

# M2500 Series Divider Valve Manifold

## Progressive Systems



### General

M2500 Series Divider Valve Manifolds are the principal components of a progressive lubricating system. Modular construction makes these blocks easy to install, modify and maintain, without removing any tubing.

Progressive movement lubricant divider blocks operate in a pre-arranged sequence for easy monitoring of system operation through a moving indicator pin. Normally, the pin transmits a signal to the system controller through an electrical limit switch at the end of a complete lubrication cycle.

Up to 20 bearings can be lubricated from one manifold assembly, and up to 20 manifolds can be included in a simple system. Cyclic discharge from a lubricator forces sequential movement of the pistons inside the divider block, which displaces fixed volumetric amounts of lubricant to each point connected to the system network.



### Features

- + Viton O-rings standard to protect against high heat and synthetic lubricants.
- + Form, fit and functionality interchangeable with all major competitive brands.
- + Dual ported valves can be purchased as a single outlet type (S) and converted to twin outlet (T). This reduces your inventory by 50%.
- + SAE straight thread, NPSF or BSPP - all standard.
- + Integral or in-line solenoid valve for zone control.
- + Easy to assemble and replace valves without removing tube.
- + Three to ten section valve manifolds available.

### Technical Data

<b>Material</b>	Steel (zinc plated)
<b>Maximum Operating Pressure</b>	241 bar (3,500 psi)
<b>Discharge per cycle</b>	.005 cu. in (.08 cc) to .080 cu. in. (1.31 cc)
<b>Seals</b>	Viton O-rings (70 durometer)
<b>Maximum Temperature</b>	350°F (163°C)
<b>Lubricant</b>	SAE 10 oil to NLGI #2 grease

### Approximate Weight of Complete Divider Valve Assembly

Valve Assembly	Weight
3 Section Divider	2.8 kg (6.2 lb)
4 Section Divider	3.5 kg (7.6 lb)
5 Section Divider	4.1 kg (9.1 lb)
6 Section Divider	4.8 kg (10.5 lb)
7 Section Divider	5.4 kg (11.9 lb)
8 Section Divider	6.1 kg (13.4 lb)
9 Section Divider	6.7 kg (14.8 lb)
10 Section Divider	7.4 kg (16.2 lb)

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## How To Order

Completely assembled single line modular valve manifolds can be ordered as follows:

First, select the manifold base assembly from the table. This assembly includes the inlet section, valve base sections, end section, tie rods, nuts and O-rings; the valve sections are installed on it. Each valve section and bypass section requires a base section and every manifold must have at least three operating valve sections.

### Valve Section

Inlet Type	# of sections	Discharge Ports		
		#4SAE	1/8-27 NPSF	1/8-28 BSPP
Standard	3	M2500A3	M2500B3	M2500C3
	4	M2500A4	M2500B4	M2500C4
	5	M2500A5	M2500B5	M2500C5
	6	M2500A6	M2500B6	M2500C6
	7	M2500A7	M2500B7	M2500C7
	8	M2500A8	M2500B8	M2500C8
	9	M2500A9	M2500B9	M2500C9
	10	M2500A10	M2500B10	M2500C10

Add **Z** to the standard code for Zone-Oil MCZ2501 or **X** for Zone-Grease MCZ2501, e.g. M2500A7Z for 7 section Zone-Oil.

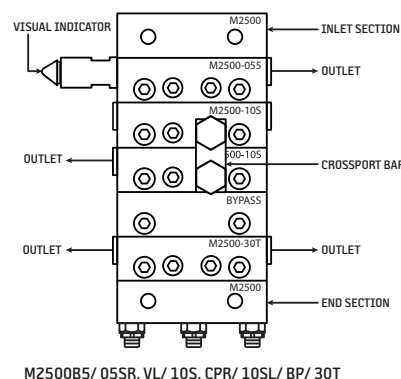
Next, specify the valve size, outlet type and optional accessories or bypass sections. Begin at the first section after the inlet and continue towards the end section. Choose one from each column on the chart below.

Valve Size	Outlet	Optional Accessories
05 25	T- Twin	V- Visual indicator
10 30	S- Single; no outlet	PP- Pin-type piston indicator
15 35	SL- Single; outlet to left	CS- Cycle switch*
20 40	SR- Single; outlet to right	CP- Crossport

Add **L** or **R** to the above codes to specify the location of each accessory. If bypass section is required, use **BP** in part number.

### Example

Specifications	Code
5 section manifold, NPSF ports, standard inlet	M2500B5
05 single, outlet to right, visual indicator left	05SR, VL
10 single, no outlet, crossport right	10S, CPR
10 single, outlet to left	10S, SL
Bypass section	BP
30 twin, outlets left and right	30T



M2500B5/ 05SR, VL/ 10S, CPR/ 10SL/ BP/ 30T

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## M2500 Valve Components

Assembled valve manifolds contain:

- + Inlet section
- + Base section
- + Valve section
- + End section

### *Inlet Section (one required)*

Inlet Port	Standard Part #	Zone Oil Part #	Zone Grease Part #
1/4" OD Tubing (#4 SAE)	MC12504A	MC12504ZA	MC12506ZA
1/4"-18 NPSF	MC12504B	MC12504ZB	MC12506ZB
1/4"-19 BSPP	MC12504C	MC12504ZC	MC12506ZC

### *Base Section (three to ten required)*

Outlet Discharge Port	Part #
1/4" OD Tubing (#4 SAE)	MCBA2502A
1/8"-27 NPSF	MCBA2502B
1/8"-28 BSPP	MCBA2502C

### *Valve Section*

Valve Size	Discharge cu. in. (cc)		Part #			
	Twin Outlet	Single Outlet	Twin Outlet		Single Outlet	
			Standard	w/ cycle pin	Standard	w/ cycle pin
05	.005 (.08)	.010 (.16)	MCVA250105T	---	MCVA250105S	---
10	.010 (.16)	.020 (.33)	MCVA250110T	---	MCVA250110S	---
15	.015 (.25)	.030 (.49)	MCVA250115T	---	MCVA250115S	---
20	.020 (.33)	.040 (.66)	MCVA250120T	MCV250120TP	MCVA250120S	MCV250120SP
25	.025 (.41)	.050 (.82)	MCVA250125T	MCV250125TP	MCVA250125S	MCV250125SP
30	.030 (.49)	.060 (.98)	MCVA250130T	MCV250130TP	MCVA250130S	MCV250130SP
35	.035 (.57)	.070 (1.15)	MCVA250135T	MCV250135TP	MCVA250135S	MCV250135SP
40	.040 (.66)	.080 (1.31)	MCVA250140T	MCV250140TP	MCVA250140S	MCV250140SP
Bypass valve	MCVA2501BP					

### *End Section (one required)*

Port Style	Standard Part #	With 1/8"NPT Port
Outlet Discharge Port	MCEA2503	37020

### *Tie Rod Kit (one required)*

Individual kits are available for three to ten sections. Kits include tie rods and locknuts (See Valve Service, page 4.)

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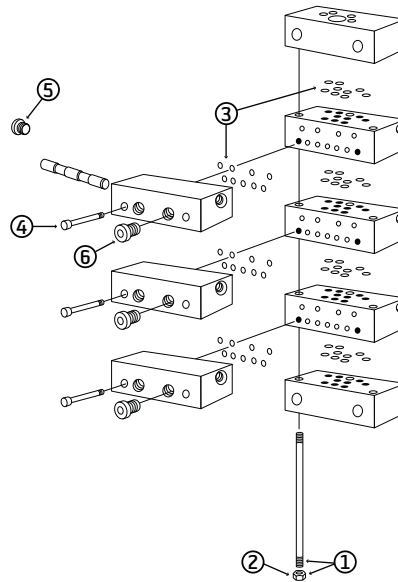
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### Service Parts

Item	Description	Part #			
1	Tie rod kit*	3 section	MCRK25053		
		4 section	MCRK25054		
		5 section	MCRK25055		
		6 section	MCRK25056		
		7 section	MCRK25057		
		8 section	MCRK25058		
		9 section	MCRK25059		
		10 section	MCRK250510		
		2	Tie rod nut	U251A	
		3	Viton O-rings	U1720005S	
4	Valve mounting screws	U212-A6			
5	Viton	PLU14038A			
6	Alternate outlet plug	U119AC			

\*Note: Includes 3 tie rods & 3 locknuts



### Accessories

#### Cross Port

Cross Port Kit	New Style Plugs	Old Style Plugs
	37083	MCCA2501

#### Rapture Disc Indicator

These indicators burst at a selected pressure to automatically relieve excessive system pressure. They are installed in an alternate outlet port. All indicators are assembled with one rupture disc. Five extra discs are included.

Description	Burst Pressure	Disc Color	Replacement Disc Kit*	Part #
Rapture Disc Indicator	1450 psi	Yellow	FT15423YWK	1041-2YW
	1750 psi	Red	FT15423RDK	1041-2RD
	3250 psi	Purple	FT15423PRK	1041-2PR

\*Note: Discs are sold in packs of 10 pieces

#### Pressure Indicator

These indicators are spring-loaded and can only be reset when system pressure decreases. The indicator's memory pin remains extended until manually reset. They are installed in the alternative outlet port.

Description	Pressure Rating	Non-Relieving	Relieving
Pressure Indicators	500 psi	N/A	21355
	1000 psi	203512	213510
	1500 psi	203516	213515
	2000 psi	203522	213520

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## Accessories Cont.

### Cycle Indicators / Cycle Switches

Manifold cycle indicators provide a means of monitoring lube flow thru the system - a pin cycles in and out when lubricant is flowing. Movement of the pin is caused by the piston (the two are pinned together) so that when the piston, and thus the entire manifold, cycles once, the pin moves in and out once. The switches can be wired to warn of system trouble. They can feed electric pulses to a control device such as SS2200 or SC400 controller or customer PLC.

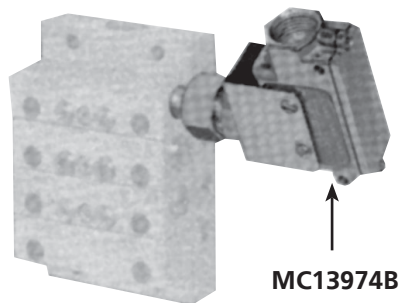
#### ELECTRICAL CYCLE SWITCHES

**MC13974B** w/1/2-14 NPSM conduit connector

**MC13975B** w/automotive type 3 pin connector

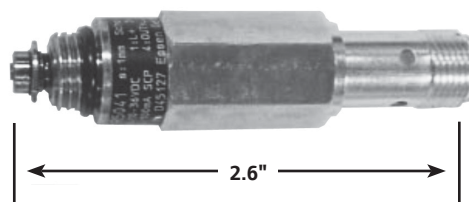
Couples to any M2500 metering valve having a cycle indicator pin and provides an electrical signal each time the divider valve operates.

SPDT switch is rated 15 amps @ 125/250 VAC, .5amps @ 125VDC.



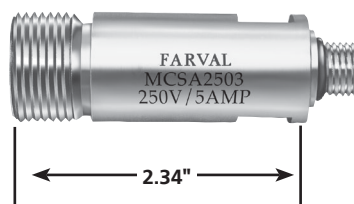
**AC498** w/4 pin micro connector M12 X 1 & LED light. Couples to any M2500 metering valve.

Rated to 5000 PSI (350 BAR). Requires 10-36 VDC. To be used with the SC400 Controller or customer PLC only. (See M12 Connectors below)



**MCSA2503** w/automotive type 3 pin connector

Because they use a magnet to sense piston position, entry of contaminants into the system is prevented. These cycle switches may be installed in the end of M2500 valve size '15' and larger. The SPDT switch is rated at 250 VAC/28 VDC-5 Amps.



#### M12 4-Pole ELEC. CONNECTORS WITH CABLE

These connectors, made to M12 specifications, are used with the AC498 switches.

**76928-2863** - Straight, 10 meters long

**76928-2833** - 90°, 10 meters long

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