic lubrication systems is delivering precise amounts of lubricant at frequent intervals to every lube point—even if they're hard to reach.



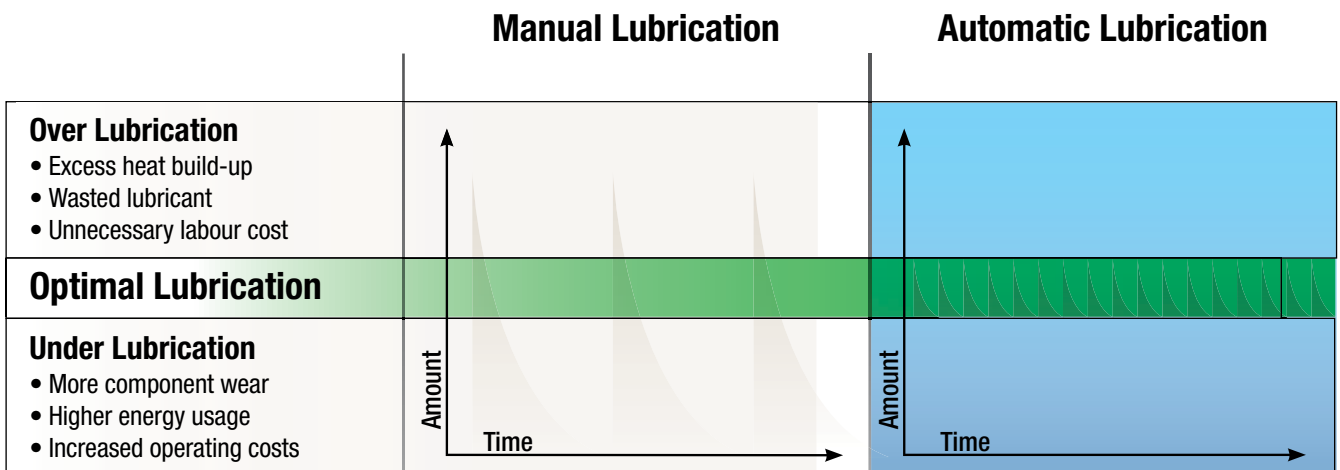
**ADVANTAGE:**

- Extend Equipment Life
- Maximize Performance
- Minimize Downtime

With Graco automatic lubrication systems you get:

- Increased productivity—Longer machine life and reduced downtime
- Reduced operating costs—Reduced repair labour and component costs
- More efficient lubrication—Small, carefully controlled amounts when needed

**Graco Automatic Lubrication Systems apply the correct amount of lubrication in the right place at the right time**



**EXAMPLE:** Infrequent filling of the bearing results in periods of over and under lubrication

**EXAMPLE:** Maintain optimal lubrication by replenishing only the lubricant that is used, with small amounts at frequent intervals

# Choosing the Right Lubrication System

## System Components

### Metering is the heart of the system

Accuracy, reliability and durability—all designed into Graco metering devices. Long-runs, high psi, continuous lube... whatever your lubrication requirements, we've got you covered.

### Monitoring and detection accessories to complete your system

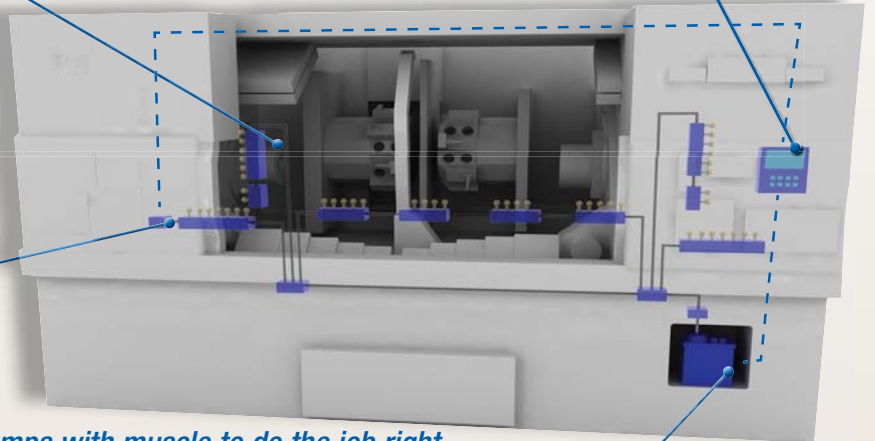
Graco supplies a wide variety of high quality accessories to complete your system. Choose from simple shut down devices, low level switches, blow out discs for high pressure detection or performance indicators.

### Controllers to keep you informed

If control is what you need, Graco has time- or cycle-based controllers for any application. Choose the monitor you need for cycle completion, high system pressure, low lube indication, low pressure and more!

### Pumps with muscle to do the job right

If you need a pump, Graco makes it! Our line-up includes pumps for grease and oil with a wide variety of outputs to handle everything from your smallest to your largest jobs.

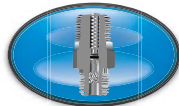


## Which system is right for you?

- 1) How many lube points are there?
- 2) What kind of power source do I have?
- 3) How long is the lube line run length?
- 4) What type of lubrication material do I use?
- 5) What kind of feedback do I want?
- 6) Indoor or outdoor use?

### System Selection Considerations

#### Single Line Resistive

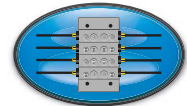


#### Single Line Parallel



Piston Distributor      Injector

#### Series Progressive



		Single Line Resistive	Single Line Parallel		Series Progressive
			Piston Distributor	Injector	
Materials	Oil	✓	✓	✓	✓
	Fluid Grease		✓	✓	✓
	Grease			✓	✓
Considerations	Metering Device	Orifice	Piston Distributor/Injector		Divider Valve
	Run Line Length	Typically short	Typically short* <small>*to ensure proper pressure relief after each lubrication cycle</small>		Varies* <small>*based on individual system zoning needs</small>
	Typical Machine Size	Small	Small to Medium		Varies
	Output Adjustment	Basic	—————→		
Feedback	Overall	—	Pressure Switch	Pressure Switch or Visual	Visual/Electronic
	Lube Point	—	—	Visual	Visual/Electronic
	Dispense Volume/Cycle	Time Dependent	Small	Small to Medium	Small to Large



# Single Line Resistive Orifice Systems

## Simple Solutions to Tight Spaces and Budgets

Single line resistive systems keep small to medium machine tools running smoothly. The most basic of automatic lubrication systems, also known as an orifice system, is easy to design, install and operate. Graco offers a complete range of orifices, pumps, controllers and accessories to meet your application needs.



## Graco Equipment Solutions

### Metering Devices

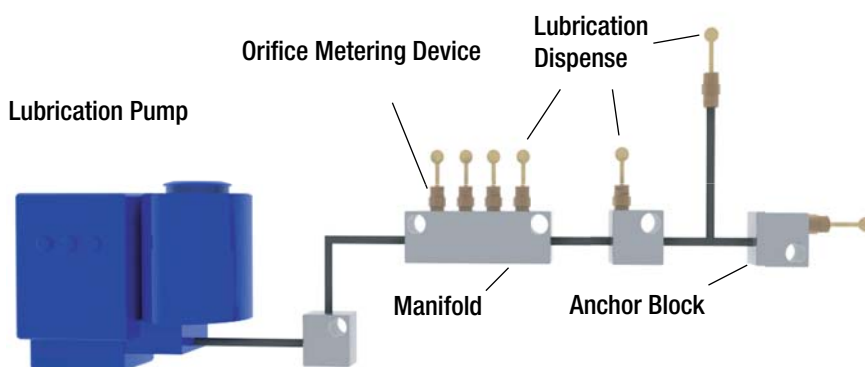
- Thrif-T-Luber Orifice

### Pumps

- Thrif-T-Luber
- Maxi-Flo
- E-Series

### Controllers

- Solid State Timer
- DC-Timer
- GLC 4400



## Time and Flow are the Key

The Graco Thrif-T-Luber system meters the amount needed to each bearing point for a set amount of time. Once complete, the timer counts down to the next cycle. It's really that simple.

### Benefits

- Wide range of metering and connection options gives you freedom to design a system to meet your requirements
- Low pressure requirement and simple threaded connections make installation fast and easy
- Few basic components are required for a complete system, keeping you within budget
- Easily expandable—quickly remove a plug or change a block to a tee and begin to add metering with minimal effort

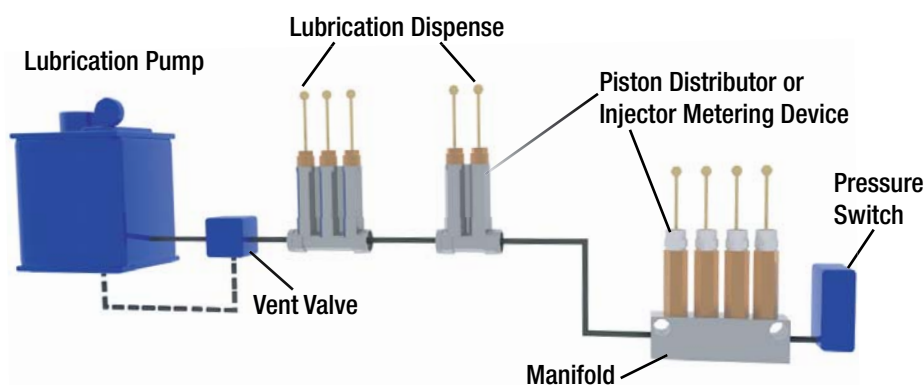
### System Considerations

- Designed for oil only
- Limited number of points
- No system monitoring
- On/off only system
- System cannot function with a broken line

# Single Line Parallel Systems

## More Precision, More Fluids, More Lube Points

Graco's single line parallel systems include piston distributors and injectors to deliver the right amount of lubricant at the right time to your multiple axis machine tools, bottling lines or injection molding machines. Basic system monitoring helps protect your hard-working machine from heat, damaging friction and unexpected breakdowns.



## Precision Dispensing Using Pressure

In single line parallel systems, the pump builds pressure to trigger the metering piston and deliver the precise amount of lubricant to the bearing. Once the pressure switch or system run time is complete, the system vents the pressure and resets for the next cycle.

### Benefits

- Basic monitoring ensures the system is operating properly
- Designed for higher pressures to handle a wide variety of lubricants up to NLGI #2
- Different sized injectors give you a wide output range to lubricate any size bearing
- One-to-one relationship between the metering device and the lube point for precision dispensing

### System Considerations

- System requires venting for metering device reset
- Blocked or pinched lines allow the system to continue to work, but those bearings will not receive lubricant
- Provides basic system monitoring



## Graco Equipment Solutions

### Metering Devices

- Injecto-Flo II Piston Distributors
- LubriSystem Injectors
- GL-1 Injectors
- GL-11 Injectors
- GL-32 Injectors

### Pumps

- Injecto-Flo II
- LubriSystem
- EO-1, EO-3
- AO-1
- G3

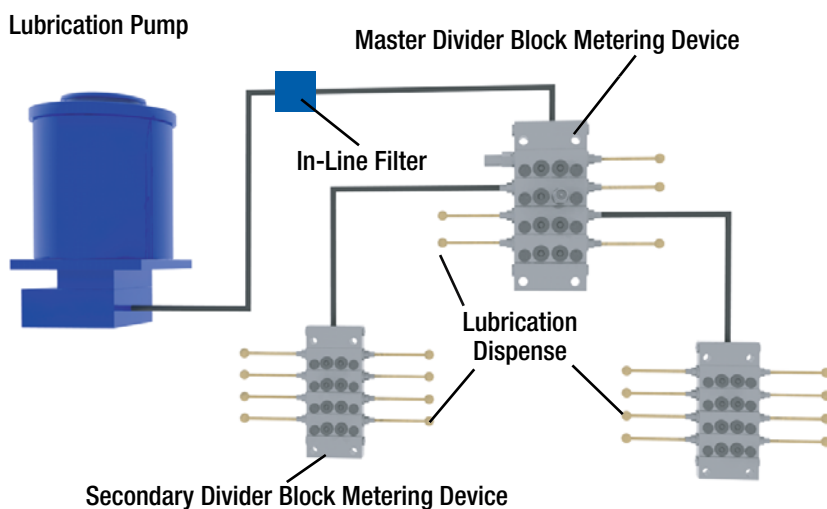
### Controllers

- Solid State Timer
- DC-Timer
- Maxi-Monitor
- Multi-Purpose Controller
- GLC 4400

# Series Progressive

## Maximum Performance and Flexibility

Graco's series progressive systems give you the most advanced centralized lubrication with numerous metering and accessory options available. Ideal for machining centers, forming presses or any application requiring precise lubrication. Get the information you need to ensure your machine is functioning at peak performance with the right amount of lubrication.



### How it Works

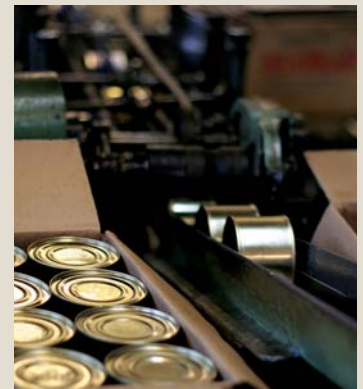
As the lubricant flows through the passages of each block, the metering pistons move to one side in sequence from inlet to end, each time “dosing” the precise amount of lubricant. As long as the lubricant is flowing, the pistons are moving. If there are blockages or too much pressure for the system to overcome, the cycling stops and the system controller lets you know.

### Benefits

- Large number of outputs to handle a full range of oils and greases
- Most advanced and precise monitoring with overall system diagnostics plus troubleshooting at the lube point
- Flexible to dispense lubricants in multiple zones—you decide where and when to lubricate
- Covers the broadest range of small to large applications
- Most are available with NPSF, SAE or BSPP threads for worldwide adaptability

### System Versatility

- Highly customizable
- Multiple zoning options
- Configure to any application
- Many pump choices
- Multiple feedback and controller options



## Graco Equipment Solutions

### Metering Devices

- MD Divider Valves
- MJ Divider Valves
- MSP Divider Valves
- MXP Divider Valves
- MGO Divider Valves

### Pumps

- Modu-Flo
- Miniature Meterflo
- E0-1
- Injecto-Flo II
- Lubemaster
- G3

### Controllers

- Maxi Monitor
- Multi-Purpose Controller
- GLC 4400

# Metering Solutions

## Single Line Resistive System



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

## Thrif-T-Luber® Orifices

### Features

- 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

### Technical Specifications

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

## Single Line Parallel System



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

## Injecto-Flo® II

### Features

- 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

### Technical Specifications

	3200 Series	3400 Series	3410 Series	3500 Series	3510 Series	3900 Series	3910 Series
Oil/Fluid Grease	Oil	Oil	Fluid grease	Oil	Fluid grease	Oil	Fluid grease
Reset Pressure	10 bar (150 psi)	10 bar (150 psi)	10 bar (150 psi)	10 bar (150 psi)	10 bar (150 psi)	10 bar (150 psi)	10 bar (150 psi)
Maximum Operating Pressure	45 bar (650 psi)	45 bar (650 psi)	45 bar (650 psi)	45 bar (650 psi)	45 bar (650 psi)	45 bar (650 psi)	45 bar (650 psi)
Output Range	0.01 – 0.16 cm <sup>3</sup> (0.0006 – 0.009 in <sup>3</sup> )	0.01 – 0.16 cm <sup>3</sup> (0.0006 – 0.009 in <sup>3</sup> )	0.01 – 0.16 cm <sup>3</sup> (0.0006 – 0.009 in <sup>3</sup> )	0.1 – 0.6 cm <sup>3</sup> (0.06 – 0.36 in <sup>3</sup> )	0.1 – 0.6 cm <sup>3</sup> (0.006 – 0.018 in <sup>3</sup> )	0.1 – 1.5 cm <sup>3</sup> (0.012 – 0.09 in <sup>3</sup> )	0.1 – 0.6 cm <sup>3</sup> (0.006 – 0.018 in <sup>3</sup> )
Metering Nipple Options	5	5	4	4	3	5	3
Thread to Manifold	Available	N/A	Available	Available	Available	Available	Available
Cast Manifold Outlets	N/A	2, 3, or 5	2, 3, or 5	2, 3, or 5	2, 3, or 5	2 or 3	2 or 3

# Metering Solutions

## Single Line Parallel System



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

## LubriSystem™

### Features

- Convenient cycle indicator option allows for simple visual system troubleshooting
- Two piece compression fitting included for fast, easy installation
- Bundled system tubing for easy installation
- Threaded outlet allows for manifold or direct-to-bearing mounting
- Adjustable output volume

### Technical Specifications

Fluids Allowed	Oil to NLGI #0
Reset Pressure	11 bar (160 psi)
Maximum Pressure	172 bar (2,500 psi)
Output Range	0.033 – 0.426 cm <sup>3</sup> (0.002 – 0.26 in <sup>3</sup> )
Metering Output Options	6
Cycle Indicator	Optional

## Single Line Parallel System



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

## GL-1™ Injectors

### Features

- Easy to change output volume in the field—no need to remove plumbing
- Standard TFE seals for compatibility with a wide range of lubricants and operating temperatures
- Visual indicator pin for quick and easy system diagnostics

### Technical Specifications

Recommended Fluids	NLGI #1 or lighter
Reset Pressure	11 bar (450 psi)
Maximum Pressure	207 bar (3,000 psi)
Normal Operating Pressure	128 bar (1850 psi) (128 bar)
Output Range	0.13 – 1.31 cm <sup>3</sup> (0.008 – 0.08 in <sup>3</sup> )
Cycle Indicator	Visual



# Metering Solutions

## Single Line Parallel System



High volume output at high pressures for the most demanding applications.

Bolt-on compatible with Lincoln® Centromatic® SL-11® injectors

## GL-11 Injectors

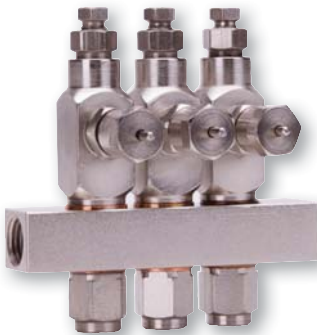
### Features

- Precision-honed internal working components are matched to fit the most exacting standards in the industry, providing reliable operation in harsh environments
- Adjustable output volumes to custom fit the system for each lube point
- Injectors adjust from 0.82 to 8.2 cm<sup>3</sup> (0.05 to 0.5 cubic inches)
- Operating pressures from 69 to 241 bar (1000 to 3500 psi) for optimal performance with grease grades up to NLGI #2
- Convenient top-mounted cycle pin indicator provides quick, at-a-glance confirmation that the injector is functioning properly

### Technical Specifications

Recommended Fluids	Grease up to NLGI #2
Reset Pressure	41 bar (600 psi)
Maximum Pressure	241 bar (3,500 psi)
Normal Operating Pressure	69 bar (1000 psi)
Output Range	0.82 – 8.2 cm <sup>3</sup> (0.05 – 0.5 in <sup>3</sup> )
Cycle Indicator	Visual

## Single Line Parallel System



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.

Bolt-on compatible with Lincoln® Centromatic® SL-32® injectors

## GL-32 Injectors

### Features

- Precision-honed primary piston is matched to fit the injector body, giving you accurate lubricant delivery and longer injector life
- Adjustable output to custom fit the system to meet the needs of each lube point
- Convenient front-mounted cycle pin indicator for quick confirmation that the injector is functioning properly
- Offered both as a stand-alone injector and replacement injector for manifold systems, allowing you to custom fit the injectors to your applications

### Technical Specifications

Recommended Fluids	Grease up to NLGI #2
Reset Pressure	13.7 bar (200 psi)
Maximum Pressure	241 bar (3,500 psi)
Normal Operating Pressure	83 bar (1200 psi)
Output Range	0.02 – .13 cm <sup>3</sup> (0.001 – 0.008 in <sup>3</sup> )
Cycle Indicator	Visual

# Metering Solutions

## Series Progressive System



Off-the-shelf, compact series progressive metering for tough-to-reach lubrication points

## Trabon® MD Series

### Features

- The most compact, simple series progressive solution to get to those tough to reach lube points
- Pre-configured to dispense two to six points for a simple installation
- Available with a cycle indicator and/or a cycle switch for a complete, off-the-shelf series progressive solution

### Technical Specifications

Series	MD-2	MD-3	MD-4	MD-6
Output per Outlet, cm <sup>3</sup> (in <sup>3</sup> )	0.66 (0.04)	0.66 (0.04), Outlet 1 0.33 (0.02), Outlets 2 & 3	0.33 (0.02)	0.16 (0.01)
Maximum Pressure, bar (psi)	207 (3,000)	207 (3,000)	207 (3,000)	207 (3,000)
Cycle Indication	Optional	Optional	Optional	N.A.

## Series Progressive System



Compact, customizable divider block series well-suited for coil slitters or bottling lines

## Trabon MJ Series

### Features

- Space-efficient—up to 16 points from one modular block
- Up to six different output amounts in three single or twin output block sizes
- Modular design for easy customizing—features include cross porting for larger volumes, cycle indication and simplified troubleshooting with performance indicators

### Technical Specifications

Series	MJ5	MJ10	MJ15
Maximum Pressure	2,000 psi (138 bar)	2,000 psi (138 bar)	2,000 psi (138 bar)
Output Twin Outlet, cm <sup>3</sup> (in <sup>3</sup> )	0.08 (0.005)	0.16 (0.01)	0.26 (0.015)
Output Single Outlet, cm <sup>3</sup> (in <sup>3</sup> )	0.16 (0.01)	0.33 (0.02)	0.49 (0.03)
Cycle Indication	N/A	Optional	Optional

# Metering Solutions

## Series Progressive System



With the widest range of accessories and outputs, MSP helps keep almost any machine running at peak performance.

## Trabon MSP Series

### Features

- The industry standard for complete modularity, Graco's Trabon MSP series is our most customizable series progressive platform
- Porting options of NPSF, SAE or BSPP allow for worldwide adaptability
- Minimize down-time with quick change-out of the working section and a broad choice of performance indicators to help provide assurance that the lubrication is done right
- Precision matched piston fit ensures the system is delivering highly accurate amounts of lubricant repeatedly
- Optional TFE seals for maximum lubricant compatibility

### Technical Specifications

	MSP5	MSP10	MSP15	MSP20	MSP25	MSP30	MSP35	MSP40
Maximum Pressure	241 bar (3,500 psi)	241 bar (3,500 psi)	241 bar (3,500 psi)	241 bar (3,500 psi)	241 bar (3,500 psi)	241 bar (3,500 psi)	241 bar (3,500 psi)	241 bar (3,500 psi)
Output Twin Outlet cm <sup>3</sup> (in <sup>3</sup> )	0.08 (0.005)	0.016 (0.01)	0.026 (0.015)	0.33 (0.02)	0.41 (0.025)	0.49 (0.03)	0.57 (0.035)	0.66 (0.04)
Output Single Outlet cm <sup>3</sup> (in <sup>3</sup> )	0.16 (0.01)	0.33 (0.02)	0.49 (0.03)	0.66 (0.04)	0.82 (0.05)	0.98 (0.06)	1.15 (0.07)	1.31 (0.08)
Cycle Indication	N/A	N/A	N/A	Optional	Optional	Optional	Optional	Optional

## Series Progressive System



Complete modularity for series progressive systems required on today's large forming presses

## Trabon MXP Series

### Features

- Able to customize with greater output volumes to meet those large machine lubrication requirements
- Delivers lubricant to up to 20 points from a single assembly—combine assemblies for a maximum of 400 lubrication points
- SAE, NPSF or metric threading for worldwide compatibility
- Up to six different output amounts in three single or twin output block sizes

### Technical Specifications

	MXP25	MXP50	MXP75	MXP100	MXP125	MXP150
Maximum Pressure	207 bar (3,000 psi)	207 bar (3,000 psi)	207 bar (3,000 psi)	207 bar (3,000 psi)	207 bar (3,000 psi)	207 bar (3,000 psi)
Output Twin Outlet, cm <sup>3</sup> (in <sup>3</sup> )	0.41 (0.025)	0.82 (0.05)	1.23 (0.075)	1.64 (0.1)	2.05 (0.125)	2.46 (0.15)
Output Single Outlet, cm <sup>3</sup> (in <sup>3</sup> )	0.82 (0.05)	1.64 (0.1)	2.46 (0.15)	3.28 (0.2)	4.1 (0.25)	4.92 (0.3)
Cycle Indication	N/A	Optional	Optional	Optional	Optional	Optional

# Metering Solutions

## Series Progressive System



Field-proven design keeps the largest hydraulic presses running trouble-free

## Trabon MGO Series

### Features

- Designed to handle the largest and most demanding applications by delivering up to 19.7 cm<sup>3</sup> (1.2 in<sup>3</sup>) of lubrication per cycle
- Largest output available with 22 outlets and 11 working sections
- SAE porting allows for a sealed outlet to ensure leak-free life
- TFE standard seals allow for maximum fluid compatibility and high temperature applications

### Technical Specifications

	MGO150	MGO300	MGO450	MGO600
Maximum Pressure*	Up to 413 bar (6,000 psi)	Up to 413 bar (6,000 psi)	Up to 413 bar (6,000 psi)	Up to 413 bar (6,000 psi)
Output Twin Outlet cm <sup>3</sup> (in <sup>3</sup> )	2.46 (0.15)	4.92 (0.3)	7.37 (0.45)	9.83 (0.6)
Output Single Outlet cm <sup>3</sup> (in <sup>3</sup> )	4.92 (0.3)	9.83 (0.6)	14.7 (0.9)	19.7 (1.2)
Cycle Indication	Optional	Optional	Optional	Optional

\*Dependent upon number of working sections in final assembly

## System Accessories



**A GRACO EXCLUSIVE**

Exclusive air/oil solution that detects air line or oil line faults in your system. Series progressive monitoring ensures your critical bearings are lubricated properly.

## Air-Oil AO Series

### Features

- 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

### Technical Specifications

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



## System Accessories



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

## Air-Lube Spra-Control Valves

### Features

- 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, no waste

### Technical Specifications

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

# Metering Solutions

## System Accessories



Simple point troubleshooting with visual indication



Keep your machine running while lubrication gets to critical points



Know quickly when critical bearings aren't getting lubricated



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

## Performance Indicators

### Reset Indicator

- 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 bar (psi)	17 (250)	35 (500)	52 (750)	69 (1000)	103 (1500)	138 (2000)	172 (2500)
MJ	✓	✓	✓	✓	✓	✓	
MSP	✓	✓	✓	✓	✓	✓	✓
MPX	✓	✓	✓	✓	✓	✓	✓
MGO					✓		

### Automatic Relief Indicator

- 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

Auto Relief bar (psi)	52 (750)	69 (1000)	86 (1250)	103 (1500)	138 (2000)	172 (2500)	207 (3000)
MJ	✓	✓		✓	✓		
MSP	✓	✓	✓	✓	✓	✓	✓
MPX	✓	✓	✓	✓	✓	✓	✓

### Rupture Indicator

- Pop out pin provides quick troubleshooting tool with visual indication
- Compact design and required part change out to assure blockage is cleared
- Easy information on blocked lines, high system pressure or blocked bearings

Rupture bar (psi)	193 (2800)	255 (3700)	317 (4600)	379 (5500)	441 (6400)
MJ	✓	✓	✓	✓	✓
MSP	✓	✓	✓	✓	✓
MPX	✓	✓	✓	✓	✓

### Rupture to Atmosphere Indicator

- Used in conjunction with system pressure switch—can warn of a fault while allowing lube system to continue to deliver to critical bearings
- Compact design and required part change out to assure blockage is cleared
- Easy information on blocked lines, high system pressure or blocked bearings

Rupture to Atmosphere bar (psi)	121 (1750)	162 (2350)	203 (2950)	224 (3250)
MJ	✓	✓	✓	✓
MSP	✓	✓	✓	✓

# Metering Solutions

## System Accessories



The only device that lets you know when lubricant is flowing in your installation

## Broken Line Indicators

### Features

- 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	4.1 bar (60 psi)	6.9 bar (100 psi)	10.3 bar (150 psi)
Maximum Pump Pressure	69.0 bar (1000 psi)	103.4 bar (1500 psi)	172.4 bar (2500 psi)

## System Accessories

## Cycle Switches



Integrates to controllers, starters or PLCs

### Features

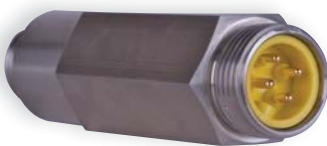
- Monitors piston movement to ensure completed lubrication cycle
- Provides positive feedback based on actual metering piston movement
- Mounts to MJ, MSP, MXP, or MX divider with cycle pin option with simple install
- Able to be set for normally open or normally closed operation

Voltage	Amp rating
125/250/480VAC	15 A
125 VDC	1/2 A
250 VDC	1/4 A
24 VDC	6 A*

\*Non-inductive

## System Accessories

## Proximity Switches



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

### Features

- 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 690 bar (10,000 psi)
- Variety of electrical connections and voltages with or without LED indication
- Select models available with UL and CSA approvals

# Ordering Information

<b>SINGLE LINE RESISTIVE ORIFICE SYSTEMS</b>	
<b>Thrif-T Luber Orifices</b>	
564028	TLOA-5/0
564027	TLOA-4/0
564026	TLOA-3/0
564025	TLOA-2/0
564019	TLOA-0
564020	TLOA-1
564021	TLOA-2
564022	TLOA-3
564023	TLOA-4
564024	TLOA-5
564047	TLOB-5/0
564046	TLOB-4/0
564045	TLOB-3/0
564044	TLOB-2/0
564038	TLOB-0
564039	TLOB-1
564040	TLOB-2
564041	TLOB-3
564042	TLOB-4
564043	TLOB-5
564036	TLOC-3/0
564035	TLOC-2/0
564029	TLOC-0
564030	TLOC-1
564031	TLOC-2
564032	TLOC-3
564033	TLOC-4
564034	TLOC-5
<b>Thrif-T Luber Hardware</b>	
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
558190	TLIF-00, Inverted Flare
558189	TLCN-00, Compression Nut
558188	TLCF-00, Compression Sleeve
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
561155	TLCP-00, Closure Plug

<b>Thrif-T Luber Accessories</b>	
564053	TLLF-00, In-Line Filter
558296	TLPG-00, Pressure Gauge
561143	TLTP-25, 25 ft of 5/32 in Tubing
563162	Relief Valve, 150 psi
556677	Plug for Reservoir
<b>Single Line Parallel</b>	
<b>Injecto-Flo II Single Point Piston Distributors</b>	
<b>3400 Series for Oil</b>	
Part No.	Description
558306	0.01 cc Output, M8 x 1, Use w/Bar Manifolds
122804	0.01 cc Output, M10 x 1
558307	0.03 cc Output, M8 x 1, Use w/Bar Manifolds
122805	0.03 cc Output, M10 x 1
558308	0.06 cc Output, M8 x 1, Use w/Bar Manifolds
122806	0.06 cc Output, M10 x 1
558309	0.10 cc Output, M8 x 1, Use w/Bar Manifolds
122807	0.10 cc Output, M10 x 1
558310	0.16 cc Output, M8 x 1, Use w/Bar Manifolds
122808	0.16 cc Output, M10 x 1
<b>3500 Series for Oil</b>	
121658	0.10 cc Output, M10 x 1, Use w/Bar Manifolds
122813	0.10 cc Output, M12 x 1
121659	0.20 cc Output, M10 x 1, Use w/Bar Manifolds
122814	0.20 cc Output, M12 x 1
121660	0.40 cc Output, M10 x 1, Use w/Bar Manifolds
122815	0.40 cc Output, M12 x 1
121661	0.60 cc Output, M10 x 1, Use w/Bar Manifolds
122816	0.60 cc Output, M12 x 1
<b>3900 Series for Oil</b>	
121665	0.20 cc Output, M14 x 1.5, Use w/Bar Manifolds
122820	0.20 cc Output, M12 x 1
121666	0.40 cc Output, M14 x 1.5, Use w/Bar Manifolds
122821	0.40 cc Output, M12 x 1
121667	0.60 cc Output, M14 x 1.5, Use w/Bar Manifolds
122822	0.60 cc Output, M12 x 1
121668	1.00 cc Output, M14 x 1.5, Use w/Bar Manifolds
122823	1.00 cc Output, M12 x 1
121669	1.50 cc Output, M14 x 1.5, Use w/Bar Manifolds
122824	1.50 cc Output, M12 x 1
<b>3410 Series for Fluid Grease</b>	
121654	0.01 cc Output, M8 x 1, Use w/Bar Manifolds
122809	0.01 cc Output, M10 x 1
121655	0.03 cc Output, M8 x 1, Use w/Bar Manifolds
122810	0.03 cc Output, M10 x 1
121656	0.06 cc Output, M8 x 1, Use w/Bar Manifolds
122811	0.06 cc Output, M10 x 1
121657	0.10 cc Output, M8 x 1, Use w/Bar Manifolds



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122812	0.10 cc Output, M10 x 1
<b>3510 Series for Fluid Grease</b>	
121662	0.10 cc Output, M10 x 1, Use w/Bar Manifold
122817	0.10 cc Output, M12 x 1
121663	0.20 cc Output, M10 x 1, Use w/Bar Manifold
122818	0.20 cc Output, M12 x 1
121664	0.30 cc Output, M10 x 1, Use w/Bar Manifold
122819	0.30 cc Output, M12 x 1
<b>3910 Series</b>	
121670	0.10 cc Output, M14 x 1.5, Use w/Bar Manifolds
122825	0.10 cc Output, M12 x 1
121671	0.20 cc Output, M14 x 1.5, Use w/Bar Manifolds
122826	0.20 cc Output, M12 x 1
121672	0.30 cc Output, M14 x 1.5, Use w/Bar Manifolds
122827	0.30 cc Output, M12 x 1
<b>3400/3410 Bar Manifolds</b>	
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
<b>3500/3510 Bar Manifolds</b>	
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
<b>3900/3910 Cast Manifolds</b>	
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
<b>3400/3410 Cast Manifolds</b>	
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
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
<b>3500/3510 Cast Manifolds</b>	
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
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
<b>3900/3910 Cast Manifolds</b>	
122888	2 Outlets, Oil PD, Complete w/Red Plastic Cover
122889	3 Outlets, Oil PD, Complete w/Red Plastic Cover
122890	2 Outlets, Fluid Grease PD, Complete w/White Plastic Cover
122891	3 Outlets, Fluid Grease PD, Complete w/White Plastic Cover
<b>3400 Dispensing Meters</b>	
122989	0.01 cc
558311	0.03 cc
558312	0.06 cc
558313	0.10 cc
558314	0.16 cc
<b>3500 Dispensing Meters</b>	
558315	0.10 cc
558316	0.20 cc
558317	0.40 cc

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558318	0.60 cc
<b>3900 Dispensing Meters</b>	
558319	0.20 cc
558320	0.40 cc
558321	0.60 cc
558322	1.00 cc
558323	1.50 cc
<b>3410 Dispensing Meters</b>	
122990	0.01 cc
558324	0.03 cc
558325	0.06 cc
558326	0.10 cc
<b>3510 Dispensing Meters</b>	
558327	0.10 cc
558328	0.20 cc
558329	0.30 cc
<b>3910 Dispensing Meters</b>	
558330	0.10 cc
558331	0.20 cc
558332	0.30 cc
<b>Direct-to-Bearing Piston Distributors</b>	
122789	For Distributor M14/D4/0.03 cc
122790	For Distributor M14/D4/0.06 cc
122791	For Distributor M14/D4/0.10 cc
122792	For Distributor M14/D5/0.03 cc
122793	For Distributor M14/D6/0.06 cc
122794	For Distributor M14/D6/0.10 cc
122795	Direct-to-Lube PD D10.35/0.03 cc
122796	Direct-to-Lube PD D10.35/0.06 cc
122797	Direct-to-Lube PD D10.35/0.10 cc
122798	Direct-to-Lube PD D13.5/0.10 cc
122799	Direct-to-Lube PD D13.5/0.20 cc
122800	Direct-to-Lube PD D13.5/0.30 cc
122801	Direct-to-Lube PD D13.5/0.40 cc
<b>Piston Distributor Fittings</b>	
558153	M8 x 1 Washer
558151	M8 x 1 Plug
558154	M10 x 1 Washer
558192	M10 x 1 Plug
<b>LubriSystem Injectors for Oil</b>	
563628	Injector #0
563630	Injector #1
563632	Injector #2
563634	Injector #3
563636	Injector #4
563638	Injector #8
<b>LubriSystem Manifolds and Accessories</b>	
561120	4 Port Manifold

561122	8 Port Manifold
563769	Meter Indicator Pin
561117	1 Port Manifold
561118	2 Port Manifold
561119	3 Port Manifold
561121	5 Port Manifold
15M038	Manifold End Plug
557901	Manifold Injector Outlet Plug
<b>Grease Jockey Injectors, Manifolds and Parts</b>	
563627	Injector #0, 0.002 cu.in.
563629	Injector #1, 0.005 cu.in.
563631	Injector #2, 0.009 cu.in.
563633	Injector #3, 0.012 cu.in.
563635	Injector #4, 0.020 cu.in.
563637	Injector #8, 0.026 cu.in.
563758	Manifold for 12 Injectors (6 on Each Side), w/Mounting Stud
557939	Manifold for 12 Injectors (One Side)
557933	Manifold for 12 Injectors (5 and 7 Configuration)
557937	Manifold for 7 Meters (One Side)
557935	Manifold for 4 Injectors In-Line
15M038	Manifold End Plug
557901	Manifold Injector Output Plug
<b>GL Injectors and Accessories</b>	
<b>GL-1 Injectors</b>	
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
114910	NPT Single GL-1 Injector
114911	GL Injector Manifold, One Point
114912	GL Injector Manifold, Two Points
114913	GL Injector Manifold, Three Points
114914	GL Injector Manifold, Four Points
114915	GL Injector Manifold, Five Points
115119	GL-1 Injector Cover Kit, Plastisol
115120	GL-1 Injector Outlet Adapter Kit
241234	GL-1 Injector Repair Kit
<b>GL-11 Injectors</b>	
24A918	GL-11 Injector
<b>GL-32 Injectors and Accessories</b>	
24A920	GL-32 Injector, Replacement for Manifold
24A921	GL-32 Injector, 1-Injector Manifold
24A922	GL-32 Injector, 2-Injector Manifold
24A923	GL-32 Injector, 3-Injector Manifold
24A924	GL-32 Injector, 4-Injector Manifold

# Ordering Information

24B360	GL32 Series Overhaul Kit
24A919	GL-32 Injector, Stand Alone
24F508	GL-32 style Injector (replacement-6mm)
24F509	GL-32 style 1-Injector manifold-6mm
24F510	GL-32 style 2-Injector manifold-6mm
24F511	GL-32 style 3-Injector manifold-6mm
24F512	GL-32 style 4-Injector manifold-6mm
24F507	GL-32 Stand-Alone Injector manifold-6mm
24F514	6mm Outlet Replacement Kit
24F513	4mm Outlet Adapter Kit
16F341	GL32/43 Manifold - 1 Port - 1/8' BSPP
16F342	GL32/43 Manifold - 2 Port - 1/8' BSPP
16F343	GL32/43 Manifold - 3 Port - 1/8' BSPP
16F344	GL32/43 Manifold - 4 Port - 1/8' BSPP

## Series Progressive

### MD Divider Valves

562656	MD-2
562657	MD-3
562658	MD-4
562659	MD-6
562653	MD-2, w/Cycle Pin
562654	MD-3, w/Cycle Pin
562655	MD-4, w/Cycle Pin
563270	MD-2, w/Cycle Switch and Bracket Assembly
563271	MD-3, w/Cycle Switch and Bracket Assembly
564356	MD-4, w/Cycle Switch and Bracket Assembly

### Spare Parts for MD Divider Valves

563555	Cycle Indicator End Plug Assembly
557506	Enclosure Plug
557507	Enclosure Plug Gaskets
556540	Standard O-Ring (NBR)

### MJ Divider Valves

562503	MJ-5T
562500	MJ-5S
562504	MJ-10T
562501	MJ-10S
562505	MJ-15T
562502	MJ-15S
562510	MJ-10T with Cycle Pin Indicator - Right
562508	MJ-10S with Cycle Pin Indicator - Right
562511	MJ-15T with Cycle Pin Indicator - Right
562509	MJ-15S with Cycle Pin Indicator - Right

### MJ Tie Rods and Nut

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
556371	Tie Rod Nut

### MJ Inlet and End

560643	MJ Inlet
560645	MJ End

### MJ Miscellaneous Accessories

562915	Singling Kit
562914	Crossport Bar
557359	Upper Seal for Crossport Kit
557503	Lower Seal for Crossport Kit
561101	Mounting Bar

### MJ Spare Parts

557514	Intermediate Gasket
557506	NPT Plug for Singled Section
557507	Piston Enclosure Plug w/Gasket Seal
563948	Indicator Repair Kit

### MSP Divider Valves

562720	MSP-5T
562711	MSP-5S
562721	MSP-10T
562712	MSP-10S
562722	MSP-15T
562713	MSP-15S
562723	MSP-20T
562714	MSP-20S
562724	MSP-25T
562715	MSP-25S
562725	MSP-30T
562716	MSP-30S
562726	MSP-35T
562717	MSP-35S
562727	MSP-40T
562718	MSP-40S
562660	MSP Bypass Section
562739	MSP-20T with Cycle Pin - Right
562729	MSP-20S with Cycle Pin - Right
562740	MSP-25T with Cycle Pin - Right
562730	MSP-25S with Cycle Pin - Right
562741	MSP-30T with Cycle Pin - Right
562731	MSP-30S with Cycle Pin - Right
562742	MSP-35T with Cycle Pin - Right
562732	MSP-35S with Cycle Pin - Right
562743	MSP-40T with Cycle Pin - Right
562733	MSP-40S with Cycle Pin - Right

### 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 (No)

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563454	NPT, 24 VDC, BH 3-Pin Connection-Right (No)
563455	NPT, 24 VDC, BH 3-Pin Connection-Left (No)
560953	SAE, 115 VAC, BH 3-Pin Connection-Right (No)
563463	SAE, 115 VAC, BH 3-Pin Connection-Left (No)
563482	SAE, 24 VDC, BH 3-Pin Connection-Right (No)
563483	SAE, 24 VDC, BH 3-Pin Connection-Left (No)
563493	BSPP, 24 VDC, BH 3-Pin Connection-Right (No)
563494	BSPP, 24 VDC, BH 3-Pin Connection-Left (No)
557213	Replacement Solenoid-563452, 563453
557215	Replacement Solenoid-563454, 563455
557214	Replacement Coil-563452, 563453
563456	NPT Pneumatic Shunt Inlet

## MSP Reversing Inlets

563446	Inlet - Side Connection
560947	Inlet - Front Connection

## MSP Zero Leak Shut-Off Inlets (1/4 - 18 NPT Port Thread)

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
557226	Replacement Coil - 563460, 563468
557225	Replacement Coil - 563464, 563467

## MSP Repair and Zero Leak Kits

563933	Valve Repair Kit-Cartridge without Coils, Screws, Seat, Nut Wrench
563461	MSP Zero Leak/Shunt Inlet Adapter Kit (NPSF)

## MS/MH Inlets, Intermediate Base and End Sections

560919	MS/MH Inlet, 1/4-18 NPSF Ports (NPT)
560943	MS/MH Inlet, 7/16-20 UNF-2B Ports (SAE)
560936	MS/MH Inlet, 1/4-19, BSPP (ISO 1179) Ports (BSP)
560976	MS/MH Inlet, ISO 6149 -1-M12x1.5 Ports (MET)
563419	MS/MH Intermediate Base, 1/8-27 NPSF Ports (NPT)
563451	MS/MH Intermediate Base, 7/16-20 UNF-2B Ports (SAE)
563447	MS/MH Intermediate Base, 1/8-28 BSPP (ISO 1179) Ports (BSP)
563487	MS/MH Intermediate Base, ISO 6149 -1-M10X1 Ports (MET)
563428	MS/MH Standard End
563280	MS/MH End with Alternate Inlet Port and Zerk Fitting
563279	MS/MH End with Alternate Inlet Port Plug

## MSP/MHP Base Section Outlet Port Plugs

558799	BSPP Plug - 1/8-28 (ISO 1179)
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## MS/MH Spare Parts

556540	Standard O-Ring (NBR)
557721	Synthetic O-Ring (70 DURO TFE)

557722	High-Pressure O-Ring (90 DURO TFE)
556371	Tie Rod Nut
556513	Valve Block Mounting Screw
557776	IMSP/MSV Indicator Port Plug
556429	MSP/MHP End Section Manual Lube Fittings
556568	Enclosure Plug Seal - O-Ring (NBR)
557717	Enclosure Plug Seal - Gasket
556570	Enclosure Plug O-Ring (90 DURO TFE)
556567	Performance Indicator Port Seal - O-Ring (NBR)
556569	Performance Indicator Port Seal - O-Ring (90 DURO TFE)
553929	Cycle Indicator Pin Repair Kit - O-Ring
563928	Cycle Indicator Pin Repair Kit - Gasket
557349	MSP Indicator Port Plug

## MS/MH Tie Rod 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

## MS/MH Singling and Crossport Kits

563472	Singling Kit
563469	Crossport Bar Kit - Right
563470	Crossport Bar Kit - Left
563471	Crossport Bar Kit - Both
563444	Universal Counter

## MS/MH Mounting Hardware

563465	Weld Bar Kit - 2 Weld Bars and Hardware
563435	3- and 4-Section Manifold Bottom Mounting Bracket Assembly
563436	5- and 6-Section Manifold Bottom Mounting Bracket Assembly
563437	7- and 8-Section Manifold Bottom Mounting Bracket Assembly
563438	3- and 4-Section Manifold Side Mounting Bracket Assembly
563439	5- and 6-Section Manifold Side Mounting Bracket Assembly
563440	7- and 8-Section Manifold Side Mounting Bracket Assembly

## MHH Working Sections

562679	MHH-6S
562680	MHH-9S
562681	MHH-12S
562682	MHH-18S
562683	MHH-24S
562684	MHH-30S
562685	MHH-6T



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562686	MHH-9T
562687	MHH-12T
562688	MHH-18T
562689	MHH-24T
562690	MHH-30T

## MHP Inlet, Intermediate Base and End Sections

563420	MHP Inlet, with Bleed Screw, 1/4-18 NPSF Ports
563422	MHP Inlet, with Bleed Screw, 7/16-20 UNF-2B Ports (SAE)

## MXP Working Sections

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
562825	MXP-50T with Cycle Pin - Right
562830	MXP-50S with Cycle Pin - Right
562826	MXP-75T with Cycle Pin - Right
562831	MXP-75S with Cycle Pin - Right
562827	MXP-100T with Cycle Pin - Right
562832	MXP-100S with Cycle Pin - Right
562828	MXP-125T with Cycle Pin - Right
562833	MXP-125S with Cycle Pin - Right
562829	MXP-150T with Cycle Pin - Right
562834	MXP-150S with Cycle Pin - Right

## MXP Inlet, Intermediate Base and End Sections

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

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 Crossport Kits

563525	Crossport Bar Kit - Right
563524	Crossport Bar Kit - Left
563260	Visual Cycle Indicator

## MXP Base Section Plugs

557391	NPT Plug
556430	SAE Plug

## MXP Spare and Repair Parts

557773	Standard Valve Section Seal
563917	Cycle Pin Indicator Repair Kit
557774	Enclosure Plug
556572	Enclosure Plug O-Ring
557776	Indicator Port Plug

## MGO Divider Valves

562574	MGO-150T
562570	MGO-150S
562575	MGO-300T
562571	MGO-300S
562576	MGO-450T
562572	MGO-450S
562577	MGO-600T
562573	MGO-600S
562582	MGO-150T with Cycle Pin - Right
562578	MGO-150S with Cycle Pin - Right
562583	MGO-300T with Cycle Pin - Right
562579	MGO-300S with Cycle Pin - Right
562584	MGO-450T with Cycle Pin - Right
562580	MGO-450S with Cycle Pin - Right
562585	MGO-600T with Cycle Pin - Right
562581	MGO-600S with Cycle Pin - Right

## MGO Inlet and End

563277	MGO Inlet
563278	MGO End

## MGO Tie Rods and Nut

560591	3-Section Tie Rod - Lower
560600	3-Section Tie Rod - Upper
560592	4-Section Tie Rod - Lower
560601	4-Section Tie Rod - Upper
560593	5-Section Tie Rod - Lower
560602	5-Section Tie Rod - Upper
560594	6-Section Tie Rod - Lower
560603	6-Section Tie Rod - Upper
560595	7-Section Tie Rod - Lower
15U857	7-Section Tie Rod - Upper

# Ordering Information

560596	8-Section Tie Rod - Lower
560604	8-Section Tie Rod - Upper
560597	9-Section Tie Rod - Lower
560605	9-Section Tie Rod - Upper
560598	10-Section Tie Rod - Lower
560606	10-Section Tie Rod - Upper
560599	11-Section Tie Rod - Lower
560607	11-Section Tie Rod - Upper
557494	Tie Rod Nut
<b>MGO Cycle Indication Switch</b>	
563269	Cycle Switch, SPDT, Bracket Assembly
557781	Replacement Switch, for 563269
<b>MGO Spare Parts</b>	
556424	Port Plug for Singled Ported Sections
563926	O-Ring Kit for 1-Section
<b>Air Oil AO Series Divider Valves</b>	
24B237	Air/Oil Manifold Assembly, 3-Section
24B203	Air/Oil Manifold Assembly, 4-Section
24B240	Air/Oil Manifold Assembly, 5-Section
24B241	Air/Oil Manifold Assembly, 6-Section
<b>Air-Lube Spra-Control Valves</b>	
563275	Valve and Nozzle Assembly, 4 inch spray diameter (normal)
563276	Valve and Nozzle Assembly (*), 8 inch spray diameter (wide)
<b>High Speed Spindl-Gard (HSSG) Blocks</b>	
563130	Spindl-Gard Block, 0.0015 cu.in. Displacement
563131	Spindl-Gard Block, 0.0030 cu.in. Displacement
563132	Spindl-Gard Block, 0.0050 cu.in. Displacement
<b>High Speed Spindl-Gard (HSSG) Components</b>	
563489	10 micron Oil Filter Element
561031	Inlet Block
561032	Outlet Block
<b>Spindl-Gard Nozzles</b>	
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 Headwalks over 1 in. thick
<b>Spindl-Gard Accessories</b>	
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. NOT (M)
557134	In-Line Lube Filter Replacement Filter Element
564348	Air Flow Switch w/Lights
563129	SG Air/Oil Mixing Tee

## High Speed Spindl-Gard (HSSG) Tie Rod Kits, Including Nuts and Washers

564443	HSSG Tie Rod Kit for 1 Air/Oil Lube Point
563940	HSSG Tie Rod Kit for 2 Air/Oil Lube Point
564444	HSSG Tie Rod Kit for 3 Air/Oil Lube Point
15U854	HSSG Tie Rod Kit for 4 Air/Oil Lube Point
15U855	HSSG Tie Rod Kit for 5 Air/Oil Lube Point
563941	HSSG Tie Rod Kit for 6 Air/Oil Lube Point
563942	HSSG Tie Rod Kit for 7 Air/Oil Lube Point
15U856	HSSG Tie Rod Kit for 8 Air/Oil Lube Point

## Performance Indicators

556567	MSP/MHP Performance Indicator Port Seal, O-Ring (NBR)
556569	MSP/MHP Performance Indicator Port Seal, O-Ring (90 DURO TFE)

## Automatic Relief Indicators for MJ, MS, MH and MXP

563163	52 bar
563164	69 bar
563165	86 bar
563166	103 bar
563167	138 bar
563168	172 bar
563169	207 bar

## Automatic Relief Indicators with O-Ring Seal for MJ, MS, MH and MXP

563170	52 bar
563171	69 bar
563172	86 bar
563173	103 bar
563174	138 bar
563175	172 bar
563176	207 bar

## Rupture-to-Atmosphere Indicators 1/8"-27 NPTF

564059	121 bar
563191	162 bar
563192	203 bar
563193	224 bar
563194	345 bar

## Rupture-to-Atmosphere Indicators 1/4"-18 NPTF

563179	100 bar
563182	121 bar
563183	141 bar
563184	162 bar
563185	203 bar

## Rupture-to-Atmosphere Indicators 1/4"-18 NPTF with Spud Assembly

563186	100 bar
563187	121 bar
563188	162 bar

# Ordering Information

<b>MS, MH and MXP Rupture Indicators with Memory</b>	
563228	193 bar
563220	255 bar
564355	317 bar
563223	379 bar
563225	441 bar
557423	255 bar Replacement Disc - Yellow
557424	317 bar Replacement Disc - Red
557425	379 bar Replacement Disc - Orange
557427	441 bar Replacement Disc - Pink
<b>MS, MH and MXP Rupture Indicators with Memory and O-Ring Seal</b>	
563229	193 bar
563221	255 bar
563222	317 bar
563224	379 bar
563226	441 bar
557422	193 bar Replacement Disc - Green
557423	255 bar Replacement Disc - Yellow
557424	317 bar Replacement Disc - Red
557425	379 bar Replacement Disc - Orange
557427	441 bar Replacement Disc - Pink
<b>MS, MH and MXP Reset Indicators with Memory and O-Ring Seal</b>	
563252	17 bar
563253	34 bar
563254	52 bar
563255	69 bar
563256	103 bar
563257	138 bar
563258	172 bar
<b>MSP Reset Indicators with Memory and O-Ring Seal</b>	
24B494	52 bar
24B495	69 bar
24B496	103 bar
<b>MJ, MS, MH and MXP Reset Indicators with Memory</b>	
563231	17 bar
563232	34 bar
563233	52 bar
563234	69 bar
563235	103 bar
563236	138 bar
563237	172 bar
<b>MGO Reset Indicator with Memory</b>	
564200	103 bar
<b>Broken Line Indicators</b>	
563068	34 bar Indicator
563069	69 bar Indicator
563070	103 bar Indicator

563075	4 bar Simulator
563076	7 bar Simulator
563077	10 bar Simulator
563078	Broken Line Indicator Kit - 563068, 563075
563079	Broken Line Indicator Kit - 563069, 563076
563080	Broken Line Indicator Kit - 563070, 563077
<b>Cycle Indicators and Switches</b>	
563251	MS, MH, MJ and MXP Visual Cycle Indicator Assembly
563260	MXP Visual Cycle Indicator Assembly
563250	MHP No Weep Cycle Indicator (NPT)
564357	MHP Cycle Switch, DPDT, Bracket Assembly
563272	MS, MH, MJ and MXP Cycle Switch, SPDT, and Bracket Assembly
563273	MS, MH, MJ and MXP Cycle Switch and Bracket Assembly, SPDT, Moisture Resistant
557781	Replacement Switch, SPDT, for 563272
557546	Replacement Bracket for 563272, 563273
<b>Proximity Switches for Divider Valves</b>	
563495	FSM, 20/28 VDC, 4-Pin CH - MGO
563970	FSM, 115 VAC, 3-Pin CH - MGO
557752	FSM, 20/28 VDC, 4-Pin CH - MXP/MX
563969	FSM, 115 VAC, 3-Pin CH - MXP/MX
563476	FSM, 115 VAC, 3-Pin PH - MXP/MX
557747	FSM, 12.23 VDC, 4-Pin CH - MSP/MH
557741	FSM, 115 VAC, 3-Pin BH - MSP/MH
557746	FSM, 115 VAC, 5-Pin BH - MSP/MH
563486	FSmech, 12-32 VDC, 3-Pin BH, LED - MXP/MX
563478	FSmech, 12-32 VDC, 3-Pin BH, LED - MSP/MH
563501	FSmech, 12-32 VDC, 4-Pin micro, LED - MSP/MH
563477	FSmech, 12-32 VDC, 5-Pin BH, LED - MSP/MH
563484	FSmech, AC/DC, 5-Pin BH - MSP/MH
557745	MHP Field Sensitive Magnetic, Explosion Proof, O-Ring Seal, (Class 1, Groups A-D)
563485	MHP Field Sensitive Mechanical, Explosion Proof, O-Ring Seal, (Class 1, Groups B-D, Div 1)
563427	MHP Reed Type (Unattached) O-Ring Seal
558018	Replacement Switch - 563427
<b>Proximity Switches Connector Cables</b>	
558021	3-Pin Cable, Straight Connector - 6 ft
558022	3-Pin Cable, Straight Connector - 12 ft
558025	4-Pin Cable, Straight Connector, Polarity (PNP) - 12 ft
558026	4-Pin Cable, 90° Connector, Polarity (PNP) - 12 ft
558023	5-Pin Cable, Straight Connector - 6 ft
558024	5-Pin Cable, Straight Connector - 12 ft



## ABOUT GRACO

Founded in 1926, Graco is a world leader in fluid handling systems and components. Graco products move, measure, control, dispense and apply a wide range of fluids and viscous materials used in vehicle lubrication, commercial and industrial settings.

The company's success is based on its unwavering commitment to technical excellence, world-class manufacturing and unparalleled customer service. Working closely with qualified distributors, Graco offers systems, products and technology that set the quality standard in a wide range of fluid handling solutions. Graco provides equipment for spray finishing, protective coating, paint circulation, lubrication, and dispensing sealants and adhesives, along with power application equipment for the contractor industry. Graco's ongoing investment in fluid management and control will continue to provide innovative solutions to a diverse global market.

## GRACO LOCATIONS

### CONTACT

#### *MAILING ADDRESS*

P.O. Box 1441  
Minneapolis, MN 55440-1441  
Tel: 612.623.6000  
Fax: 612.623.6777

### AMERICAS

#### *MINNESOTA*

Worldwide Headquarters  
Graco Inc.  
88-11th Avenue N.E.  
Minneapolis, MN 55413

### EUROPE

#### *BELGIUM*

European Headquarters  
Graco N.V.  
Industrieterrein-Oude Bunders  
Slakweidestraat 31  
3630 Maasmechelen,  
Belgium  
Tel: 32.89.770.700  
Fax: 32.89.770.777

### ASIA PACIFIC

#### *JAPAN*

Graco K.K.  
1-27-12 Hayabuchi  
Tsuzuki-ku  
Yokohama City, Japan 2240025  
Tel: 81.45.593.7300  
Fax: 81.45.593.7301

### ASIA PACIFIC

#### *CHINA*

Graco Hong Kong Ltd.  
Representative Office  
Room 118 1st Floor  
No.2 Xin Yuan Building  
No.509 Cao Bao Road  
Shanghai, P.R. China 200233  
Tel: 86.21.649.50088  
Fax: 86.21.649.50077

### ASIA PACIFIC

#### *KOREA*

Graco Korea Inc.  
Choheung Bank Building  
4th Floor #1599  
Gwanyang-Dong, Dongan-Ku,  
Anyang-Si, Gyunggi-Do,  
Korea 431-060  
Tel: 82(Korea).31.476.9400  
Fax: 82(Korea).31.476.9801

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Europe  
+32 89 770 700  
FAX +32 89 770 777  
WWW.GRACO.COM