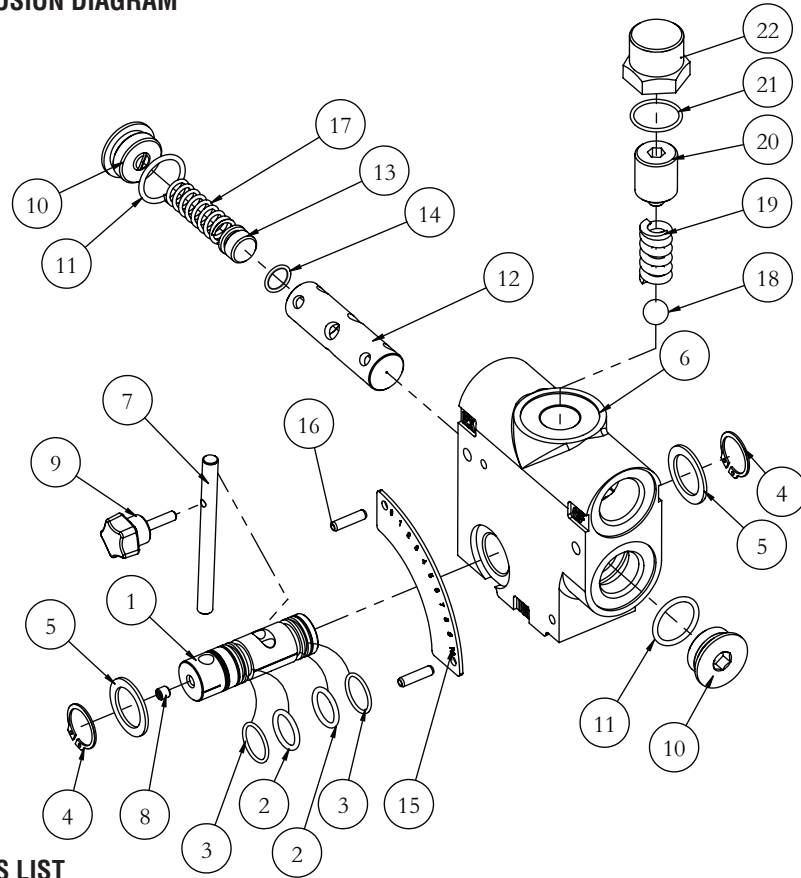


HYDRAULIC FLOW CONTROL VALVE WITH RELIEF

INSTRUCTION MANUAL

EXPLOSION DIAGRAM



PARTS LIST

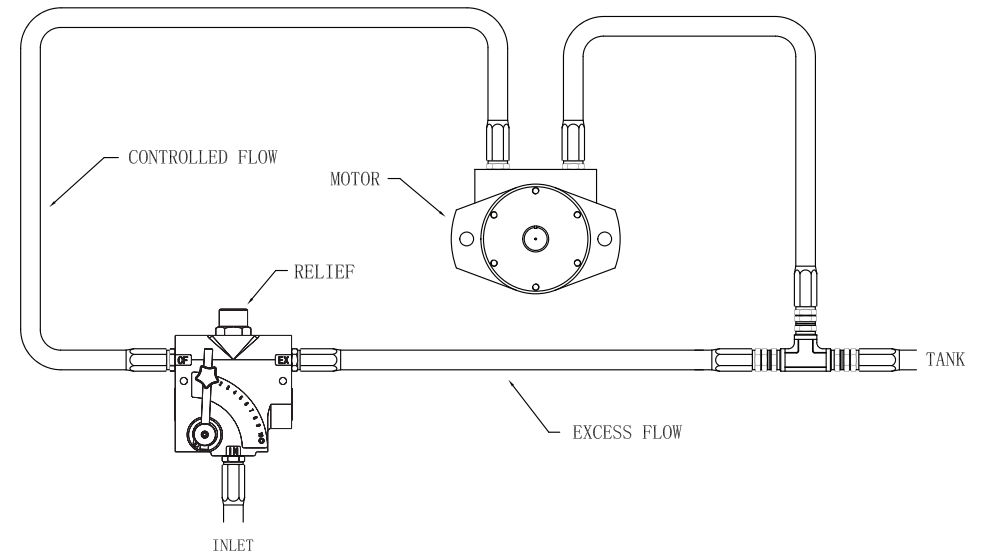
Part No.	Q'TY	Description	Part No.	Q'TY	Description
6	1	Valve Body	10	2	Main Bore Plug
1	1	Rotary Spool	11	2	O-ring
2	2	O-ring	12	1	Metering Spool
3	2	O-ring	13	1	Plug
4	2	Snap Ring	14	1	O-ring
5	2	Washer	17	1	Metering Spring
8	1	Set Screw	18	1	Steel Ball
7	1	Handle	19	1	Spring
9	1	Thumb Screw	20	1	Adjusting Screw
15	1	Plate	21	1	O-ring
16	2	Roll Pin	22	1	Acorn Nut

Rotary Spool kit, Handle Kit, Metering Spool Kit, Relief Kit, They do not sold separately.

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HYDRAULIC CIRCUIT



INSTALLATIONS

The valve is mounted as above shown. Oil from a source is directed into the inlet of the valve by moving the handle the flow can be varied from zero when handle is vertical to maximum when handle is horizontal. This models have a built in relief valve that bypasses oil from inlet to the excess flow port when the relief setting is reached. The factory setting is 2500psi@. The excess flow port must be connected to tank.

GENERAL INFORMATION

The flow control is designed so that the orifice area varies as the lever is rotated. Fluid travels past the variable orifice, through the compensator spool and then out the controlled flow port. Therefore the flow out of the CF port is proportional to the orifice area which can vary from closed to open. The sum of the controlled flow and the excess flow equals the inlet flow and as the controlled flow increases the excess flow decreases. Both outlet flows are pressure compensated with a spool that maintains a constant flow by adjusting for pressure. Hunting between the compensated pump and valve is dampened with a dashpot on the compensator spool. Thus, the outlet flow is smooth and constant regardless of the pressure on the CF and EX port. External seals on the rotary spool prevent contamination from getting between the spool and the casting, thus preventing the spool from locking in one position.

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SAFETY

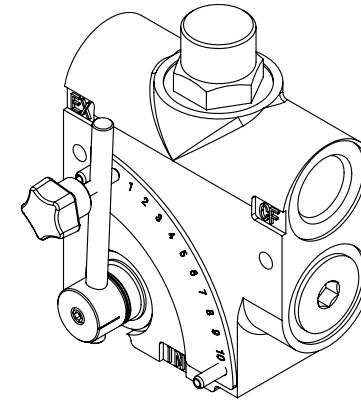
ADJUSTABLE RELIEFS – The adjustable ball spring relief allow the customer pressure compensated flow up to the pressure setting on the relief. Once the pressure on the CF port increases above the relief setting the relief valve opens and diverts flow to the EX port while maintaining the pressure on the CF port. The EX port must be plumbed back to tank for both of these reliefs. Both relief options are preset to 2500 psi, standard, and field adjustable from 750 to 3000 psi.

⚠ 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.

HYDRAULIC FLOW CONTROL VALVE WITH RELIEF

INSTRUCTION MANUAL



FEATURES

- HONED SPOOL BORE provides consistent spool fit with low leakage.
- EVERY FLOW CONTROL VALVE IS TESTED for shutoff, max. flow, and pressure compensation.
- STANDARD 3-PORT allows for pressure compensated flow out of two ports.

SPECIFICATION

- 3,000PSI max operating pressure
- Adjustable relief preset at 2500 PSI
- Side ported, port size: 1/2" NPT, 3/4" NPT, #10SAE, #12SAE available
- Standard controlled flow ranges of 0-30 GPM
- Once set, maintains constant speed regardless load variation
- Excess flow is returned to tank

RECOMMENDED SYSTEM

MAXIMUM TANK PRESSURE	500 PSI	MAXIMUM OPERATING PRESSURE	3,000 PSI
MAXIMUM OPERATING TEMPERATURE	180°F	MAXIMUM OPERATING FILTRATION	30 MICRON

INSTALLATION DIMENSION

