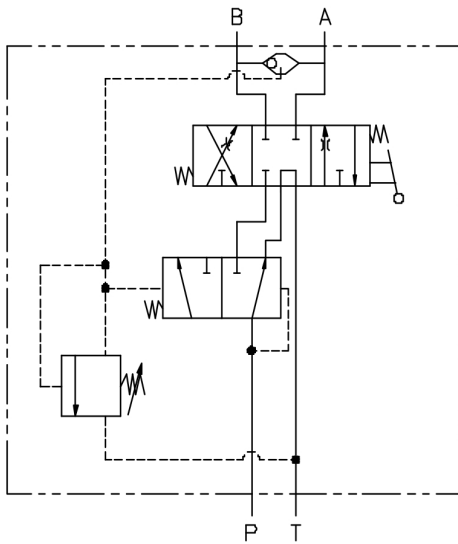


## P70 Series Directional Control Valves

P70LS-755-TM-6-4-L-S



### Features:

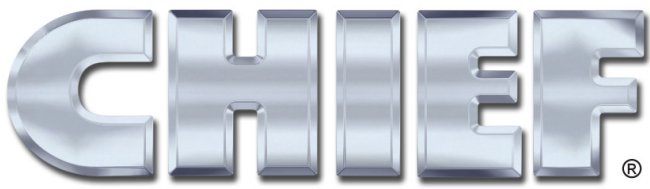
- Pilot operated relief valve is standard on every P70 series.
- Full range pressure compensated by-pass type flow control valve built in.
- Reduced cost and potential for leaks with fewer fittings with the P70 series.
- Fine positive metering in both directions with the manual handle.
- Precision ground chrome plated spool for increase life.
- O'ring Ports optional

### Specifications:

- Rated for 0-18 gpm (0-68.1 lpm).
- Rated for 3000 psi (207 bar).
- Weighs 6-1/2 lbs. (2.9 kg).
- 30 – Micron filtration recommended.

### Materials:

- Cast Iron Body
- Buna N O'Rings
- Chrome Plated Steel Spool
- Consult Factory for Stainless Steel Spools



# HYDRAULIC VALVES

## P70 Series Product Information

The P70 series combines the features of a four-way directional control valve, a full range pressure compensated by-pass type flow control valve, and a pilot operated pressure relief valve all in one compact package. This valve reduces the number of fittings, plumbing and potential leakage points in hydraulic circuits. The manual handle allows the customer to meter the flow out of either port. Flow to the work port is directly proportional to the movement of the lever. Flow out of each work port is constant regardless of load changes, this allows the customer to maintain smooth and constant movement of a cylinder or motor. Every P70 comes standard with a pilot operated relief. The tank port must be plumbed directly back to tank.

**Spool Type** – Spool types are tandem center (T), open center (O), open meter center (OM), fine metering (M), and tandem metering (TM). (See chart on next page and schematics on page #4 for information on spool type)

**Actuators** – Lever handle (L) pressurizes the B port when the handle is pushed towards the valve body. Lever handle (J) pressurizes A port when the handle is pushed towards the valve body. Rotary handle (H) is used to rotate spool in or out of valve body. No actuator (N) L type spool. No actuator (M) J type spool.

**Spool Action** – Three-position detent (D) holds the spool in neutral and both active positions. Friction detent (F1) applies friction to the spool so that the spool does not move when the handle is released either side of neutral, a detent groove clearly indicates neutral position. Spring center (S) returns the handle to neutral when the handle is released. Spring center detent (SD) springs back to neutral from one position and is mechanically detented in the other position (flow out port A in detent). Spring offset (SO) spring holds spool in one active position (flow out port B). Rotary friction detent (E) applies friction to the spool as it is rotated so that the spool does not rotate when the handle is released either side of neutral, a detent groove clearly indicates neutral position. Two-position detent (2D) P to B only. Two-position detent (D2) P to A only. Normally closed electric switch (WC) used with (S), (F1) and (D) options only. Normally open electric switch (WO) used with (S), (F1) and (D) options only.

### P70LS – EXAMPLES OF COMMON MODEL CODES:

**P70LS755TM64LF1**.....3/4" inlet and outlet ports, 1/2" work ports, 0-6 gpm tandem metering spool, L style handle and neutral position friction detent.

**P70LS120TM184LF1**.....#12SAE inlet and outlet ports, #10SAE work ports, 0-18 gpm tandem metering spool, L style handle and neutral position friction detent.

**P70LS55TM124LS**.....3/4" inlet and outlet ports, 1/2" work ports, 0-12 gpm tandem metering spool, L style handle and neutral position spring center.

### P70LS – COMPLETE LIST OF OPTIONS AND ACCESSORIES:

**P70-D**..... Three-position detent kit.

**P70-WC**..... Three-position detent kit with normally closed electric switch.

**P70-WO**..... Three position detent kit with normally open electric switch.

**P70-F1**.....Ball friction detent.

**P70-F1WC**.....Ball friction detent with normally closed electric switch.

**P70-F1WO**.....Ball friction detent with normally open electric switch.

**P70-HJ**.....J style handle kit.

**P70-HL**.....L style handle kit.

**P70-S**..... Spring centering kit.

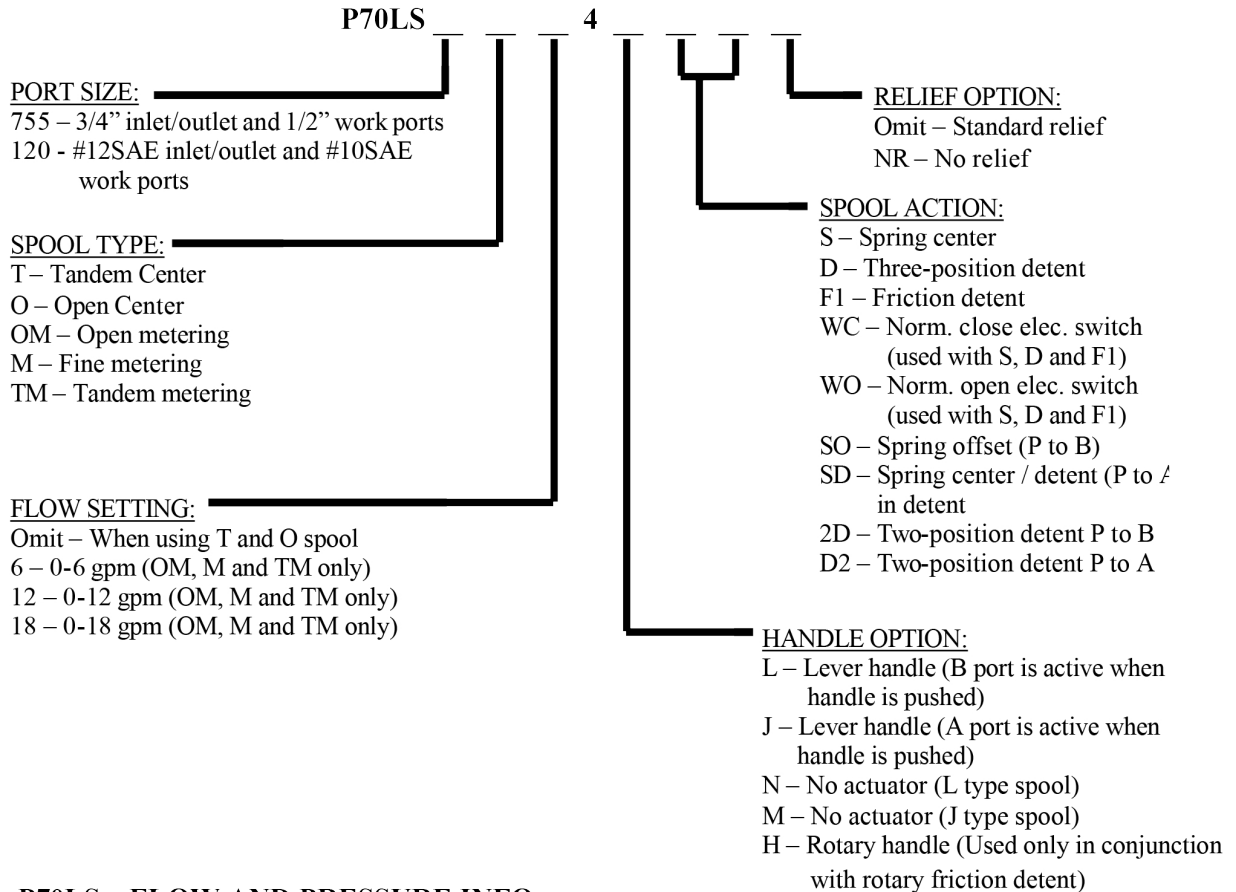
**P70-SD**.....Spring center detent kit (P to A in detent).

## Product Customization Guide

### P70LS – COMPLETE LIST OF OPTIONS AND ACCESSORIES CONT...

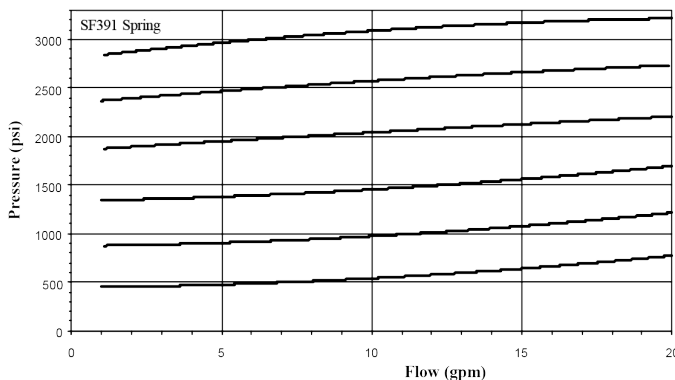
- P70-SO.....Spring offset kit (P to B).
- P70-SOHD.....Heavy duty spring offset kit (P to B).
- P70LS-K.....Seal kit for SDCF.

### P70LS – MODEL CODE CREATION:



### P70LS – FLOW AND PRESSURE INFO:

Pressure vs. Flow for Pilot Relief  
Relief is set at 6 gpm



Neutral Flow Pressure Drop

