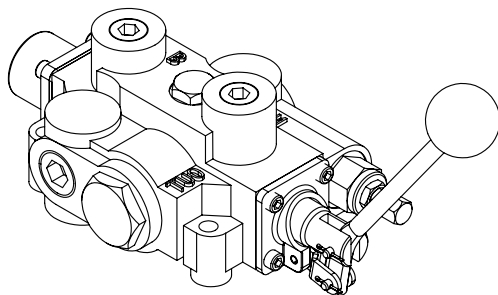
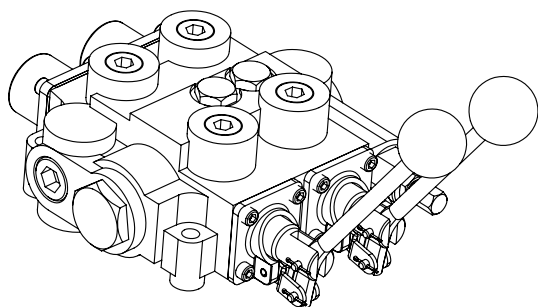


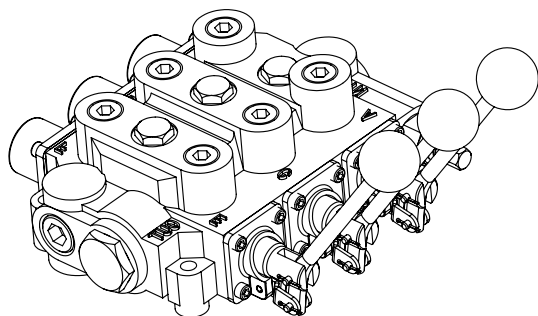
INSTRUCTION MANUAL



81035342



81035401

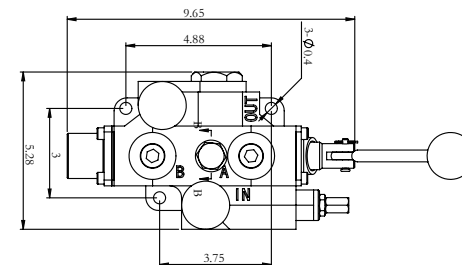
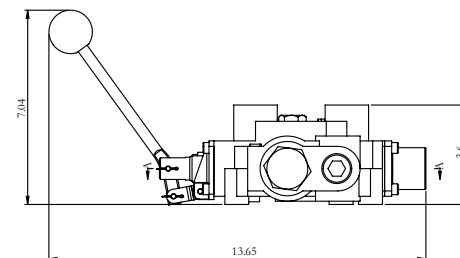


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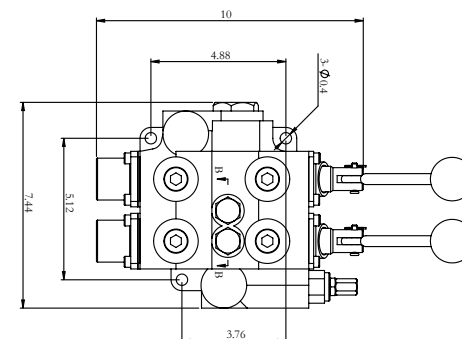
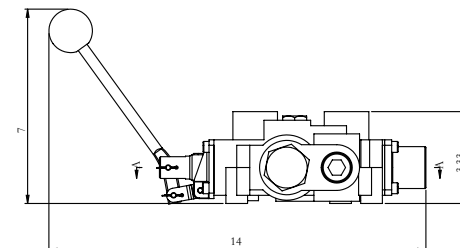
INSTRUCTION MANUAL

INSTALLATION DIMENSION:

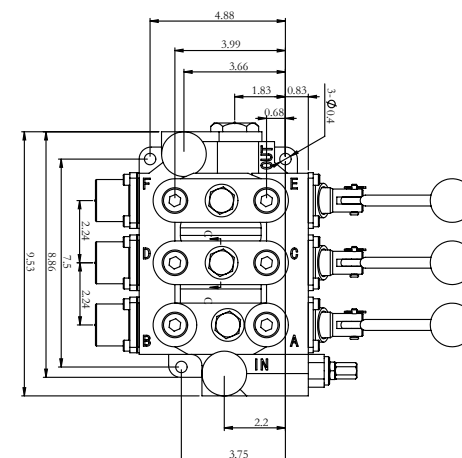
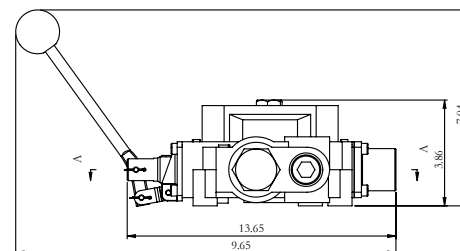
- MODEL 81035342
- CAPACITY: 25GPM
- MAX PRESSURE: 3000PSI
- IN/OUT PORT: 3/4"NPT, WORKING PORT: 1/2"NPT



- MODEL 31035401
- CAPACITY: 25GPM
- MAX PRESSURE: 3000PSI
- IN/OUT PORT: 3/4"NPT, WORKING PORT: 1/2"NPT



- MODEL 81035501
- CAPACITY: 25GPM
- MAX PRESSURE: 3000PSI
- IN/OUT PORT: 3/4"NPT, WORKING PORT: 1/2"NPT



INSTRUCTION MANUAL

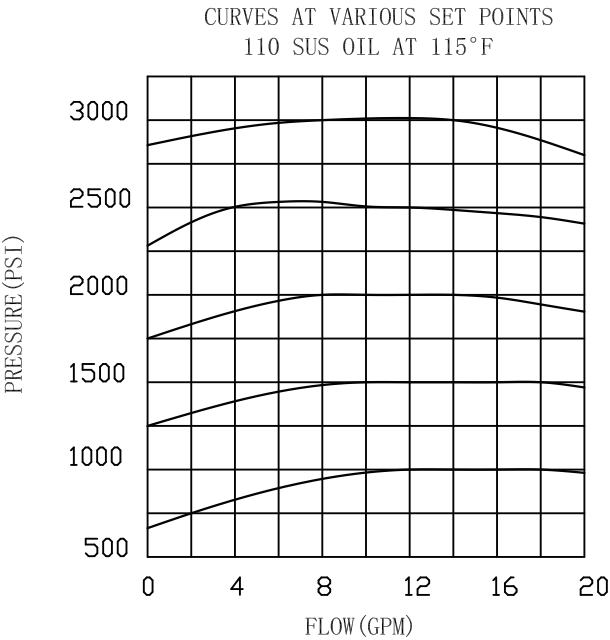
FEATURES:

- Economical mono-block construction of high tensile strength gray cast iron.
- Load check on each spool.
- Hard chrome plated spool.
- Differential poppet style relief, adjustable from 1500 to 3000psi, preset at 2500psi@4GPM
- Power beyond and closed center capability
- In/out port: 3/4"NPT, working port: 1/2"NPT

RECOMMENDED SYSTEM:

PARALLEL CIRCUIT
MAXIMUM OPERATING PRESSURE 3,000 PSI
MAXIMUM OPERATING TEMPERATURE 160°F
MAXIMUM TANK PORT PRESSURE 500 PSI
RECOMMEND SYSTEM FILTRATION ISO 4406 19/17/14.
FLOW RATING 25 GPM

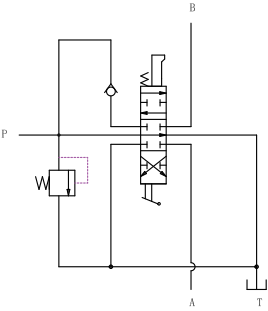
MD30 RELIEF VALVE 110 SUS OIL AT 115°F



INSTRUCTION MANUAL

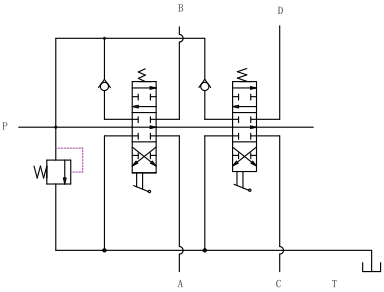
MD30 SINGLE SPOOL VALVE PRESSURE DROP VALUES

1- Spool Pressure Drop Values 110 SUS OIL AT 115°F			
Δ P-PSI			
Flow (GPM)	Inlet to outlet	Inlet to A or B	A or B to Outlet
5	2	8	3
10	5	17	6
15	9	35	12
20	21	58	21
25	26	86	34



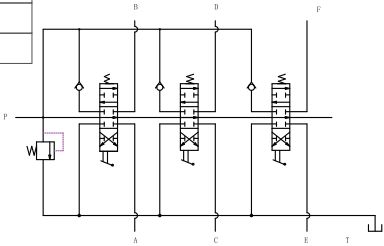
MD30 TWO SPOOL VALVE PRESSURE DROP VALUES

2- Spool Pressure Drop Values 110 SUS OIL AT 115°F					
Δ P-PSI					
Flow (GPM)	Inlet to outlet	Inlet to A or B	Inlet to C or D	A or B to Outlet	C or D to Outlet
5	3	11	11	2	2
10	8	22	24	8	5
15	16	38	42	15	11
20	28	57	68	27	19
25	44	83	101	43	29



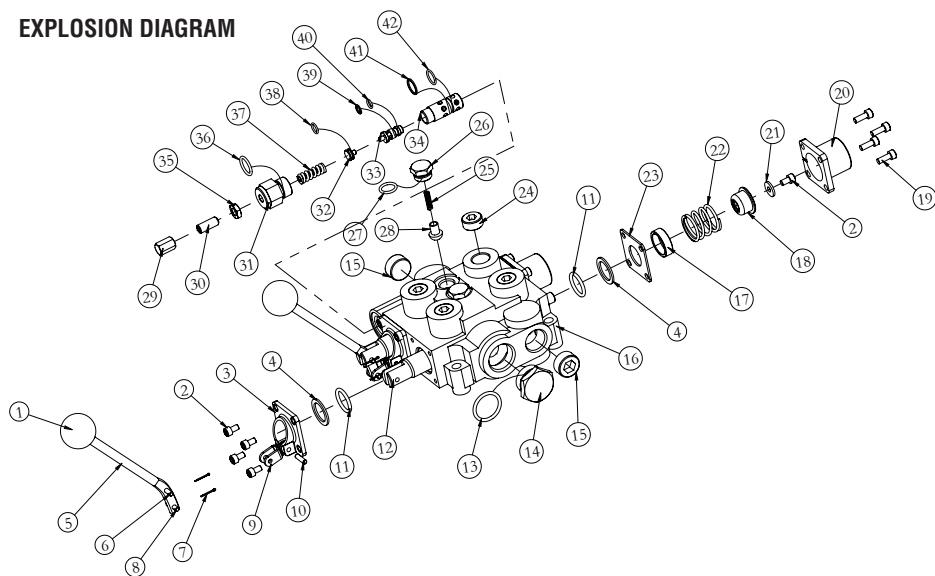
MD30 THREE SPOOL VALVE PRESSURE DROP VALUES

3-Spool Pressure Drop Values 110 SUS OIL AT 115°F							
Δ P-PSI							
Flow (GPM)	Inlet to outlet	Inlet to A or B	Inlet to C or D	Inlet to E or F	A or B to Outlet	C or D to Outlet	E or F to Outlet
5	2	9	9	11	4	3	2
10	10	18	20	25	14	9	6
15	22	33	41	49	32	22	13
20	37	56	68	78	51	36	21
25	58	83	101	118	76	55	32



INSTRUCTION MANUAL

EXPLOSION DIAGRAM



PARTS LIST

Part No.	Description	Q'ty	Kits Description	Part No.	Description	Q'ty	Kits Description
16	Valve Body	1		21	Spring Adapter	2	Spool Action Kit (Spring Center W/Float Detent Kit)
13	O-ring	1		22	Spring	2	
14	Conversion Plug	1		23	Gasket	2	
15	3/4" Plug	2		25	Spring	2	Load Check Set
24	1/2" Plug	4		26	Plug	2	
4	Spool Backup	4	Spool Kit	27	O-ring	2	
11	Spool O-ring	4		28	Spring Adapter	2	Relief Cartridge
12	Spool	2		29	Acorn Nut	1	
1	Knob	2	Handle Kit	30	Set Screw	1	
2	Screw	9		31	Nut	1	
3	Handle Bracket	2		32	Spring Adapter	1	
5	Handle Rod	2		33	Piston	1	
6	Pin	2		34	Piston Sleeve	1	
7	Cotter Pin	4		35	Nut	1	
8	Pin	2		36	O-ring	1	
9	Connecting Board	4		37	Spring	1	
10	Pin	2		38	O-ring	1	
2	Screw	9	Spool Action Kit (Spring Center W/Float Detent Kit)	39	Back-up Washer	1	
17	Spring Sleeve	2		40	O-ring	1	
18	Stop Cup	2		41	Back-up Washer	1	
19	Screw	8		42	O-ring	1	
20	Attachment Cover	2					

*The diagram is for 2-spool. In MD30 series, 1-spool, 2-spool and 3-spool mono block valve are similar.

INSTRUCTION MANUAL

ADJUSTABLE RELIEFS – An adjustable relief valve is standard on all mono-block directional valves. The factory setting is 2, 500PSI@4 GPM. Other setting can be specified. The relief pressure is adjusted by removing Acorn Nut (Parts No.29), and turning the Adjusting Screw (Part No 30). Turning the Adjusting Screw clockwise will increase the pressure and counter-clockwise will decrease the pressure (a pressure gauge must be installed in the inlet line whenever the relief pressure is adjusted). Adjustable pressure range is 1500psi to 3000psi. Do not backout adjusting screw to the point it falls out.

Warning:

All hydraulic valve must be properly installed into the hydraulic system to prevent personal injury and/or property damage. Further, the improper servicing of a valve may result in personal injury and/or property damage. Please read and understand all catalog and service information before starting, as with all mechanical work the proper tools, knowledge, and safety equipment are required, always wear safety glasses.

Make sure all pressure has been relieved in the hydraulic lines before installing or servicing a hydraulic valve.

Escaping hydraulic fluid under pressure can have sufficient force to penetrate skin, causing serious personal injury. Do not use your hand to check for hydraulic leaks.

Before installing or servicing a hydraulic component make sure all weight has been removed from the cylinders or motors before disconnecting hydraulic lines.

Disconnecting the hydraulic lines while the cylinder or motor is under load may result in the unexpected rapid movement of machine resulting in serious personal injury.

Do not exceed the operating specifications for pressure, flow or temperature, all hydraulic systems require a means to limit the maximum pressure. This requires either a pressure relief valve in the system or a pump that has pressure compensation.

Overpressure may cause sudden and unexpected failure of a component in the hydraulic system resulting in serious personal injury, always use a gauge when adjusting a relief valve.