



M2500

Modular Valves for Central Lubrication Systems



Featuring

- Valve sections
- Zone control valves
- Manifold bases
- Accessories

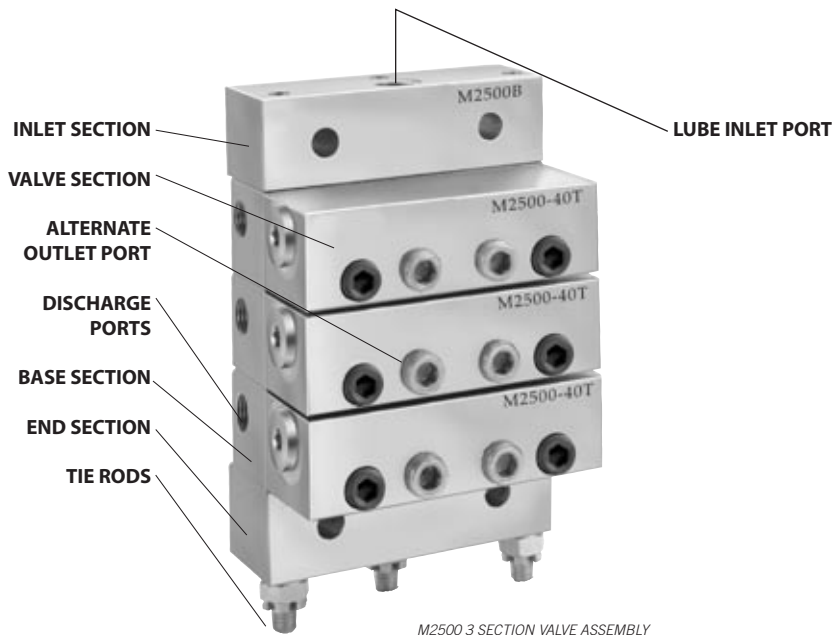


Easy to install. Easy to modify. Easy to maintain.

The M2500 Series valve manifolds are the principal components of a Bijur Single Line central lubricating system. The modular construction makes the system easy to install, and can be modified and maintained without removing any tubing. Operation of all valves in the system can be monitored by a single cycle indicator switch. Up to 20 bearings can be lubricated from one manifold assembly and up to 20 manifolds can be included in a system.

Zone control components can be used to build a system of any size and can be divided into individually controlled and monitored zones. This permits varied cycle times, rapid trouble-shooting and easy maintenance.

The Bijur M2500 Series...an unbeatable combination of performance and convenience.



M2500 3 SECTION VALVE ASSEMBLY

Ten Features That Make The Difference

- Viton® O-rings standard to protect against high heat & 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.
- Operating pressures to 3,500 psi.
- .005 to .080 cubic inch discharge volumes.
- Nickel plating optional.
- Three to ten section valve manifolds available.

Bijur M2500 Valve Sections

M2500 SPECIFICATIONS

- **Maximum operating pressure:** 3500 psi (241 bar)
- **Discharge per cycle, cu. in. (cc):** .005 (.08) to .080 (1.31)
- **Lubricants:** SAE 10 oil to NLGI #2 grease
- **Seals:** Viton O-rings (70 durometer)
- **Max. temperature:** 350°F (163°C)

NOTES FOR M2500 VALVES:

- Discharge is in cubic inches per cycle from each outlet.
- Valve sections include O-rings and mounting screws.
- Material: Steel with zinc plating, electroless nickel plating available on special order.
- Dual ported valves (single or twin outlet) are available.
- MCVA2501BP bypass valve with Viton O-rings is available.

VALVE SIZE	DISCHARGE CU. IN. (cc)		VALVE SECTIONS			
	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

Valve Manifold Bases

Valve manifold bases consist of an inlet section, several valve base sections (3-10) and an end section.

INLET SECTION: Refer to chart at right

VALVE BASE SECTIONS: Includes integral check valves, Viton O-rings

- **MCBA2502A:** #4 SAE discharge ports
- **MCBA2502B:** 1/8-27 NPSF discharge ports
- **MCBA2502C:** 1/8-28 BSPP discharge ports

END SECTION:

- **MCEA2503:** Includes Viton O-rings.

TIE ROD KIT

Includes 3 tie rods and locknuts. Refer to chart at right.

Bijur Zone Control Valves

Bijur offers a full range of zone control valves to satisfy a variety of requirements:

Style

- MCZ2501F series for oil systems operating up to 1500 psi
- MCZ2501A series for oil systems operating between 1500 and 3000 psi
- MCZ2503B series for all grease systems operating up to 3000 psi

Installation

- In the inlet section of the valve manifold (see p. 3 for zone inlets)
- As a stand-alone component mounted in a remote location

Electrical

- 115 volts AC (50 or 60 Hz.)
- 24 volts DC
- Class H coils

Connectors

- Standard 1/2 inch conduit with insulated 18 AWG leads
- Automotive 3 pin connector accepts Brad Harrison Mini-Change or Crouse Hinds Mini-Line connectors. Conforms to ANSI B93.55M
- Hirschmann GDM series connector for grease service
- Hirschmann GM series connector for oil service

Port types

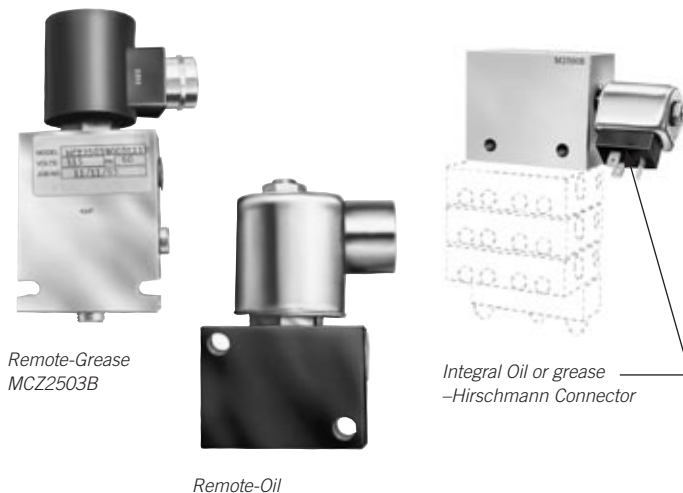
- Integral valves: #4 SAE, 1/4-18 NPTF or 1/4-19 BSPP on inlet
- Remote valves: #6 SAE or 1/4-18 NPTF on inlet and outlet

Inlet Type*	Port Style		
	#4 SAE	1/4-18 NPSF	1/4-19 BSPP
Standard	MCI2504A	MCI2504B	MCI2504C
Zone - oil	MCI2504ZA	MCI2504ZB	MCI2504ZC
Zone- grease	MCI2506ZA	MCI2506ZB	MCI2506ZC

* Select Applicable Control Valve (MCZ2501 or MCZ2503) from page 5.

Number of sections	Tie rod kit number
3	MCRK25053
4	MCRK25054
5	MCRK25055
6	MCRK25056
7	MCRK25057
8	MCRK25058
9	MCRK25059
10	MCRK250510

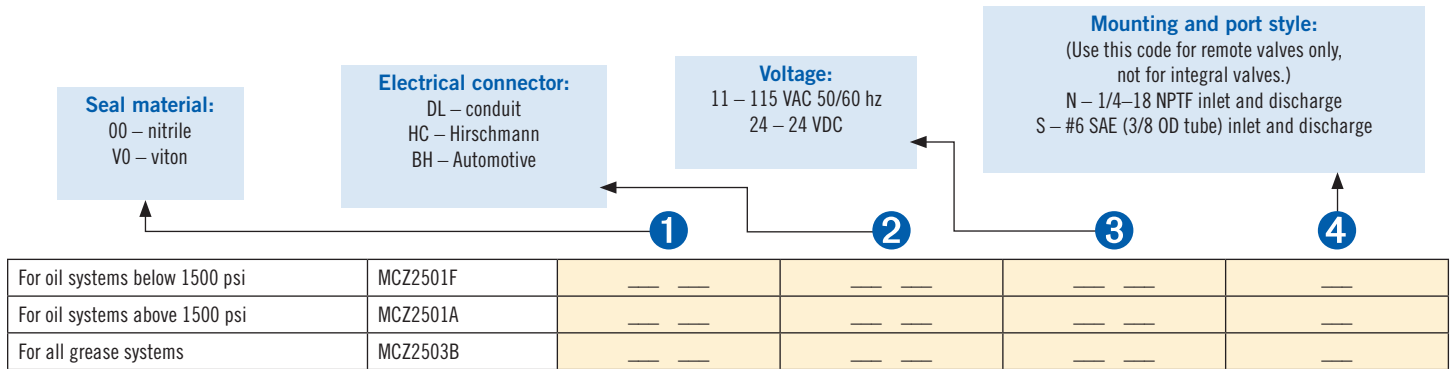
Complete ordering instructions on page 7.



Electrical specifications			
Series	MCZ2501F	MCZ2501A	MCZ2503B
Inrush Current	.21 amp	.21 amp	.17 amp
Power	20 watts	20 watts	20 watts
Lead Length	24 in.	24 in.	18 in.

Notes: 1. Inrush current rating at 115VAC 60 Hertz.
2. All AC coils contain full wave rectifiers.

Zone Control Valve Selection Chart



- EXAMPLES:
- For an integral zone control in a 400 psi oil system, nitrile seals, an automotive connector, operating on 120 volt 60Hz current, and with SAE ports, order MCZ2501F00BH11 cartridge and MCI2504ZA zone inlet oil. (see page 3).
 - For a remote zone control in a grease system, nitrile seals, a Hirschmann connector, 24 volt DC current, and with NPTF ports, order MCZ2503B00HC24N.

Control Valves And Cycle Switches

CROUSE HINDS/BRAD HARRISON AUTOMOTIVE-TYPE ELECTRICAL CONNECTORS WITH MOLDED CABLE

These feature molded 3 pin automotive connectors are used with Bijur cycle switches and Bijur type BH zone control valves. The 3-conductor cables are yellow PVC insulated STO rated at 10 amperes and 300 volts. The plugs have NEMA 6P, IP68 protection.

- **MCC2505A** – 6 feet
- **MCC2505B** – 12 feet

Available with indicator lamps for 115 volt systems. **To be used with customer P.L.C. or DCS controllers only.**

- **MCC2506A** – 6 feet
- **MCC2506B** – 12 feet



HIRSCHMANN-TYPE ELECTRICAL CONNECTORS

These connectors, made to DIN 43650 specifications, are used with Bijur Type HC zone control valves. They include all hardware including gaskets. They are rated at 250 VAC and 16 amperes.

MCC2509A: For Bijur MCZ2501 series control valves. DIN 43650 Form B 11 mm blades. 1.12" by .82".

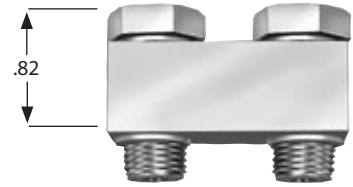
MCC2510A: For Bijur MCZ2503 series zone control valves. DIN 43650 Form A. 1.08" square.



Accessories For Bijur M2500 Valves

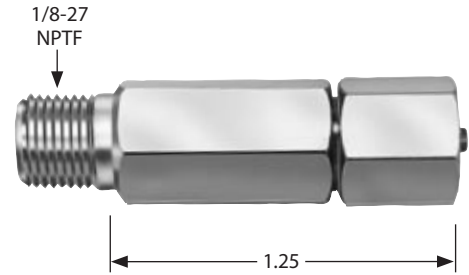
CROSSPORT BARS

MCCA2501 crossport bar is installed in the alternate outlet port of adjacent M2500 valves to combine the outputs to feed a single lubrication point.



PRESSURE INDICATORS

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 alternate outlet port.



NON-RELIEVING TYPE		RELIEVING TYPE	
Part Number	Pressure Rating	Part Number	Pressure Rating
2035A-5	500 psi	2135-5	500 psi
2035A-10	1000 psi	2135-10	1000 psi
2035A-15	1500 psi	2135-15	1500 psi
2035A-20	2000 psi	2135-20	2000 psi
2035A-30	3000 psi		

VISUAL CYCLE INDICATORS

MCSA2502 visual cycle indicators provide a simple method of monitoring system operation. The unique design and O-ring seal prevent the entry of contamination into the lubricating system. MCSA2502 visual cycle indicators may be installed in the end of any Bijur M2500 valve.

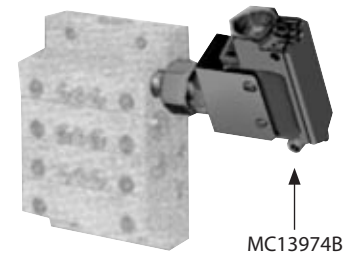


ELECTRICAL CYCLE SWITCHES

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 @ 125/250VAC, 0.5 amps @ 125VDC.

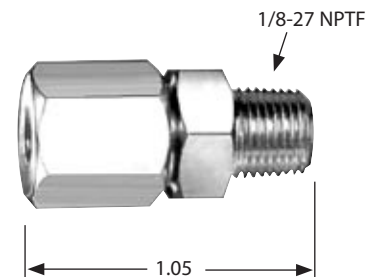


RUPTURE DISC INDICATORS

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.

Part Number	Burst Pressure	Disc Color	Replacement Disc Kit*
1041-2YW	1450 psi	Yellow	FT15423YWK
1041-2RD	1750 psi	Red	FT15423RDK
1041-2PR	3250 psi	Purple	FT15423PRK
1041-2YN	3700 psi	Yellow/Neutral	FT15423YNK

* discs are sold in packs of 10 pieces



How To Order A Complete Valve Manifold

Completely assembled Bijur 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 3 operating valve sections.

Next, specify the valves, bypass sections and accessories. Begin at the first section after the inlet and continue towards the end section. Separate each entry with a slash:

1 **Valve/size** (05, 10, 15, etc.)

2 **Outlet**

T – twin	SL – single; outlet to left
S – single; no outlet	SR – single; outlet to right

3 **Optional accessories**

V – visual indicator	CS – cycle switch*
PP – pin-type piston indicator	CP – crossport
Part number – pin-type pressure indicator	

*Specify which cycle switch model

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.

NOTE: Zone control valves are ordered as separate items as shown on pages 4 and 5. Omit the mounting style code. Other accessories such as electrical cables must also be ordered as separate items.

MANIFOLD BASE ASSEMBLIES					
INLET TYPE	NUMBER 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	
	ZONE-OIL MCZ2501 SERIES	3	M2500A3Z	M2500B3Z	M2500C3Z
		4	M2500A4Z	M2500B4Z	M2500C4Z
5		M2500A5Z	M2500B5Z	M2500C5Z	
6		M2500A6Z	M2500B6Z	M2500C6Z	
7		M2500A7Z	M2500B7Z	M2500C7Z	
8		M2500A8Z	M2500B8Z	M2500C8Z	
9		M2500A9Z	M2500B9Z	M2500C9Z	
10		M2500A10Z	M2500B10Z	M2500C10Z	
ZONE-GREASE MCZ2503 SERIES		3	M2500A3X	M2500B3X	M2500C3X
		4	M2500A4X	M2500B4X	M2500C4X
	5	M2500A5X	M2500B5X	M2500C5X	
	6	M2500A6X	M2500B6X	M2500C6X	
	7	M2500A7X	M2500B7X	M2500C7X	
	8	M2500A8X	M2500B8X	M2500C8X	
	9	M2500A9X	M2500B9X	M2500C9X	
	10	M2500A10X	M2500B10X	M2500C10X	

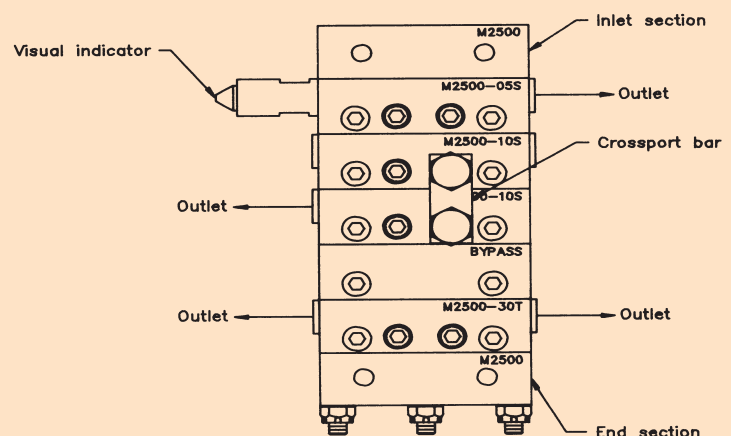
Example

The complete part number for a manifold with the following specifications:

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

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

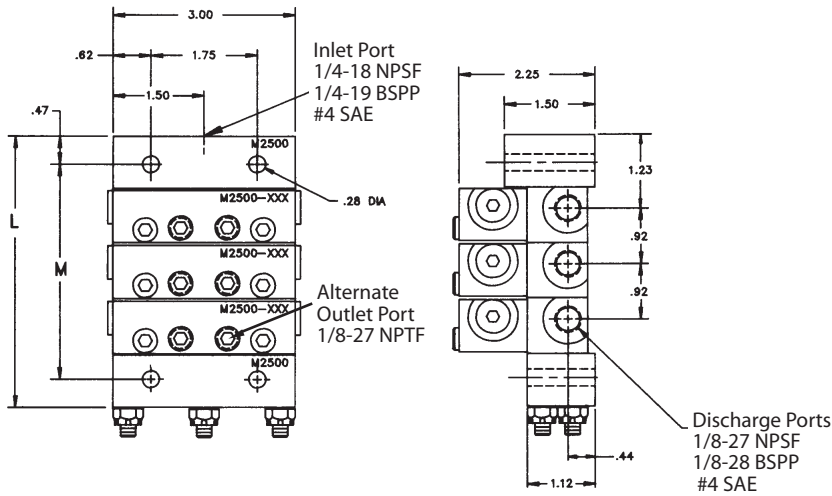
Note: Unused outlet ports are plugged.



Dimensions

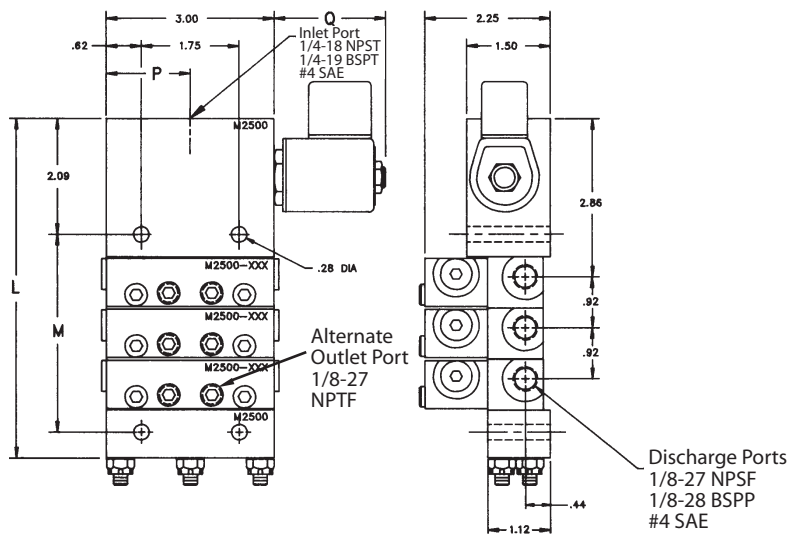
NOTE: All dimensions shown in inches unless otherwise noted.

VALVE MANIFOLDS WITH STANDARD INLET



No. of sections	M	L
3	3.58	4.54
4	4.50	5.44
5	5.42	6.36
6	6.34	7.28
7	7.27	8.20
8	8.19	9.13
9	9.11	10.04
10	10.03	10.97

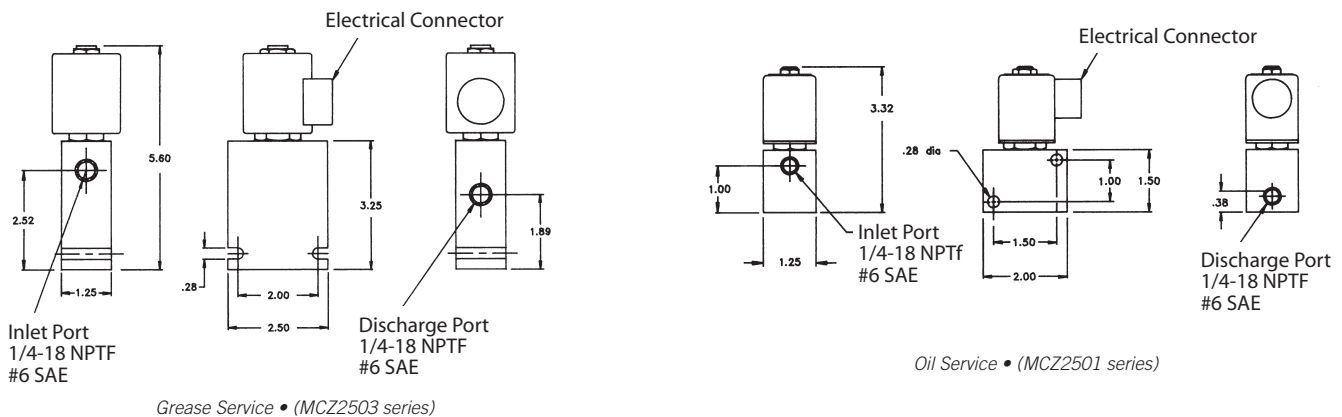
VALVE MANIFOLDS WITH INTEGRAL ZONE CONTROL



No. of sections	M	L
3	3.58	7.03
4	4.50	7.95
5	5.42	8.97
6	6.34	9.80
7	7.27	10.72
8	8.19	11.64
9	9.11	12.56
10	10.03	13.48

Lubricant	P	Q
Oil service (MCZ2501 series)	1.50	1.82
Grease service (MCZ2503 series)	2.25	2.35

REMOTE ZONE CONTROL VALVES



Oil Service • (MCZ2501 series)

Grease Service • (MCZ2503 series)



Innovators of engineered lubrication technology since 1923

Sometimes you know what kind of lubrication system you need. Sometimes you don't. Bijur has experienced regional sales managers that can walk you through the process of selecting a system that fits your needs when you aren't sure. And when you need additional parts for the system, our trained customer service representatives can help you choose genuine Bijur parts that can generally be shipped to you within 24 hours.

Bijur also has ISO 9001:2000 quality certified manufacturing facilities around the world, so you'll know your centralized lubrication system meets the highest industry quality standards. It's all part of the Bijur commitment to quality and customer service.

CORPORATE HEADQUARTERS

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