

P05MSV-PD

Pilot Operated Pressure Reducing Valve

MODULAR VERSION
NFFPA D05 ISO 4401-05

P max **5000 PSI 350 bar**
Q max SEE PERFORMANCE TABLE

► DESCRIPTION:

This valve is a pilot operated pressure reducing valve with mounting surface according to NFFPA D05/ISO 4401-05 standards. It is used to reduce pressure on secondary circuit branches, assuring stability of the controlled pressure. It can be assembled in a stack under a NFFPA D05/ISO 4401-05 directional solenoid valve using suitable tie rods or bolts. It is supplied with a hex socket adjustment screw and a locknut. The maximum travel of the adjustment screw is limited. It is available in three pressure adjustment ranges, up to 4000psi [280bar].

Key Features:

- Maximum operating pressure:
P05MSV-PD / PDA / PDB is 5000 psi
- Maximum flow rate P05MSV-PD for controlled lines 21 gpm and free lines 26 gpm

► PERFORMANCE:

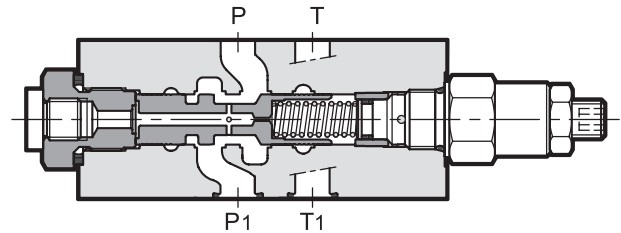
(Measured with mineral oil of viscosity
36cSt at 120°F [50°C])

Max operating pressure:	PSI [bar]	5000 (350)
Maximum flow rate in the controlled line P		21 [80]
Maximum flow rate in the free lines	GPM [l/min]	26 [100]
Drain flow rate		≤ 0.21 [≤ 0.8]
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 20/18/15
Mass: P05MSV-RP	lbs [kg]	6.0 [2.7]

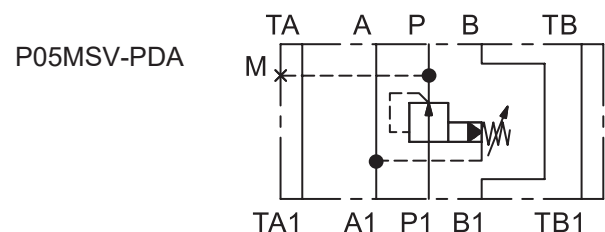
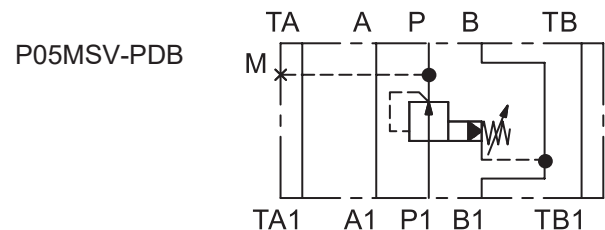
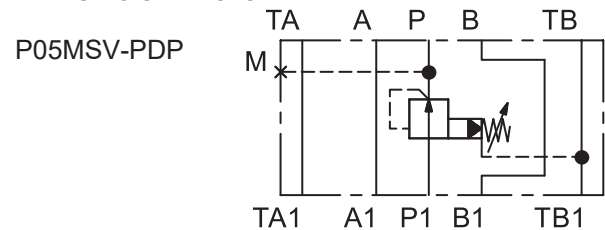
P05MSV-PD



OPERATING PRINCIPLES



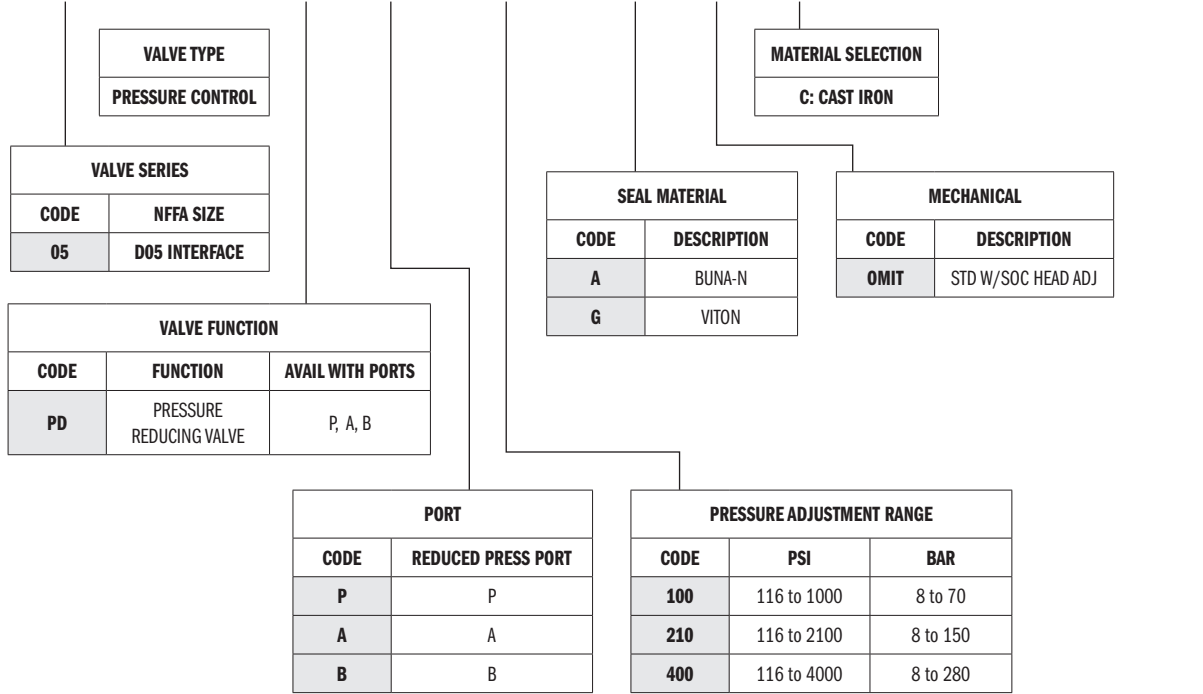
HYDRAULIC SYMBOLS



P05MSV-PD

► IDENTIFICATION CODE:

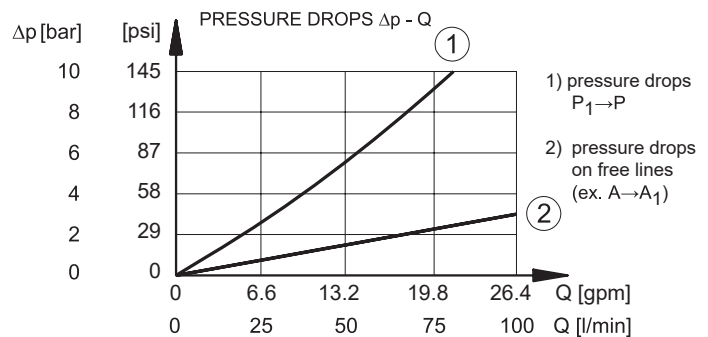
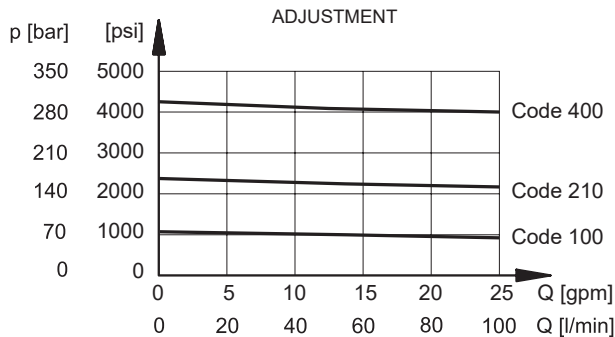
P05MSV - PD [] - [] - [] [] **C** - [] ————— DESIGN LETTER



TYPICAL ORDERING CODE:
P05MSV-PDP-210-AC

► PERFORMANCE DATA:

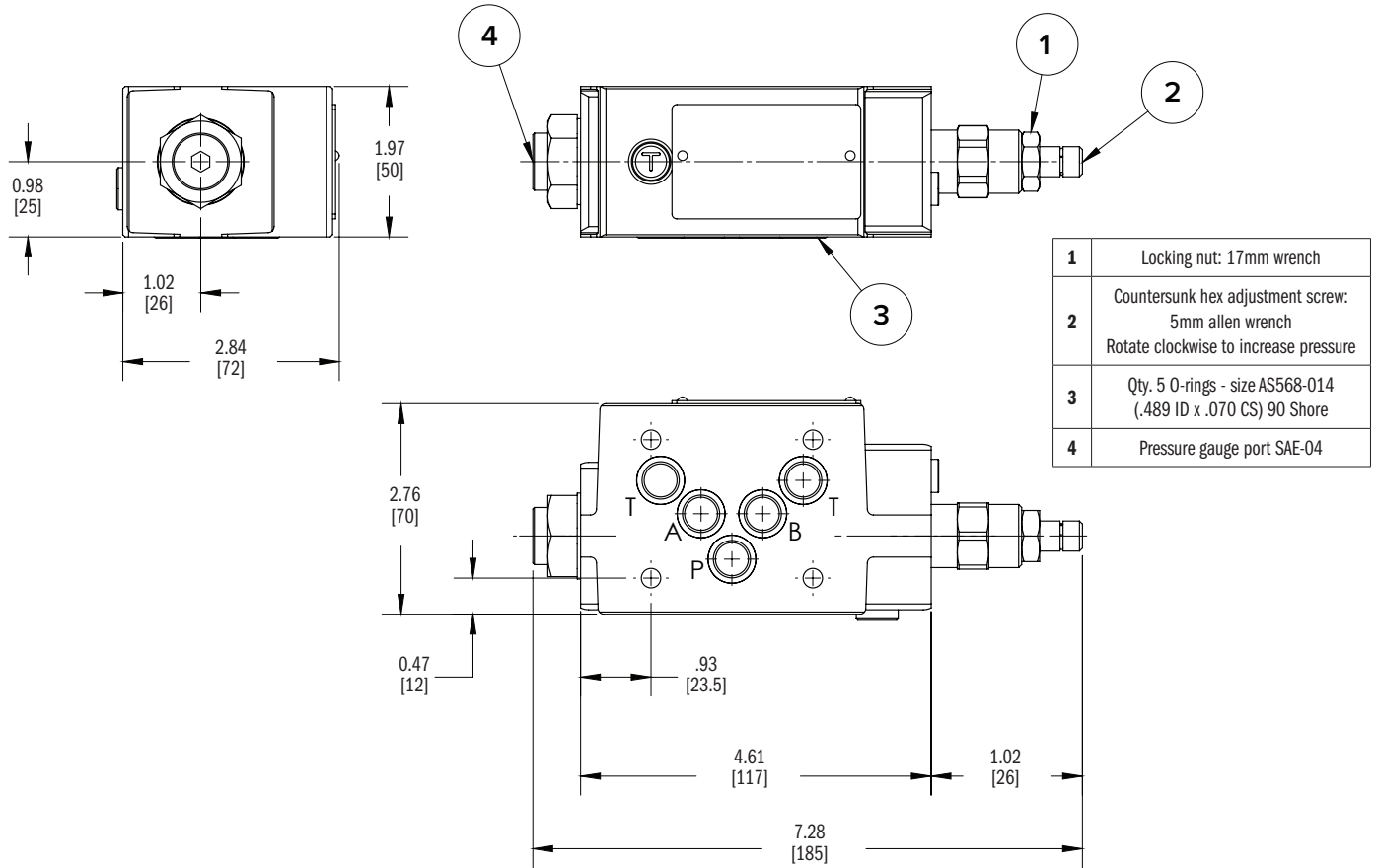
CHARACTERISTIC CURVES (values obtained with viscosity of 36 cSt at 120°F [50°C])



Dimensions inch [mm]

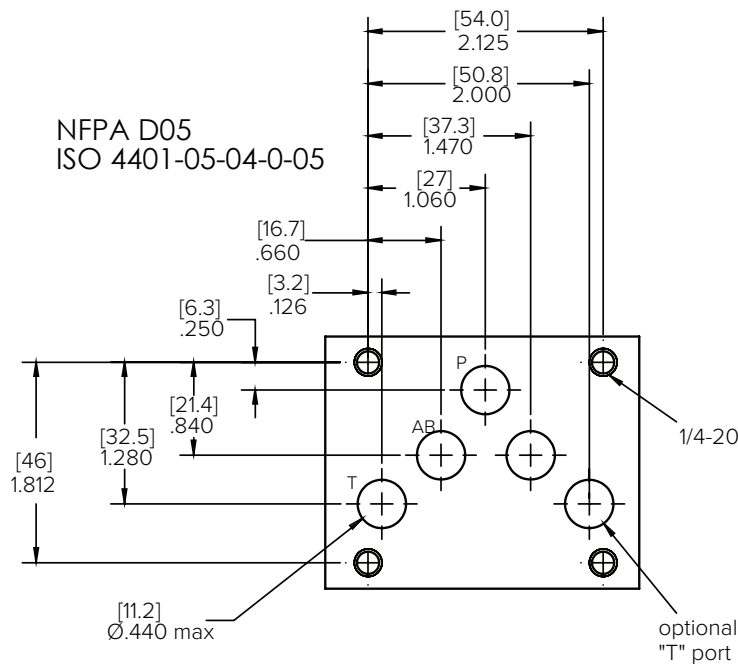
► INSTALLATION DATA:

OVERALL AND MOUNTING DIMENSIONS



► MOUNTING:

NFPA D05
ISO 4401-05-04-0-05



► 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		



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