

PowerFlow™ D03 Modular Stack Valves



MODULAR STACK VALVES

PRODUCT OVERVIEW

Modular Stack Valves



Features and Benefits

- Reduces assembly time
- Eliminates plumbing for reduced system space and connections
- 5,000 PSI rated at full rated flow
- Matches D03, D05, and D08 mounting patterns

Product Description

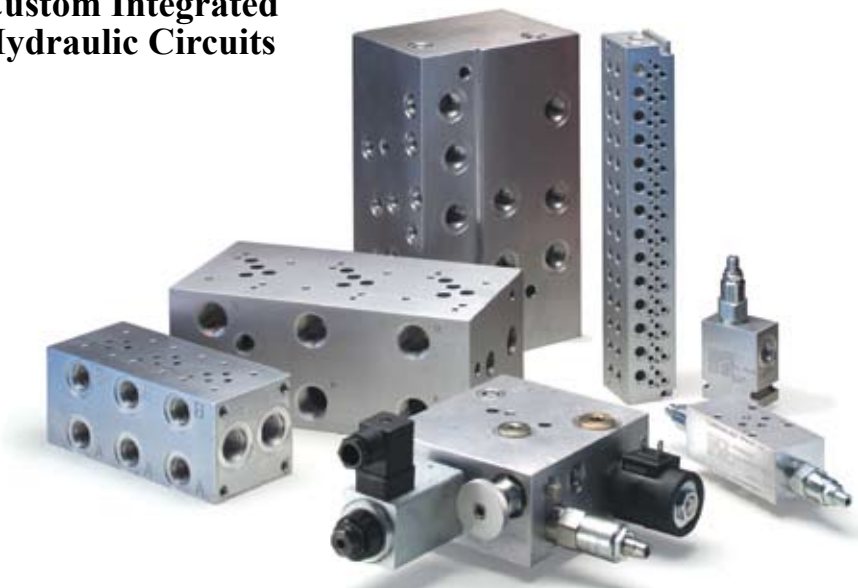
Modular stack valves are designed to install between the valve and its mounting surface. This will eliminate plumbing connections and reduce space requirements. Continental Hydraulics has a full range including check, flow control, relief, reducing, sequencing, shuttle valves and counterbalance valves. Manufactured to NFPA and ANSI/ISO's standards.

Bodies are manufactured of either aluminum (3000 PSI) or ductile (5000 PSI) to meet your pressure requirements. Our bodies use industry common cavities. All cartridges are 100% tested functionally.

Specifications

- Flow: Up to 120 GPM
- Pressure: Up to 5,000 PSI
- Temperature: Up to 200° F.
- Buna Seals

Subplates/Manifolds and Custom Integrated Hydraulic Circuits



Features & Benefits

- Precision machining to meet both NFPA and ANSI/ISO valve patterns
- High flow option
- Pressures up to 5000 PSI
- Available off the shelf for shipping
- Manifolds reduce piping thus reducing possible leakage points
- Parallel, series or custom circuits

Product Description

Continental Hydraulics supply Subplates, manifolds and Custom Block designs to meet your requirements. Our Subplates, Manifolds and custom products are available to match a variety of cartridge valve manufacturer's cavities

We also have a full line of adapter, transition, tapping and cover plates. Adapter plates mount to your existing equipment and allow newer; valve patterns to be mounted, saving plumbing time and expense.

Tapping plates allow installation of gauges without external plumbing. Our manifolds are manufactured for D02 through D10 NFPA patterns. Manifolds are available with one to sixteen stations.

Specifications

Manufactured from either aluminum or continuous cast ductile materials Pressure rated to 3000 PSI for aluminum and 5000 PSI for ductile. Ports available are NPTF, SAE, BSPP, ISO and BSPT

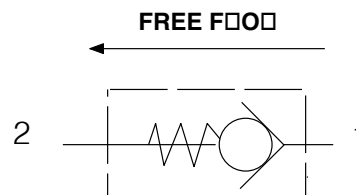
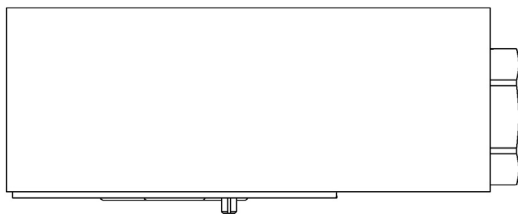
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C03MSV-DP / C03MSV-DT

CHECK VALVE, DIRECT OPERATED



DESCRIPTION

Utilizes a cartridge type, guided poppet, and hydraulic check valve as a blocking or load holding device for high-pressure applications.

OPERATIONS

This valve allows free flow in one direction and blocks flow in the opposite direction.

FEATURES & BENEFITS

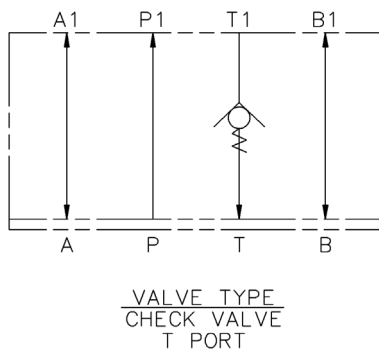
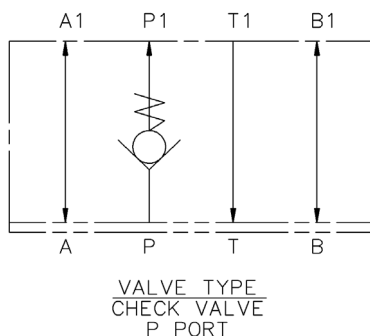
- All external parts are zinc plated for long life against elements.
- All cartridges are 100% functionally tested.
- Industrial common cavities.

SPECIFICATIONS

Flow: 20 GPM (75 L/M) Nominal

Valve Bodies: 3000 PSI (207 Bar) = Aluminum (2024-T4)

Estimated Shipping Weight: 2 # Aluminum

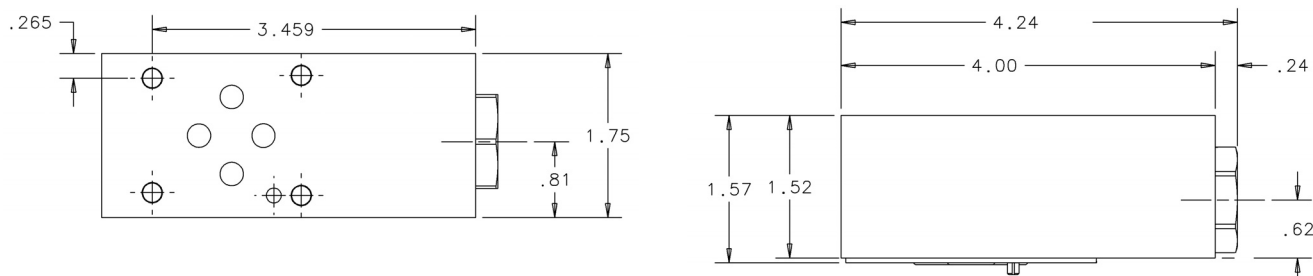


C03MSV-DP / C03MSV-DT

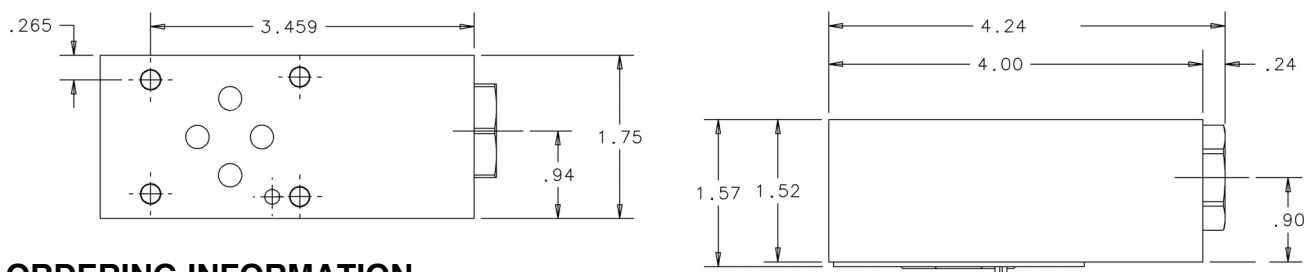
CHECK VALVE, DIRECT OPERATED

DIMENSIONS

C03MSV-DP



C03MSV-DT

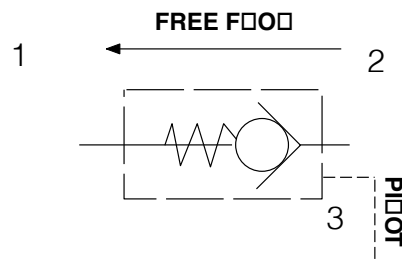
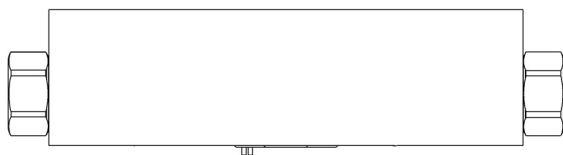


ORDERING INFORMATION

C03MSV — D											
			SELECT ONE	—		SELECT ONE	—		SELECT ONE	—	

C03MSV-PA / C03MSV-PB / C03MSV-PC

CHECK VALVE, PILOT OPERATED



DESCRIPTION

Utilizes a cartridge-type, guided poppet, and hydraulic pilot operated check valve as a blocking or load-holding device for high pressure applications.

OPERATIONS

This valve allows free flow from the work port to the outlet port and blocks flow in the opposite direction. Free flow will be allowed from the outlet port to the work port when at least one-third of the load induced pressure is sensed in the opposing work port.

FEATURES & BENEFITS

- All external parts are zinc-plated for long life against elements.
- All cartridges are 100% tested functionally.
- Uses Sun T-11A cavity.

SPECIFICATIONS

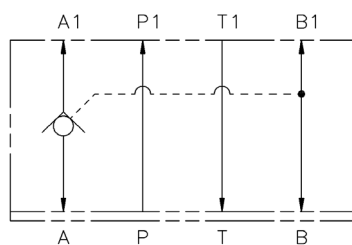
Valve Bodies: 3000 PSI (207 Bar) = Aluminum (2024-T4)

Flow: 15 GPM (57 L/M) Nominal

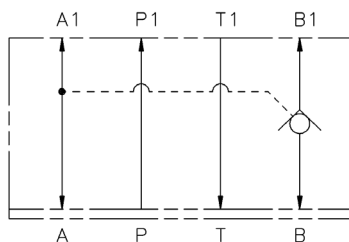
Pilot Ratio: 3:1

Internal Leakage: 1 drop per minute maximum at 5000 PSI

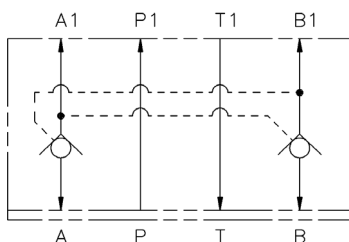
Estimated Shipping Weight: 2 # Aluminum



VALVE TYPE
PILOT OPERATED
CHECK VALVE
A PORT



VALVE TYPE
PILOT OPERATED
CHECK VALVE
B PORT



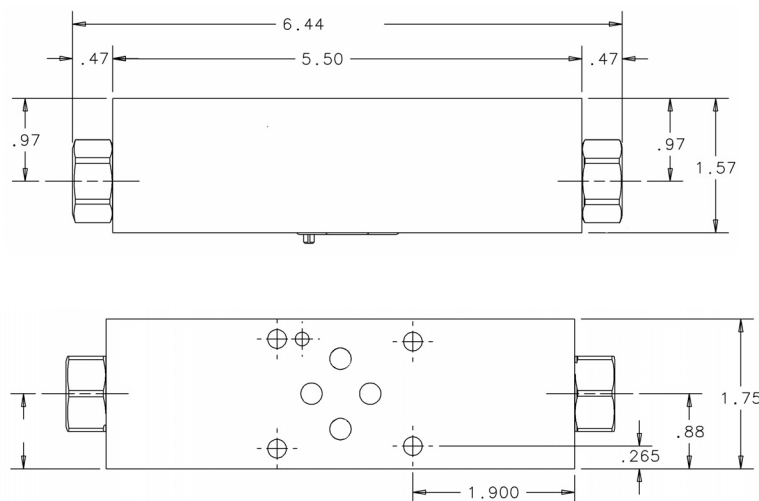
VALVE TYPE
PILOT OPERATED
CHECK VALVE
A & B PORT

C03MSV-PA / C03MSV-PB / C03MSV-PC

CHECK VALVE, PILOT OPERATED

DIMENSIONS

C03MSV-PA, PB and PC



ORDERING INFORMATION

C03MSV — P

SELECT ONE

SELECT ONE

SELECT ONE

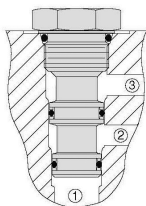
SELECT ONE

DESIGN

FUNCTION	SIZE	STYLE	TYPE	CONTROL PORT		CRACKING PRESSURE		SEALS		BODY MATERIAL	
CHECK VALVE	NFFPA D03 NG6 (CETOP 3)	MODULAR STACK VALVE	PILOT OPERATED GUIDED POPPET	CODE	LOCATION	CODE	PRESSURE	CODE		CODE	
				A	A PORT	30	30 PSI	A	BUNA N (STD)	A	ALUMINUM (STD)
				B	B PORT	75	75 PSI	G	VITON		
				C	A & B PORT						

Body Only Assembly:

Code A, B & C:
Aluminum (Part No.) - 550424K



General Information:

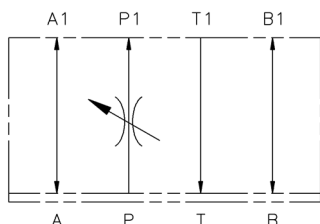
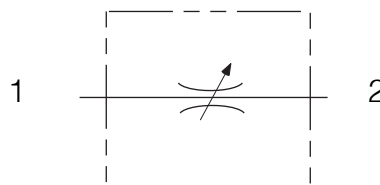
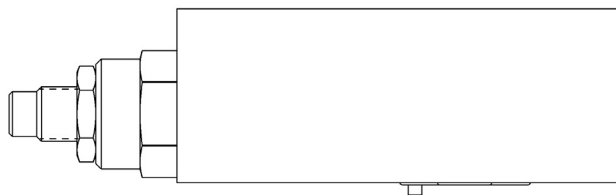
Cartridge cavity is Sun T-11A with flow pattern set up for checked flow port 1 to port 2, with port 3 as the pilot signal.

Cartridge #	CKCB-XCN	Buna N	30 PSI
	CKCB-XEN	Buna N	75 PSI
	CKCB-XCV	Viton	30 PSI
	CKCB-XEV	Viton	75 PSI

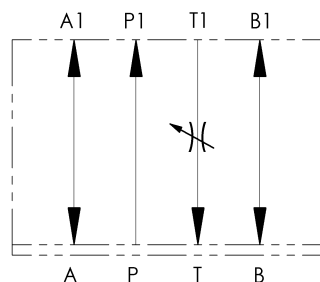
TYPICAL ORDERING CODE: **C03MSV-PA-30-AA**

F03MSV-NIP / F03MSV-NOT

FLOW CONTROL VALVE, NON-COMPENSATED



VALVE TYPE
FLOW CONTROL VALVE
METER-IN
P-PORT



VALVE TYPE
FLOW CONTROL VALVE
METER-OUT
T-PORT

DESCRIPTION

Utilizes a screw-in cartridge type, adjustable poppet type, hydraulic flow control valve.

OPERATIONS

This valve increases its orifice value from fully closed to fully open with counter-clockwise rotation.

FEATURES & BENEFITS

- All external parts are zinc-plated for long life against elements.
- All cartridges are 100% tested functionally.
- Industry common cavity.

SPECIFICATIONS

Flow: 12 GPM (45 L/M) Nominal

Valve Bodies: 3000 PSI (207 Bar) = Aluminum (2024-T4)

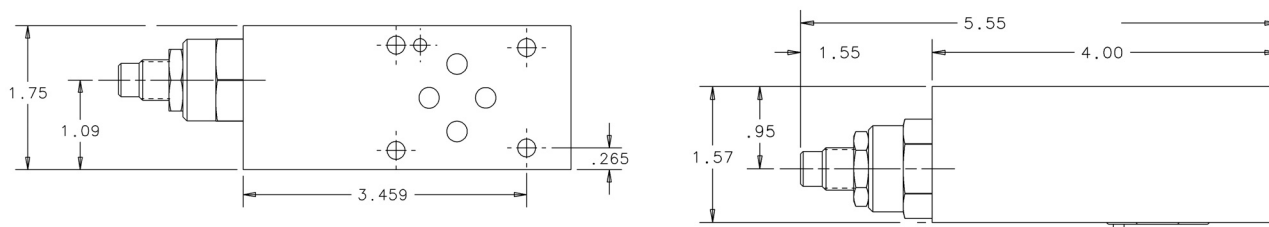
Estimated Shipping Weight: 2 # Aluminum

F03MSV-NIP / F03MSV-NOT

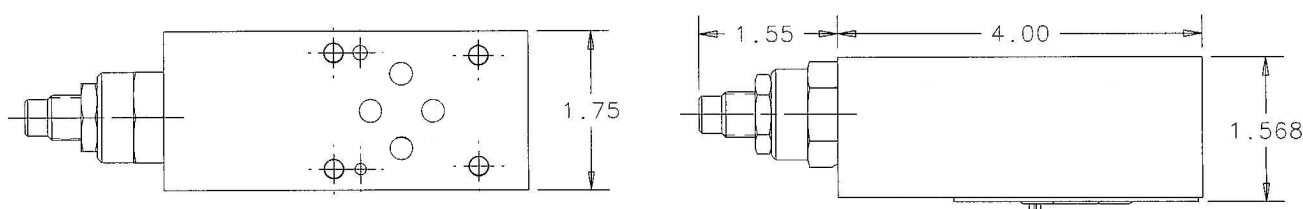
FLOW CONTROL VALVE, NON-COMPENSATED

DIMENSIONS

F03MSV-NIP



F03MSV-NOT



ORDERING INFORMATION

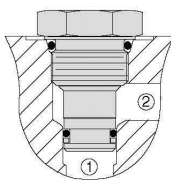
F03MSV		N		SELECT ONE		SELECT ONE		SELECT ONE		DESIGN	
FUNCTION	SIZE	STYLE	TYPE	CONTROL PORT		SEALS		BODY MATERIAL			
FLOW CONTROL VALVE	NFPA D03 NG6 (CETOP 3)	MODULAR STACK VALVE	NON- COMPENSATED	CODE	LOCATION	CODE		CODE		MAX. PS	
				IP	P PORT (Meter-In)	A	BUNA N (STD)	A	ALUMINUM (STD)	3000 PSI	
				OT	T PORT (Meter-Out)	G	VITON				

Body Only Assembly

NIP:
Aluminum (Part No.) - 552973K

NOT:
Aluminum (Part No.) - 552469K

Includes Seal Retainer Plate, O-rings & Locating Pin.



General Information

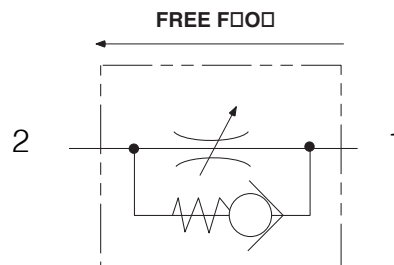
Cartridge cavity is HydraForce VC10-2 with a flow pattern set up for flow port 1 to port 2.

Cartridge # NV10-20A-0-N Buna N
NV10-20A-0-V Viton

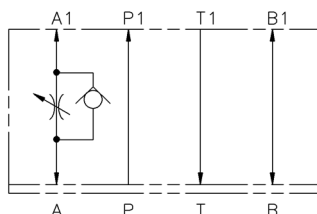
TYPICAL ORDERING CODE: **F03MSV-NIP-AA**

F03MSV-NDA / F03MSV-NDB / F03MSV-NDC

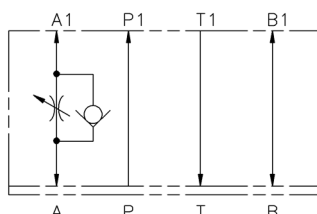
FLOW CONTROL VALVE, NON-COMPENSATED WITH CHECK



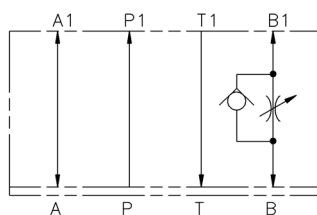
VALVE TYPE
FLOW CONTROL VALVE
WITH CHECK
METER-OUT
A PORT



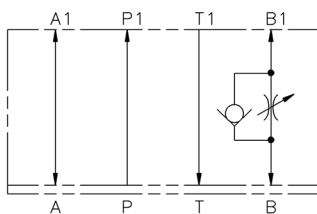
VALVE TYPE
FLOW CONTROL VALVE
WITH CHECK
METER-IN
A PORT



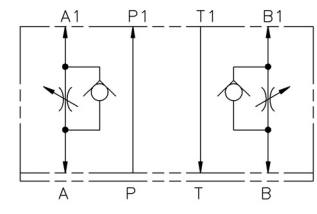
VALVE TYPE
FLOW CONTROL VALVE
WITH CHECK
METER-OUT
B PORT



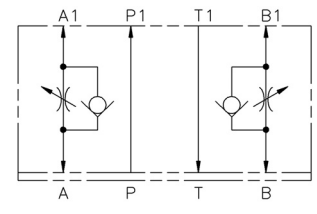
VALVE TYPE
FLOW CONTROL VALVE
WITH CHECK
METER-IN
B PORT



VALVE TYPE
FLOW CONTROL VALVE
WITH CHECK
METER-OUT
A - B PORT



VALVE TYPE
FLOW CONTROL VALVE
WITH CHECK
METER-IN
A - B PORT



DESCRIPTION

Utilizes a screw-in cartridge type, adjustable poppet type, hydraulic flow control valve with free reverse flow check.

OPERATIONS

This valve increases its orifice value from fully closed to fully open with counter-clockwise rotation.

FEATURES & BENEFITS

- All external parts are zinc-plated for long life against elements.
- All cartridges are 100% tested functionally.
- Industry common cavity.

SPECIFICATIONS

Flow: 12 GPM (45 L/M) Nominal

Valve Bodies: 3000 PSI (207 Bar) = Aluminum (2024-T4)

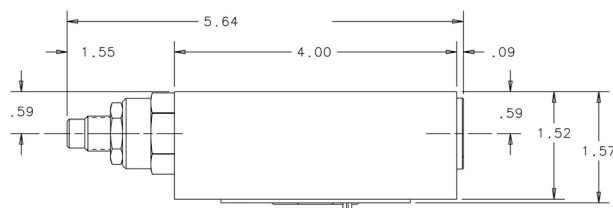
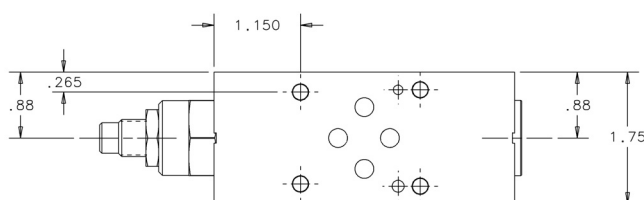
Estimated Shipping Weight: 2 # Aluminum

F03MSV-NDA / F03MSV-NDB / F03MSV-NDC

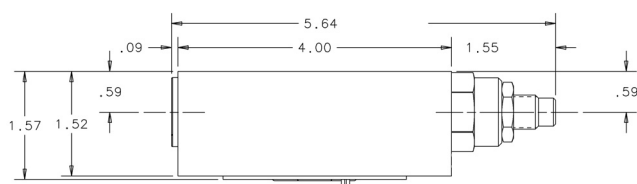
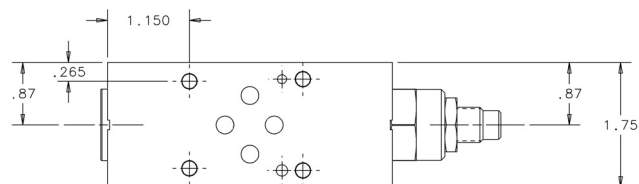
FLOW CONTROL VALVE, NON-COMPENSATED WITH CHECK

DIMENSIONS

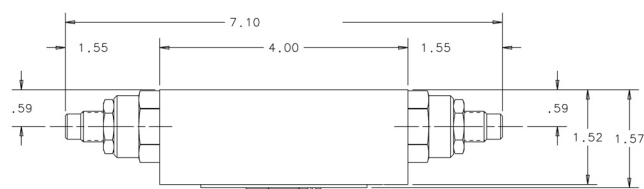
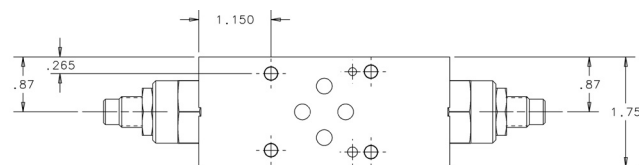
F03MSV-NDA



F03MSV-NDB



F03MSV-NDC



ORDERING INFORMATION

F03MSV — ND

SELECT ONE

SELECT ONE

SELECT ONE

DESIGN

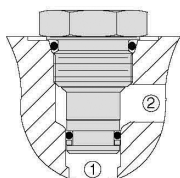
FUNCTION	SIZE	STYLE	TYPE	CONTROL PORT		SEALS		BODY MATERIAL		
				CODE	LOCATION	CODE		CODE		MAX. PSI
FLOW CONTROL VALVE	NFPA D03 NG6 (CETOP 3)	MODULAR STACK VALVE	NON-COMPENSATED METER-IN OR METER-OUT	A	A PORT	A	BUNA N (STD)	A	ALUMINUM (STD)	3000 PSI
				B	B PORT					
				C	A & B PORT	G	VITON			

Body Only Assembly:

Code A, B, & C

Aluminum (Part No.) - 553081K

Includes Seal Retainer Plate,
O-rings, Locating Pin & Plug on A-B
code.



General Information:

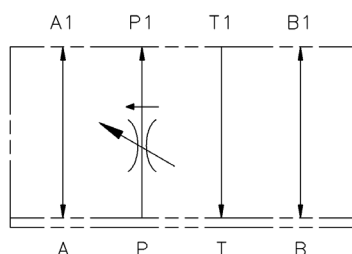
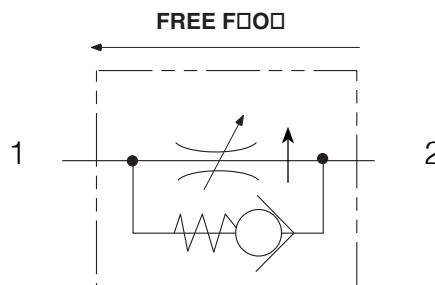
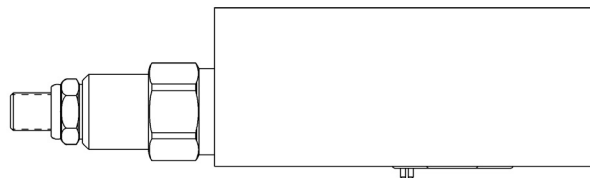
Cartridge cavity is HydraForce VC10-2 with a flow pattern set up for metered flow port 2 to port 1 with free flow port 1 to port 2.

Cartridge # FC10-20A-0-N Buna N
FC10-20A-0-V Viton

TYPICAL ORDERING CODE: **F03MSV-NDA-AA**

F03MSV-CIP

FLOW CONTROL VALVE, PRESSURE COMPENSATED WITH CHECK



VALVE TYPE
PRESSURE COMPENSATED
FLOW CONTROL VALVE
METER IN
P PORT

DESCRIPTION

This unit is a pressure compensated, fully adjustable flow control valve with reverse freeflow check.

OPERATION

This valve maintains a constant flow rate regardless of system pressure or load changes. Reverse flow will open the check at 10 PSI.

FEATURES & BENEFITS

- Sharp edge orifice designed to minimize floor variation.
- All external parts are zinc-plated for long life against elements.
- All cartridges are 100% functionally tested.
- Uses Sun T-13A Cavity.
- 5 turns of adjustment.
- 10 PSI free flow check cracking pressure.
- 18 cu.in./min. leakage at shut-off.

SPECIFICATIONS

Flow: .1 to 6 GPM (23 L/M) Nominal
See performance chart

Flow Accuracy: Less than $\pm 5\%$ with a minimum of 200 PSI pressure differential.

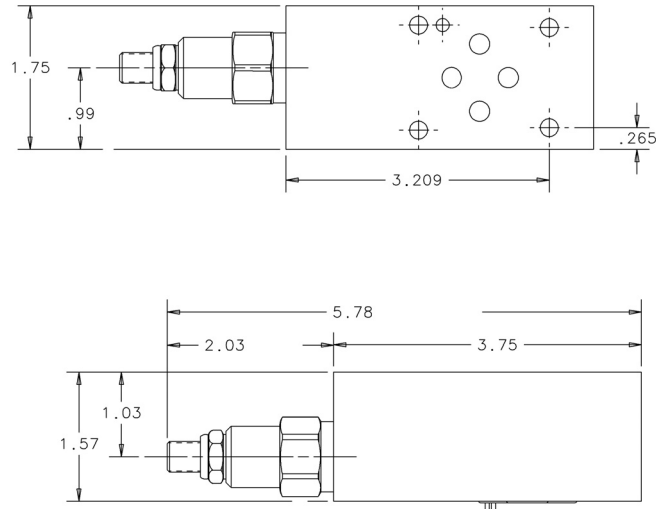
Valve Bodies: 3000 PSI (207 Bar) = Aluminum (2024-T4)

Estimated Shipping Weight: 2 # Aluminum

FLOW CONTROL VALVE, PRESSURE COMPENSATED WITH CHECK

DIMENSIONS

F03MSV-CIP



ORDERING INFORMATION

F03MSV — **C** **I** **P** — — —

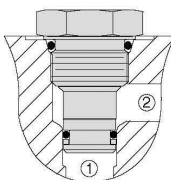
SELECT ONE SELECT ONE DESIGN

FUNCTION	SIZE	STYLE	TYPE	VALVE FUNCTION	CONTROL PORT		SEALS		BODY MATERIAL		
FLOW CONTROL VALVE	NFPA	MODULAR	PRESSURE	I METER-IN	CODE	LOCATION	CODE		CODE		PSI RATED
	D03	STACK VALVE	COMPENSATED		P	P PORT	A	BUNA N (STD)	A	ALUMINUM (STD)	3000 PSI
	NG6 (CETOP 3)						G	VITON			

Body Only Assembly:

Aluminum (Part No.) - 552951K

Includes Seal Retainer Plate, O-rings & Locating Pin.



General Information:

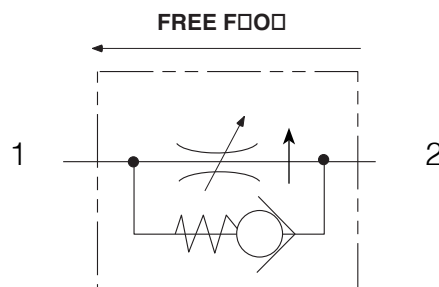
Cartridge cavity is Sun T-13A with a flow pattern set up for metered flow port 1 to port 2 and free flow port 2 to port 1.

Cartridge # FDDB-LAN Buna N
 FDDB-LAV Viton

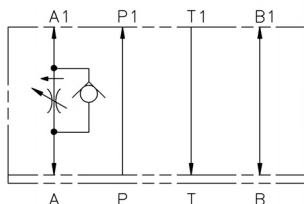
TYPICAL ORDERING CODE: **F03MSV-CIP-AA**

F03MSV-CDA / F03MSV-CDB / F03MSV-CDC

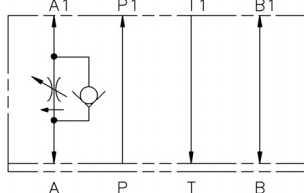
FLOW CONTROL VALVE, PRESSURE COMPENSATED WITH CHECK



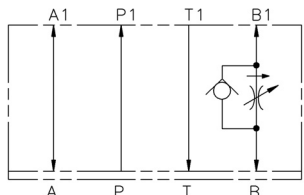
VALVE TYPE
FLOW CONTROL VALVE
WITH CHECK
METER-OUT
A PORT



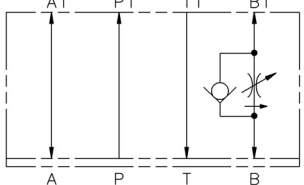
VALVE TYPE
FLOW CONTROL VALVE
WITH CHECK
METER-IN
A PORT



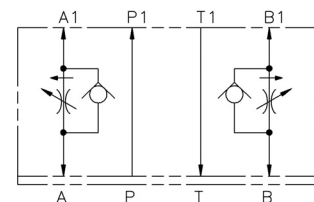
VALVE TYPE
FLOW CONTROL VALVE
WITH CHECK
METER-OUT
B PORT



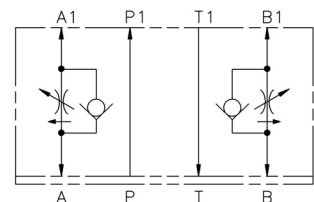
VALVE TYPE
FLOW CONTROL VALVE
WITH CHECK
METER-IN
B PORT



VALVE TYPE
FLOW CONTROL VALVE
WITH CHECK
METER-OUT
A - B PORT



VALVE TYPE
FLOW CONTROL VALVE
WITH CHECK
METER-IN
A - B PORT



DESCRIPTION

This is a pressure compensated, fully adjustable flow control valve with reverse flow check.

OPERATIONS

This valve maintains a constant flow rate regardless of system pressure or load changes. Reverse flow will open the check at 10 PSI.

FEATURES & BENEFITS

- Sharp edge orifice to minimize flow variation.
- All external parts are zinc-plated for long life against elements.
- 10 PSI reverse free flow check cracking pressure.
- Minimum 18 cu.in./min. leakage at shutoff.
- All cartridges are 100% tested functionally.
- Sun T-13A cavity.
- 5 turns of adjustment.

SPECIFICATIONS

Flow: .1 to 6 GPM (46 L/M) Nominal

Flow Accuracy: Less than $\pm 5\%$ with a minimum of 200 PSI pressure differential

Valve Bodies: 3000 PSI (207 Bar) = Aluminum (2024-T4)

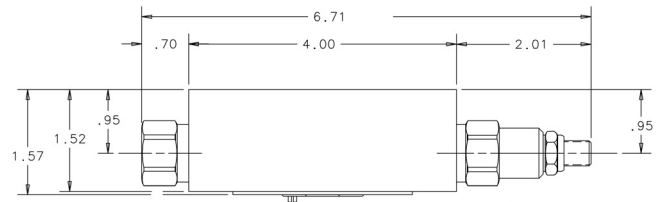
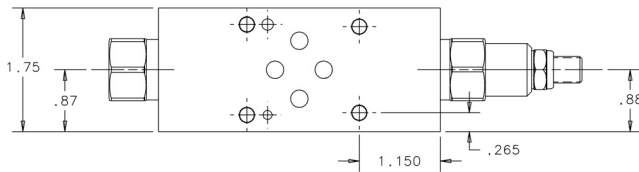
Estimated Shipping Weight: 2 # Aluminum

F03MSV-CDA / F03MSV-CDB / F03MSV-CDC

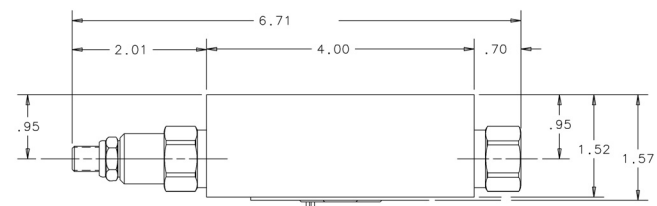
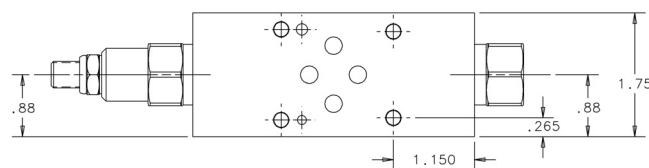
FLOW CONTROL VALVE, PRESSURE COMPENSATED WITH CHECK

DIMENSIONS

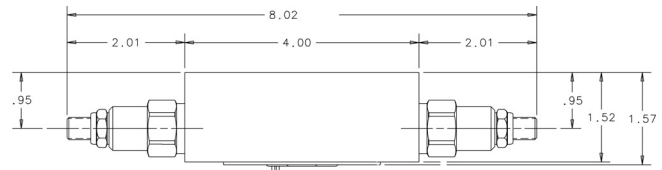
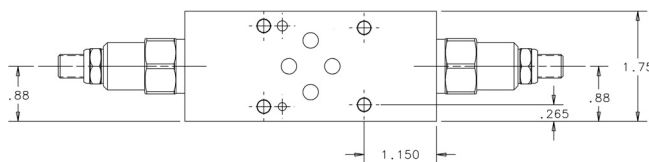
F03MSV-CDA



F03MSV-CDB



F03MSV-CDC



ORDERING INFORMATION

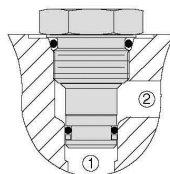
F03MSV — C D				SELECT ONE	SELECT ONE	SELECT ONE	DESIGN			
FUNCTION	SIZE	STYLE	TYPE	VALVE FUNCTION	CONTROL PORT		SEALS		BODY MATERIAL	
FLOW CONTROL VALVE	NFPA	MODULAR	PRESSURE COMPENSATED	METER-IN OR METER-OUT WITH REVERSE CHUCK	CODE	LOCATION	CODE		CODE	
	D03	STACK			A	A PORT	A	BUNA N (STD)	A	ALUMINUM (STD)
	NG6 (CETOP 3)	VALVE			B	B PORT	G	VITON		
					C	A & B PORT				

Body Only Assembly:

Code A, B & C

Aluminum (Part No.) - 550425K

Includes Seal Retainer Plate, O-rings & Locating Pin.



General Information:

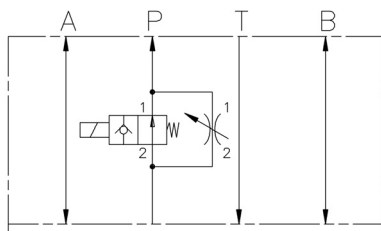
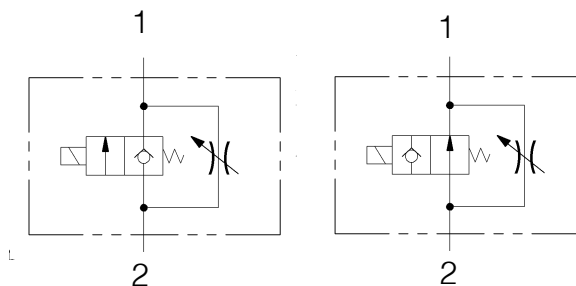
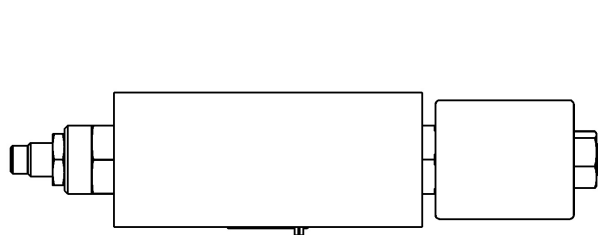
- Cartridge cavity is Sun T-13A with a flow pattern set up for metered flow port 1 to port 2 and free flow port 2 to port 1.

Cartridge # FD8A-LAN Buna N
 FD8A-LAV Viton

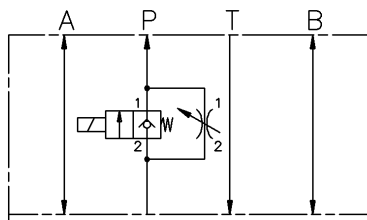
TYPICAL ORDERING CODE: **F03MSV-CDA-AA**

F03MSV-NSIP

TWO SPEED FLOW CONTROL, DIRECT OPERATED



VALVE TYPE NORMALLY OPEN
TWO SPEED VALVE WITH FULL FLOW AND METERED
FLOW WHEN ENERGIZED



VALVE TYPE NORMALLY CLOSED
TWO SPEED VALVE WITH FULL FLOW AND METERED
FLOW WHEN ENERGIZED

DESCRIPTION

Utilizes a direct operated cartridge type electrical poppet valve to allow system flow through or block it off. The fluid will then flow through the needle valve.

OPERATIONS

The cartridge valve design incorporates a single solenoid acting on a poppet. This will either open the poppet allowing flow or close it blocking flow.

When the poppet is in the closed position, the fluid will pass through the adjustable needle valve giving you a restricted flow. This allows full system flow and a restricted flow volume.

FEATURES & BENEFITS

- All external parts are zinc-plated for long life against elements.
- All cartridges are 100% tested functionally.
- Industry common cavity.
- Coil uses standard DIN 43650 Connector.

SPECIFICATIONS

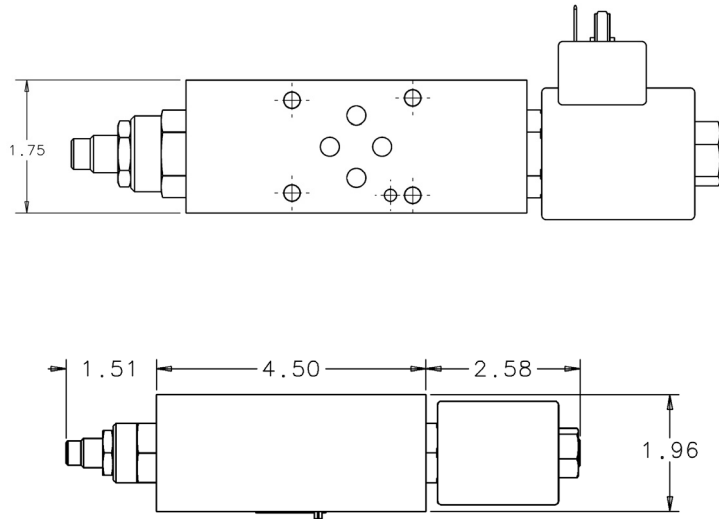
Valve Bodies: 3000 PSI (207 Bar) = Aluminum (2024-T4)

Estimated Shipping Weight: 3 # Aluminum

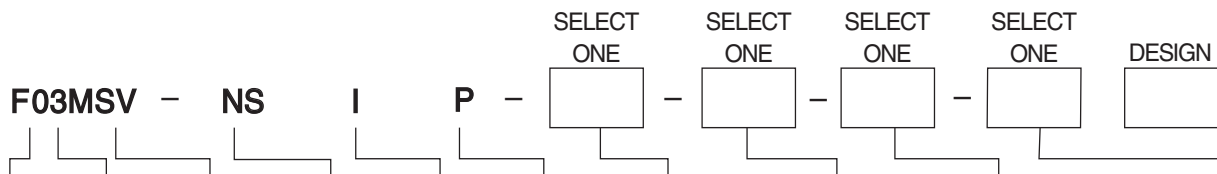
TWO SPEED FLOW CONTROL, DIRECT OPERATED

DIMENSIONS

F03MSV-NSIP



ORDERING INFORMATION

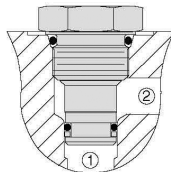


FUNCT.	SIZE	STYLE	TYPE	FUNCT.	CONTROL PORT	SOLENOID FUNCTION		SEALS		BODY MATERIAL		MECHANICAL/ELECTRICAL	
FLOW CONTROL VALVE	NFPA D03 NG6 (CETOP 3)	MODULAR STACK VALVE	NON-COMPENSATED DUAL SPEED WITH SOLENOID	DIRECT OPERATED	P PORT (METER-IN)	CODE	NORMAL POSITION	CODE		CODE		CODE	DESCRIP.
						NO	OPEN	A	BUNA N (STD)	A	ALUMINUM (STD)	12DG	12Vdc Coil DIN 43650
						NC	CLOSED	G	VITON			24DG	24Vdc Coil DIN 43650
												115AG	115 VAC Coil DIN 43650
												230AG	230 VAC Coil DIN 43650

Body Only Assembly:

Aluminum (Part No.) - 552241K

Optional DIN 43650 Connector:
Black (Part No.) - VEA-3F



General Information:

Cartridge cavity is a HydraForce VC10-2 with a flow pattern set up for metered flow port 2 to port 1. Electrical valve flow is from port 2 to port 1.

Needle Valve Cartridge # NV10-20A-0-N Buna N
NV10-20A-0-V Viton

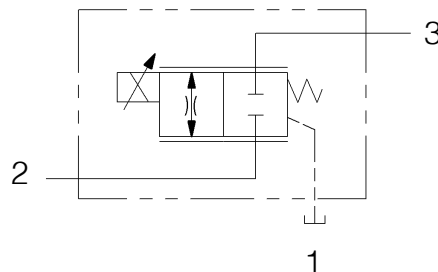
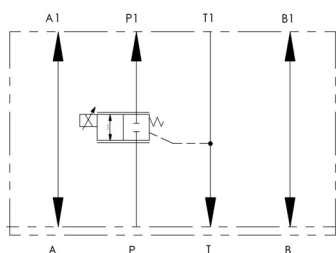
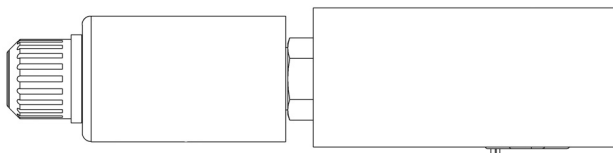
Electrical Cartridge # SV10-20-0-N-**** Buna N Normally Closed
SV10-20-0-V-**** Viton Normally Closed
SV10-21-0-N-**** Buna N Normally Open
SV10-21-0-V-**** Viton Normally Open

**** = Coil Voltage

TYPICAL ORDERING CODE: **F03MSV-NSIP-NO-AA-115AG**

EF03MSV-D

PROPORTIONAL FLOW CONTROL, DIRECT OPERATED



TYPICAL PERFORMANCE SPECIFICATIONS*

		Code 16	4.3 gpm	16.2 lpm
		Code 28	7.5 gpm	28.4 lpm
MAXIMUM OPERATING PRESSURE	Ports 2 and 3		300 psi	207 bar
TYPICAL RESPONSE TIME †	10 to 90% Spool Travel		25 ms	
	90 to 10% Spool Travel		45 ms	
	30 to 90% Spool Travel		20 ms	
	(Nominal) 90 to 30% Spool Travel		30 ms	
SPOOL STROKE	Closed to open		1.20 in.	3.05 mm
HYSTERESIS	With Dither		< 6%	
THRESHOLD	With Dither		< 3%	
REPEATABILITY	With Dither		< 3%	
DEADBAND			16% nominal of spool travel	
VOLTAGE (Nominal)	Code 12		12 VDC	
	Code 24		24 VDC	
CURRENT (Maximum)	Code 12		2.2 Amp	
	Code 24		1.1 Amp	
WATTAGE (I ² R) @ 76° F. (24° C.) (Continuous)	Code 12		19	
	Code 24		19	
COIL RESISTANCE @ 68° F. (20° C.)	Code 12		3.8 Ohms	
	Code 24		15.2 Ohms	
DUTY CYCLE			Continuous @ rated specifications	
FLUID VISCOSITY	Operating		80-350 SUS	
	Maximum		30-4000 SUS	
FLUID CLEANLINESS LEVEL			ISO 4406 Code 16/13 (SAE Class 4) or cleaner	

*NOTE: Data taken with fluid temperature at 120°F. (49°C.) and viscosity at 100 SUS (20.6 Cs), inlet pressure @ 1000 psi (69 bar) using Continental Hydraulics ECM4 electronic controller.

†NOTE: Response times are effected by pressure, viscosity and flow rate.

DESCRIPTION

Utilizes a direct operated cartridge type proportional flow control to create a constant flow between the inlet and the outlet of an orifice or valve.

OPERATIONS

The cartridge valve design incorporates a single proportional solenoid acting directly on a spool via a drive pin and is opposed by an offset spring.

Without current applied to the solenoid the offset spring will hold the valve spool in a blocked flow condition. Applying an electrical current to the solenoid will shift the spool against the spring and create an orifice between ports 2 and 3. This orifice size is proportional to the applied solenoid current.

FEATURES & BENEFITS

- Fewer moving parts.
- No minimum pressures.
- Hardened spool and sleeve for long life.
- Manual override pin.
- Low internal leakage.
- Uses standard C10-3 mounting cavity.
- Coil uses standard DIN 43650 Connector.

SPECIFICATIONS

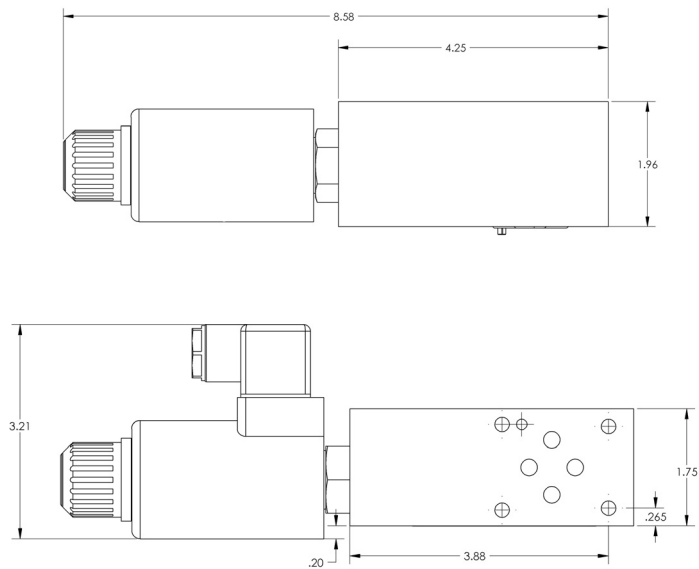
Valve Bodies: 3000 PSI (207 Bar) = Aluminum (2024-T4)

Estimated Shipping Weight: 3 # Aluminum

PROPORTIONAL FLOW CONTROL, DIRECT OPERATED

DIMENSIONS

EF03MSV-D



Shown with DIN electrical connector for measurement.
Connector must be purchased separately.

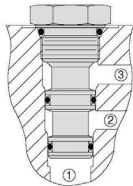
ORDERING INFORMATION

EF03MSV			-	D	SELECT ONE		-	G	-	D	SELECT ONE		-	L	DESIGN	
FUNCT.	SIZE	STYLE	FUNCT.	FLOW		SEALS		ELECTRICAL		SOLENOID		SOLENOID MFG.				
FLOW CONTROL VALVE	NFPA	MODULAR	DIRECT OPERATED		NOMINAL FLOW (GPM) AT 10 bar (145 PSI) PRESSURE DROP (FULL OPEN)	CODE		CODE		CODE	(SEE BELOW)	CODE				
	D03	STACK VALVE		16	16 LITER (4.3 GPM)	G	VITON	D	DIN 43650 SOLENOID CONNECTOR	12	12 VDC	L	LISK			
	NG6 (CETOP 3)			28	28 LITER (7.5 GPM)					24	24 VDC					

Body Only Assembly:

Aluminum (Part No.) - 1001121K

Optional DIN 43650 Connector:
Black (Part No.) - VEA-3F



General Information

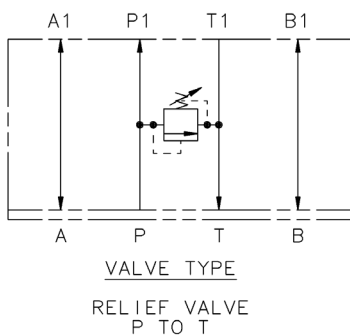
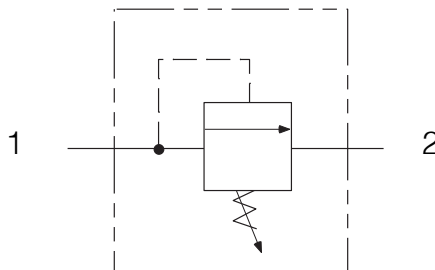
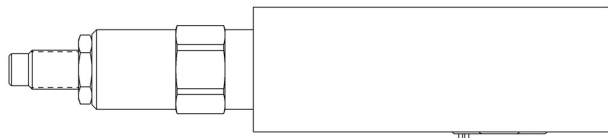
Cartridge cavity is C10-3 with a flow pattern set up for metered flow port 2 to port 3 and port 1 going back to reservoir.

Cartridge #:	EF10C-D16-GD-12L	12 VDC, 16 Liters
	EF10C-D16-GD-24L	24 VDC, 16 Liters
	EF10C-D28-GD-12L	12 VDC, 28 Liters
	EF10C-D28-GD-24L	24 VDC, 28 Liters

TYPICAL ORDERING CODE: EF03MSV-D16-GD-12L

P03MSV-RP

PRESSURE RELIEF VALVE, PILOT OPERATED / BALANCED SPOOL



DESCRIPTION

This pilot-operated pressure relief cartridge valve with balanced sliding spool provides accurate, smooth pressure regulation.

OPERATIONS

The valve blocks flow from port 1 to port 2 until sufficient pressure is present at port 1 to force the pilot poppet from its seat, thus opening the valve. This cartridge relief valve offers a smooth transition in response to a load change in a hydraulic circuit.

FEATURES & BENEFITS

- Leakproof screw adjustment cannot be backed out of valve.
- All external parts are zinc-plated for long life against elements.
- All cartridges are 100% tested functionally.
- Industry common cavity.

SPECIFICATIONS

Flow: 30 GPM (113 L/M) Nominal

Internal Leakage: 115cc/min (7 cu. In/min)

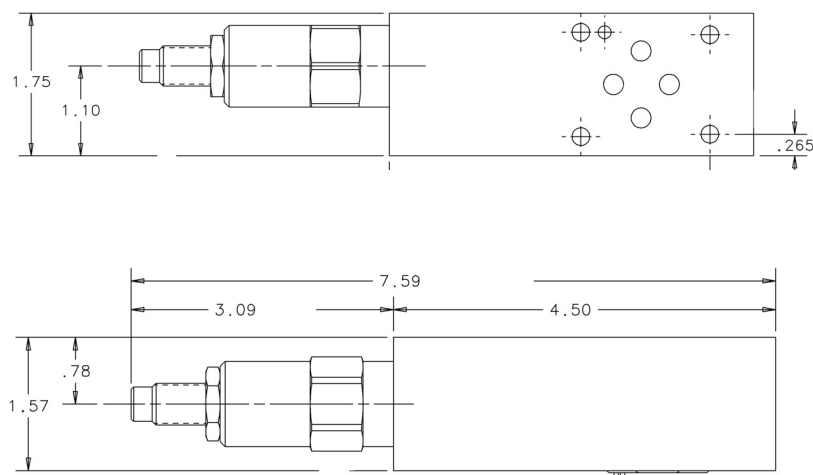
Valve Bodies: 3000 PSI (207 Bar) = Aluminum (2024-T4)

Estimated Shipping Weight: 2 # Aluminum

PRESSURE RELIEF VALVE, PILOT OPERATED / BALANCED SPOOL

DIMENSIONS

P03MSV-RP



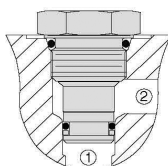
ORDERING INFORMATION

<div><div>P03MSV</div><div>—</div><div>R</div><div>—</div><div>P</div><div>—</div><div><div>SELECT ONE</div><div></div></div><div>—</div><div><div>SELECT ONE</div><div></div></div><div>—</div><div><div>SELECT ONE</div><div></div></div><div>—</div><div><div>DESIGN</div><div></div></div></div>										
FUNCTION	SIZE	STYLE	TYPE	CONTROL PORT	PRESSURE RANGE		SEALS		BODY MATERIAL	
PRESSURE CONTROL VALVE	NFPA	MODULAR	RELIEF	P PORT	CODE	PRESSURE	CODE		CODE	
	D03	STACK	VALVE		150	150-1500 PSI	A	BUNA N (STD)	A	ALUMINUM (STD)
	NG6 (CETOP 3)	VALVE	300		400-3000 PSI					
							G	VITON		

Body Only Assembly:

Aluminum (Part No.) - 552481K

Includes O-rings & Locating Pin.



General Information

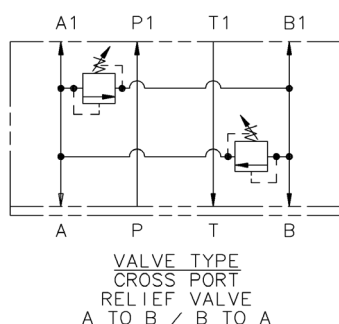
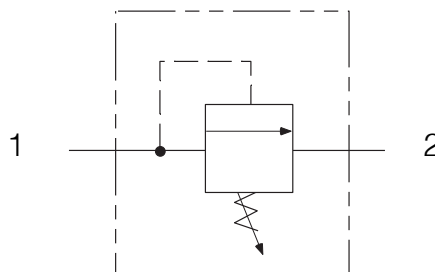
Cartridge cavity is HydraForce VC10-2 with a flow pattern set up for relief flow port 1 to port 2.

Cartridge #:	RV10-26A-0-N-15	Buna N	1500 PSI
	RV10-26A-0-V-15	Viton	1500 PSI
	RV10-26A-0-N-30	Buna N	3000 PSI
	RV10-26A-0-V-30	Viton	3000 PSI

TYPICAL ORDERING CODE: **P03MSV-RP-150-AA**

P03MSV-XC

CROSS PORT VALVE, PILOT OPERATED / BALANCED SPOOL



DESCRIPTION

Utilizes a cartridge type, guided poppet, hydraulic operated check valve as a blocking or load-holding device for high pressure applications.

OPERATIONS

The valve allows free flow from the work port to the outlet port and blocks flow in the opposite direction. Free flow will be allowed from the outlet port to the work port when at least one-third of the load induced pressure is sensed in the opposing work port.

FEATURES & BENEFITS

- All external parts are zinc-plated for long life against elements.
- All cartridges are 100% tested functionally.
- Industry common cavity.

SPECIFICATIONS

Flow: 30 GPM (113 L/M) Nominal

Internal Leakage: 115cc/min (7 cu. In/min)

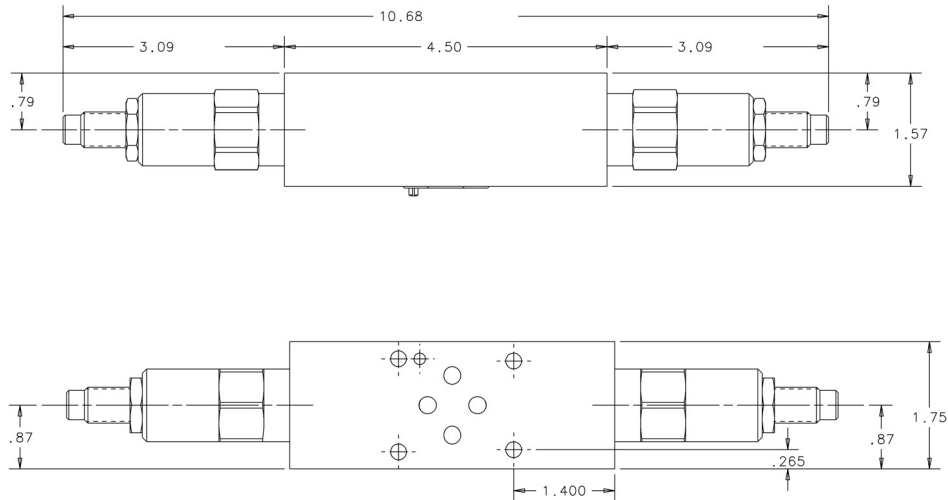
Valve Bodies: 3000 PSI (207 Bar) = Aluminum (2024-T4)

Estimated Shipping Weight: 2 # Aluminum

CROSS PORT VALVE, PILOT OPERATED / BALANCED SPOOL

DIMENSIONS

P03MSV-XC



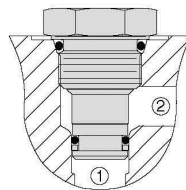
ORDERING INFORMATION

P03MSV		X	C	SELECT ONE		SELECT ONE	SELECT ONE	DESIGN		
FUNCTION	SIZE	STYLE	TYPE	CONTROL PORT	PRESSURE RANGE		SEALS		BODY MATERIAL	
PRESSURE CONTROL VALVE	NFPA	MODULAR	CROSSPORT RELIEF VALVE	A & B PORT	CODE	PRESSURE	CODE		CODE	
	D03	STACK			150	150-1500 PSI	A	BUNA N (STD)	A	ALUMINUM (STD)
	NG6 (CETOP 3)	VALVE			300	400-3000 PSI	G	VITON		

Body Only Assembly:

Aluminum (Part No.) - 552482K

Includes O-rings & Locating Pin.



General Information

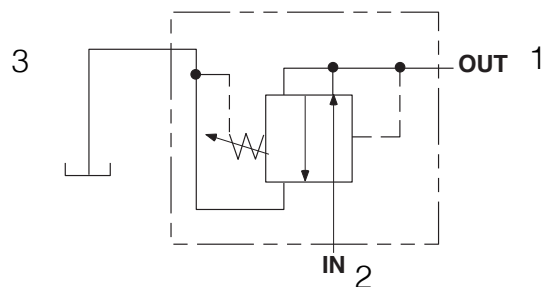
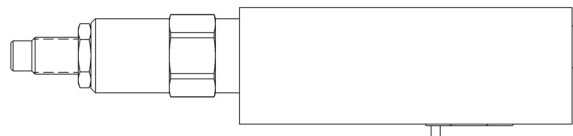
Cartridge cavity is HydraForce VC10-2 with a flow pattern set up for relief flow port 1 to port 2.

Cartridge #:	RV10-26A-0-N-15	Buna N	1500 PSI
	RV10-26A-0-V-15	Viton	1500 PSI
	RV10-26A-0-N-30	Buna N	3000 PSI
	RV10-26A-0-V-30	Viton	3000 PSI

TYPICAL ORDERING CODE: **P03MSV-XC-150-AA**

P03MSV-PDRA / P03MSV-PDRB / P03MSV-PDRP

PRESSURE REDUCING / RELIEVING VALVE, PILOT OPERATED, SLIDING SPOOL



DESCRIPTION

This pilot-operated hydraulic pressure reducing/relieving valve acts as a pressure-regulating device for a secondary circuit. It features a sliding spool and screw-in cartridge.

OPERATIONS

The valve will allow flow from the inlet port to the controlled port until pressure in the controlled port exceeds the force of the spring bias. Then the spool will shift and restrict. This causes reduced pressure in the controlled port. The valve will maintain the same pressure as the force of the spring setting regardless of the pressure at the inlet port. In this mode, the valve will also relieve from the controlled port to the drain port, regulating pressure at the controlled port.

FEATURES & BENEFITS

- All external parts are zinc-plated for long life against elements.
- All cartridges are 100% tested functionally.
- Industry common cavity.

SPECIFICATIONS

Flow: 15 GPM (56 L/M) Nominal

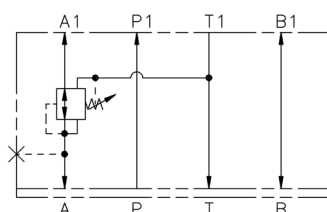
Pilot Control

Internal Leakage: .13 GPM (.49 L/M) Nominal

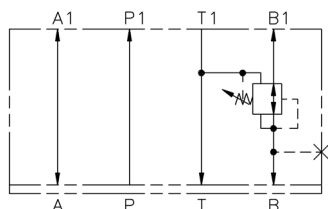
Valve Bodies: 2500 PSI (175 Bar) = Aluminum (2024-T4)

Gauge Port: #4 SAE Straight Thread

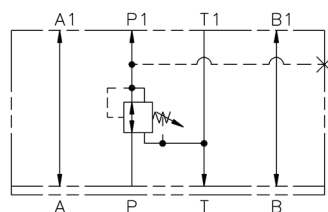
Estimated Shipping Weight: 2 # Aluminum



VALVE TYPE
PRESSURE REDUCING/
RELIEVING VALVE
A-PORT



VALVE TYPE
PRESSURE REDUCING/
RELIEVING VALVE
B-PORT



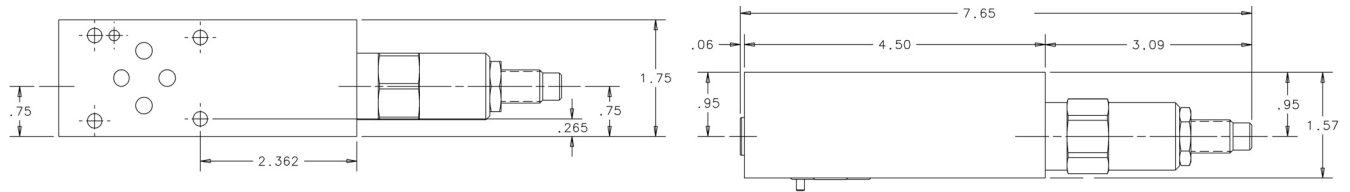
VALVE TYPE
PRESSURE REDUCING/
RELIEVING VALVE
P-PORT

P03MSV-PDRA / P03MSV-PDRB / P03MSV-PDRP

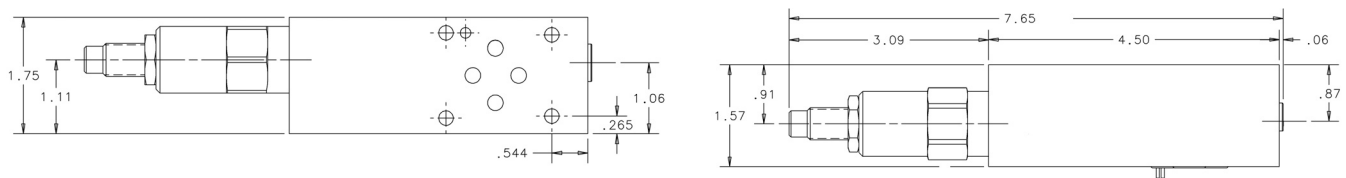
PRESSURE REDUCING / RELIEVING VALVE, PILOT OPERATED, SLIDING SPOOL

DIMENSIONS

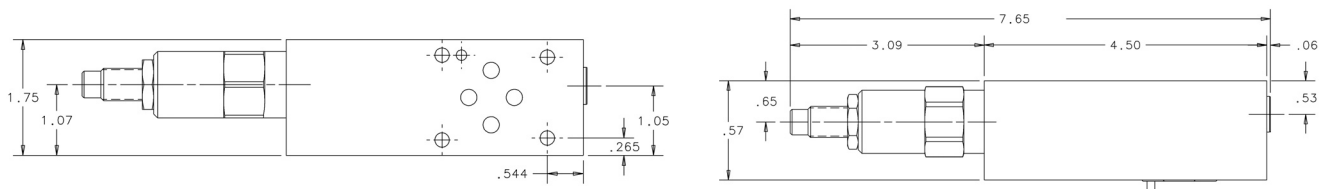
P03MSV-PDRA



P03MSV-PDRB



P03MSV-PDRP



ORDERING INFORMATION

P03MSV — PDR

SELECT ONE

SELECT ONE

SELECT ONE

SELECT ONE

DESIGN

FUNCTION	SIZE	STYLE	VALVE FUNCTION	CONTROL PORT		ADJUSTMENT RANGE		SEALS		BODY MATERIAL	
PRESSURE	NFPA	MODULAR	REDUCING/ RELIEVING PILOT OPERATED	CODE	LOCATION	CODE	PRESSURE (PSI)	CODE		CODE	
CONTROL	D03	STACK		A	A PORT	150	150-1500	A	BUNA N (STD)	A	ALUMINUM (STD)
VALVE	NG6 (CETOP 3)	VALVE		B	B PORT	300	400-3000	G	VITON		
				P	P PORT						

Body Only Assembly:

PDRA

Aluminum (Part No.) - 552493K

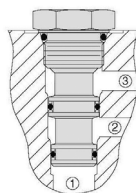
PDRB

Aluminum (Part No.) - 552483K

PDRP

Aluminum (Part No.) - 552484K

Includes O-rings & Locating Pin.



General Information

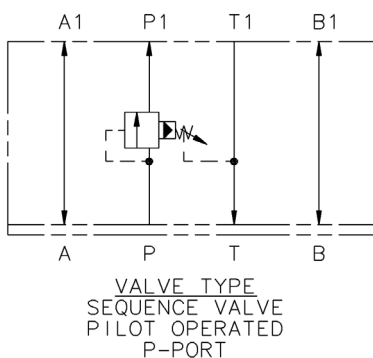
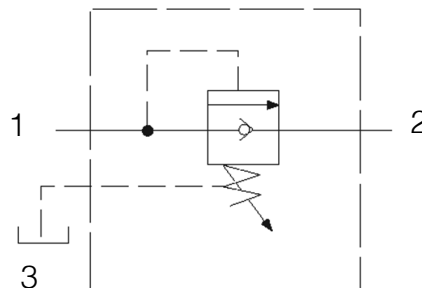
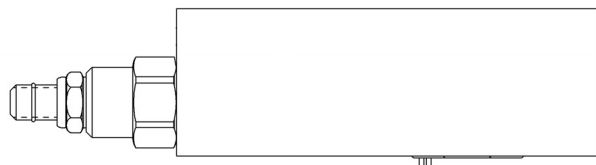
Cartridge cavity is HydraForce VC10-3 with a flow pattern set up for reduced pressure from port 2 to port 1 with port 3 to reservoir.

Cartridge #:	PR10-36A-0-N-15	Buna N	1500 PSI
	PR10-36A-0-V-15	Viton	1500 PSI
	PR10-36A-0-N-30	Buna N	3000 PSI
	PR10-36A-0-V-30	Viton	3000 PSI

TYPICAL ORDERING CODE: **P03MSV-PDRA-150-AA**

P03MSV-SP

SEQUENCE VALVE, POPPET TYPE WITH FREE REVERSE FLOW



DESCRIPTION

This pilot-operated, pressure sequence valve uses a screw-in poppet type cartridge with built-in free reverse flow check.

OPERATIONS

The valve blocks flow from the inlet port to the outlet port until sufficient pressure is present at the sense port to force the pilot poppet from its seat, thus opening the valve. This sequence valve offers free reverse flow from the outlet port to the inlet port.

FEATURES & BENEFITS

- Adjustment screw cannot be backed out of the valve.
- All external parts are zinc-plated for long life against elements.
- All cartridges are 100% tested functionally.
- Uses Sun T-11A Cavity.

SPECIFICATIONS

Flow: 15 GPM (56 L/M) Nominal

Internal Leakage: 2 IN³/min/1000 psi

Valve Bodies: 3000 PSI (207 Bar) = Aluminum (2024-T4)

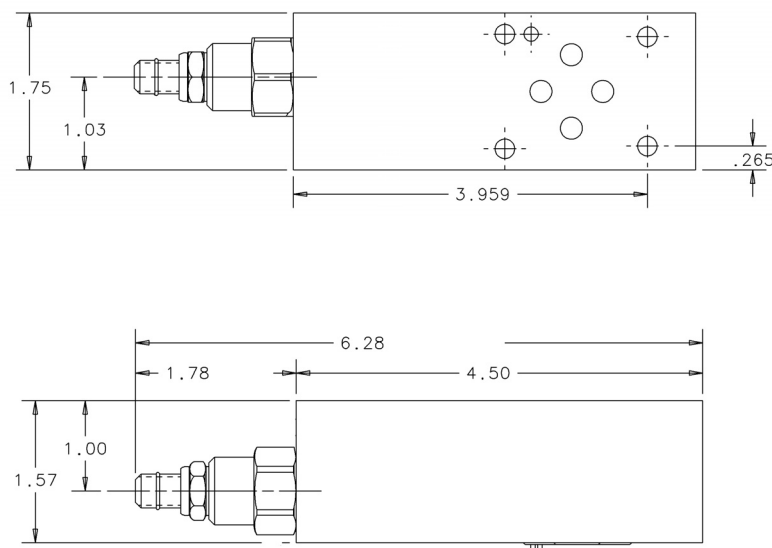
Estimated Shipping Weight: 2 # Aluminum

P03MSV-SP

POPPET TYPE WITH FREE REVERSE FLOW

DIMENSIONS

P03MSV-SP



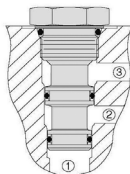
ORDERING INFORMATION

P03MSV		S	P	SELECT ONE		SELECT ONE	SELECT ONE	DESIGN		
FUNCTION	SIZE	STYLE	TYPE	CONTROL PORT	PRESSURE RANGE		SEALS		BODY MATERIAL	
PRESSURE CONTROL VALVE	NFPA	MODULAR	PRESSURE SEQUENCE VALVE	P PORT	CODE	PRESSURE	CODE		CODE	
	D03	STACK			150	50-1500 PSI	A	BUNA N (STD)	A	ALUMINUM (STD)
	NG6 (CETOP 3)	VALVE			300	100-3000 PSI	G	VITON		

Body Only Assembly:

Aluminum (Part No.) - 550479K

Includes O-rings & Locating Pin.

**General Information**

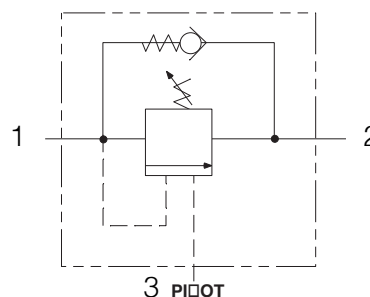
Cartridge cavity is Sun T-11A with a flow pattern set up for sequence flow port 1 to port 2 & port 3 as the drain.

Cartridge #:	RSDC-LBN	Buna N	1500 PSI
	RSDC-LAN	Buna N	3000 PSI
	RSDC-LBV	Viton	1500 PSI
	RSDC-LAV	Viton	3000 PSI

TYPICAL ORDERING CODE: **P03MSV-SP-150-AA**

P03MSV-CA / P03MSV-CB / P03MSV-CC

COUNTERBALANCE, PILOT OPERATED



DESCRIPTION

Utilizes a cartridge type, guided poppet, hydraulic operated, pilot assisted, counterbalance valve as a blocking or load-holding device for high pressure applications.

OPERATIONS

This valve controls moving load and prevents it from running ahead of the pump and locking the load in any position. It also provides static overload and thermal expansion protection.

This valve is a modulating device that allows free flow from the valve to the outlet port and then blocks reverse flow until pilot pressure inversely proportional to the load pressure is sensed at the opposite work port modulating out flow from the work port back to the valve.

FEATURES & BENEFITS

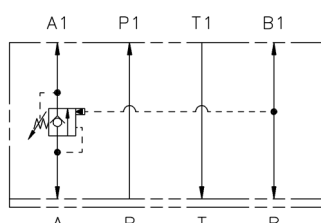
- Leak proof screw adjustment.
- Adjustment screw cannot be backed out of the valve.
- All external parts are zinc-plated for long life against elements.
- All cartridges are 100% tested functionally.
- Uses Sun T-11A Cavity.

SPECIFICATIONS

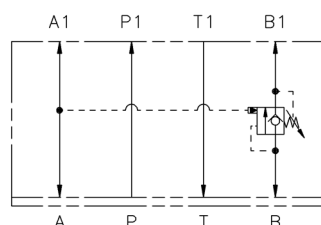
Flow: Nominal
Pilot Ratio: 3:1 for 1500 PSI, 4.5:1 for 3000 PSI
Internal Leakage: 5 drops per minute maximum at PSI below crack pressure

Valve Bodies: 3000 PSI (207 Bar) = Aluminum (2024-T4)

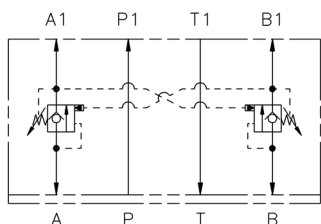
Estimated Shipping Weight: 2 # Aluminum



VALVE TYPE
COUNTERBALANCE VALVE
A PORT



VALVE TYPE
COUNTERBALANCE VALVE
B PORT



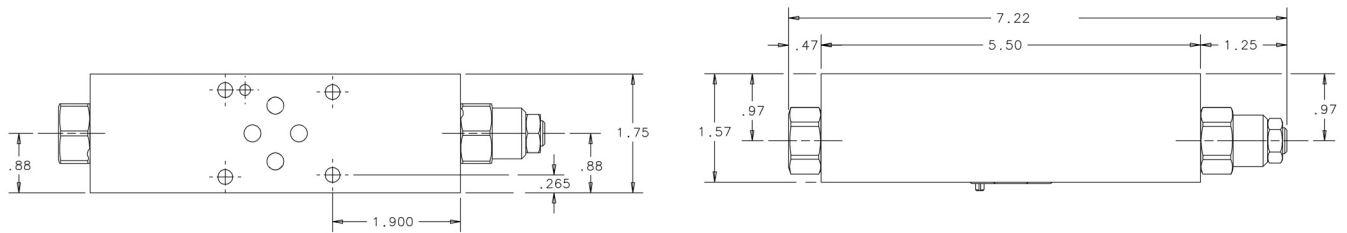
VALVE TYPE
COUNTERBALANCE VALVE
A & B PORT

P03MSV-CA / P03MSV-CB / P03MSV-CC

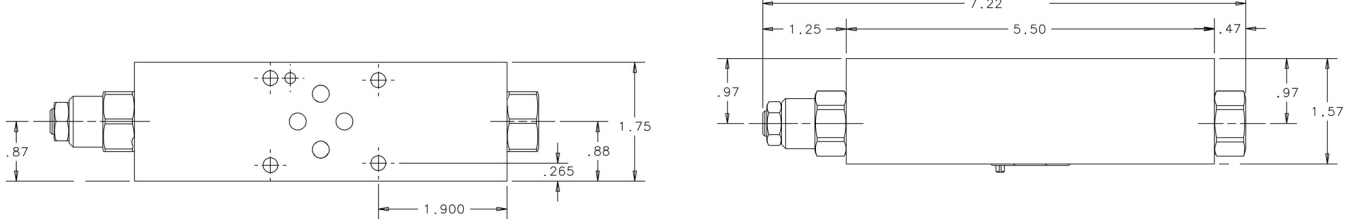
COUNTERBALANCE, PILOT OPERATED

DIMENSIONS

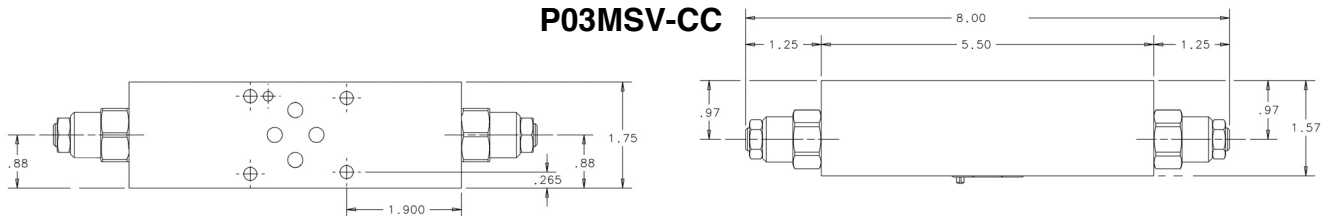
P03MSV-CA



P03MSV-CB



P03MSV-CC



ORDERING INFORMATION

P03MSV — C

SELECT ONE

SELECT ONE

SELECT ONE

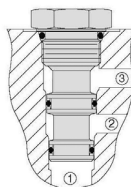
SELECT ONE

DESIGN

FUNCTION	SIZE	STYLE	TYPE	CONTROL PORT		ADJUSTMENT RANGE		SEALS		BODY MATERIAL	
PRESSURE CONTROL VALVE	NFPA D0 3 NG6 (CETOP 3)	MODULAR STACK VALVE	COUNTER- BALANCE VALVE	CODE	LOCATION	CODE	PRESSURE (PSI)	CODE		CODE	
				A	A PORT	150	400-1500 PSI	A	BUNA N (STD)	A	ALUMINUM (STD)
				B	B PORT	300	1000-2500 PSI	G	VITON		
				C	A & B PORT						

Body Only Assembly:

Aluminum (Part No.) - 550424K



General Information

Cartridge cavity is Sun T-11A with a flow pattern set up for blocked flow port 1 to port 2, free flow port 2 to port 1 & port 3 as the pilot signal.

Cartridge #:	CBCA-LIN	Buna N	1500 PSI
	CBCG-LKN	Buna N	3000 PSI
	CBCA-LIV	Viton	1500 PSI
	CBCG-LKV	Viton	3000 PSI

TYPICAL ORDERING CODE: **P03MSV-CA-150-AA**

P03MSV-RCC / P03MSV-BCC

PRESSURE CONTROL VALVE ACCESSORIES



DESCRIPTION

Utilizes a cartridge type pressure reducing or relief valve to create a constant pressure differential between the inlet and the outlet of an orifice or valve.

OPERATIONS

The valve controls the pressure drop by sensing the pressures in port A & B which is added to the spring setting causing the valve to open or close so it maintains a constant pressure drop. This will improve your system performance when widely changing loads are seen.

FEATURES & BENEFITS

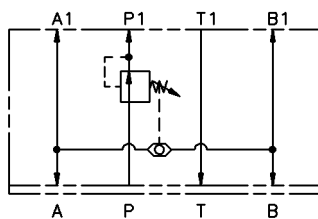
- Low friction seal on the pilot piston.
- All external parts are zinc-plated for long life against elements.
- All cartridges are 100% tested functionally.
- Uses Sun T-11A Cavity for cartridge.
- Uses HydraForce VC04-B3 Cavity for shuttle.

SPECIFICATIONS

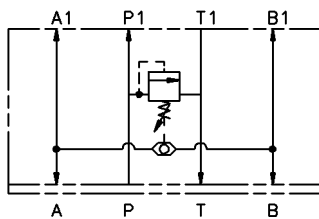
Flow:	RCC	10 GPM (37 L/M) Nominal
	BCC	15 GPM (56 L/M) Nominal

Valve Bodies: 3000 PSI (207 Bar) = Aluminum (2024-T4)

Estimated Shipping Weight: 2 # Aluminum



VALVE TYPE
PRESSURE COMPENSATOR
(RESTRICTIVE)



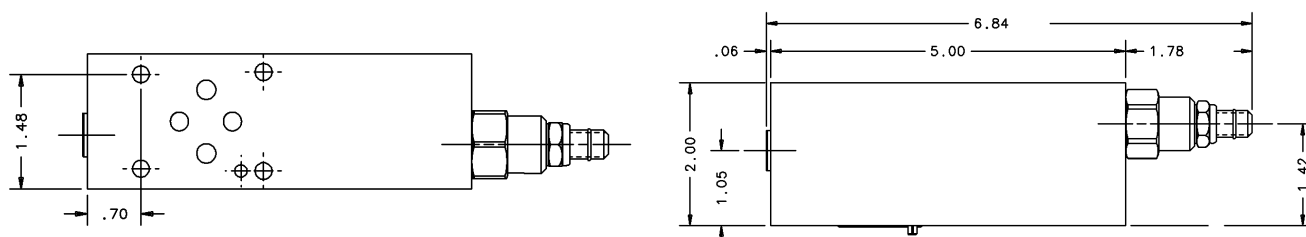
VALVE TYPE
PRESSURE COMPENSATOR
(BY-PASS)

P03MSV-RCC / P03MSV-BCC

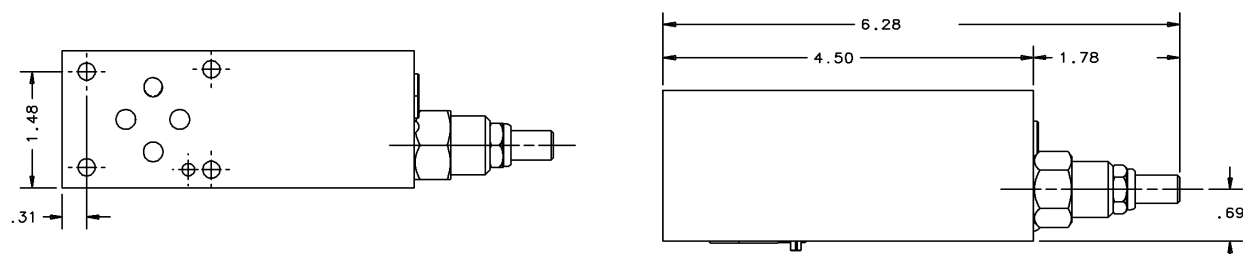
PRESSURE CONTROL VALVE ACCESSORIES

DIMENSIONS

P03MSV-RCC



P03MSV-BCC



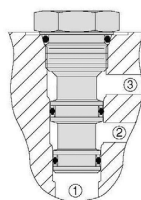
ORDERING INFORMATION

P03MSV			SELECT ONE <div></div>		SELECT ONE <div></div>		SELECT ONE <div></div>		SELECT ONE <div></div>		SELECT ONE <div></div>		DESIGN LETTER <div></div>	
FUNCTION	SIZE	STYLE	CODE	DESCRIPTION	PORT		PRESSURE RANGE			SEALS		BODY MATERIAL		
PRESSURE CONTROL VALVE	NFPA	MODULAR	RC	PRESSURE COMPENSATOR (RESTRICTIVE)	CODE	PORT	CODE	PSI	BAR	CODE		CODE		PSI RATED
	D03	STACK	BC	PRESSURE COMPENSATOR (BY-PASS)	C	A & B PORT	040	60-400	4.1-27.5	A	BUNA N (STD)	A	ALUMINUM (STD)	3000 PSI
	NG6 (CETOP 3)	VALVE		G						VITON				

Body Only Assembly:

RCC
Aluminum (Part No.) - 552978K

BCC
Aluminum (Part No.) - 552990K



General Information

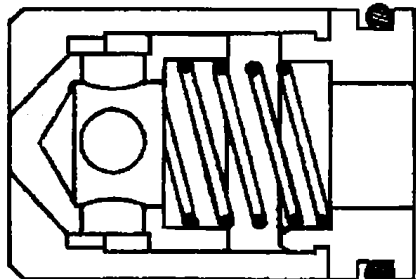
Cartridge cavity is Sun T-11A with RCC flow pattern set up for cartridge flowing port 2 to port 1. Port 3 is A or B sensor. BCC flow pattern set up for cartridge flowing port 1 to port 2. Port 3 is A or B sensor.

Cartridge #:	RCC	PBDB-LQN	Buna N
		PBDB-LQV	Viton
	BCC	RSDC-LQN	Buna N
		RSDC-LQV	Viton
	Shuttle	LS04-B30-0-N	Buna N
		LS04-B30-0-V	Viton

TYPICAL ORDERING CODE: **P03MSV-RCC-040-AA**

CDC-12 CHECK VALVE

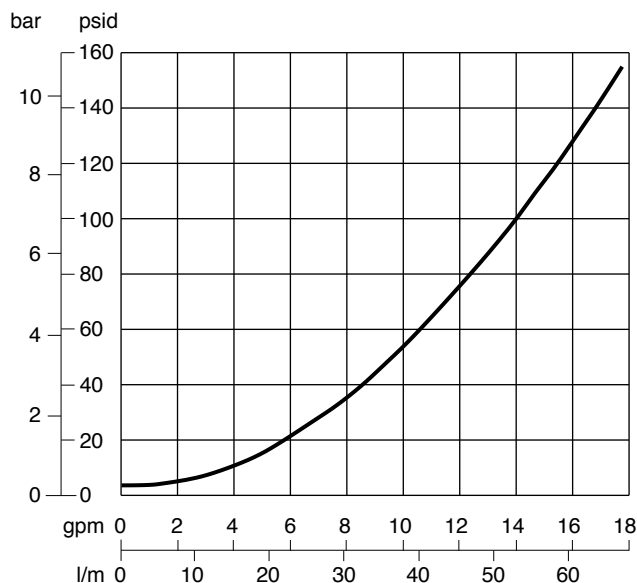
DIRECT-OPERATED, CARTRIDGE



DESCRIPTION

The check valve is designed to be installed in a cavity in the subplate or manifold, and is held in place by the directional valve or manifold valve.

TYPICAL PRESSURE DROP



All pressure drops shown on this data page are based on 100 SUS fluid viscosity and 0.87 specific gravity.

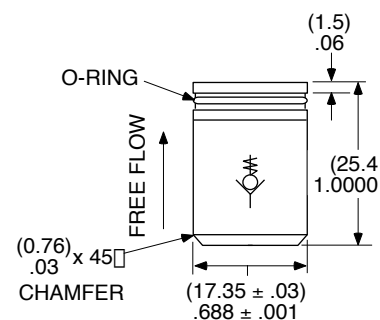
For any other specific gravity (G_1), the pressure drop (ΔP_1) will be approximately $\Delta P_1 = \Delta P (G_1/G)$.

TYPICAL PERFORMANCE SPECIFICATIONS

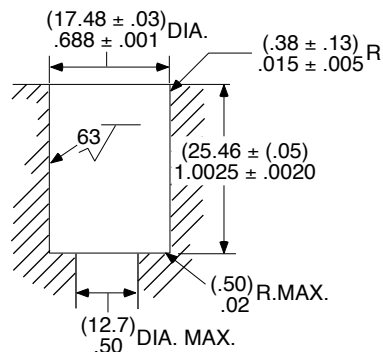
FLOW RATES	Maximum	18 gpm	68 l/m
MAXIMUM OPERATING PRESSURE		3500 psi	241 bar
INTERNAL LEAKAGE (Across Check)		2 cipm	33 ml/m
	3500 psi, 100 SUS		
CRACK PRESSURE	Minimum	4 psi	.28 bar
	Maximum	8 psi	.55 bar
SEALS	VITON		
WEIGHT		.25 lbs.	0.1 kg

DIMENSIONS SHOWN IN:
(MILLIMETERS)
INCHES

CARTRIDGE



CARTRIDGE CAVITY DETAIL

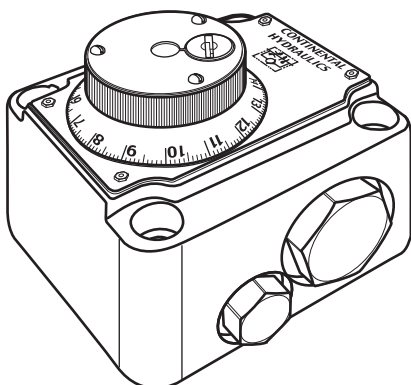


ORDERING INFORMATION

CDC - 12

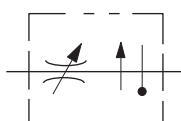
F12M FLOW CONTROL VALVE

LOCKABLE, PRESSURE COMPENSATED

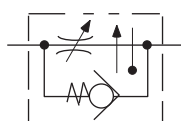


DESCRIPTION

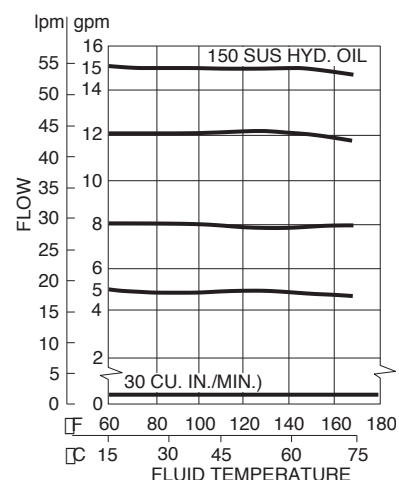
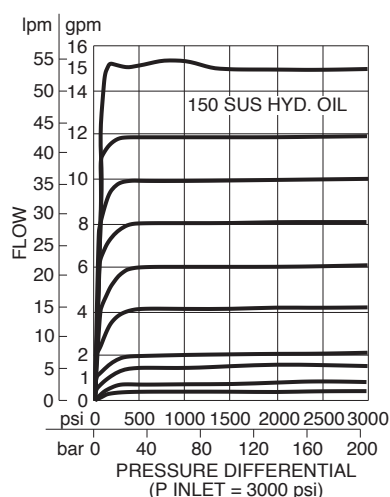
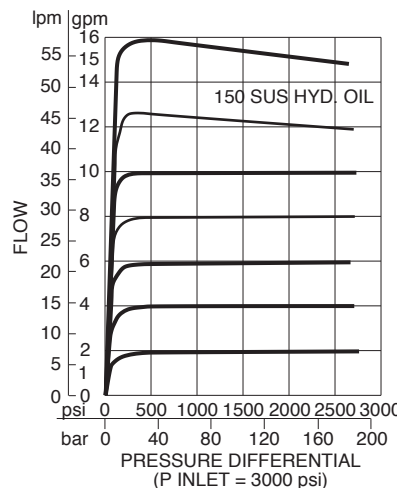
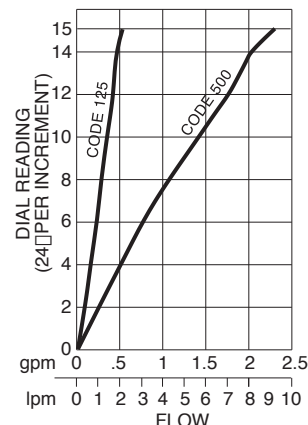
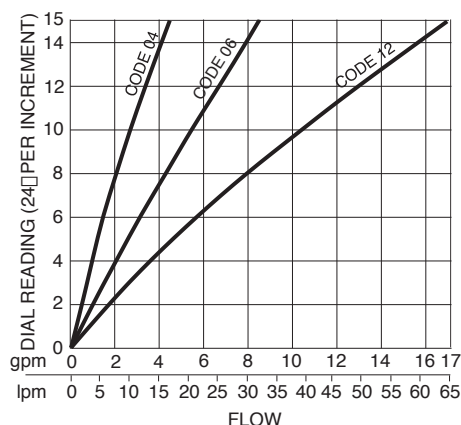
The Flow Control Valve is pressure compensated to maintain constant flow out of the valve regardless of pressure changing to the inlet or outlet port. Exclusive internal pressure balancing allows easy adjustment of flow setting under pressure. Pressure compensation will maintain preset flow with 1 to 5%, depending on the basic flow range, as long as there is 150 psi pressure differential between the inlet and outlet ports. The dial is calibrated for easy and repeatable flow settings. Continental Hydraulics' unique sharp edged orifice design means that the valve is immune to temperature or fluid viscosity changes. This valve is internally drained, therefore, eliminating the drain piping.



NO CHECK



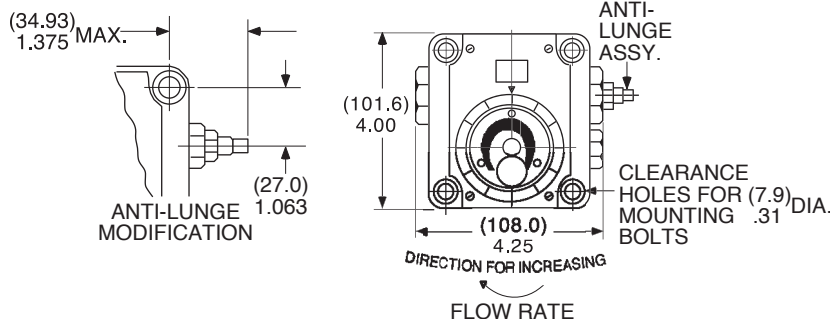
WITH CHECK



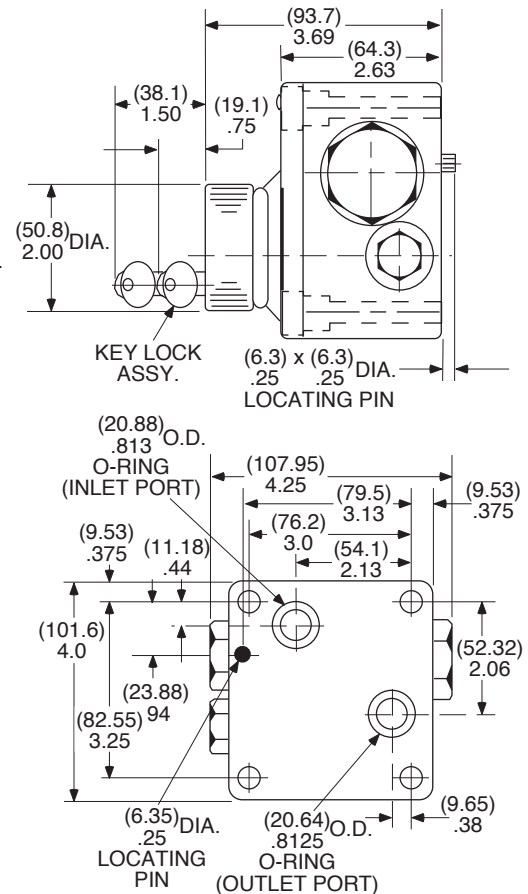
F12M

LOCKABLE, PRESSURE COMPENSATED

STANDARD DIMENSIONS



DIMENSIONS SHOWN IN: (MILLIMETERS)
INCHES



ANTI-LUNGE ASSEMBLY

When the flow control valve is initially activated, there is a very short time lapse before the pressure compensator spool reaches the controlling position. The anti-lunge device provides an adjustable mechanical stop to prevent the spool from over opening. Follow these steps to adjust the anti-lunge device:

1. Set the desired flow control speed setting;
2. Turn the device clockwise until the feed rate slows slightly;
3. Reverse the adjustment screw one-half turn.
4. Repeat these steps each time the flow setting

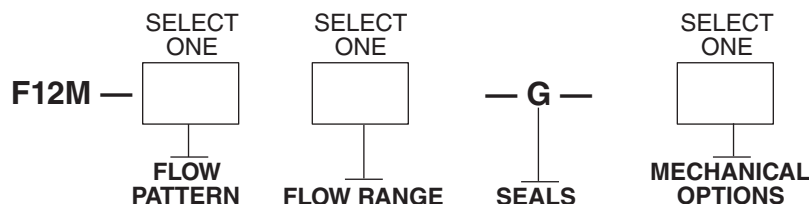
STANDARD KEY LOCK ASSEMBLY

This lock prevents tampering with the valve setting. Place the supplied allen head inch into the screw head and turn clockwise to lock the setting. Two keys are supplied and all locks will use the same key.

APPROXIMATE
FLOW CHANGE
PER DIAL
INCREMENT

SPOOL CODE	GPM
125	.03
500	.15
04	.25
08	.60
12	1.00

ORDERING INFORMATION



BASIC VALVE

- FLOW CONTROL
- PRESSURE/TEMP. COMPENSATED
- NFPA 2F06 MOUNTING
- 12 GPM NOMINAL FLOW
- 3000 PSI MAXIMUM OPERATING PRESSURE

CODE	OPTION	CODE	MAX.		CODE	DESCRIPTION
A	Return Check	125	125 cipm	VITON SEALS STANDARD	OMIT	STANDARD KEY LOCK
		500	500 cipm			
B	With Return Check	04	4 gpm		F	ANTI-LUNGE & STD. KEY LOCK
		08	8 gpm			
		12	12 gpm			

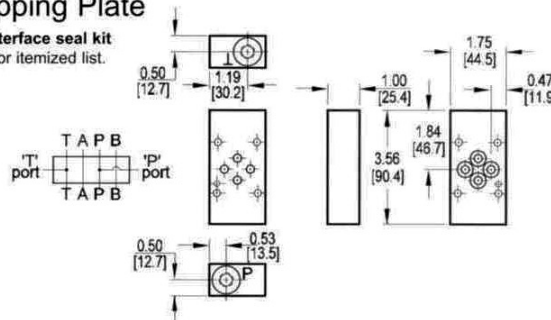
NOTES:

- Use subplate No. S2F06-C50-B.
- 1/2" NPT, Bottom ported.
- Bolt kit B2F06-225.

TYPICAL ORDERING CODE: **F12M-A04-G-F**

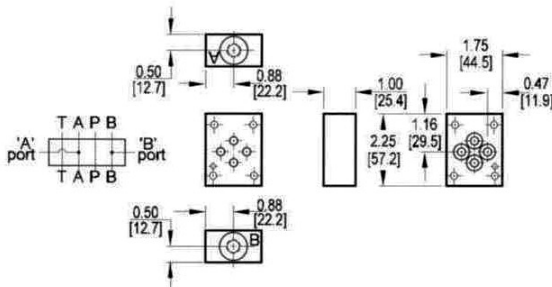
P and T Port Tapping Plate

Tapping Plate hardware / interface seal kit is supplied. See page 164 for itemized list.



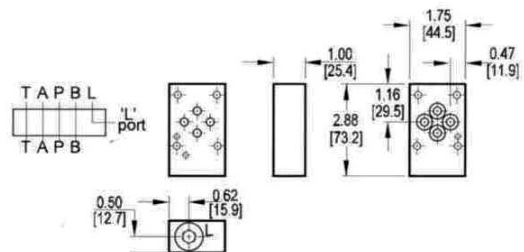
A and B Port Tapping Plate

Tapping Plate hardware / interface seal kit is supplied. See page 164 for itemized list.



L Port Tapping Plate

Tapping Plate hardware / interface seal kit is supplied. See page 164 for itemized list.



Specifications, descriptions, and dimensional data are subject to correction or change without notice or incurring obligation. Download latest catalog page revisions at www.damanifolds.com.

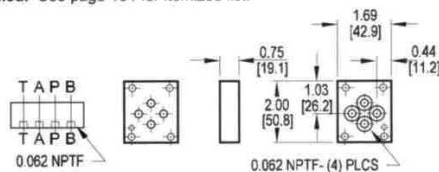
Ordering Information

Material	Valve Pattern	Product Type	Circuit	Port Threads
Material A Aluminum - 6061-T6 3000† psi • 20.7 MPa D Ductile Iron - D4512 5000† psi • 34.5 MPa † Working pressure should be considered in accordance with ISO 4413 to determine appropriate material type.	Valve Pattern D03 ISO 4401-03-02 NFPA T3.5:1-D03 See Tech Information	Product Type TP Tapping Plate	Circuit PT P and T ports provided AB A and B ports provided L L port provided	Port Threads 4P 0.25-18 NPTF ANSI B1.20.3 4S -4 SAE ISO 11926; SAE 1926 4B 0.25-19 BSPP ISO 1179; BS 2779 4M M10 x 1.0 ISO 6149 4T 0.25-19 BSPT ISO 7; BS 21

D03 TAPPING PLATES

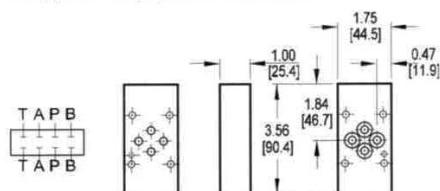
Orifice Tapping Plate

Tapping Plate hardware / interface seal kit is supplied. See page 164 for itemized list.



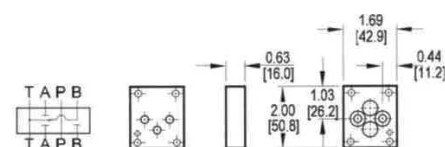
Spot Drilled Tapping Plate

Tapping Plate hardware / interface seal kit is supplied. See page 164 for itemized list.



B to T vent Tapping Plate

Tapping Plate hardware / interface seal kit is supplied. See page 164 for itemized list.



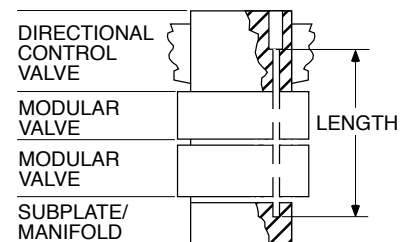
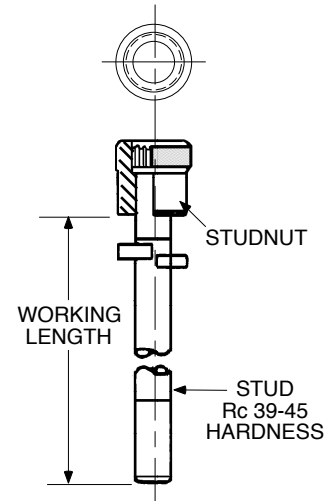
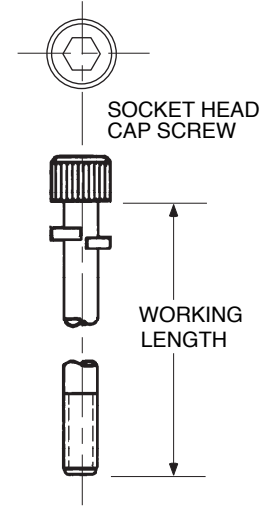
Specifications, descriptions, and dimensional data are subject to correction or change without notice or incurring obligation. Download latest catalog page revisions at www.damanifolds.com.

Ordering Information

Material		Valve Pattern		Product Type		Circuit	
Material				Product Type			
A	Aluminum - 6061-T6 3000† psi • 20.7 MPa			TP	Tapping Plate		
D	Ductile Iron - D4512 5000† psi • 34.5 MPa						
† Working pressure should be considered in accordance with ISO 4413 to determine appropriate material type.							
		Valve Pattern				Circuit	
		D03 ISO 4401-03-02 NFPA T3.5.1-D03 See Tech Information				SD Spot drilled ports	
						OP Orifice plate	
						BTV B to T vent plate	

VALVE BOLT KITS

MODULAR STACK VALVE	VALVE STACK(MM) INCH	ORDER CODE	TYPE	WORKING LENGTH (MM) INCH	WEIGHT lbs. (kg)
V5M / VD03M NFPA D03 CETOP 3 NG6 KIT: (4) 10-24NC FASTENERS (4) #10 LOCKWASHERS	DIRECTIONAL VALVE ONLY	BD03-100	BOLT	(25.5) 1.00	(0.02) 0.05
	VALVE + (1)(40.0) MODULAR 1.57 STACK	BD03-250	BOLT	(63.8) 2.50	(0.04) 0.08
	VALVE + (1)(50.0) MODULAR 1.96 STACK	BD03-300	BOLT	(76.0) 3.00	(0.05) 0.13
	VALVE + (2)(40.0) MODULAR 1.57 STACK	BD03-4125	BOLT	(104.8) 4.125	(0.08) 0.18
	VALVE + (1)(40.0) + (1)(50.0) MODULAR 1.57 1.96	BD03-450	BOLT	(114.0) 4.50	(0.09) 0.20
	VALVE + (3)(40.0) MODULAR 1.57 STACK	BD03-575	BOLT	(146.0) 5.75	(0.10) 0.23
	VALVE + (2)(40.0) MODULAR 1.57 STACK	BD03-460	STUD	(104.8) 4.125	(0.08) 0.18
	VALVE + (3)(40.0) MODULAR 1.57 STACK	BD03-616	STUD	(146.0) 5.75	(0.10) 0.23
V12M / VD0-5M NFPA D05 CETOP 5 NG10 KIT: (4) 1/4-20NC FASTENERS (4) 1/4" LOCKWASHERS	DIRECTIONAL VALVE ONLY	BD05-175	BOLT	(44.6) 1.75	(0.05) 0.11
	VALVE + (1)(55.0) MODULAR 2.17 STACK	BD05-400	BOLT	(102.0) 4.00	(0.10) 0.24
	VALVE + (2)(55.0) MODULAR 2.17 STACK	BD05-6125	BOLT	(155.6) 6.125	(0.20) 0.44
	VALVE + (3)(55.0) MODULAR 2.17 STACK	BD05-825	BOLT	(209.6) 8.25	(0.25) 0.55
	VALVE + (2)(55.0) MODULAR 2.17 STACK	BD05-667	STUD	(155.6) 6.125	(0.20) 0.44
	VALVE + (3)(55.0) MODULAR 2.17 STACK	BD05-884	STUD	(209.6) 8.25	(0.25) 0.55
V50M / VD08M DVS50M NFPA D08 CETOP 8 NG25 (6) 1/2-13NC FASTENERS (6) 1/2" LOCKWASHERS	DIRECTIONAL VALVE ONLY	BD08-275	BOLT	(70.1) 2.75	(0.57) 1.25
	VALVE + (1)(88.9) MODULAR 3.44 STACK	BD08-625	BOLT	(159.4) 6.25	(1.02) 2.25
	VALVE + (1)(101.6) MODULAR 4.00 STACK	BD08-675	BOLT	(172.1) 6.75	(1.08) 2.40
	VALVE + (2)(88.9) MODULAR 3.44 STACK	BD08-9625	BOLT	(244.5) 9.625	(1.70) 3.75
	VALVE + (1)(88.9) + (1)(101.6) MODULAR 3.44 4.00	BD08-1020	BOLT	(260.0) 10.25	(1.81) 4.00
	VALVE + (2)(101.6) MODULAR 4.00 STACK	BD08-1080	BOLT	(273.0) 10.75	(1.87) 4.13
	VALVE + (2)(88.9) MODULAR 3.44 STACK	BD08-1025	STUD	(244.5) 9.625	(1.70) 3.75
	VALVE + (1)(88.9) + (1)(101.6) MODULAR 3.44 4.00	BD08-1075	STUD	(260.0) 10.25	(1.81) 4.00
	VALVE + (2)(101.6) MODULAR 4.00 STACK	BD08-1125	STUD	(273.0) 10.75	(1.87) 4.13
	DIRECTIONAL VALVE ONLY	BD10-250	BOLT	(63.8) 2.50	(1.19) 2.63
VALVE					
F12M NFPA 2F06 KIT: (4) 5/16"-18NC FASTENERS (4) 5/16" LOCKWASHERS	FLOW CONTROL	B2F06-225	BOLT	(57.8) 2.25	(0.11) 0.25



When reliability and durability count....count on Continental Hydraulics!

Continental Hydraulics is a world leading hydraulic components manufacturer. Since 1955 we've been designing and manufacturing hydraulic equipment to withstand the most demanding applications. Continental Hydraulics is ISO 9001:2000 Certified.

Our Approach

Continental Hydraulics welcomes the opportunity to work with you to help design your hydraulic system from the ground up. Our Application specialists and our trained local support Distributors can advise you of the most efficient, cost-effective components available off the shelf, or work with you on custom designs to meet your needs.

Product Characteristics

Continental Hydraulic's products are designed to provide maximum overall value. Reliability, durability, and efficiency are designed in. Ease of maintenance, quiet operation and low operating costs are common design features.

Product Lineup

Pumps

- PVR Vane Pumps, rugged duty pumps for medium pressure applications
- PVX Vane Pumps, quiet pumps for higher pressure applications
- HPV Piston Pumps, efficient pumps for higher pressure applications

Valves

- D03/5/8/10 Directional Control Valves, for a variety of applications
- D03/5/8 Proportional Control Valves offer more control options, from programmable On-board amplifiers to panel and Euro card mounts.
- Modular Stack Valves for controlling flows and pressures in industrial and/or mobile applications
- Cartridge Valves for controlling flows and pressures in compact applications

Power Units

- Little Champ series for smaller and/or economical applications
- JIC and L-Shape series for larger industrial applications

- Available from fractional horse power and 3 gallon tank size, to 100 horse power, 330 gallon tank, straight out of the catalog.
- Custom Designed and larger units to match your application, exactly

Continental Hydraulics manufactured components are covered by a 3 year warranty!

How can we help you?

Contact your Continental Hydraulics representative for solutions to your toughest hydraulics problems. Whether it's reducing your operating expenses, or increasing your production capability, you can count on Continental Hydraulics!





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