

# MODULAR STACK VALVES

F03MSV-CI/CO

# 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

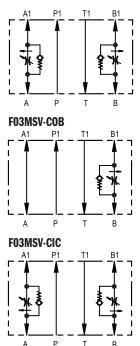


Max operating pressure:	PSI [bar]	3000 (210)			
Flow adjustment range	GPM [I/min] A,B,C GPM [I/min] CIP	.1 - 6 [0.4 - 23] .2 - 12 [0.4 - 55]			
Adjustment Range	No. of CCW turns from close to open	5			
Ambient temperature range	°F [°C]	-4 to 140 [-20 to +60]			
Fluid temperature range	°F [°C]	-4 to 176 [-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]			

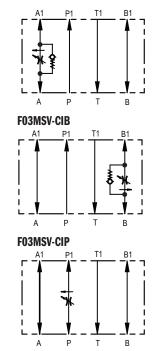


### **HYDRAULIC SYMBOLS**

### F03MSV-COC



### F03MSV-COA



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### **MODULAR STACK VALVES**

### F03MSV-CI/CO

#### ► IDENTIFICATION CODE: FO3MSV - C Δ DESIGN LETTER VALVE TYPE **PRESSURE CONTROL** VALVE SERIES SEAL MATERIAL MATERIAL SELECTION CODE NFFA SIZE CODE DESCRIPTION CODE DESCRIPTION **D03 INTERFACE** BUNA-N ALUMINUM 03 A A VITON G

COMPENSATION						
CODE FUNCTION						
C	PRESSURE COMP					

CODE

I

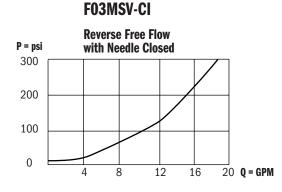
0

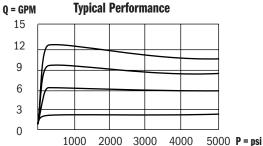
PORTS							
CODE	PORT	AVAIL WITH FUNC					
A	A	0					
В	В	I, 0					
C	A & B	I, 0					
Р	Р	1					

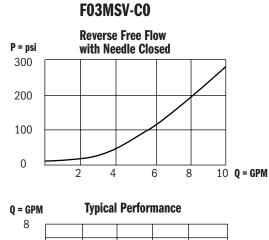
### TYPICAL ORDERING CODE: F03MSV-COC-GA-\*

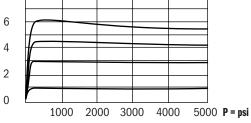
\*All options have ADJ screw w/socket head

# PERFORMANCE DATA:









**AVAIL WITH PORTS** 

A, B, C, P

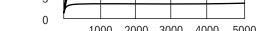
A, B, C

VALVE FUNCTION

FUNCTION

METER IN WITH REV CHK

METER OUT WITH REV CHK





1

[39.9]

1.57

4

## **MODULAR STACK VALVES**

F03MSV-CI/CO

25.40

1.00 CODE CIB

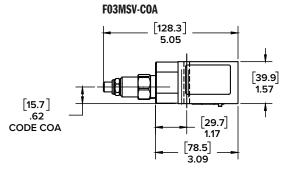
[15.7]

.62

CODE COB

# ► INSTALLATION DATA:

Dimensions inch [mm]



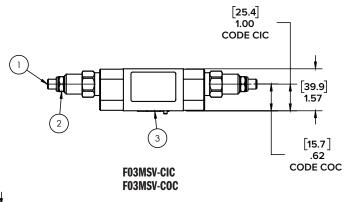
F03MSV-CIB

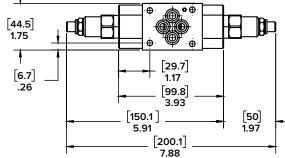
F03MSV-COB

[128.3]

5.05

₿⊨





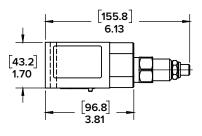
1.594

F03MSV-CIP

[7.1]

.28

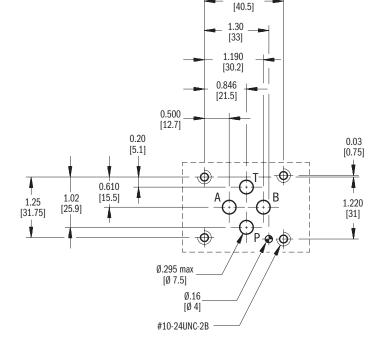
[78.5] 3.09



1         Countersunk hex adjustment screw: 5/32" [4mm] alle wrench Rotate counterclockwise to increase flow.						
2	Locking nut: 9/16" wrench					
3	Qty. 4 0-rings - size AS568-012 (.364 ID x .070 CS) 90 Shore					

► MOUNTING:

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





### **MODULAR STACK VALVES**

### F03MSV-CI/C0

# ► 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.

Fluid	Cst	10	14.5	32	36	43	54	65	76	86	108	216	324	400
Viscosities	SUS	60	75	150	170	200	250	300	350	400	500	1000	1500	1900
Multiplier		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.

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





### CONTINENTAL HYDRAULICS INC. / HYDRECO INC.

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