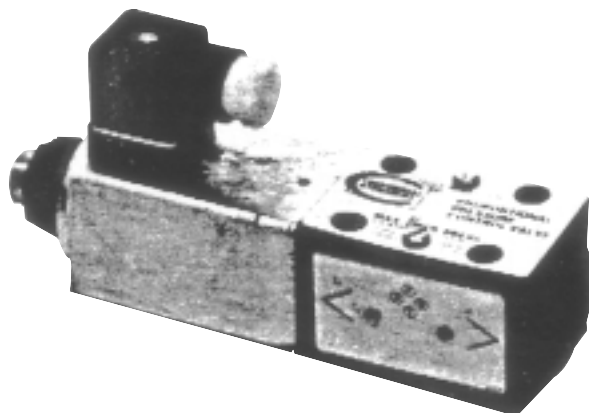


EP03M-3

PRESSURE CONTROL VALVES

PRESSURE REDUCING/RELIEVING

SUBPLATE MOUNTING



DESCRIPTION

These proportional valves are direct operated pressure reducing valves. They can be used to control pressure in parts of a circuit. This valve incorporates a pressure control spool with a pressure sensing piston to sense downstream pressure.

The single solenoid version, **code B**, will allow fluid flow from P port to B port when an electrical signal is applied. If the signal is decreased to zero, P port will be blocked and B port opened to the tank port. The **code A** version will allow flow from P to A.

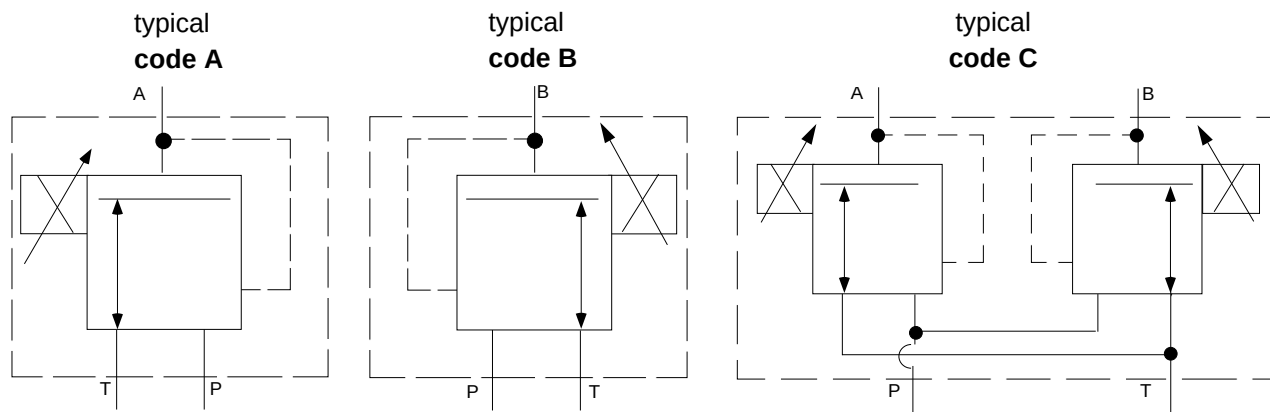
The double solenoid version will allow flow from P to A (or P to B) when the signal is applied to the proper solenoid. A and B ports are used alternately for pressure reduction in the respective port. P and T ports are common.

TYPICAL PERFORMANCE SPECIFICATIONS

MOUNTING SURFACE		NFPA / T3.5.1M (D03) ISO / 4401 Size 03	
MOUNTING POSITION		Unrestricted (horizontal part)	
MAXIMUM OPERATING PRESSURE	P, A, B Port	3500 psi	250 bar
	T Port	400 psi	26 bar
FLUID OPERATING VISCOSITY		80 to 350 SUS Acceptable start-up 4000 SUS	
FLUID CLEANLINESS		ISO 4406 Code 16 / 13 or cleaner	
HYSTERESIS	With Dither	4%	
REPEATABILITY	With Dither	1%	
THRESHOLD	Nominal w/Dither	3%	
VOLTAGE	Code 12	12 VDC	
	Code 24	24 VDC	
CURRENT	Code 12	2.2 Amp.	
	Code 24	1.1 Amp.	
WATTAGE	@ 20° C (I2R)	19	
COIL RESISTANCE	Code 12 / @ 68° F (20° C)	3.8	
	Code 24 / @ 68° F (20° C)	15.2	
INTERNAL LEAKAGE	@ 1000 psi P @ 0 VDC	8 In3/min typical (131 ml/min)	
FLUID TEMPERATURE RANGE		Maximum 150° F (65° C) For safety, over 130° F (54° C) is not recommended.	
WEIGHT	EP03M-3-A or B	4.1 lbs.	1.8 kg.
	EP03M-3-C	6.3 lbs	2.8 kg.

NOTE:

Data is taken with oil temperature @ 120°F (49°C) and viscosity @ 100 SUS, using a Continental Hydraulics' ECM4 electronics controller.





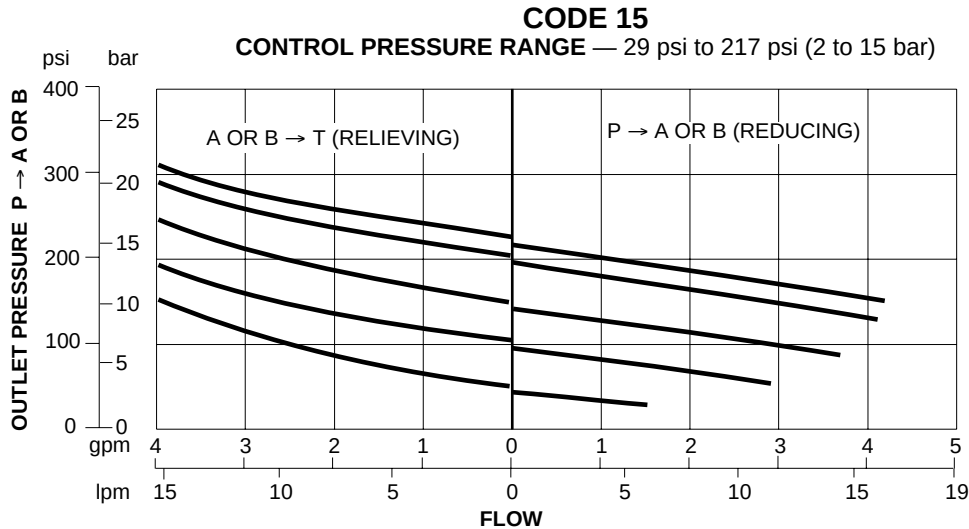
EP03M-3

PRESSURE CONTROL VALVES

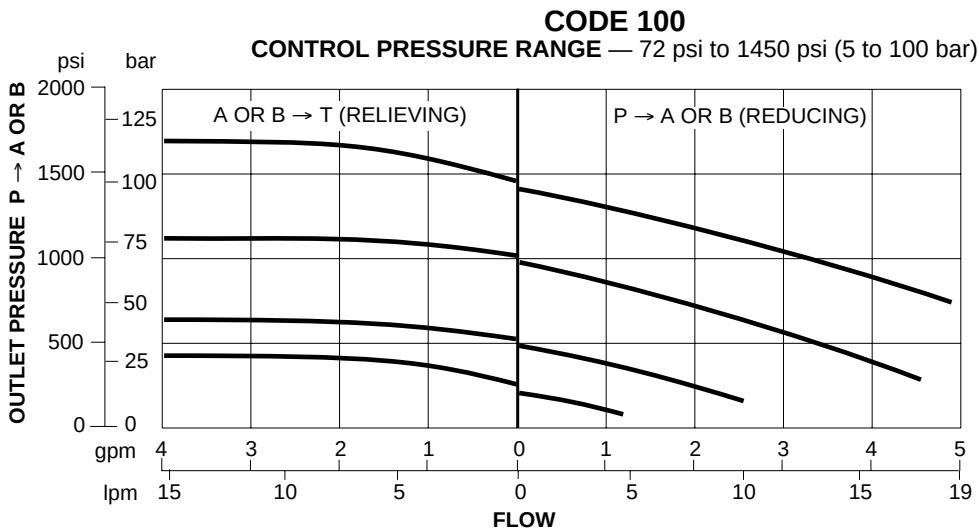
PRESSURE REDUCING/RELIEVING

SUBPLATE MOUNTING

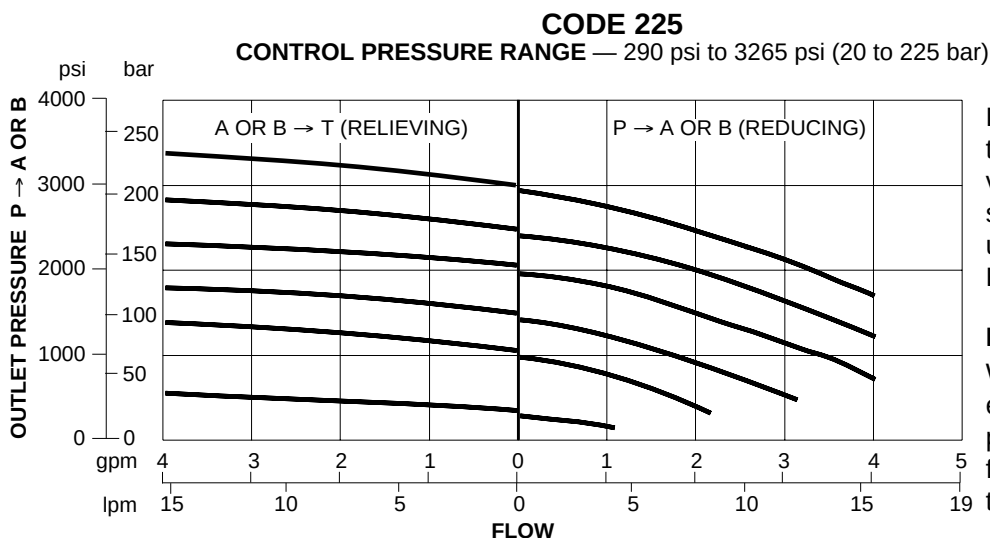
PRESSURE vs. FLOW



Data is taken with oil temperature @ 120° F (49° C), viscosity @ 100 SUS and system pressure @ 1500 psi, using a Continental Hydraulics' ECM4 controller.



Data is taken with oil temperature @ 120° F (49° C), viscosity @ 100 SUS and system pressure @ 3000 psi, using a Continental Hydraulics' ECM4 controller.



Data is taken with oil temperature @ 120° F (49° C), viscosity @ 100 SUS and system pressure @ 3300 psi, using a Continental Hydraulics' ECM4 controller.

NOTE:

When the secondary pressure exceeds the reduced set pressure, flow will then move from the controlled port to the tank port.

EP03M-3

PRESSURE CONTROL VALVES

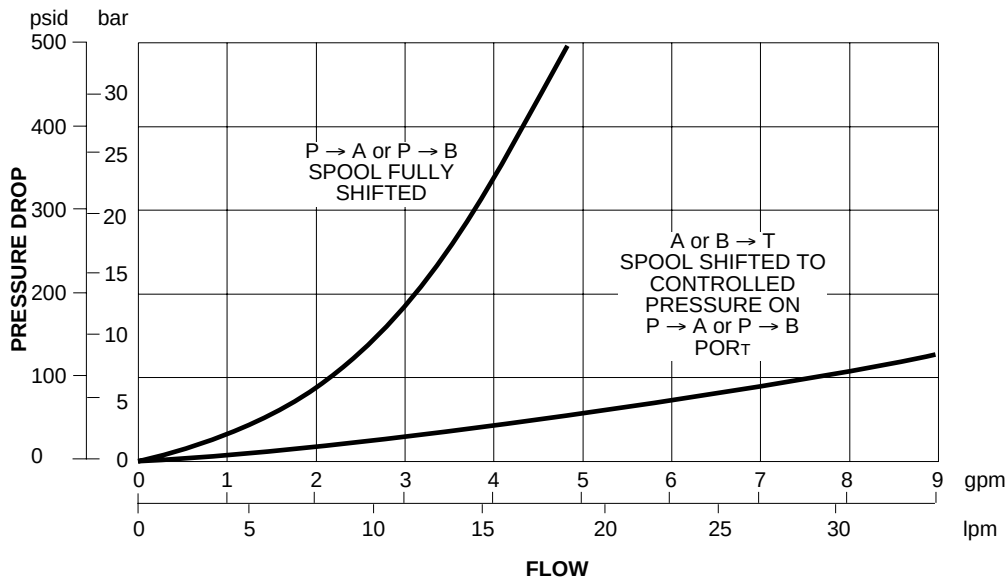
PRESSURE REDUCING/RELIEVING

SUBPLATE MOUNTING



PRESSURE DROP CURVES — SINGLE/DOUBLE SOLENOID VALVE

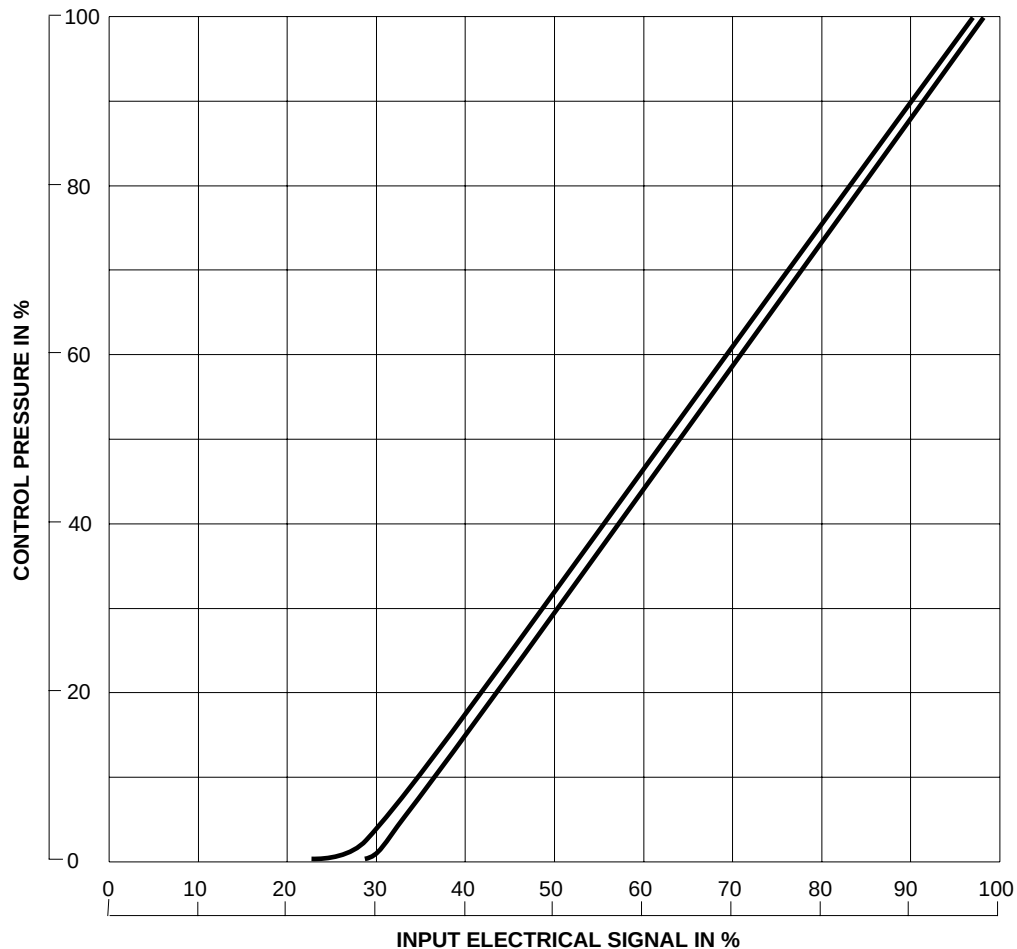
FLUID VISCOSITY: 100 SUS OIL @ +120°F (49°C)



CONTROL PRESSURE vs. INPUT SIGNAL

CURVE SHOWN @ ZERO FLOW

FLUID VISCOSITY: 100 SUS OIL @ +120°F (49°C)





EP03M-3

PRESSURE CONTROL VALVES

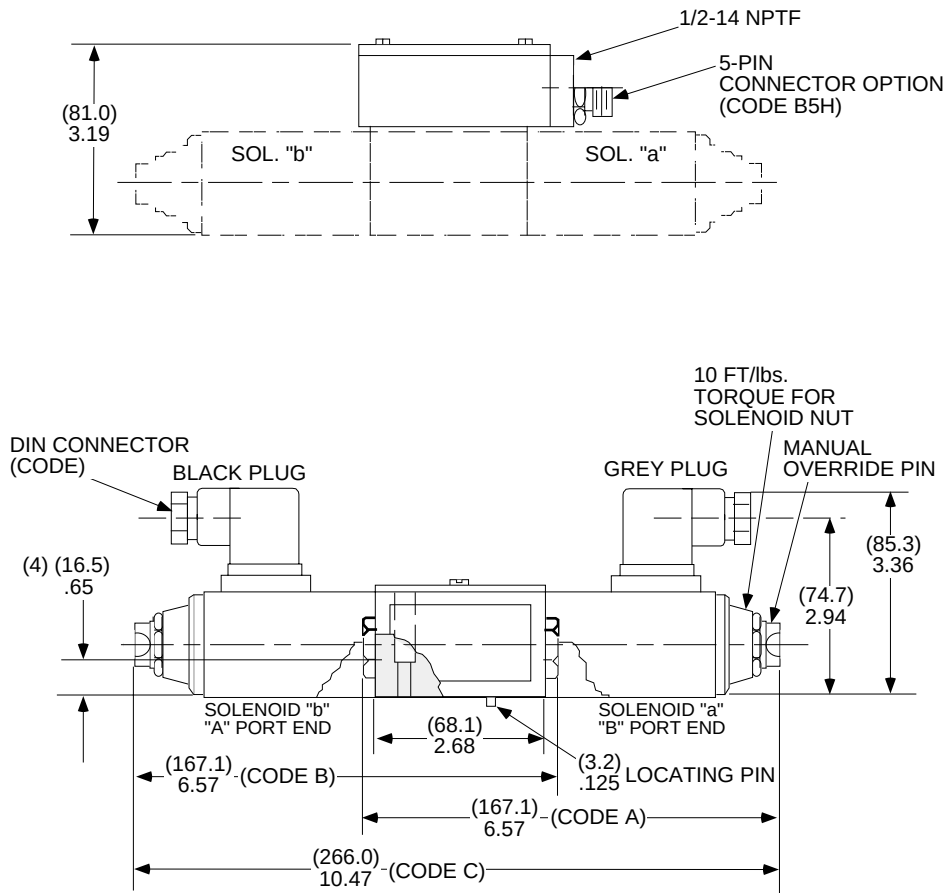
PRESSURE REDUCING/RELIEVING

SUBPLATE MOUNTING

ELECTRICAL OPTIONS: CODES B, BT or B5H

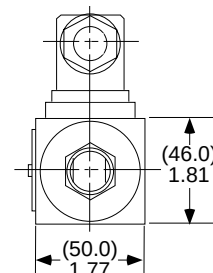
DIMENSIONS SHOWN IN: (MILLIMETERS)
INCHES

NFPA D03 size (formerly D01).
See Mounting Surface section
for interface pattern.



NOTES:

1. Electrical box may be rotated 180° (Codes B, BT and B5H).
2. 5-pin quick disconnect meets NFPA recommended standard T3.5.29M-1980.
3. Two lead wires for each solenoid --- 6 inches (152.44 mm) long (except Code D) and ground screw are provided by removing the top cover plate.
4. Mounting bolts (4): torque 4-5 ft./lbs. using a 5/32 hex wrench.



EP03M-3

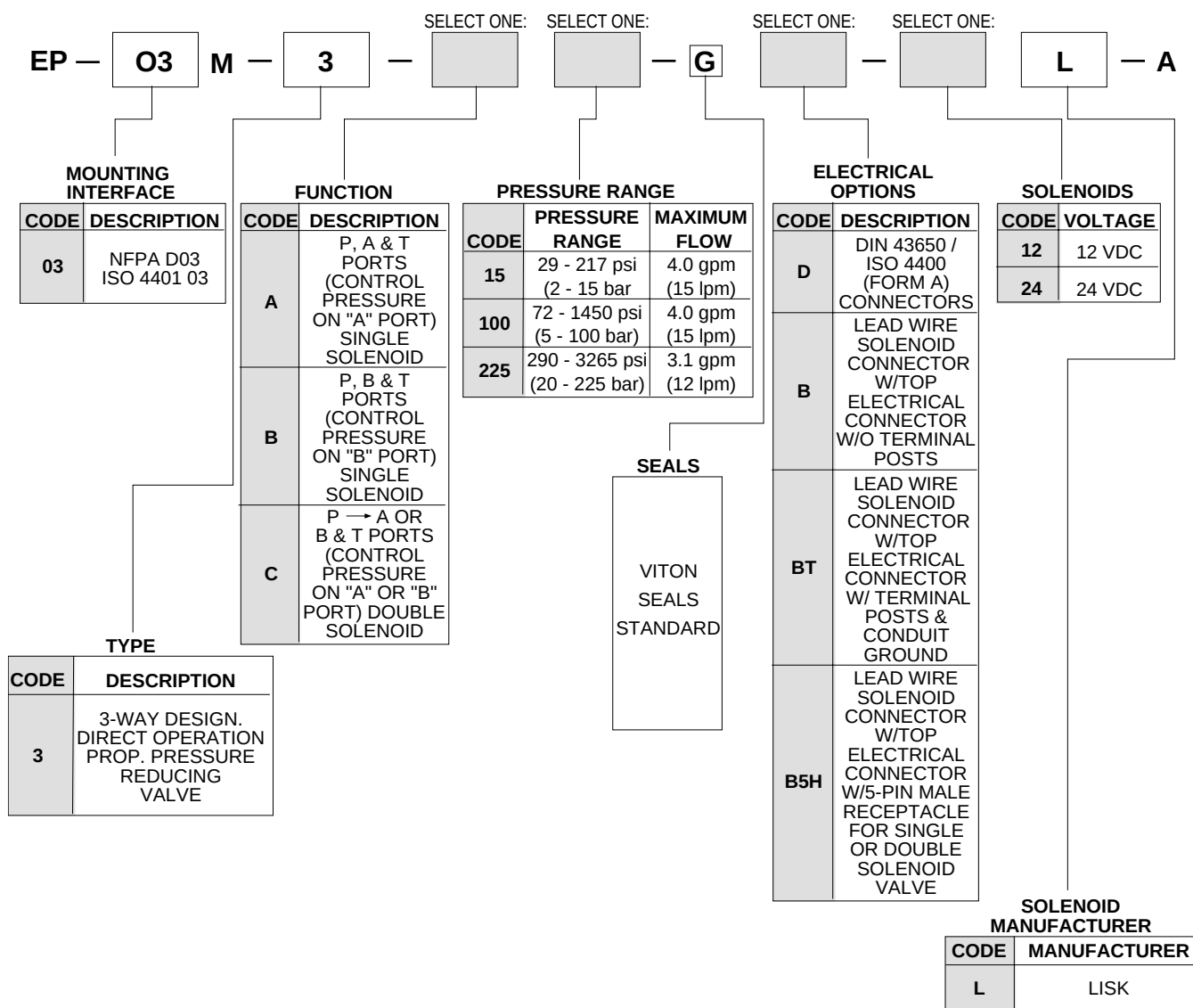
PRESSURE CONTROL VALVES

PRESSURE REDUCING/RELIEVING

SUBPLATE MOUNTING



ORDERING INFORMATION



TYPICAL ORDERING CODE: **EP03M-3-B15-GD-24L**