



Trabon[®] MSP Modular Divider Valves



Your key to maximum design flexibility with series-progressive reliability.

PROVEN QUALITY. LEADING TECHNOLOGY.

Match lubricant flow to the exact needs of each point.

- Precise monitoring, positive feedback
- Simple to install and operate
- Modular design for total flexibility

The flexible, modular MSP Divider Valve

- For grease or oil systems up to 3,500 psi (241 bar)
- Lubricate up to 16 points per valve assembly
- Choice of SAE, NPSF or BSPP inlet/outlet connections
- O-Ring sealing prevents leaks, reduces maintenance
- Individual valve outputs vary by a maximum ratio of 16:1
- Built-in check valves prevent lube re-entry and help keep lines full
- Stackable design simplifies installation, adds flexibility
- Available in carbon steel with corrosion-resistant plating. Contact Graco's factory regarding 316 stainless steel for corrosive applications

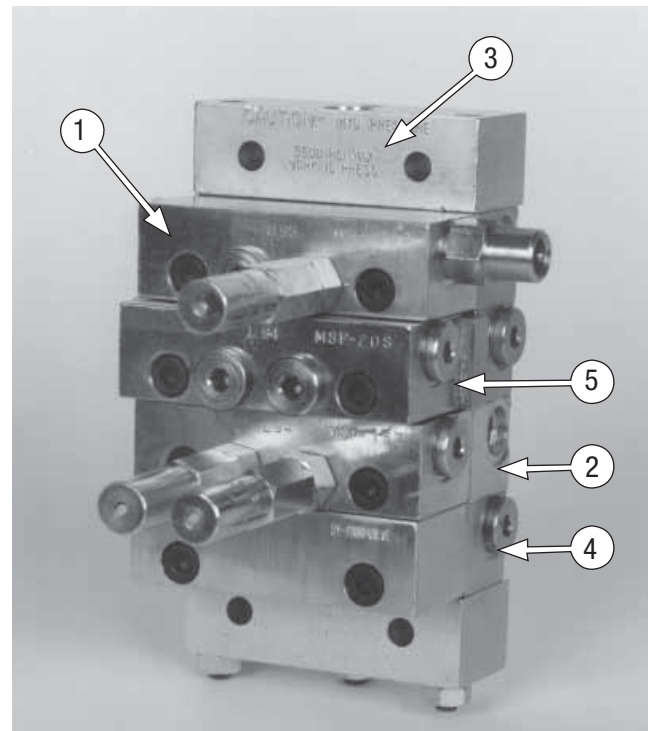
Each assembly includes: (1) **valve sections** with working pistons (3 minimum), (2) **subplates** with outlet ports, (3) **inlet section**, and (4) **end sections**.

Twin piston sections are ported to create **separate outputs** for two lube points. **Single sections combine** the output from both ends of the piston and send it to a single lube point.

Field-installable **crossport or singling plates (5)** may be used to increase the flow to a single point or accommodate an odd number of lube points.

A **bypass section** is available to eliminate a piston section or provide for added lube points in the future.

NOTE: When bypass sections are used, the Divider Valve assembly must have a minimum of 3 working sections in addition to one or more bypass sections.



Improve matchup of lube delivery and machine usage.

Special Inlet Sections

- Allow zoning of large systems served by single pump and reservoir
- Choice of inlet port activation: electric or pneumatic
- Simpler to install, add or remove points
- Choice of SAE, NPSF, BSPP (ISO 1179) or metric (ISO 6149) connection

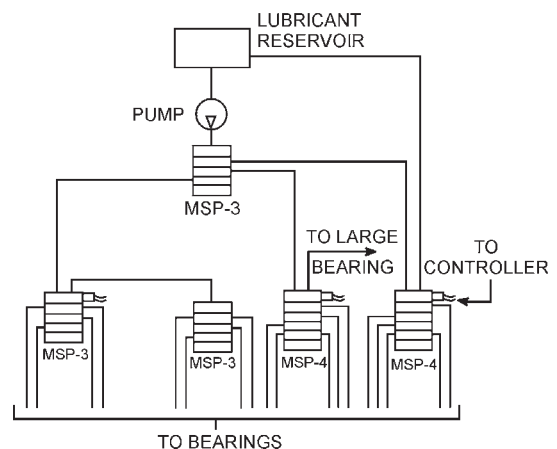
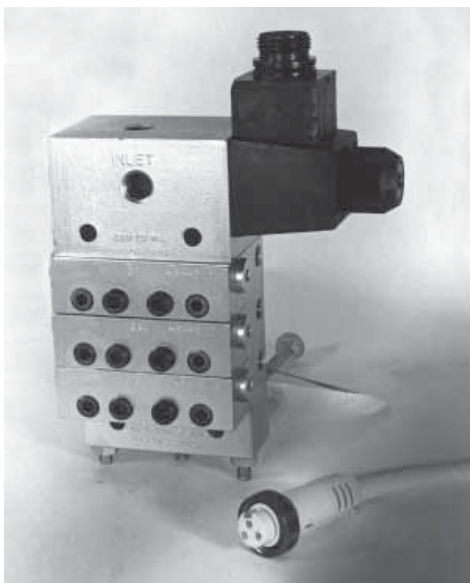
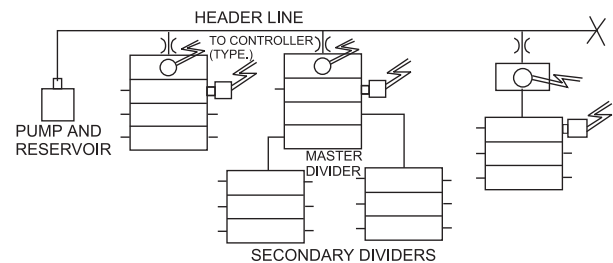
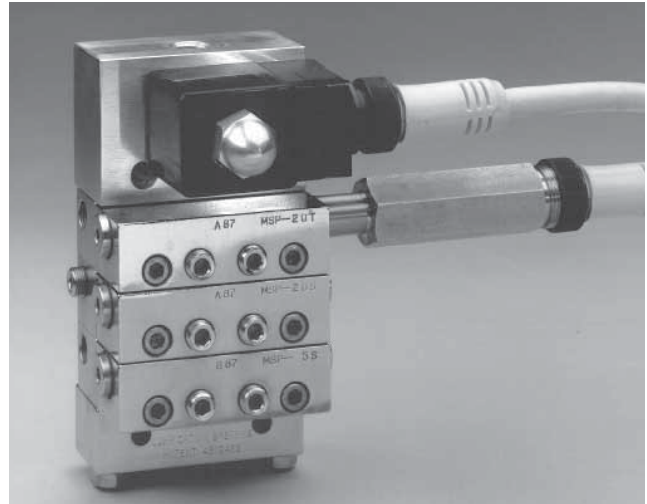
These versatile inlets provide positive, series-progressive lubrication for extended lines and systems. You easily match lube delivery to machine usage, bypass machinery that's not currently in use, and get reliable start-up testing, monitoring, and fault detection.

Zero-Leak Inlet Shut-Off

A two-way valve that can be used with either continuous or intermittent pressurized harder systems. Replaces a standard inlet section or mounts in-line with a remote manifold kit. Refer to bulletin L10104 for additional details. Refer to bulletin L10105 for modular zero-leak.

Shunt Inlet Section

A three-function valve, either electric or pneumatic: allows lubricant to enter divider valve, bypasses it to another divider valve, or diverts it back to tank. Replace standard inlet or mount in-line with remote manifold kit.

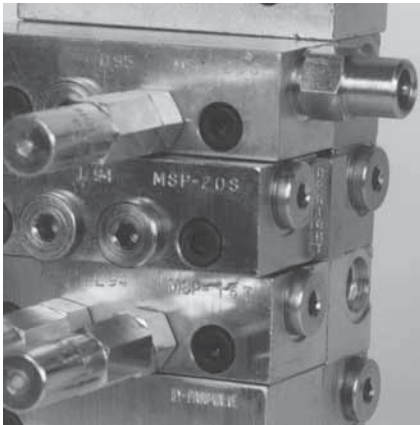


A wide variety of safeguards monitor and verify lube cycles

- Track valve-piston action
- Easily interfaced to system controller

Cycle Indicators

These mechanical and electrical units sense the divider valve piston's action for accurate control and monitoring of lube cycles.



- **Cycle Indicator Pin:** Valve sections are available with a factory-installed indicator pin which moves in and out as lubricant passes through the valve.
- **Universal Cycle Counter:** Six-digit counter displays each complete cycle of the divider valve. Requires divider valve section with indicator pin (described above). Part number: **563444** (527-002-410).



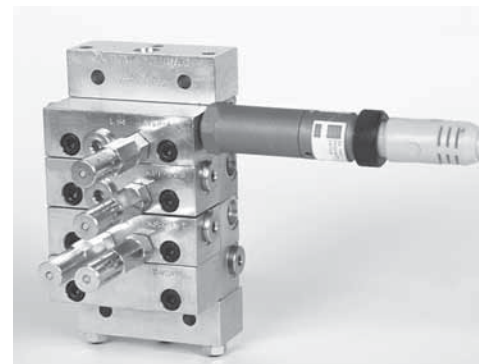
- **Field-sensitive Proximity Switch:** A ceramic-magnet switch for grease or oil systems up to 200 cpm at pressure up to 3,500 psi (241 bar), accurately signals piston cycles, and is ideal for high-cycle applications. Part numbers: 3-pin with O-Ring, **557741** (527-003-251); 5-pin with O-Ring, **557746** (527-004-111).



- **Magnetic Visual Indicator:** Six steel balls in a clear sleeve follow a magnet which moves with the cycling piston, providing a clear visual indication of lube cycles. Part number: with O-Ring, **563251** (509-932-522).



- **Cycle Indicator Switch (SPDT):** Used in conjunction with the cycle indicator pin at cycle rates not exceeding 60 cpm, it provides an electrical signal to the system controller which counts cycles to monitor and verify completion of the lube cycle. Part number: **563272** (510-599-000). A moisture-resistant switch, **563273** (510-599-200), is also available.



- **LED Field-sensitive Proximity Switch:** This 24 VDC device magnetically senses the movement of the piston, triggering the switch and illuminating the LED. Part numbers: 3-pin with O-Ring, **563478** (527-005-690); 5-pin with O-Ring, **563477** (527-005-670); Explosion proof with O-Ring; **563485** (527-006-060).
- **Connecting Cables:** Brad Harrison mating cables with either 3- or 5-pin connectors are available in 12-ft. (3.65 m) lengths for the F/S proximity switches and other devices. Refer to bulletin 15600 for complete listing of proximity cycle switches.

Choice of indicators offer automatic system protection and fault location.

- Immediate response to blockages
- Manual or automatic reset
- Continues to serve unaffected points

Performance Indicators

These vital safeguards react to excess lube pressure when points or lines become blocked. Installed in indicator ports on the working piston sections, they quickly identify the affected lines. Refer to bulletin L15401 for complete listing of available performance indicators.

- **Automatic Relief-to-Atmosphere Indicator (O-Ring Seal):** Spring-loaded piston unseats when blockage occurs, venting lubricant to atmosphere each time piston cycles. This allows system to lubricate unaffected points. When the blockage is cleared, the indicator resets automatically.
- **Manual Reset Indicator with Memory (O-Ring Seal):** System blockage triggers a spring-loaded piston to display an indicator. Since there is no relief, pressure backs up in the system and the system stops, allowing a controller to alarm. After correcting the problem, the indicator pin is reset manually.

ORDERING INFORMATION		
Description	Part No.	Old Part No.
O-Ring, 750 psi (51 bar)	563170	508-310-415
O-Ring, 1000 psi (69 bar)	563171	508-310-425
O-Ring, 1250 psi (86 bar)	563172	508-310-435
O-Ring, 1500 psi (103 bar)	563173	508-310-445
O-Ring, 2000 psi (138 bar)	563174	508-310-455
O-Ring, 2500 psi (172 bar)	563175	508-310-465
O-Ring, 3000 psi (207 bar)	563176	508-310-475

ORDERING INFORMATION		
Description	Part No.	Old Part No.
O-Ring, 250 psi (17 bar)	563252	509-932-590
O-Ring, 500 psi (34 bar)	563253	509-932-600
O-Ring, 750 psi (51 bar)	563254	509-932-610
O-Ring, 1000 psi (69 bar)	563255	509-932-620
O-Ring, 1500 psi (103 bar)	563256	509-932-630
O-Ring, 2000 psi (138 bar)	563257	509-932-640
O-Ring, 2500 psi (172 bar)	563258	509-932-650



Automatic Relief-to-Atmosphere Indicator

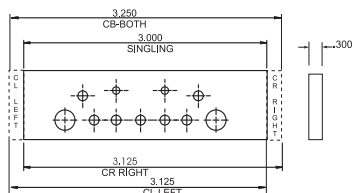
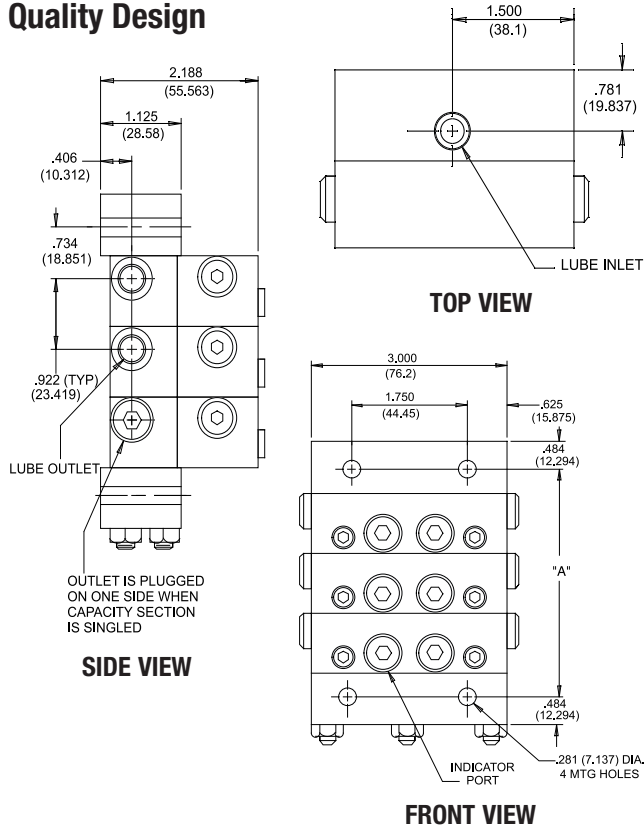


Manual Reset Indicator with Memory

Designed with over 100 years of experience in centralized lubrication.

- Engineering certified to ISO 9001 Standards
- Modular design for maximum flexibility
- Install and maintain without disturbing lube lines

Quality Design



Style	Tab(s)
CR Right	Right
CL Left	Left
CB-Both	Right & Left
Singling	None

Qty of Sections	"A"
3	3.578 (90.881)
4	4.500 (114.30)
5	5.422 (137.718)
6	6.344 (161.138)
7	7.266 (184.556)
8	8.188 (207.975)

MSP DIVIDER SPECIFICATIONS

Standard Material	Corrosion Protected Steel
Optional Material	Type 316 Stainless Steel
O-Ring Seals	Standard - 70 Durometer Buna-N Optional - 70 Durometer Viton
Max Cycle Rate: w/Cycle Pin w/out Cycle Pin, or w/Prox Cycle Sw	60 CPM 200 CPM
Pressure (max)	3500 psi (241 bar)
Temperature (max)	Buna-N Seals - 200°F (93°C) Viton Seals - 350°F (177°C)
Lubricant	Oil or Grease
Zero Leak Inlet: Pressure (max) Ambient Temperature (max) Lubricant (oil only)	1500 psi (104 bar) 140°F (60°C) up to 5000 SUS Requires 25 micron (min) filtration
Electrical Characteristics	See page 7
Shunt/Shut-Off Inlet: Pressure (max) Ambient Temperature (max) Lubricant	3000 psi (207 bar) Intermittent supply pressure only 140°F (60°C) Oil and Fluid Grease
Electrical Characteristics	Filter oil through 25 micron filter and grease through a 100 mesh strainer See page 7

DIVIDER VALVE ASSEMBLY

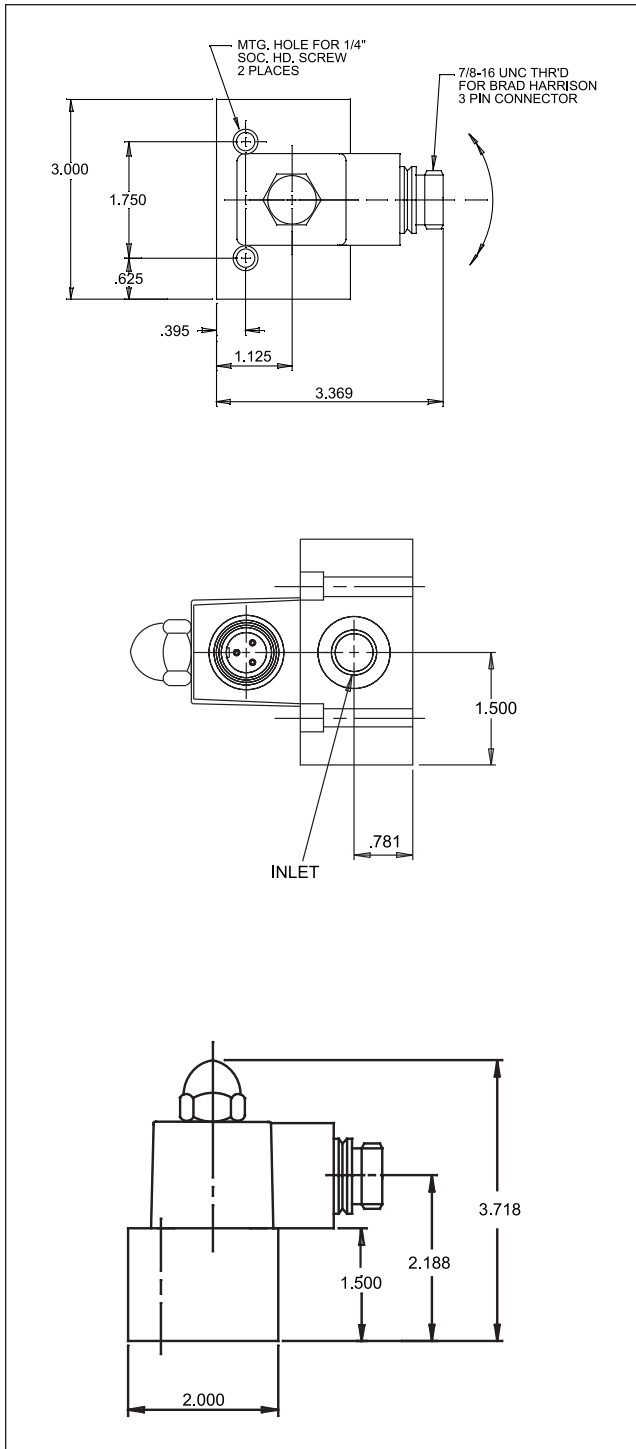
Description	Net Weight lbs (kg)
3 section	5.9 (2.7)
4 section	7.3 (3.3)
5 section	8.7 (4.0)
6 section	10.2 (4.6)
7 section	11.6 (5.6)
8 section	13.0 (5.9)

TORQUE SPECIFICATIONS

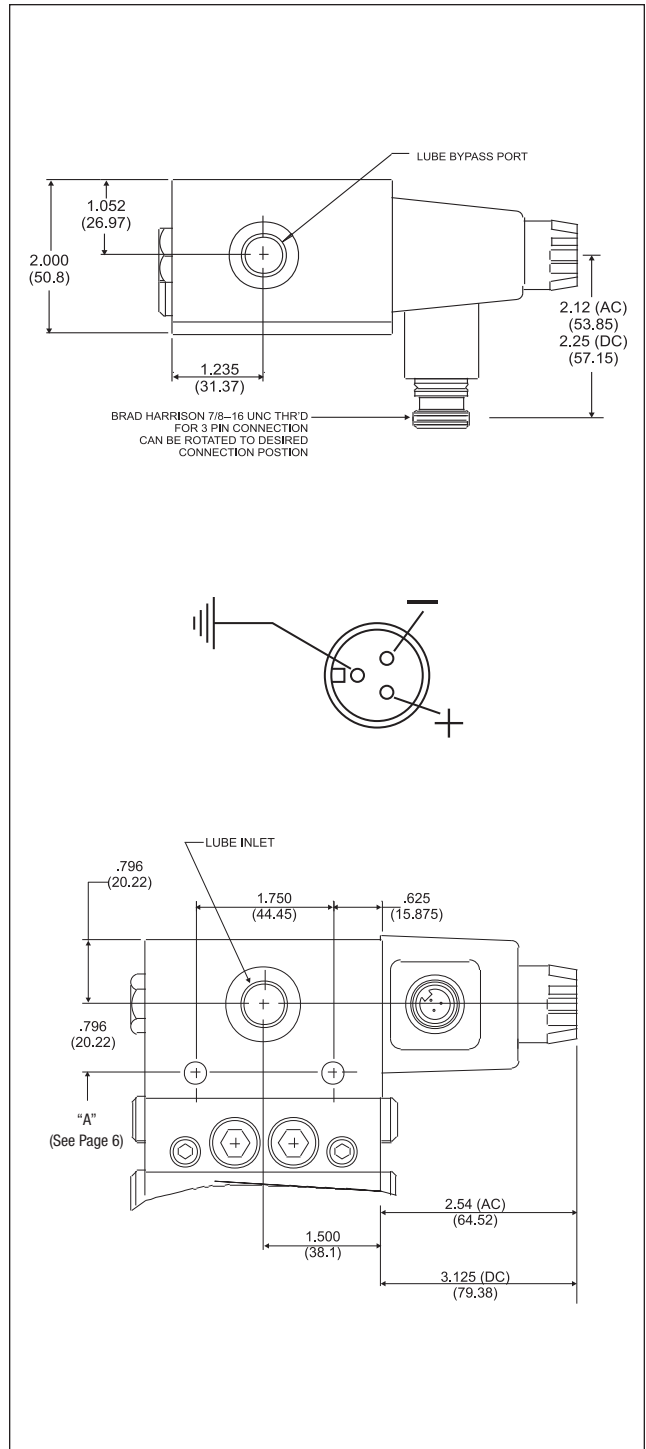
Tie Rod Nut	5-8 ft lbs
Valve Block Mtg. Screw	8-9 ft lbs*
Indicator Port Plug	8-9 ft lbs*
Inlet Bleed Screw	1-2 ft lbs
Piston Enclosure Plug	12-15 ft lbs*

*O-Ring sealed components

Zero-Leak Inlet Shut-Off Valve



Shunt Inlet Option



Zero-Leak Electrical Specifications:

115 VAC, 0.22 A In-Rush, 0.14 A Holding 24 VDC, 28 W

Shunt/Shut-Off Electrical Specifications:

115 VAC, 1.6 A In-Rush, 0.54 A Holding 24 VDC, 28 W

Solenoid mounted on right side n.o. to divider, closed to bypass

Solenoid mounted on left side n.c. to divider, open to bypass

You can easily configure the system to the need.

- Custom performance from stock modules
- Choice of Single or Twin outlets

Specifying Guide - MSP Divider Valve

Component Identification and Ordering Information*
Zinc plated carbon steel

Item	Description T = Twin S = Single	Displacement in ³ (cm ³)	Buna-N Seal		w/Cycle Pin (RH) Buna-N Seal	
			Part no.	Old Part No.	Part No.	Old Part No.
1	Valve Sections					
	5T - .005	0.005 (0.082)	562720	106-100-175		
	5S - .005	0.010 (0.164)	562711	106-100-015		
	10T - .010	0.010 (0.164)	562721	106-100-185		
	10S - .010	0.020 (0.328)	562712	106-100-025		
	15T - .015	0.015 (0.246)	562722	106-100-195		
	15S - .015	0.030 (0.492)	562713	106-100-035		
	20T - .020	0.020 (0.328)	562723	106-100-205	562739	106-100-935
	20S - .020	0.040 (0.656)	562714	106-100-045	562729	106-100-735
	25T - .025	0.025 (0.410)	562724	106-100-215	562740	106-100-945
	25S - .025	0.050 (0.820)	562715	106-100-055	562730	106-100-745
	30T - .030	0.030 (0.492)	562725	106-100-225	562741	106-100-955
	30S - .030	0.060 (0.983)	562716	106-100-065	562731	106-100-755
	35T - .035	0.035 (0.574)	562726	106-100-235	562742	106-100-965
	35S - .035	0.070 (1.148)	562717	106-100-075	562732	106-100-765
	40T - .040	0.040 (0.656)	562727	106-100-245	562743	106-100-975
	40S - .040	0.080 (1.311)	562718	106-100-085	562733	106-100-775

Item	Description	Part No.	Old Part No.
2	Subplate		
	1/8-27 NPSF	563425	527-000-311
	7/16-20 SAE	563451	527-003-550
	1/8-28 BSPP (ISO 1179)	563447	527-003-140
3	Inlet		
	1/4-18 NPSF	560919	527-001-800
	7/16-20 SAE	560943	527-003-540
	1/4-19 BSPP (ISO 1179)	560936	527-003-130
	Inlet w/Bleed		
	1/4-18 NPSF	563420	527-000-321
	7/16-20 SAE	563422	527-000-325
4	End Section	563424	527-001-900
	† End (SPP)	563279	510-770-332
5	Crossport Plate		
	Right	563469	527-005-320
	Left	563470	527-005-330
	Both	563471	527-005-340
6	Singling Plate	563472	527-005-350
7	Bypass Block	562660	106-000-010

Item	Description	Part No.	Old Part No.
8	Tie Rod (3 required)		
	3 Section	557731	527-001-930
	4 Section	557732	527-001-940
	5 Section	557733	527-001-950
	6 Section	557734	527-001-960
	7 Section	557735	527-001-970
	8 Section	557736	527-001-980
9	Tie Rod Nut Only (3 required)	556371	410-440-010
10	Valve Block Mounting Screws	556513	419-140-070
11	Piston Enclosure Plug	557716	527-000-232
12	Piston Enclosure O-Ring	556568	422-210-040
13	Indicator Port Plug	557776	527-300-840
14	Indicator Port Plug O-Ring	556567	422-210-030
15	MSP Buna-N O-Rings	556540	422-010-060
	MSP (70 Duro) Viton O-Ring	557721	527-000-810
16	Valve Block Mounting Screw for Crossport/Singling Plate	556514	419-140-080
17	Outlet Check Ball	556327	401-030-020
18	Outlet Check Spring	557737	527-001-910

Special Inlets

Valve State	Description	Part No.	Old Part No.
N.C.	Zero-Leak, 115 VAC, 3-Pin Brad Harrison Connector		
	1/4-18 NPSF	563460	527-004-320
	9/16-18 SAE	563468	527-005-200
	Replacement Coil	557226	492-120-206
N.C.	Zero-Leak, 24 VDC, 3-Pin Brad Harrison Connector		
	1/4-18 NPSF	563464	527-004-870
	9/16-18 SAE	563467	527-005-180
	1/4 BSPP (ISO 1179)	563082	463-920-720
	Replacement Coil	557225	492-120-205
	Zero-Leak, No Coil (order separate)	563462	527-004-770
N.O.	Shunt/Shut-Off, 115 VAC, 3-Pin Brad Harrison Connector		
	1/4-18 NPSF	563452	527-003-660
	9/16-18 SAE	560953	527-004-790
	1/4-18 NPSF	563453	527-003-670
	9/16-18 SAE	563463	527-004-800
	Replacement Coil	557214	492-120-128
N.O.	Shunt/Shut-Off, 24 VDC, 3-Pin Brad Harrison Connector		
	1/4-18 NPSF	563454	527-003-680
	9/16-18 SAE	563482	527-005-780
	1/4 BSPP (ISO 1179)	563493	527-007-090
	1/4-18 NPSF	563455	527-003-690
N.C.	9/16-18 SAE	563483	527-005-785
N.C.	1/4 BSPP (ISO 1179)	563494	527-007-100
	Replacement Solenoid	557215	492-120-130
	Shunt/Shut-Off Pneumatic Operator	563456	527-003-730
	Remote Manifold kit - Zero-Leak and Shunt/Shut-Off		
	1/4-18 NPSF	563461	527-004-360
	9/16-18 SAE	-	527-005-400

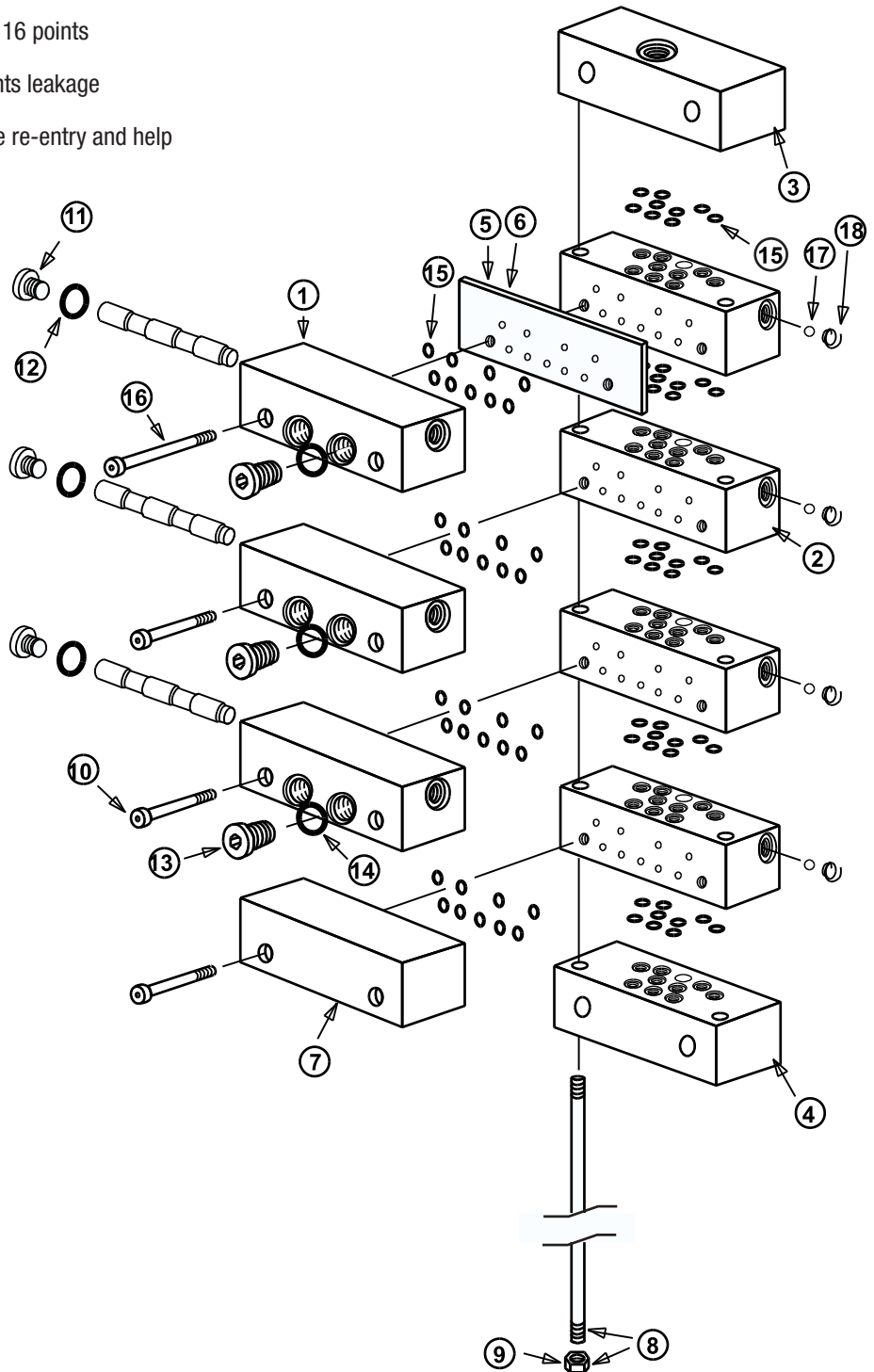
NOTE: Part numbers shown on previous page are for standard plated steel with Buna-N Seals. Consult Graco for Viton Seals or stainless steel components. Valve sections with cycle pin are standard Right Hand; can be made Left Hand. Consult factory. Consult factory for components requiring thread connection series other than those listed. † End Section (SPP) is supplied with plugged 1/8-27 NPS manual lube fitting port. Order (412-700-490) manual lube fitting separate.

Modular design for full flexibility

- One valve assembly serves up to 16 points
- O-Ring sealing throughout prevents leakage
- Built-in check valves prevent lube re-entry and help keep lines full

MSP Divider Valve

Part List Schematic



How to Order

Ordering Information

XXX - XXX - XX - X - X - XX - X - XX

SERIES OF FEEDER

MSP - STANDARD INDUSTRIAL TO 3500 PSI
MSV - SYNTHETIC INDUSTRIAL TO 3500 PSI
(VITON SEALS)

INLET/OUTLET PORT TYPES

SAE - STRAIGHT THREAD O-Ring SEAL
NPT - NPSF PIPE THREAD
BPS - BRITISH PARALLEL PIPE O-Ring SEAL (LSO 1179)
MET - METRIC THREAD O-Ring (ISO 6149)

INLET SECTION OPTIONS

MS - MS DIVIDER INLET
MH - MS DIVIDER INLET W/BLEED SCREWS
SH - MS DIVIDER W/SHUNT/SHUT-OFF (115 VAC)
SD - MS DIVIDER W/SHUNT/SHUT-OFF (24 VDC)
ZL - ZERO LEAK SHUT-OFF (115 VAC)
ZF - ZERO LEAK SHUT-OFF (24 VDC)

DIVIDER VALVE ACCESSORY OPTIONS

P - ASSEMBLY OF PERFORMANCE INDICATORS IN ALL WORKING OUTLETS
B - ASSEMBLY OF PERFORMANCE INDICATORS AND CHECK VALVES IN ALL WORKING OUTLETS
C - EXTERNAL CHECK VALVES IN ALL WORKING OUTLETS
E - SPP END SECTION W/PLUG IN 1/8-27 NPSF PORT FOR MANUAL LUBE FITTING - 563279 - (510-770-332)

NUMBER OF SECTIONS

3 - THREE 6 - SIX
4 - FOUR 7 - SEVEN
5 - FIVE 8 - EIGHT

VALVE CAPACITY MS VALVE BLOCK

BP - BYPASS
05 - .005 cu.in. (.082 cm³)
10 - .010 cu.in. (.164 cm³)
15 - .015 cu.in. (.246 cm³)
20 - .020 cu.in. (.328 cm³)
25 - .025 cu.in. (.410 cm³)
30 - .030 cu.in. (.492 cm³)
35 - .035 cu.in. (.574 cm³)
40 - .040 cu.in. (.656 cm³)

TYPE OF VALVE BLOCK

T - TWIN VALVE
S - SINGLE VALVE - RH OUTLET
L - SINGLE VALVE - LH OUTLET
B - TWIN VALE W/CYCLE PIN RIGHT
C - SINGLE VALVE W/CYCLE PIN RIGHT - RH OUTLET
D - SINGLE VALVE W/CYCLE PIN RIGHT - LH OUTLET
H - TWIN VALVE W/CYCLE PIN LEFT
J - SINGLE VALVE W/CYCLE PIN LEFT - RH OUTLET
K - SINGLE VALVE W/CYCLE PIN LEFT - LH OUTLET

CROSSPORTING OPTION

CR - RIGHT HAND SIDE
CL - LEFT HAND SIDE
CB - BOTH SIDES

Ordering Example

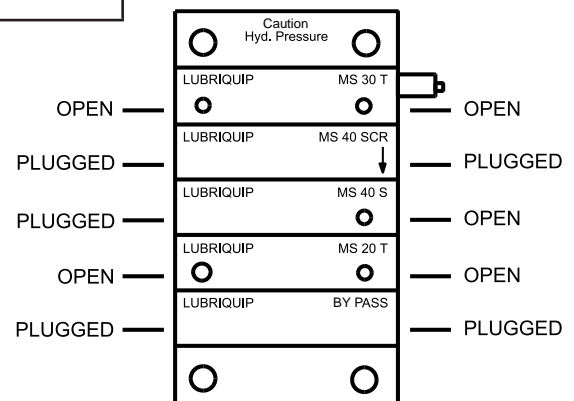
5-section MSP Divider Valve Assembly, standard seals, SAE ports and performance indicators in each working outlet. Consisting of:

- 1 - .030 Twin Valve with Cycle Pin Right Side
- 1 - .040 Single Valve - Crossport Right Side
- 1 - .040 Single Valve - Right Hand Outlet
- 1 - .020 Twin Valve
- 1 - Bypass Block

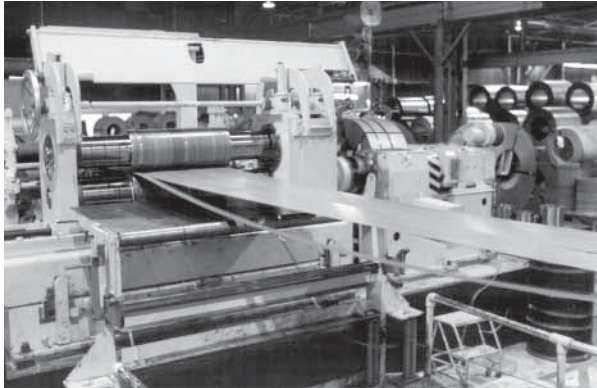
Ordering Code - MSP-SAE-MS-P-5-30B-40SCR-40S-20T-BP

Notes

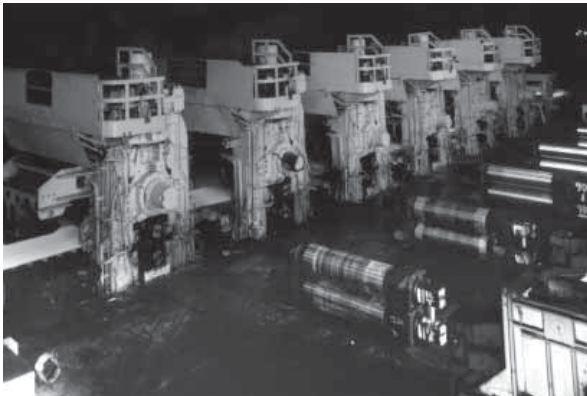
1. Right/Left Hand determined when viewing front of divider valve assembly. (Divider valve assembly placed on flat surface with inlet at top.)
2. Valves are specified starting from inlet section.
3. When valve is crossported, its outlet is plugged and output is diverted to next valve away from inlet.
4. Last valve in divider assembly, farthest from inlet, cannot be crossported.
5. Single valve can be crossported on one side only.
6. When valve is a single, only one outlet in its subplate can be used, other outlet must be plugged.
7. Cycle pins are available on MS (20, 25, 30, 35, and 40) valves only.
8. All divider valve assemblies must have a minimum of 3 working valves.
9. Bypass block cannot be supplied on divider valve with 3 subplates. Bypass block is not a working valve.
10. Divider systems should be limited to first and second stages only. Third staging is not recommended. Refer to Trabon **Bulletins L20101, L20105 and L20115** for further information on system design.



Graco® has applied automatic lubrication technology to a world of needs including yours!



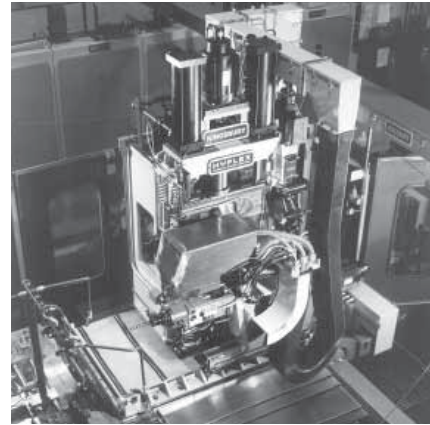
Graco systems require minimum attention. Filling the reservoir and periodic inspections are the only routine maintenance required.



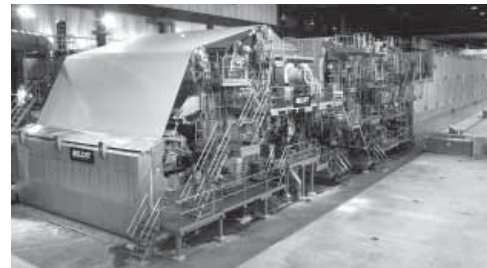
Lube delivery to machines in motion is offer superior to static lubrication. Oil and grease are forced into the load area to coat wear points.



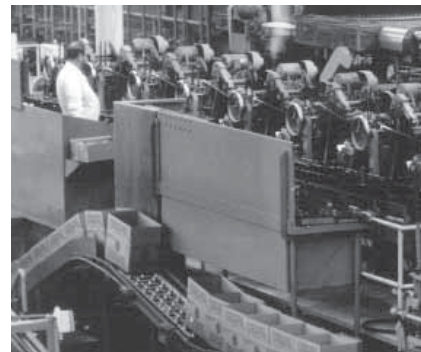
Graco's automated systems deliver lubricant to vital mechanisms, prolonging equipment life and reducing downtime.



Automated systems improve safety. Maintenance personnel do not have to lubricate dangerous machinery. Operators have less exposure to oil and lubricants on equipment and floor.



Graco's precise lubricant delivery eliminate lubricant waste, product contamination and heat buildup from excessive viscous shear.



Surges, vibrations, and other erratic operations are reduced with automatic lube systems. This minimizes risk of damage to equipment, products and personnel.



All Graco systems are engineered for the machinery and lubricant being used. We can even supply the lubricant, matched to the system you need.

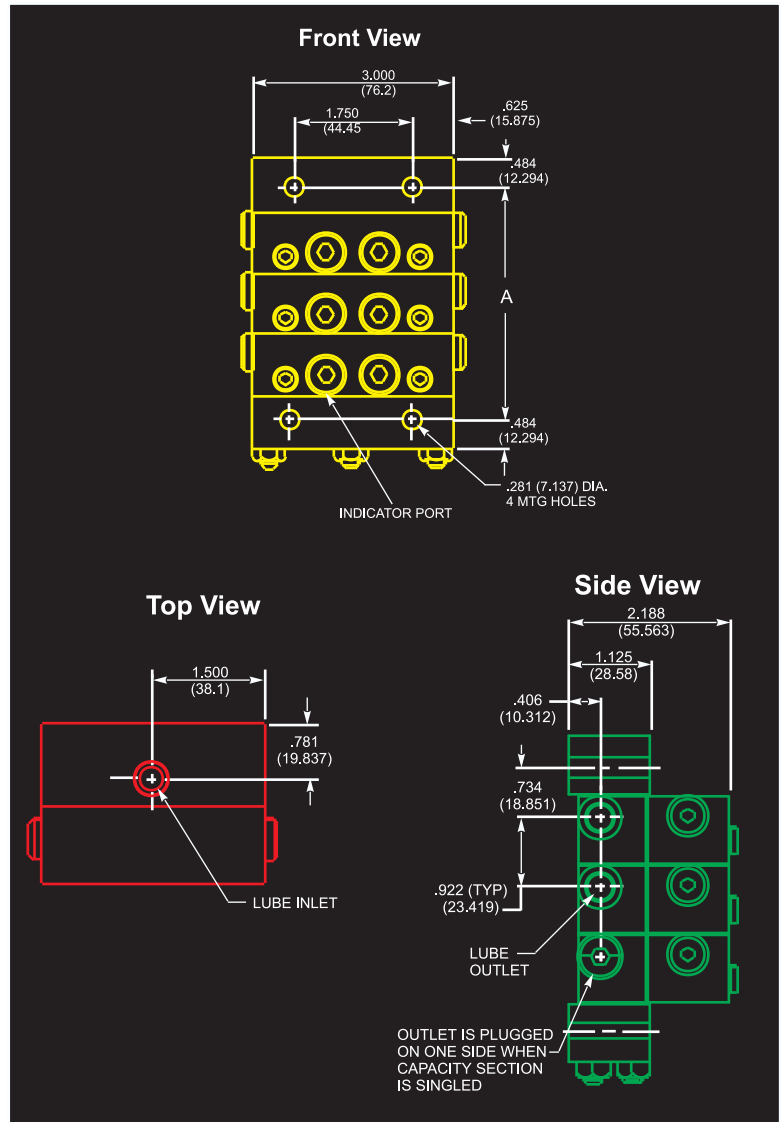
Your solution is at hand.



Our years of engineering innovative lubrication technology, plus our worldwide network of more than 100 distributors means that the components you need are probably in stock right now. This inventory of proven components allows distributors and factory engineers to design a truly customized system using economical on-the-shelf parts.

New or upgrade, Graco has the applied technology.

Whether you are considering new equipment or upgrading an existing system, count on Graco for the applied lubrication technology to meet your need with a minimum of hassle and investment. Call on our unparalleled customer support for fast, efficient design, installation, maintenance and troubleshooting assistance, or to get the name of your nearest full-line, factory-trained distributor.



All written and visual data contained in this document are based on the latest product information available at the time of publication. Graco reserves the right to make changes at any time without notice.

Contact us today!

To receive product information or talk with a Graco representative, call 800-533-9655 or visit us online at www.graco.com.

