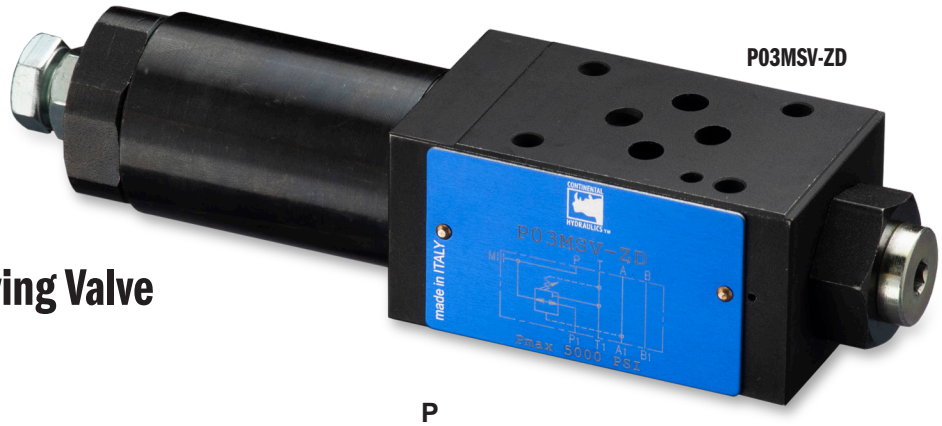
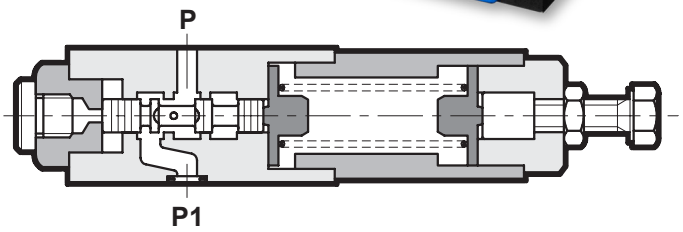


P03MSV-PDR*

Pressure Reducing / Relieving Valve

MODULAR VERSION
NFPA D05 ISO 4401-03

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



► DESCRIPTION:

The P03MSV-PDR* valve is a three-port, spool type, direct operated pressure reducing valve with variable adjustment. It is made in modular version according to the ISO 4401-03 standards, it can be assembled quickly under solenoid valves, without the use of pipes. It is normally open and the hydraulic fluid flows freely from P1 port to P port. The three-way design provides protection of the secondary circuit from pressure surges since it allows a reverse flow from the actuator to the T discharge line. The spool is subjected to the pressure in the P path but also to the force of the counter spring. When the pressure in P1 exceeds the spring force, the valving element closes until the pressure is reduced to the set pressure value. The valve provides good adjustment sensitivity with reduced drain flow. The drain is connected to path T inside the valve. The variable adjustment version is supplied with a hexagonal head adjustment screw.

The fixed adjustment version is available preset to 285 psi (20 bar) 360 psi (25 bar) or 430 psi (30 bar) pressure.

► PERFORMANCE:

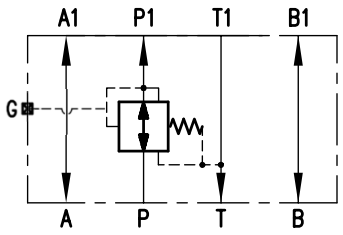
(Measured with mineral oil of viscosity 36cSt at 120°F [50°C])

Maximum operating pressure:		PSI (bar)	5000 (350)
Maximum pressure: T Port		PSI (bar)	145 (10)
Maximum flow rate:	**Controlled Lines**	gpm (l/min)	13 (50)
	Free Lines	gpm (l/min)	20 (75)
	Drainage	≤ 4.9 in³/min (≤ 0.08 l/min)	
Mounting surface		NFPA D03 ISO 4401-03-02-0-05	
Adjustment range		No. of CCW turns from Min to Max. setting	3.75
Ambient temperature range		°F (°C)	-4 to 140 (-20 to +60)
Fluid temperature range		°F (°C)	-4 to 180 (-20 to +80)
Fluid viscosity range		SUS (cSt)	60 - 1900 (10-400)
Recommended viscosity		SUS (cSt)	120 (25)
Fluid contamination degree		according to ISO 4406:1999 class 20/18/15	
Mass:	**P03MSV-CC**	lbs (kg)	3.5 (1.6)

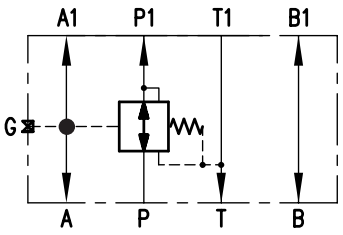
► HYDRAULIC SYMBOLS:

AVAILABLE VERSIONS: FIXED ADJUSTMENT

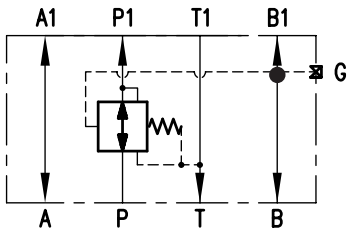
P03MSV-PDRP-F*



P03MSV-PDRA-F*

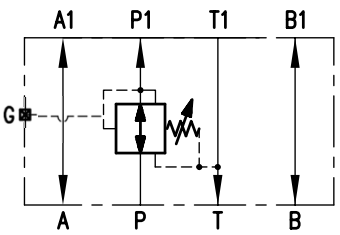


P03MSV-PDRB-F*

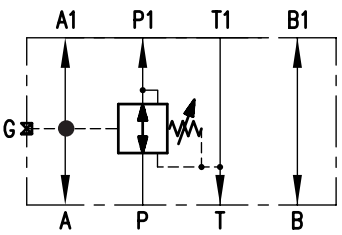


AVAILABLE VERSIONS: VARIABLE ADJUSTMENT

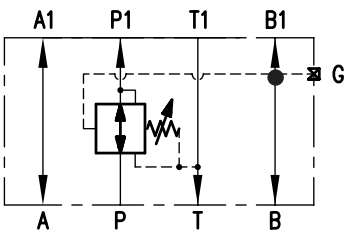
P03MSV-PDRP- A*



P03MSV-PDRA- A*



P03MSV-PDRB- A*



► IDENTIFICATION CODE:

P03MSV - PDR ☐ - ☐ - ☐ C - ☐ ——— DESIGN LETTER

CONTROL PORT	
CODE	PORT
A	A
B	B
P	P

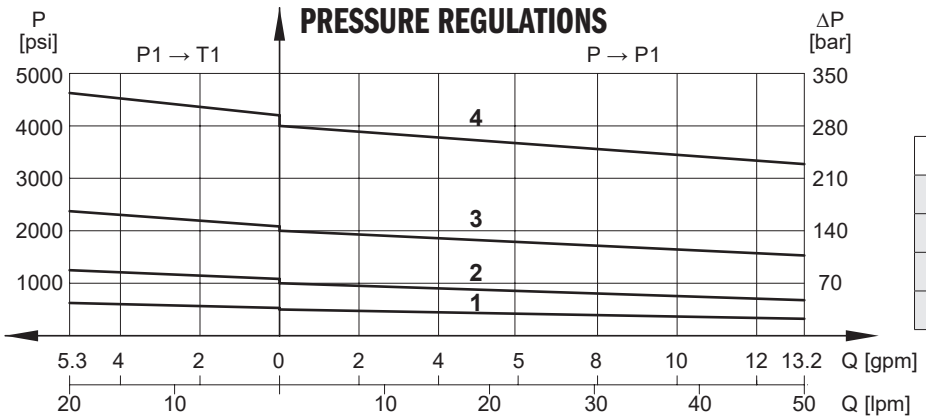
ADJUSTMENT	
CODE	DESCRIPTION
F28	285 psi (20 bar) Fixed
F36	360 psi (25 bar) Fixed
F43	430 psi (30 bar) Fixed
A50	45 - 500 psi (3 - 35 bar) Adj.
A100	145 - 1000 psi (10 - 70 bar) Adj.
A200	430 - 2000 psi (30 - 140 bar) Adj.
A400	870 - 4000 psi (60 - 280 bar) Adj.

SEAL MATERIAL	
CODE	DESCRIPTION
A	BUNA (Std)
G	VITON

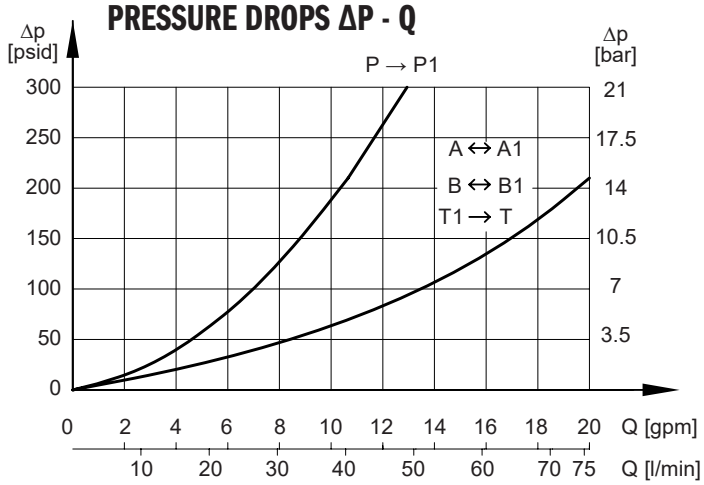
BODY MATERIAL	
CODE	DESCRIPTION
C	Cast Iron

TYPICAL ORDERING CODE:
P03MSV-PDRP-F28-AC-C

► PERFORMANCE DATA: Characteristics - Variable Adjustment



CURVE	PRESSURE CODE
1	A50
2	A100
3	A200
4	A400

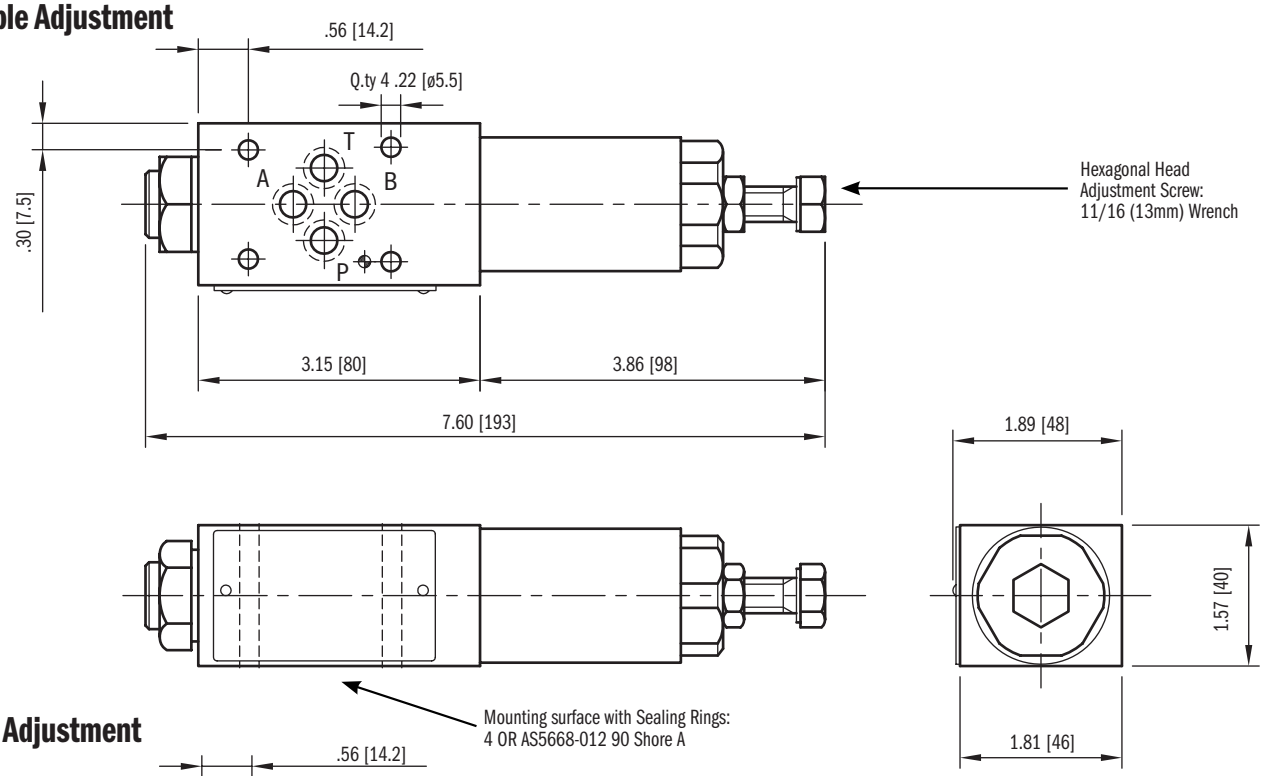


NOTE: Curves obtained with mineral oil with viscosity of 170 SUS (36 cSt) at 122°F (50°C).

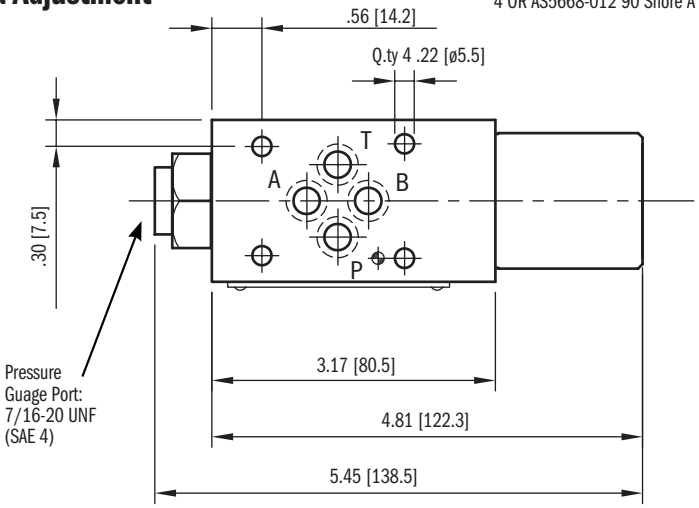
► ADJUSTMENTS:

Dimensions inch [mm]

Variable Adjustment

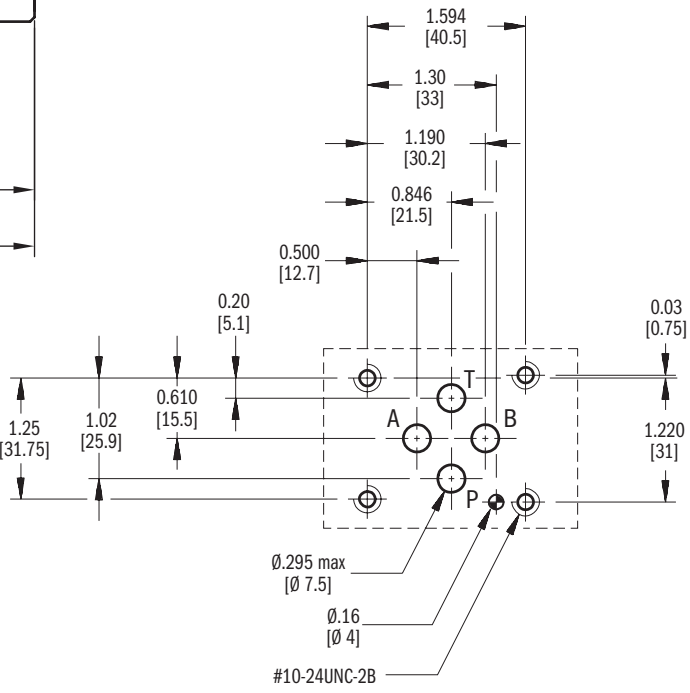


Fixed Adjustment



► 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. 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
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	

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HYDRECO a member of DAIKIN group

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