

F03MSV-ND

Flow Control Valve, Non-Compensated with Check

MODULAR VERSION
NFPA D03 ISO 4401-03

P max 5000 PSI 350 bar
Q max See table of performance

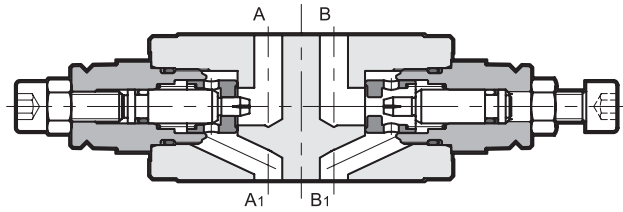


F03MSV-ND

► DESCRIPTION:

This modular stack valve is a non-compensated flow control valve with a check valve for reverse free flow. This valve increases its orifice value from fully closed to fully open with counter-clockwise rotation. Meter-in or meter-out configuration is determined by the orientation of the body to mounting surface. Available with flow control function on line A, B, or both A + B.

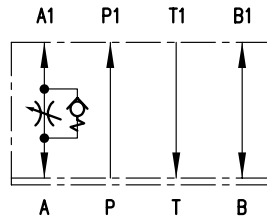
- Maximum operating pressure: 5000 psi
- Maximum flow rate: (Controlled lines / free lines)
F03MSV-ND (13 / 20 gpm)



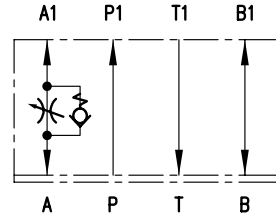
HYDRAULIC SYMBOLS

F03MSV-NDA

METER-OUT

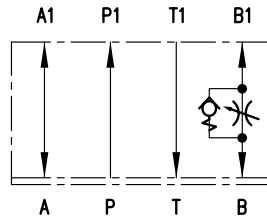


METER-IN

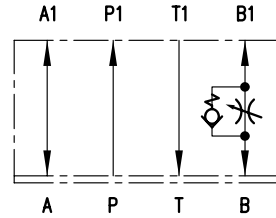


F03MSV-NDB

METER-OUT

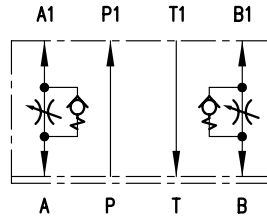


METER-IN

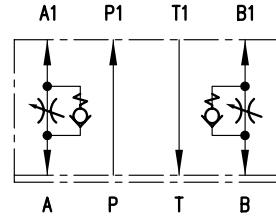


F03MSV-NDC

METER-OUT



METER-IN



► PERFORMANCE:

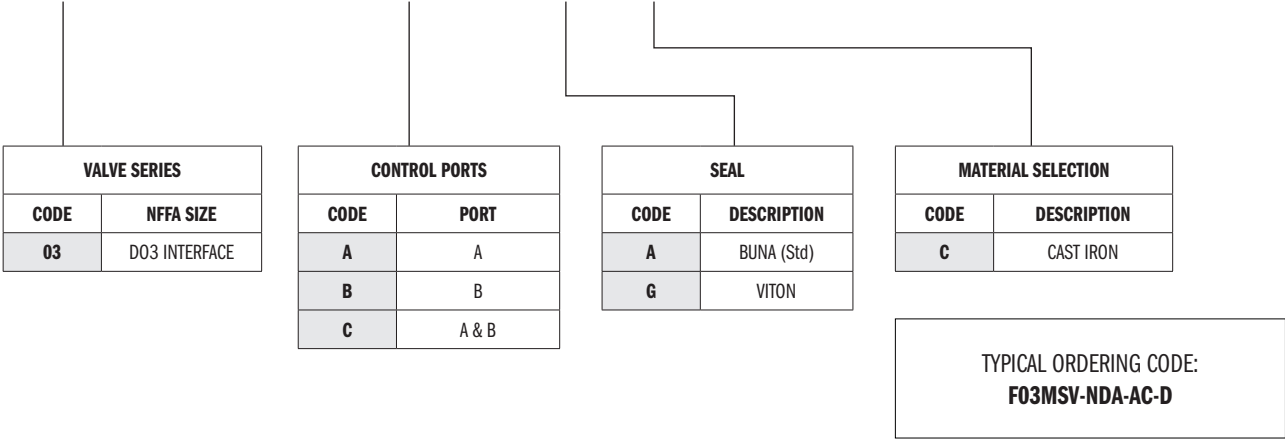
(Measured with mineral oil of viscosity 36cSt at 120°F [50°C])

Max operating pressure:	5000 PSI	350 bar
Cracking Pressure	7 PSI	0.5 bar
Maximum Flow Rate	Control Lines	13 GPM 50 l/min
	Free Lines	20 GPM 75 l/min
Minimum Flow Rate	Controlled lines with ΔP = 145 psi	≤ 0.015 gpm ≤ 0.06 l/min
Mounting Surface	NFPA D03 ISO 4401-03-02-0-05	
Mass:	2.87 lbs	1.3 kg

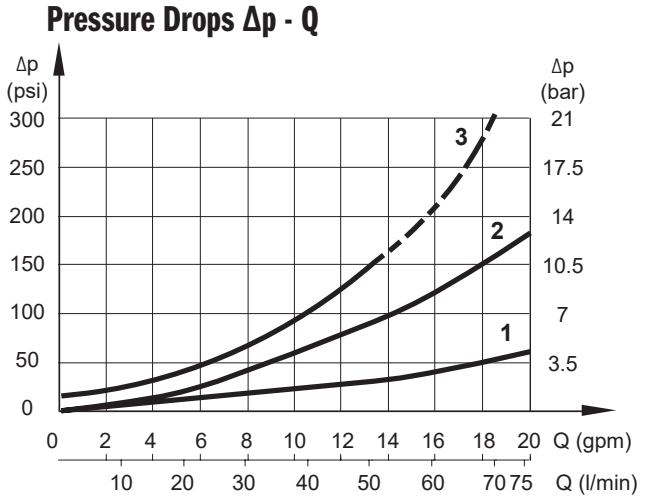
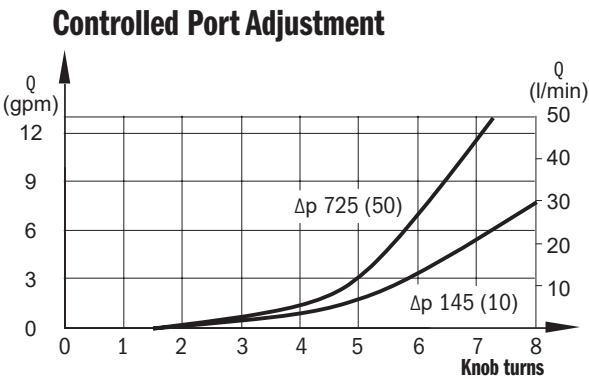
F03MSV-ND

► **IDENTIFICATION CODE:**

F03MSV - ND [] - [] **C** - [] ————— DESIGN LETTER



► **PERFORMANCE DATA:**



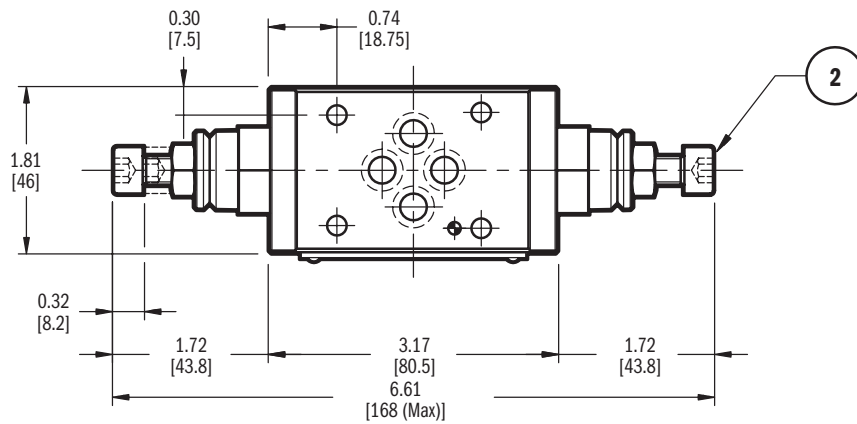
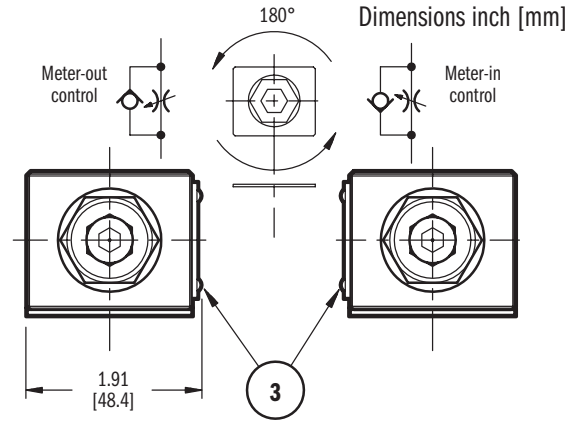
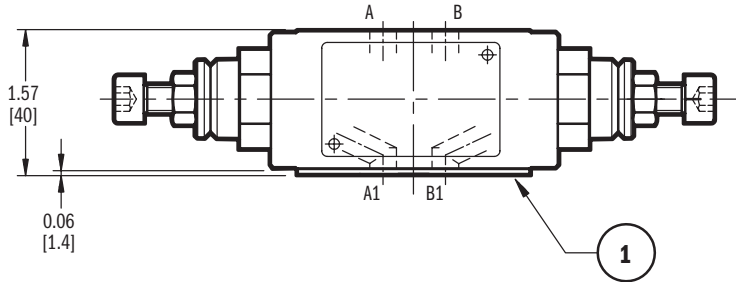
CURVE	FLOW PATH
1	P Port, T Port
2	A port or B port w/o flow control
3	reverse free flow thur check

NOTE: Values obtained with oil viscosity of 36 cSt at 122°F (50°C).

► INSTALLATION DATA:

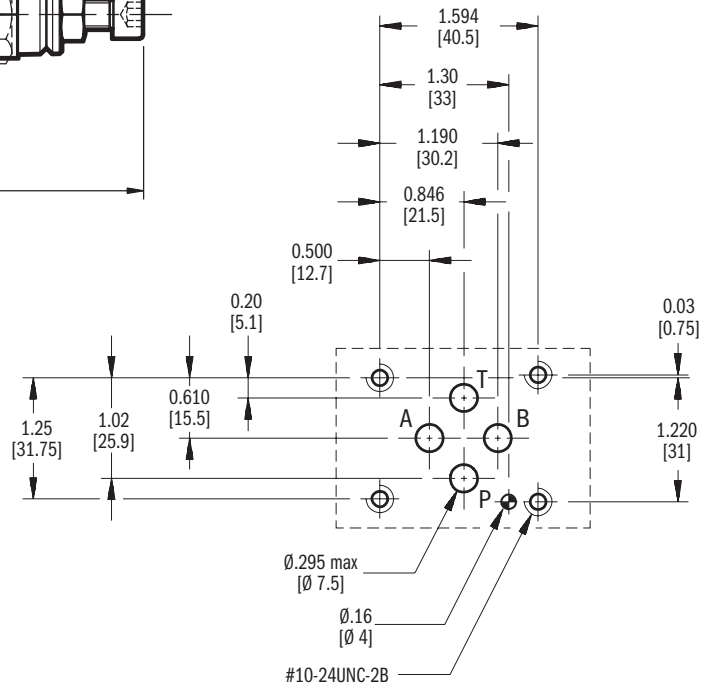
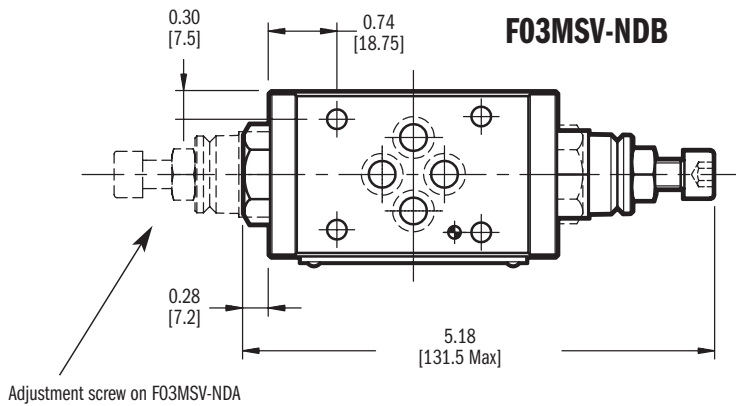
MOUNTING DIMENSIONS

F03MSV-ND



- | | |
|---|--|
| 1 | OR retainer plate 1025858 (included in the supply): |
| 2 | Socket hex adjustment screw: Hex key 6
Rotate anti-clockwise to increase flow |
| 3 | Identification plate |

F03MSV-NDB



► MOUNTING:

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

SEAL KIT

BUNA SEAL KIT	1013661
VITON SEAL KIT	1013662

► 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 (ΔP) 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.

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



CONTINENTAL HYDRAULICS INC. / HYDRECO INC.

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