



Trabon® MSP Modular Divider Valves

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



Match lubricant flow to the exact needs of each point.

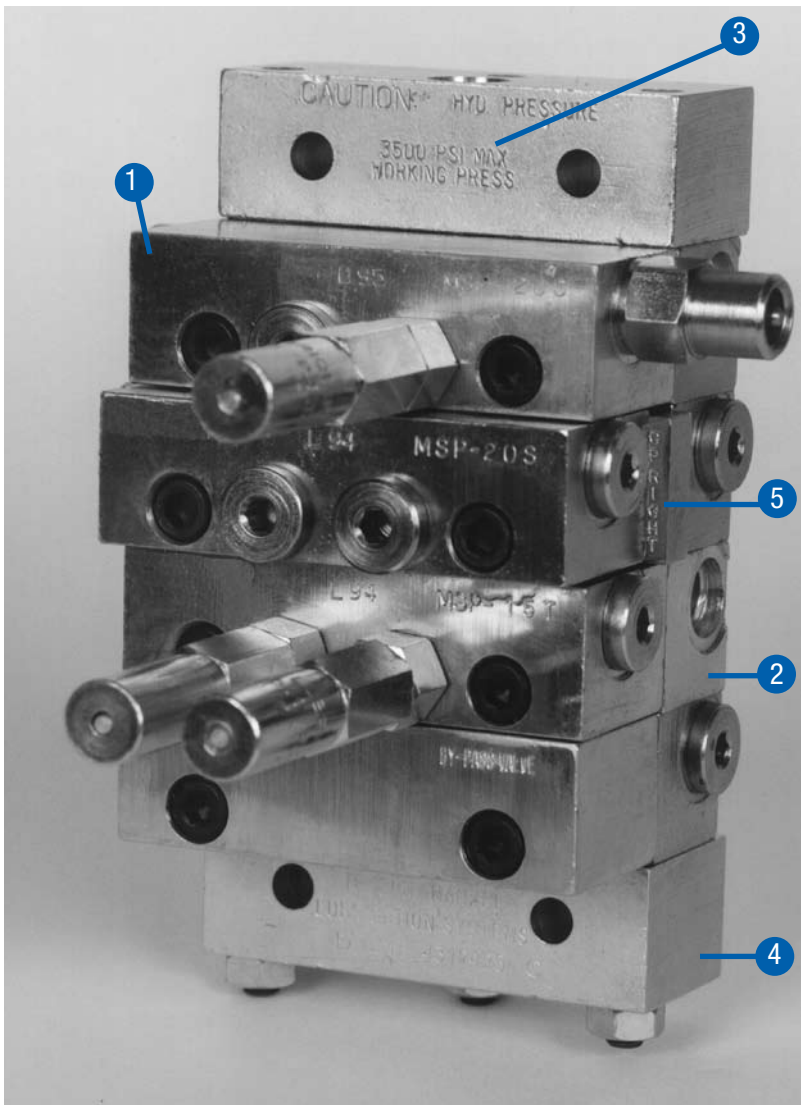
- Precise monitoring, positive feedback
- Simple to install and operate
- Modular design for total flexibility

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 piston (3 minimum), (2) **subplates** with outlet ports, (3) **inlet section**, and (4) **end section**.

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:

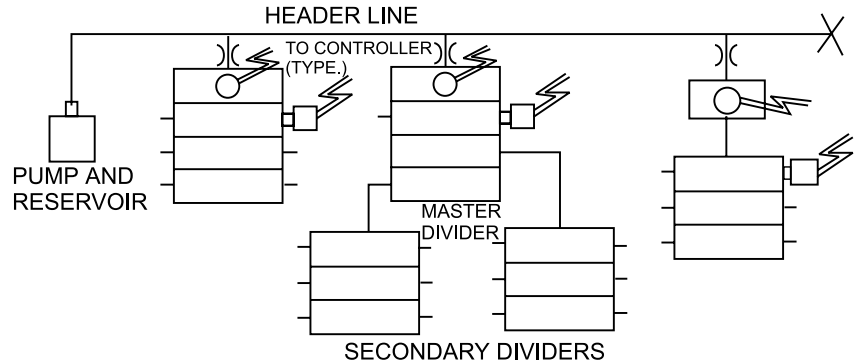
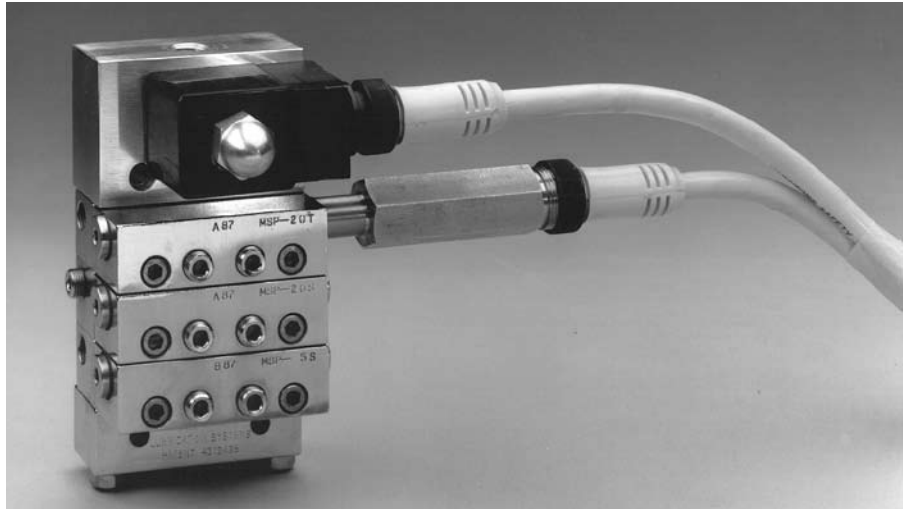
When bypass sections are used, the Divider valve assembly must have a minimum of 3 working sections in addition to one or more bypass sections.

Improve matchup of lube delivery and machine usage.

SPECIAL INLET SECTIONS

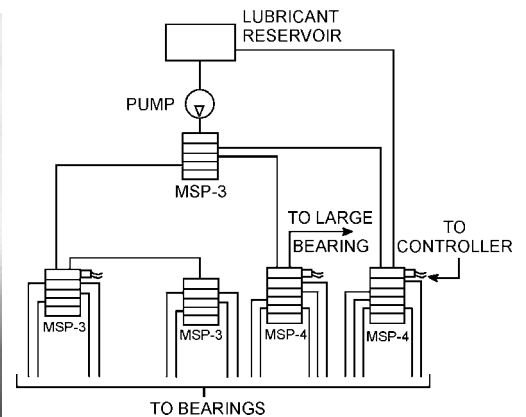
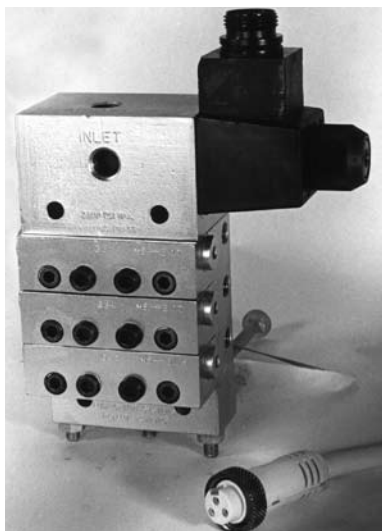
- Allow zoning of large systems served by single pump and reservoir
- Choice of inlet port activation: electric or pneumatic
- Simpler to install, add or remove points
- Choice of SAE, NPSF, BSPP (ISO 1179) or metric (ISO 6149) connection

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 header 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, (1) Allows lubricant to enter divider valve, (2) bypasses it to another divider valve, or (3) diverts it back to tank. Replace standard inlet or mount in-line with remote manifold kit.

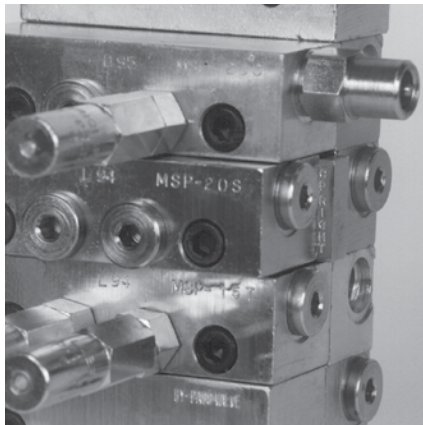


A wide variety of safeguards monitor and verify lube cycles.

- 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.

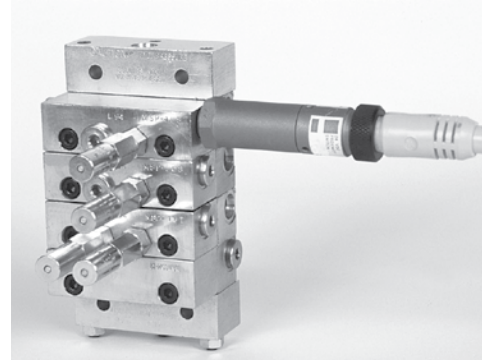
- **Universal Cycle Counter.** Six-digit counter displays each complete cycle of the divider valve. Requires divider valve section with indicator pin (described above). Part number: **563444** (527-002-410).



- **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, **563272** (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).
- **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).
- **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



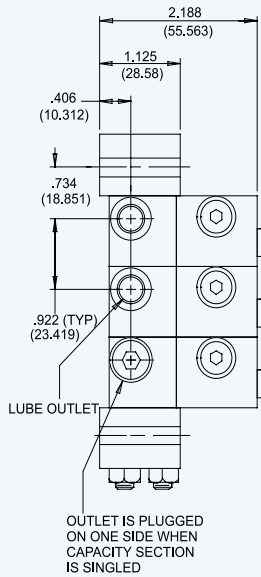
Manual Reset Indicator with Memory

Designed with over 100 years experience in centralized lubrication.

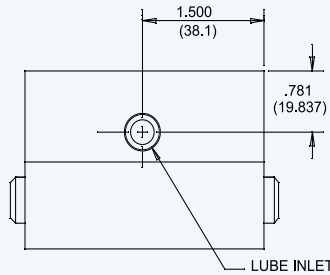
- Engineering certified to ISO 9001 Standards
- Modular design for maximum flexibility
- Install and maintain without disturbing lube lines

QUALITY DESIGN

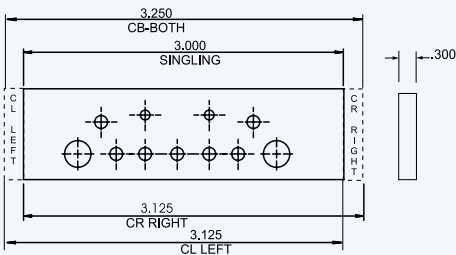
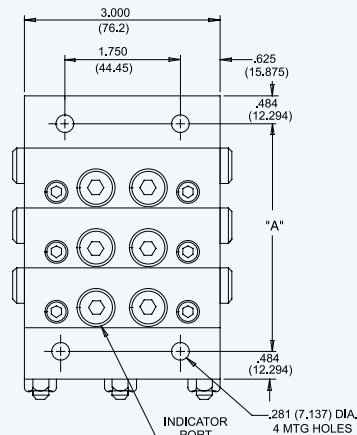
SIDE VIEW



TOP VIEW



FRONT VIEW



PRODUCT I.D.

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	60 CPM
w/o Cycle Pin, or w/Prox Cycle Sw	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)	1500 psi (104 bar)
Ambient Temperature (max)	140°F (60°C)
Lubricant (oil only)	up to 5000 SUS Requires 25 micron (min) filtration
Electrical Characteristics	See page 7
Shunt/Shut-Off Inlet:	
Pressure (max)	3000 psi (207 bar) intermittent supply pressure only
Ambient Temperature (max)	140°F (60°C)
Lubricant	Oil and Fluid Grease Filter oil through 25 micron filter and grease through a 100 mesh strainer
Electical Characteristics	See page 7

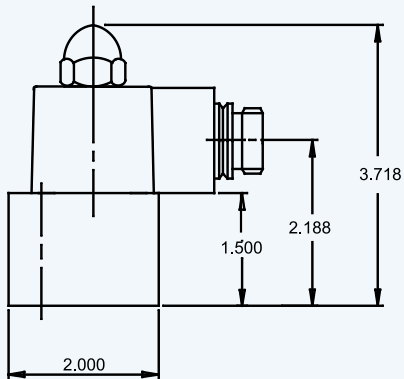
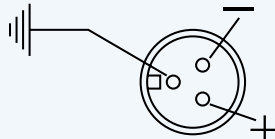
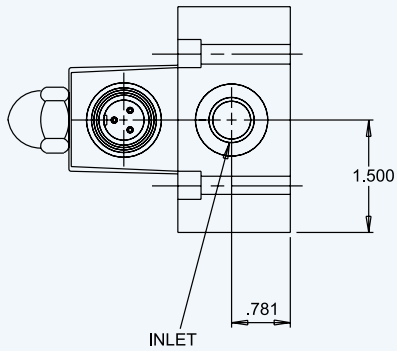
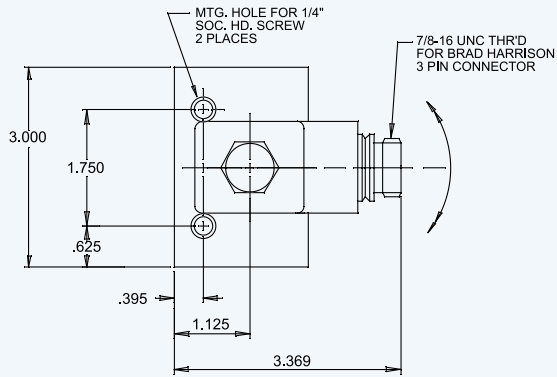
DIVIDER VALVE ASSEMBLY

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

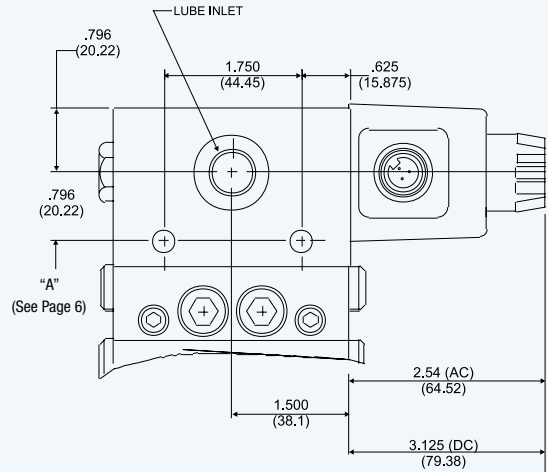
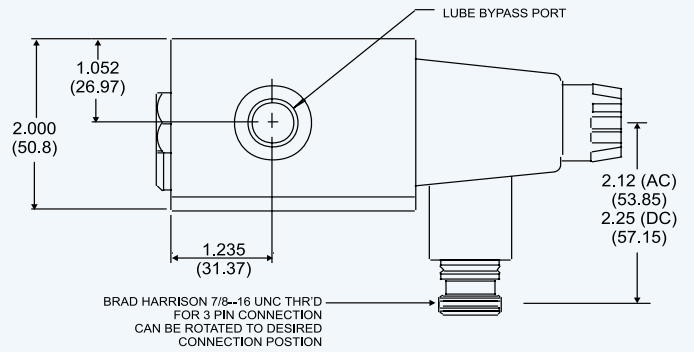
Tie Rod Nut	5-8 ft lbs
Valve Block Mtg. Screw	8-9 ft lbs*
Indicator Port Plug	8-9 ft lbs*
Inlet Bleed Screw	1-2 ft lbs
Piston Enclosure Plug	12-15 ft lbs*
*O-Ring sealed components	

ZERO LEAK INLET SHUT-OFF VALVE



ZERO LEAK ELECTRICAL SPECIFICATIONS 115 VAC, .22 A
IN-RUSH, .14 A HOLDING
24 VDC, 28 W

SHUNT INLET OPTION



SHUNT/SHUT-OFF ELECTRICAL SPECIFICATIONS

115 VAC, 1.6 A IN-RUSH, .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

Parts List Key	Size	Description	Displacement in ³ cm ³	Buna-N Seal Part No. (Old No.)	With Cycle Pin (Rt. Side) Buna-N Seals Part No. (Old No.)
1		Valve Sections			
	5T	.005 Twin Outlet	0.005 0.082	562720 (106-100-175)	— —
	5S	.005 Single Outlet	0.010 0.164	562711 (106-100-015)	— —
	10T	.010 Twin Outlet	0.010 0.164	562721 (106-100-185)	— —
	10S	.010 Single Outlet	0.020 0.328	562712 (106-100-025)	— —
	15T	.015 Twin Outlet	0.015 0.246	562722 (106-100-195)	— —
	15S	.015 Single Outlet	0.030 0.492	562713 (106-100-035)	— —
	20T	.020 Twin Outlet	0.020 0.328	562723 (106-100-205)	562739 (106-100-935)
	20S	0.02 Single Outlet	0.040 0.656	562714 (106-100-045)	562729 (106-100-735)
	25T	.025 Twin Outlet	0.025 0.410	562724 (106-100-215)	562740 (106-100-945)
	25S	.025 Single Outlet	0.050 .0820	562715 (106-100-055)	562730 (106-100-745)
	30T	.030 Twin Outlet	0.030 0.492	562725 (106-100-225)	562741 (106-100-955)
	30S	.030 Single Outlet	0.060 0.983	562716 (106-100-065)	562731 (106-100-755)
	35T	.035 Twin Outlet	0.035 0.574	562726 (106-100-235)	562742 (106-100-965)
	35S	.035 Single Outlet	0.070 1.148	562717 (106-100-075)	562732 (106-100-765)
	40T	.040 Twin Outlet	0.040 0.656	562727 (106-100-245)	562743 (106-100-975)
	40S	.040 Single Outlet	0.080 1.311	562718 (106-100-085)	562733 (106-100-775)

Parts List Key	Description	1/8-27 NPSF Part No. (Old No.)	7/16-20 SAE Part No. (Old No.)	(ISO 1179) 1/8-28 BSPP Part No. (Old No.)
2	Subplate	563419 (527-000-311)	563451 (527-003-550)	563447 (527-003-140)

Parts List Key	Description	1/4-18 NPSF Part No. (Old No.)	7/16-20 SAE Part No. (Old No.)	(ISO 1179) 1/4-19 BSPP Part No. (Old No.)
3	Inlet	560919 (527-001-800)	560943 (527-003-540)	560936 (527-003-130)
	Inlet: w/Bleed	563420 (527-000-321)	563422 (527-000-325)	— —
4 †	End Section	563428 (527-001-900)	563428 (527-001-900)	563428 (527-001-900)
	End (SPP)	563279 (510-770-332)	563279 (510-770-332)	563279 (510-770-332)
5	Right	563469 (527-005-320)	563469 (527-005-320)	563469 (527-005-320)
	Left	563470 (527-005-330)	563470 (527-005-330)	563470 (527-005-330)
	Both	563471 (527-005-340)	563471 (527-005-340)	563471 (527-005-340)
6	Single Plate	563472 (527-005-350)	563472 (527-005-350)	563472 (527-005-350)
7	Bypass Block	562660 (106-000-010)	562660 (106-000-010)	562660 (106-000-010)

NOTE: Part numbers shown 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 for components requiring thread connection series other than those listed. † End Section (SPP) is supplied with plugged 1/8-27 NPS manual lube fitting part. Order 556429 (412-700-490) manual lube fitting separate.

Parts List Key	Description	Part No. (Old No.)
8 (3 req'd)	Tie Rod \$ Nut Assembly	— —
	3 Section	563429 (527-001-930)
	4 Section	563430 (527-001-940)
	5 Section	563431 (527-001-950)
	6 Section	563432 (527-001-960)
	7 Section	563433 (527-001-970)
	8 Section	563434 (527-001-980)
	9	Tie Rod Nut Only
10	Valve Block Mounting Screws	556513 (419-140-070)
11	Piston Enclosing 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-Rings	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

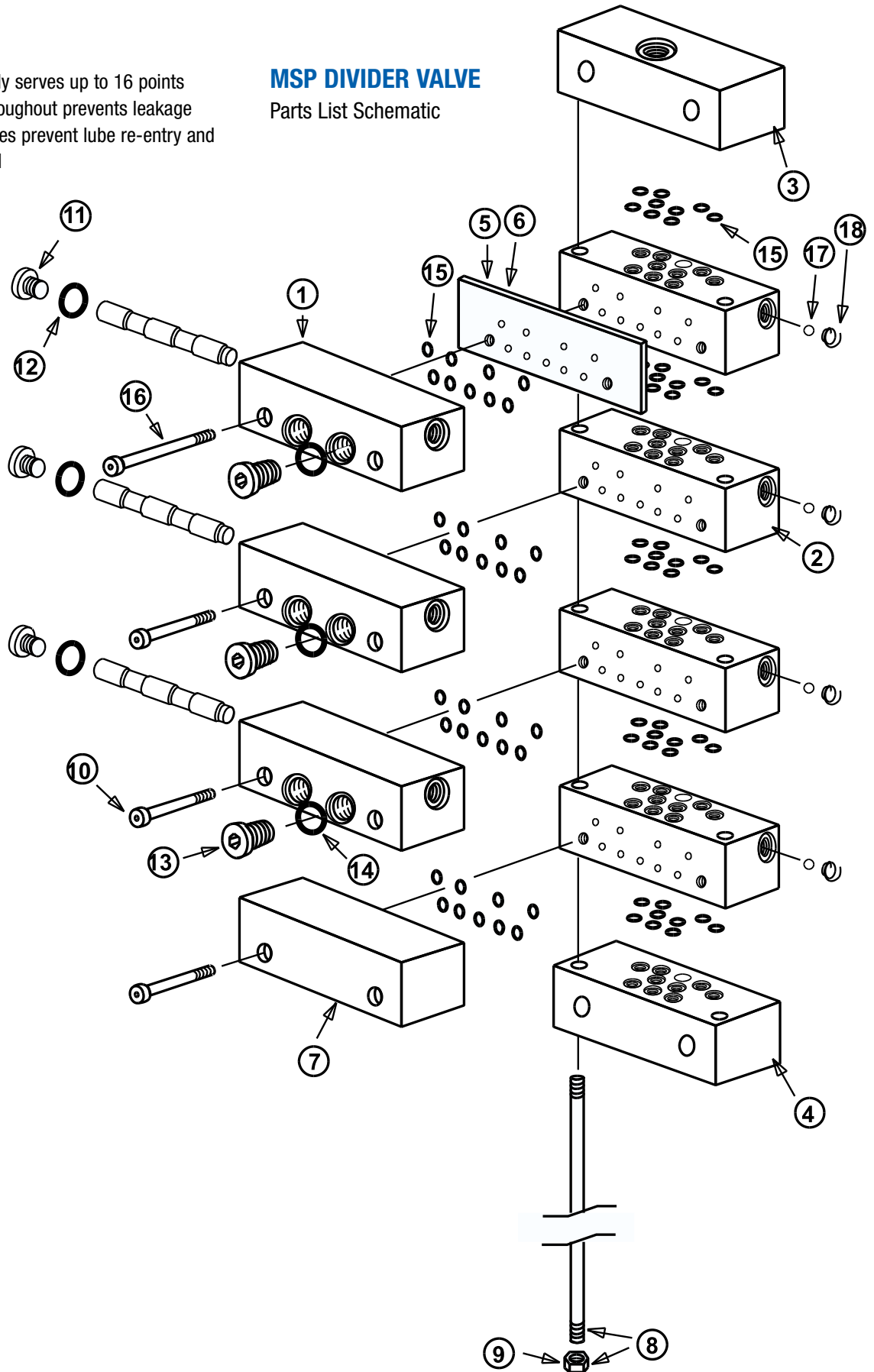
Description	Valve State	1/4-18 NPSF Part No. (Old No.)	9/16-18 SAE Part No. (Old No.)	(ISO 1179) 1/4 BSPP Part No. (Old No.)
Zero Leak, 115 VAC, 3-pin Brad Harrison Connector	N.C.	563460 (527-004-320)	563468 (527-005-200)	— —
Replacement Coil	—	557226 (492-120-206)	557226 (492-120-206)	557226 (492-120-206)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

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

Parts List Schematic



How to Order

ORDERING INFORMATION

	XXX	-	XXX	-	XX	-	X	-	X	-	XX	-	X	-	XX
SERIES OF FEEDER															
MSP - STANDARD INDUSTRIAL TO 3500 PSI (24100 kPa)															
MSV - SYNTHETIC INDUSTRIAL TO 3500 PSI (24100 kPa) (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 cm ³)															
10 - .010 cu.in. (.164 cm ³)															
15 - .015 cu.in. (.246 cm ³)															
20 - .020 cu.in. (.328 cm ³)															
25 - .025 cu.in. (.410 cm ³)															
30 - .030 cu.in. (.492 cm ³)															
35 - .035 cu.in. (.574 cm ³)															
40 - .040 cu.in. (.656 cm ³)															
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															

NOTES

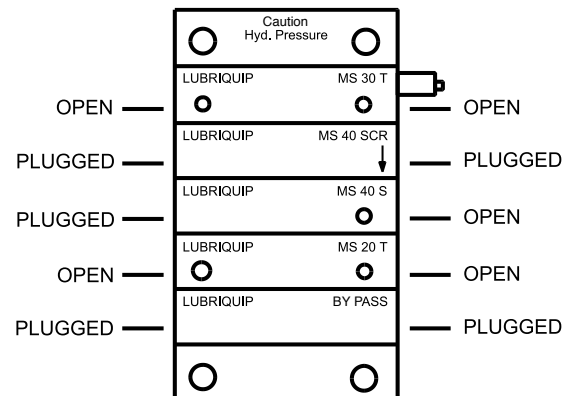
1. Right/Left Hand determined when viewing front of divider valve assembly. (Divider valve assembly placed on flat surface with inlet at top.)
2. Valves are specified starting from inlet section.
3. When valve is crossported, its outlet is plugged and output is diverted to next valve away from inlet.
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.

ORDERING EXAMPLE

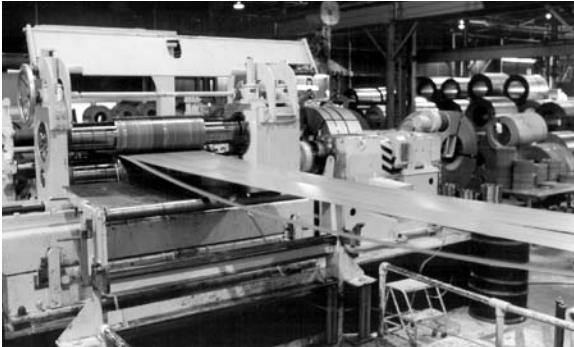
5-section MSP Divider Valve Assembly, standard seals, SAE ports and performance indicators in each working outlet. Consisting of:

- 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

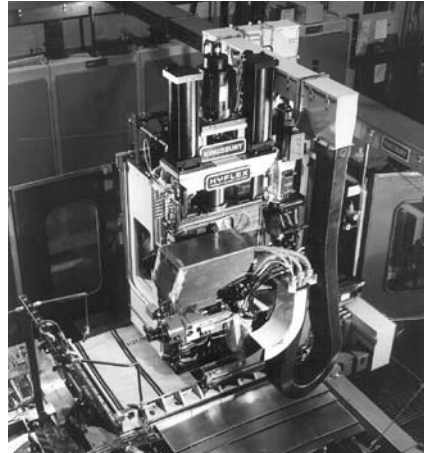
Ordering Code - MSP-SAE-MS-P-5-30B-40SCR-40S-20T-BP



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



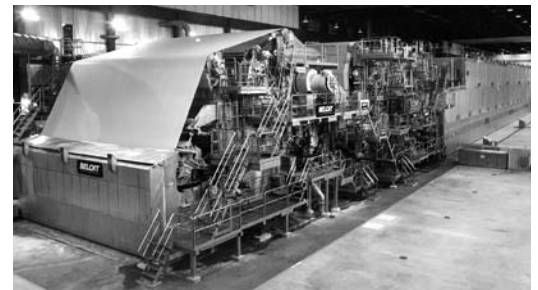
Graco systems require minimum attention. Filling the reservoir and periodic inspections are the only routine maintenance required.



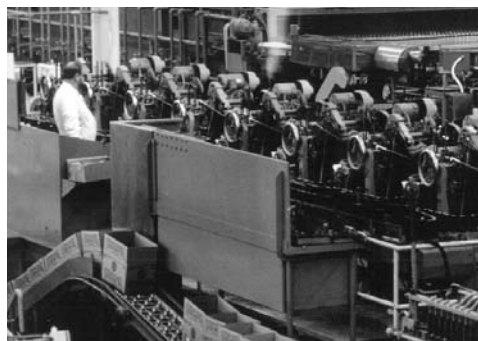
Automated systems improve safety. Maintenance personnel do not have to lubricate dangerous machinery. Operators have less exposure to oil and lubricants on equipment and floor.



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



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



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



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

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



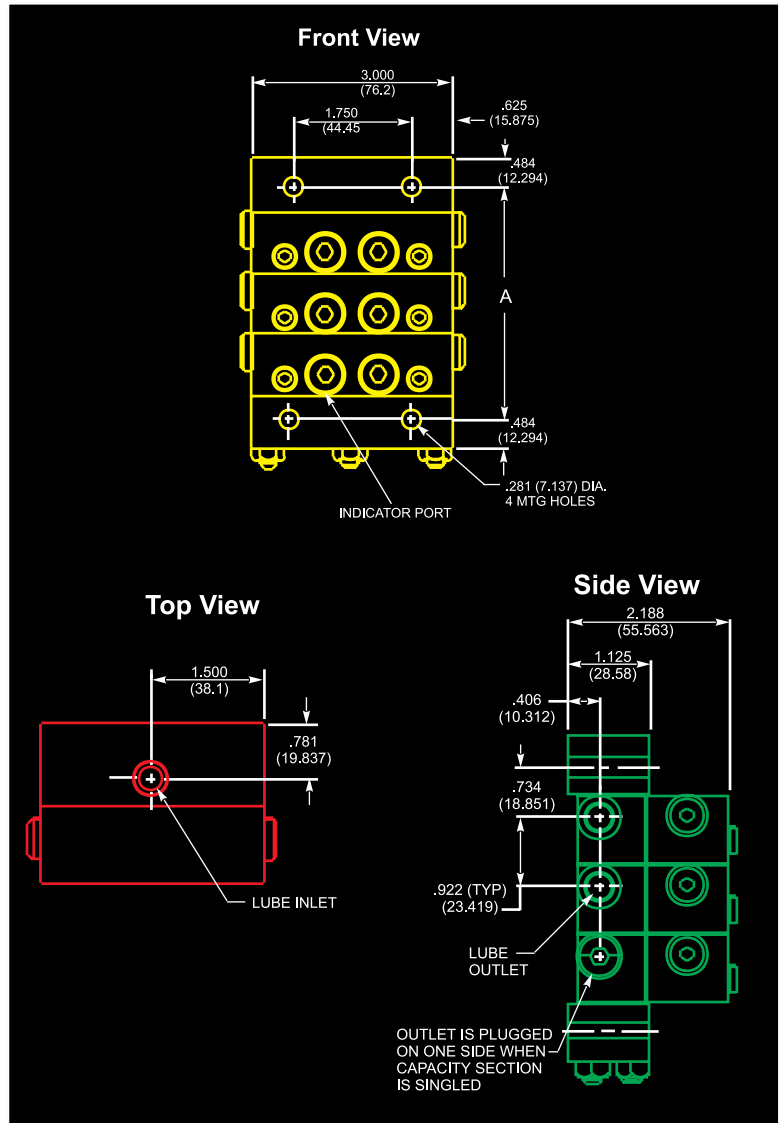
Your solution is at hand.



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.

