

# F03MSV-CI/CO

## Pressure Compensated Flow Control with Reverse Flow Check Valve

MODULAR VERSION  
NFPA D03 ISO 4401-03

P max 3000 PSI 210 bar  
Q max 12 GPM 55 l/min

### ► DESCRIPTION:

Pressure compensated, fully adjustable flow control valves with an integral reverse flow check valve. Valve conforms to NFPA D03/ISO 4401-03 standard for mounting interface. This valve maintains a constant flow rate regardless of system pressure or load changes. Sharp edge orifice minimizes flow variation due to changes in viscosity. Reverse flow will open the check at about 10 psi [.7 bar]. Minimum leakage is .1 gpm [0.4 l/min] at shutoff. Balanced adjustment screw for easy adjustment at all pressures. Five turns of adjustment closed to fully open.

- Maximum operating pressure: 3000 psi
- Maximum flow rate: 6 gpm for F03MSV-C\* A,B,C  
12 gpm for F03MSV-CIP

### ► PERFORMANCE:

(Measured with mineral oil of viscosity 36cSt at 120°F [50°C])

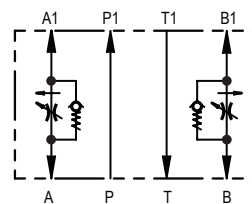
Max operating pressure:	PSI [bar]	3000 (210)
Flow adjustment range	GPM [l/min] A,B,C	.1 - 6 [0.4 - 23]
	GPM [l/min] CIP	.2 - 12 [0.4 - 55]
Adjustment Range	No. of CCW turns from close to open	5
Ambient temperature range	°F [°C]	-4 to 140 [-20 to +60]
Fluid temperature range	°F [°C]	-4 to 176 [-20 to +80]
Fluid viscosity range	cSt	10 - 400
Recommended viscosity	cSt	25
Fluid contamination degree	According to ISO 4406:1999 class 19/17/14	
Mass: F03MSV-C*C F03MSV-C*A, C*B, P	lbs [kg]	1.45 [0.66]
		1.0 [0.45]

F03MSV-COA

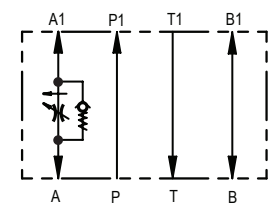


### HYDRAULIC SYMBOLS

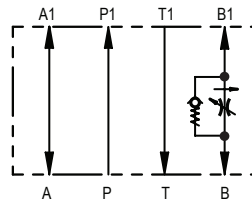
F03MSV-COC



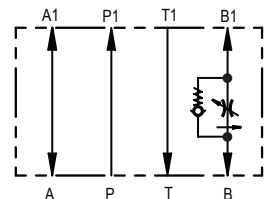
F03MSV-COA



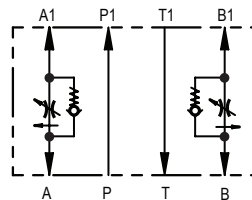
F03MSV-COB



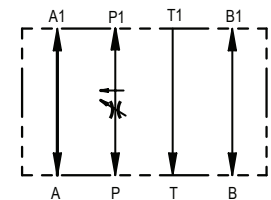
F03MSV-CIB



F03MSV-CIC



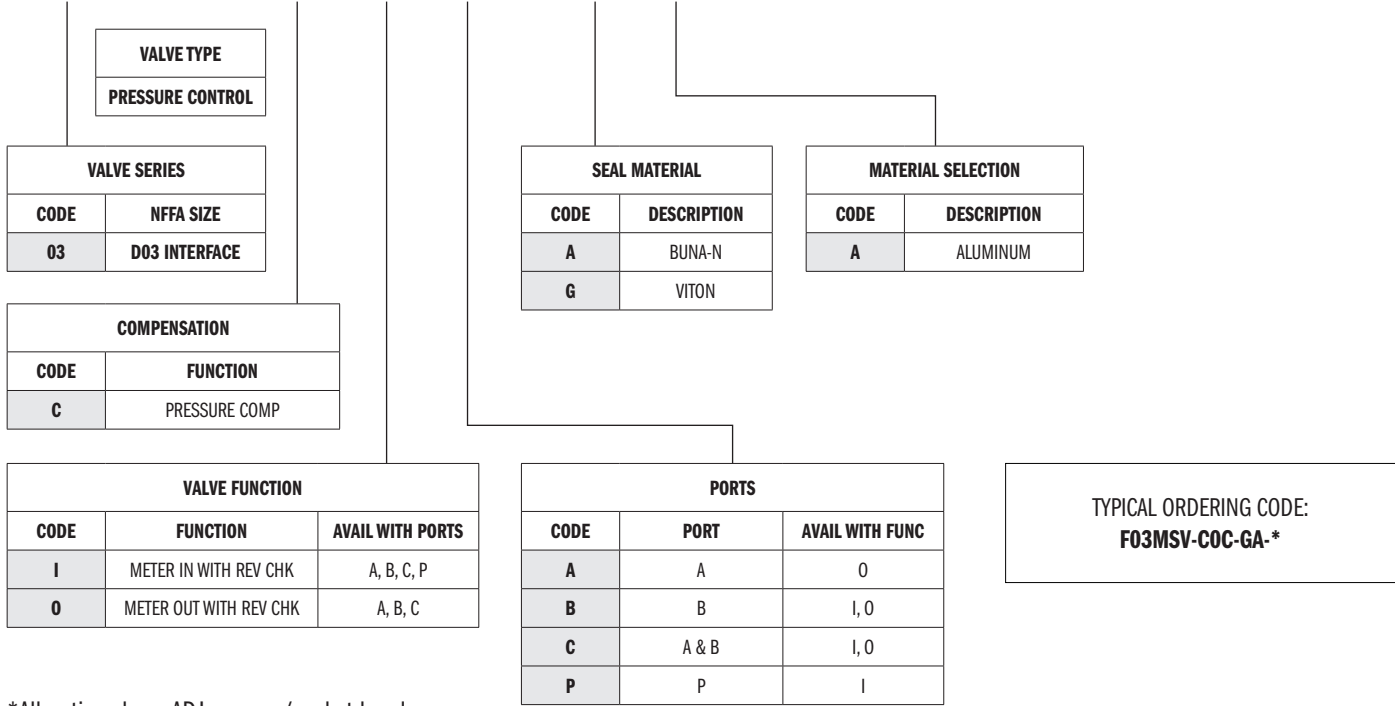
F03MSV-CIP



**F03MSV-CI/CO**

► **IDENTIFICATION CODE:**

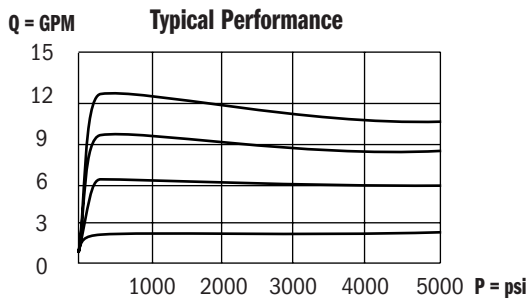
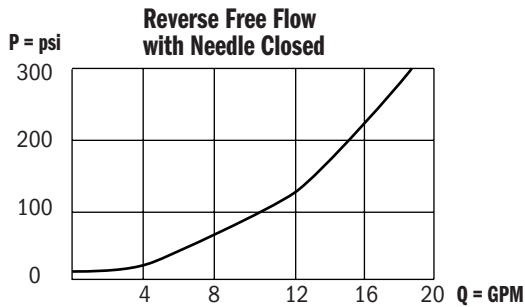
**F03MSV - C**            -        **A**    -        ————— DESIGN LETTER



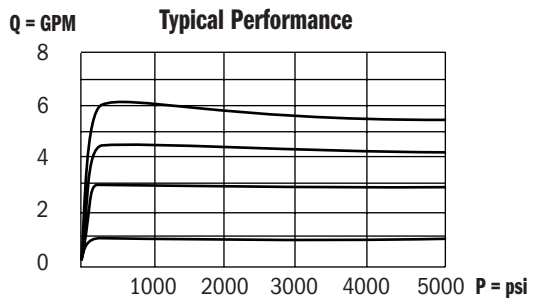
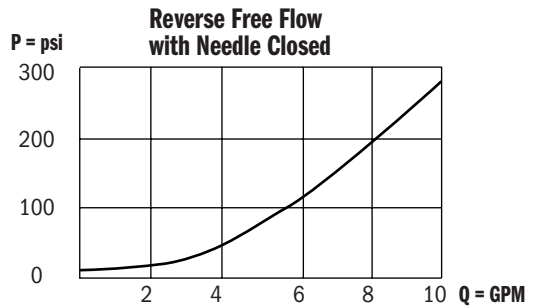
\*All options have ADJ screw w/socket head

► **PERFORMANCE DATA:**

**F03MSV-CI**

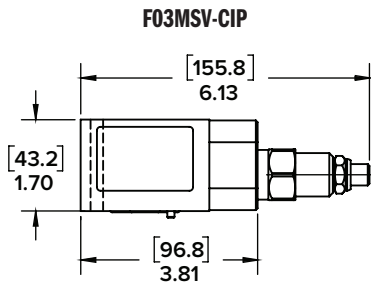
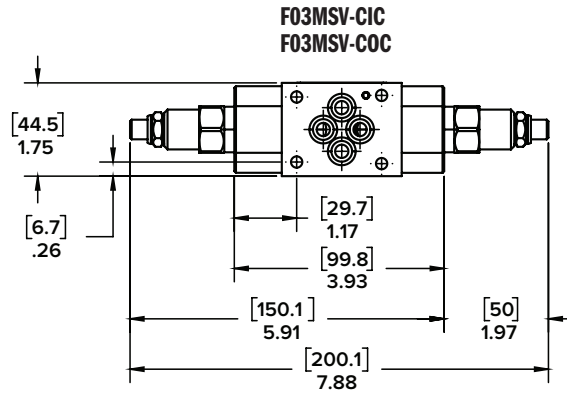
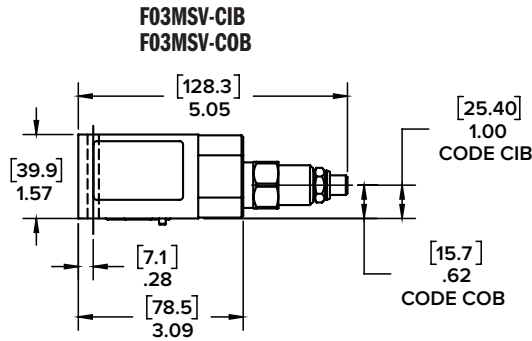
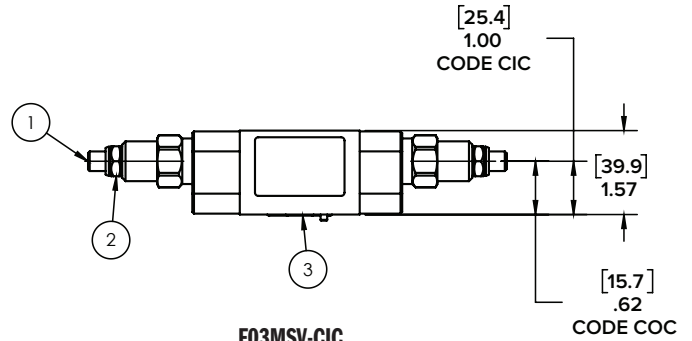
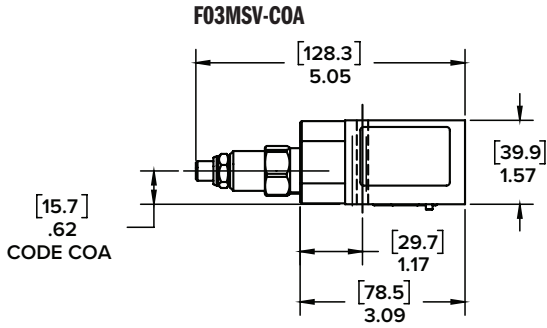


**F03MSV-CO**



Dimensions inch [mm]

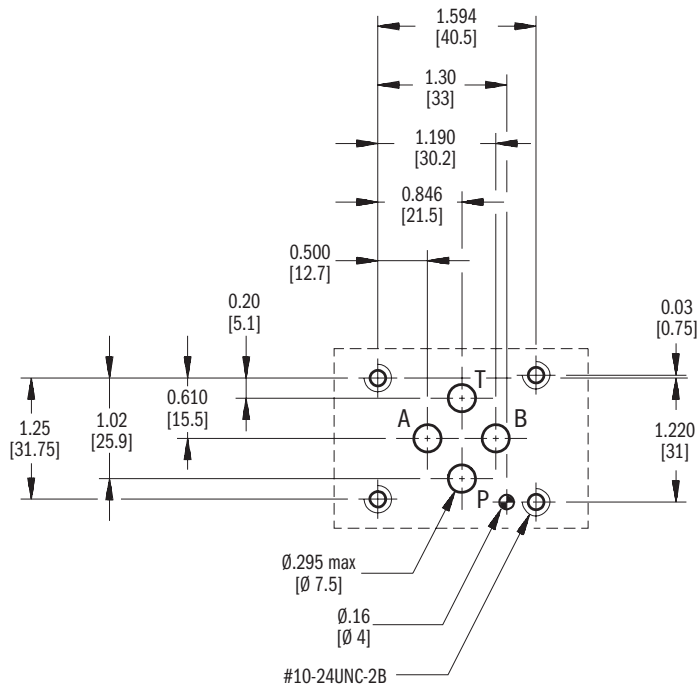
► **INSTALLATION DATA:**



<b>1</b>	Countersunk hex adjustment screw: 5/32" [4mm] allen wrench Rotate counterclockwise to increase flow.
<b>2</b>	Locking nut: 9/16" wrench
<b>3</b>	Qty. 4 O-rings - size AS568-012 (.364 ID x .070 CS) 90 Shore

► **MOUNTING:**

NFPA D03  
ISO 4401-03-02-0-05



## ► HYDRAULIC FLUIDS:

Use mineral oil-based hydraulic fluids HL or HM type, according to ISO 6743-4. For these fluids, use NBR seals. For fluids HFDR type (phosphate esters) use FPM seals (code V). For the use of other kinds of fluid such as HFA, HFB, HFC, please consult our technical department.

Using fluids at temperatures higher than 80 °C causes a faster degradation of the fluid and of the seals characteristics. The fluid must be preserved in its physical and chemical characteristics.

All pressure drops shown on these data pages are based on 170 SUS fluid viscosity and 0.87 specific gravity. For any other specific gravity (G1) the pressure drop ( $\Delta P$ ) will be approx.  $\Delta P1 = \Delta P (G1/G)$ . See the chart for other viscosities.

<b>Fluid</b>	Cst	10	14.5	32	36	43	54	65	76	86	108	216	324	400
<b>Viscosities</b>	SUS	60	75	150	170	200	250	300	350	400	500	1000	1500	1900
<b>Multiplier</b>		0.77	0.81	0.97	1.00	1.04	1.10	1.15	1.20	1.24	1.31	1.56	1.72	1.83

Use mineral oil-based hydraulic fluids HL or HM type, according to ISO 6743-4. For these fluids, use NBR seals. For fluids HFDR type (phosphate esters) use FPM seals (code G). For the use of other kinds of fluid such as HFA, HFB, HFC, please consult our technical department.

Using fluids at temperatures higher than 180 °F causes the accelerated degradation of seals as well as degradation of the fluids physical and chemical properties.

From a safety standpoint, temperatures above 130 degrees F are not recommended.

<b>Temperature Ranges</b>	Ambient	-4 to +130°F	-20 to +54°F
	Standard	-4 to +180°F	-20 to +82°F
<b>Fluid Viscosity</b>	Range	60-1900 SUS	10-400 cSt
	Recommended	120 SUS	25 cSt
<b>Fluid Contamination Degree</b>	ISO 4406:1999 Class 20/18/15		