



OVERVIEW

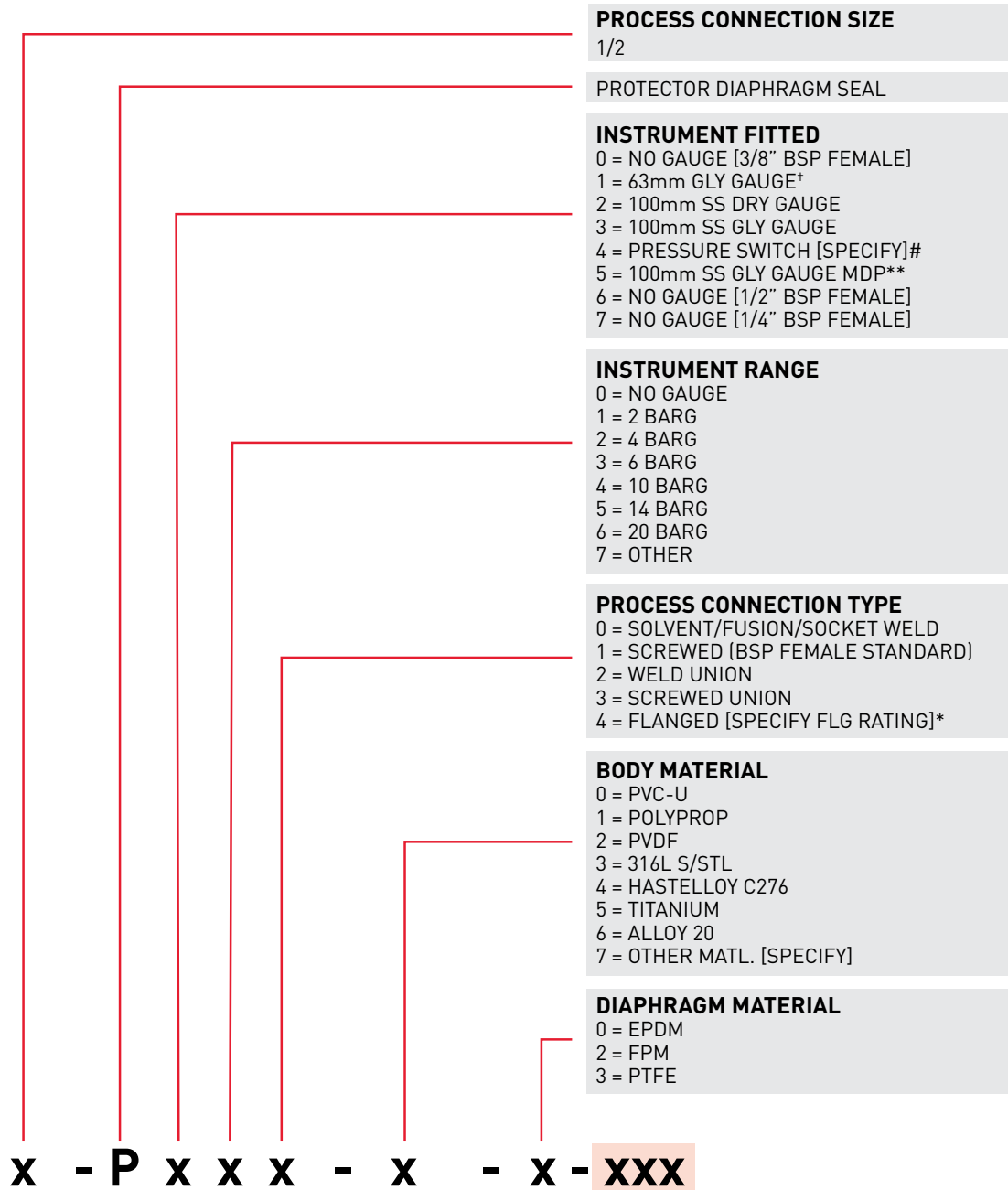
Prochem diaphragm seals (or gauge isolators) are designed to enable standard construction pressure gauges and switches to be used on process lines carrying corrosive chemicals, which would otherwise corrode or clog the sensing instruments. They operate by hydraulically isolating the pressure gauge or switch from the process stream via a diaphragm. The process fluid exerts a pressure on the diaphragm, which in turn transmits the pressure through to the sensing side of the seal which is solidly filled with water or silicon oil. This then transmits the pressure to the gauge or switch. Generally, a reduction in accuracy of approximately 0.5 -1% is experienced when using a diaphragm seal.

Note due to the memory of PTFE the gauge may not return to zero gauge pressure immediately.

CHEMICAL DIAPHRAGM SEALS

These are designed to handle corrosive process fluids and are available in a wide range of engineering plastics and metals with a variety of elastomer diaphragm materials to suit most applications. The seals screw directly onto a tee branch or male nipple in the process line and are normally supplied complete with a standard 100mm glycerine filled gauge or a single pole switch. Alternative gauges/switches can be fitted as per data sheet. All gauges supplied are with dual scale in BarG and PSI and if required are available with calibration test certificates at extra cost. The seals can be supplied loose for on-site fitting but care is required to ensure that the units are correctly filled to eliminate reading inaccuracies. Normal operating temperature ranges from 1 to 60 degrees C. Please consult Prochem if outside this range.

DIAPHRAGM SEAL DESIGNATIONS



PROCESS CONNECTION SIZE
1/2

PROTECTOR DIAPHRAGM SEAL

INSTRUMENT FITTED
0 = NO GAUGE [3/8" BSP FEMALE]
1 = 63mm GLY GAUGE†
2 = 100mm SS DRY GAUGE
3 = 100mm SS GLY GAUGE
4 = PRESSURE SWITCH [SPECIFY]#
5 = 100mm SS GLY GAUGE MDP**
6 = NO GAUGE [1/2" BSP FEMALE]
7 = NO GAUGE [1/4" BSP FEMALE]

INSTRUMENT RANGE
0 = NO GAUGE
1 = 2 BARG
2 = 4 BARG
3 = 6 BARG
4 = 10 BARG
5 = 14 BARG
6 = 20 BARG
7 = OTHER

PROCESS CONNECTION TYPE
0 = SOLVENT/FUSION/SOCKET WELD
1 = SCREWED (BSP FEMALE STANDARD)
2 = WELD UNION
3 = SCREWED UNION
4 = FLANGED [SPECIFY FLG RATING]*

BODY MATERIAL
0 = PVC-U
1 = POLYPROP
2 = PVDF
3 = 316L S/STL
4 = HASTELLOY C276
5 = TITANIUM
6 = ALLOY 20
7 = OTHER MATL. [SPECIFY]

DIAPHRAGM MATERIAL
0 = EPDM
2 = FPM
3 = PTFE

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DIN DIN Pressure Switch	#	NPT NPT Connections	150 Ansi 150 lb flange	*
NC Normally Closed Pressure Switch			300 Ansi 300 lb flange	
NO Normally Open Pressure Switch			PN16 EN1902-1 PN16, PN25,PN40 flange	

† GLY = Glycerine
**MDP = Maximum Drag Pointer

EXAMPLE DIAPHRAGM SEALS

1/2"-P341-00 – DIAHRAGM SEAL WITH PVC-U BODY, EPDM DIAPHRAGM C/W 100MM DIAMETER GLYCERINE FILLED STAINLESS STEEL 0 – 10 BARG PRESSURE GAUGE. 1/2" BSP FEMALE PROCESS CONNECTION.

1/2"-P441-32-NC-150 – DIAPHRAGM SEAL WITH 316L STAINLESS BODY, FPM DIAPHRAGM C/W NORMALLY CLOSED PRESSURE SWITCH 1 TO 10 BARG AND PROTECTIVE RUBBER BOOT. 1/2" RF ANSI 150 LB FLANGE PROCESS CONNECTION.

SUBJECT TO CHANGE WITHOUT NOTICE