CONTINENTAL HYDRAULICS

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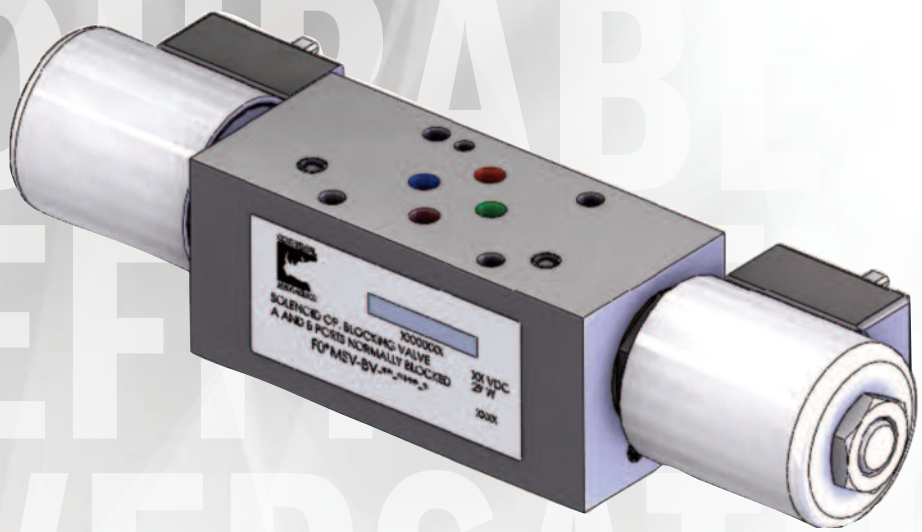
FO*MSV-BV

NORMALLY CLOSED BLOCKING VALVE



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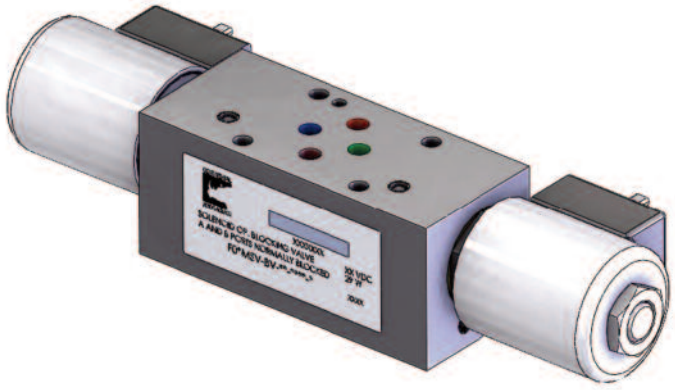
F0*MSV-ND
NORMALLY CLOSED BLOCKING VALVE



DESCRIPTION

This modular stack valve is designed to help block oil movement both from the control valve or from the actuator. Typically used with Proportional valves with Zero-Lap type spool configurations that could allow oil movement when the system is shut down.

OPERATIONS

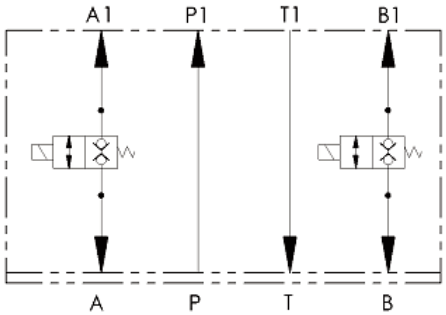
This valve will block flow when de-energized and will allow bi-directional flow when energized.

Both the A and B work ports incorporate a 2-way, 2-position bi-directional, normally closed poppet type solenoid valve. Energizing the solenoid will allow full flow to the system.

TYPICAL PERFORMANCE SPECIFICATIONS

	F03MSV		F05MSV	
MAXIMUM OPERATING PRESSURE	5000 psi	350 bar	5000 psi	350 bar
MAXIMUM FLOW RATE	20 gpm	76 l/min	30 gpm	114 l/min
INTERNAL LEAKAGE at 5000 psi	< 5 drops/min			
MOUNTING SURFACE	NFPA D03 ISO 4401-03-02-0-05		NFPA D05 ISO 4401-05-04-0-05	
24 VOLT DC SOLENOID	DIN 43650 connection, 1.21 A			
WEIGHT	lbs 3.4	kg 1.89	lbs 8.8	kg 4

HYDRAULIC SCHEMATIC



IDENTIFICATION CODE

F ☐ **MSV - BV - AD - 24DG -** ☐ — DESIGN LETTER

SIZE	
03	NFPA D03
05	NFPA D05

CONTROL PORT Blocking poppet type	
BV	Port A & B

SEAL	
A	Buna

BODY MATERIAL	
D	Ductile iron

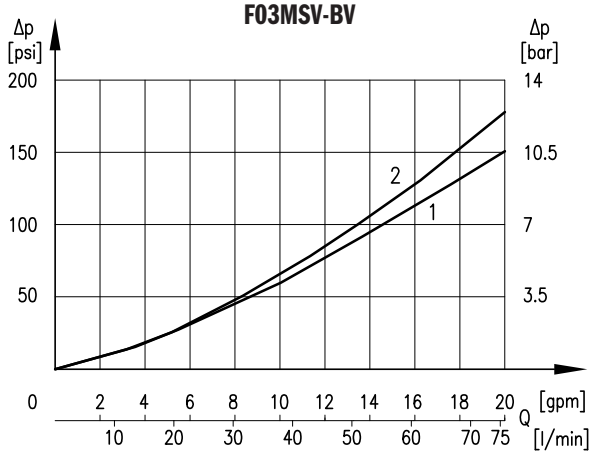
COIL TYPE	
24DG	24VDC DIN 43650 connection

TYPICAL ORDERING CODE:
F03MSV-BV-AD-24DG-C
F05MSV-BV-AD-24DG-C

PRESSURE DROPS ΔP-Q (CARTRIDGE ONLY)

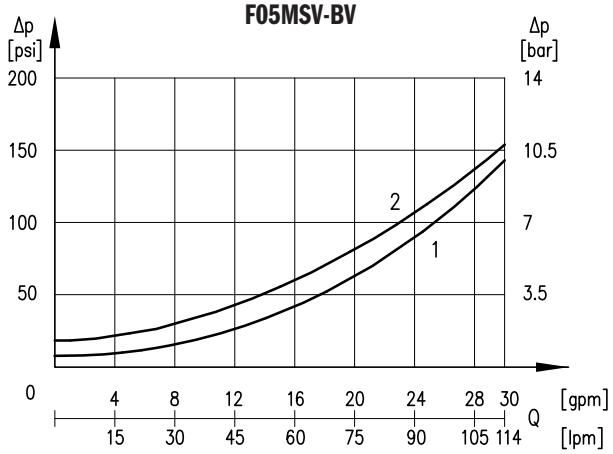
(OBTAINED WITH VISCOSITY OF 105 SUS - 21.8 CST AT 122°F - 50°C)

F03MSV-BV



CURVE	FLOW PATH
1	port A1 to port A
2	port B1 to port B

F05MSV-BV

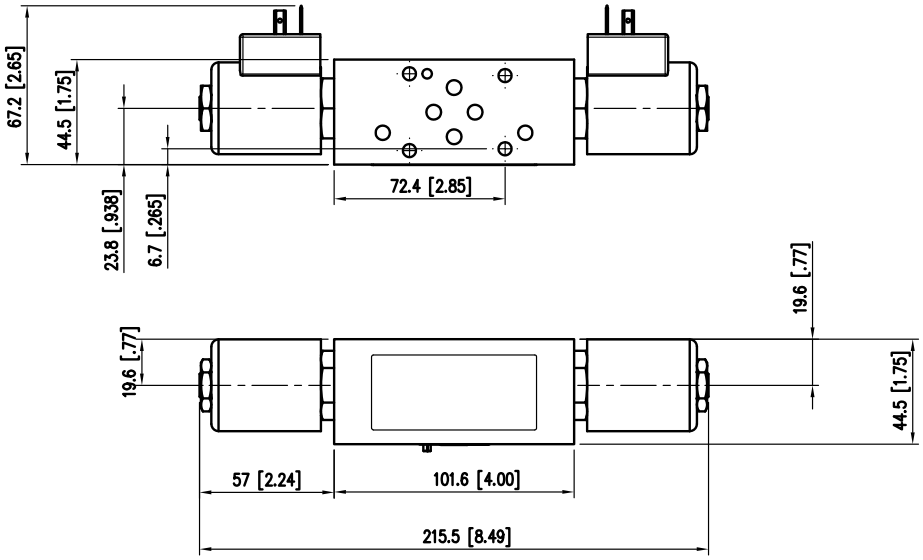


CURVE	FLOW PATH
1	port A1 to port A
2	port B1 to port B

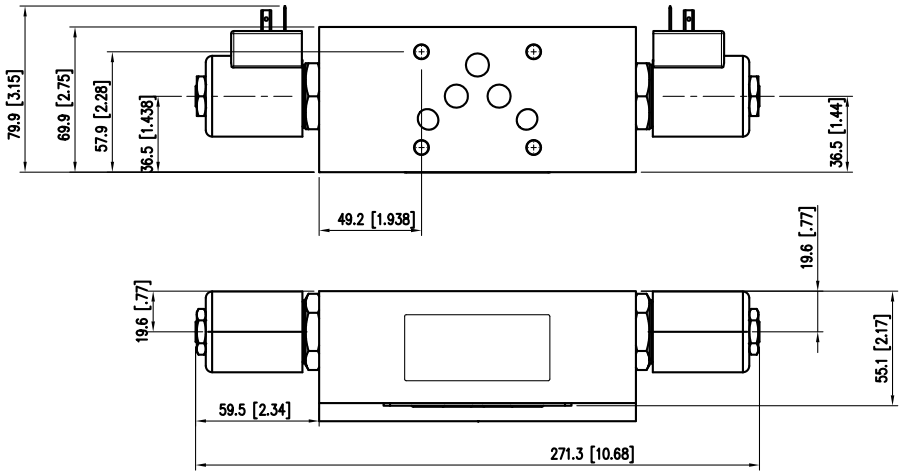
OVERALL AND MOUNTING DIMENSIONS

Dimensions in mm [IN]

F03MSV



F05MSV



APPLICATION DATA

FLUIDS
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. ΔP1 = ΔP (G1/G). See the chart for other viscosities.

FLUID VISCOSITIES	Cst	10	14.5	32	36	43	54	65	76	86	108	216	324	400
	SUS	60	75	150	170	200	250	300	350	400	500	1000	1500	1900
MULTIPIER		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 degrees F causes the accelerated degradation of seals as well as the degradation of the fluids physical and chemical properties.

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

RANGE TEMPERATURES	Ambient	- 4 to +130 °F	-20 to +54 °C
	Fluid	- 4 to +180 °F	-20 to +82 °C
FLUID VISCOSITY	Range	60 - 1900 SUS	10 - 400 cSt
	Recommended	120 SUS	25 cSt
FLUID CONTAMINATION		ISO 4406:1999 Class 18/16/13	

POWERFUL
ACCURATE
INNOVATIVE
PRECISE
DURABLE
EFFICIENT
RELIABLE

ABOUT CONTINENTAL HYDRAULICS

Rugged, durable, high-performance, efficient—the reason Continental Hydraulics' products are used in some of the most challenging applications across the globe. With a commitment to quality customer support and innovative engineering, Continental's pumps, valves, power units, mobile and custom products deliver what the markets demand. Continental has been serving the food production, brick and block, wood products, automotive and machine tool industries since 1962. Learn how our products survive some of the most harsh environments.

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