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H40

High Pressure Diaphragm Thread Type

Product application

For mounting to Bourdon tube gauges, pressure sensors or pressure switches

For corrosive, high viscosity, contaminated or hardened media
Paper/pulp/paint industry

Functional characteristics

Compact design of special flange connections for the pulp and paper industry

Can be welded directly to the pressure gauge

Various lengths of pipe

Product description

Diaphragm seals are used to protect pressure measuring instruments from various media in applications. In diaphragm sealing systems, diaphragm-sealed diaphragms isolate the instrument and the medium. The pressure is transmitted to the measuring instrument through a system filled with liquid inside the diaphragm seal system.

The lower chamber can be replaced without changing the diaphragm sealing system. Low pressure ranges can be covered by this diaphragm seal. When the temperature changes, the large diameter diaphragm has less influence on the measurement deviation of the instrument.

The diaphragm seal can be fitted directly to the measuring instrument or through cooling elements or flexible capillaries to accommodate high temperatures.

To meet our customers' demanding application requirements, we offer different designs, materials and system filling fluids.



Technical parameter

Model H40	Standard	Selectable
Pressure range	0... 10 MPa [0... 1,450 psi] or all other equivalent mixing and vacuum ranges	
Cleanliness level of liquid connected components	No oil, no fat, in accordance with ASTM G93-03 standard F(<1,000 mg/m ²)	No oil, no fat, according to ASTM G93-03 standard D ISO 15001 (<220 mg/m ²)
Origin of raw materials for liquid parts	internation	European Union, Switzerland, United States
How the instrument is connected	Axial adapter	Through G1/2, G1/4, 1/2NPT or 1/4NPT (internal thread) axial adapters
Seal	The maximum applicable temperature of PTFE is 260°C	FPM, up to 200 °C
		Statotherm®, up to 400 °C
Flush connection	-	Single flush connection (G1/4, G1/8, 1/4NPT, 1/8NPT)
		Two flushing connections (G1/4, G1/8, 1/4NPT, 1/8NPT)
		Lock nut
Designed to comply with the NACE declaration	-	MR 0175
		MR 0103
Vacuum service	Basic service	Quality service
		Premium service
Meter mounting bracket (Capillary option only)	-	Model H, DIN 16281, 100mm, aluminum, black
		Type H, DIN 16281, 100mm, stainless steel
		Pipe bracket mounting for Ø20... 80 mm pipe, steel

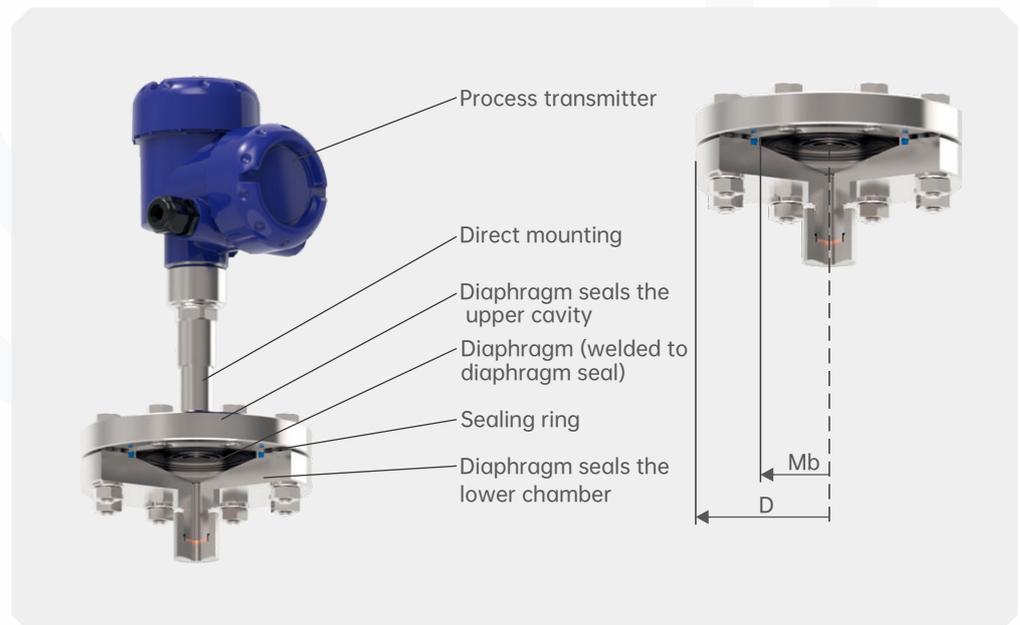
Case

Model H40 Installation process transmitter

legend

Mb Effective diaphragm diameter

D Diaphragm seal outer diameter



Process connection

Standard	Male thread		Internal thread	
	Standard	Selectable	Standard	Selectable
Conform to DIN ISO 228-1	G1/2A	G1/4A G3/8A G3/4A G 1 A G 1 ½ A	G1/2	G1/4 G3/8 G3/4 G 1
Conform to ASME B 1.20.1	1/2NPT	1/4NPT 3/8NPT 3/4NPT 1 NPT 1 ½ NPT	1/2NPT	1/4NPT 3/8NPT 3/4NPT 1 NPT
Conform to DIN 13-1	M20 x 1.5	-	M20 x 1.5	-
Conform to ISO 7-1	R 1/2	R1/4, R3/8, R3/4	-	-

Combination of materials

Diaphragm seals the upper cavity	Liquid connection unit		Maximum process temperature limit ¹⁾ (°C/°F)
	Diaphragm seals the lower chamber	diaphragm	
Stainless Steel 1.4404 (316L)	Stainless Steel 1.4404 (316L)	Stainless Steel 1.4404/1.4435 (316L), standard version	400/752
	Stainless Steel 1.4539 (904L)	Stainless Steel 1.4539 (904L)	
	Stainless Steel 1.4541 (321)	Stainless Steel 1.4541 (321)	
	Stainless Steel 1.4571 (316Ti)	Stainless Steel 1.4571 (316Ti)	
	PTFE lining ²⁾	ECTFE coating	
	PTFE lining ²⁾	PFA (perfluoroalkoxy) coating, FDA	260/500
	PTFE lining ²⁾	PFA (perfluoroalkoxy) coating, antistatic	400/752
	-	gild	
	-	Ceramic coating	
	Hastelloy C22 (2.4602)	Hastelloy C22 (2.4602)	260/500
	Hastelloy C276 (2.4819)	Hastelloy C276 (2.4819)	400/752
	Inconel 600 (2.4816)	Inconel 600 (2.4816)	
	Inconel 625 (2.4856)	Inconel 625 (2.4856)	
	Incoloy 825 (2.4858)	Incoloy 825 (2.4858)	
	Monel 400 (2.4360)	Monel 400 (2.4360)	
Nickel 200 (2.4060, 2.4066)	Nickel 200 (2.4060, 2.4066)	260/500	
Titanium Grade 2 (3.7035)	Titanium Grade 2 (3.7035)	150/302	
Titanium Grade 7 (3.7235)	Titanium Grade 11 (3.7225)		
Tantalum lining ²⁾	tantalum	300/572	
Stainless Steel 1.4435 (316L)	Stainless Steel 1.4435 (316L)	Stainless Steel 1.4435 (316L)	400/752
Stainless Steel 1.4539 (904L)	Stainless Steel 1.4539 (904L)	Stainless Steel 1.4539 (904L)	

Combination of materials

Diaphragm seals the upper cavity	Liquid connection unit		Maximum process temperature limit ¹⁾ (°C/°F)
	Diaphragm seals the lower chamber	diaphragm	
Stainless Steel 1.4541 (321)	Stainless Steel 1.4541 (321)	Stainless Steel 1.4541 (321)	400/752
Stainless Steel 1.4571 (316Ti)	Stainless Steel 1.4571 (316Ti)	Stainless Steel 1.4571 (316Ti)	
Duplex steel 2205 (1.4462)	Duplex steel 2205 (1.4462)	Duplex steel 2205 (1.4462)	300/572
Super Duplex Steel (1.4410)	Super Duplex Steel 2507 (1.4410)	Super Duplex Steel 2507 (1.4410)	
Hastelloy C22 (2.4602)	Hastelloy C22 (2.4602)	Hastelloy C22 (2.4602)	400/752
Hastelloy C276 (2.4819)	Hastelloy C276 (2.4819)	Hastelloy C276 (2.4819)	
Inconel 600 (2.4816)	Inconel 600 (2.4816)	Inconel 600 (2.4816)	
Inconel 625 (2.4856)	Inconel 625 (2.4856)	Inconel 625 (2.4856)	
Incoloy 825 (2.4558)	Incoloy 825 (2.4858)	Incoloy 825 (2.4858)	
Monel 400 (2.4360)	Monel 400 (2.4360)	Monel 400 (2.4360)	
Nickel 200 (2.4060, 2.4066)	Nickel 200 (2.4060, 2.4066)	Nickel 200 (2.4060, 2.4066)	
Titanium Grade 2 (3.7035)	Titanium Grade 2 (3.7035)	Titanium Grade 2 (3.7035)	
Titanium Grade 7 (3.7235)	Titanium Grade 7 (3.7235)	Titanium Grade 11 (3.7225)	

1) The process temperature limit of the diaphragm sealing system is limited by the connection method, the system filling fluid and the measuring instrument

2) For G1/2 and M 20 x 1.5 (external thread), Max 0... 10MPa

Size mm [in]

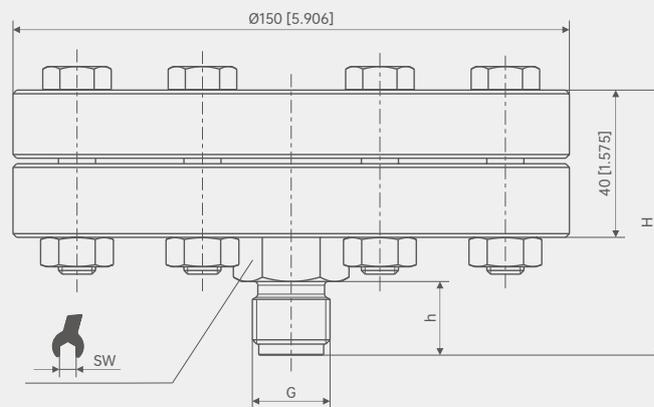
Nominal pressure PN 100 Male thread

legend

Mb Diaphragm diameter

G Screw thread

SW Wrench width



G	Size mm [in]			
	h	H	Mb	SW
G1/4A	13 [5.512]	65 [2.559]	90 [3.543]	27 [1.063]
G3/8A	16 [0.63]	68 [2.677]	90 [3.543]	27 [1.063]
G1/2A	20 [0.787]	72 [2.835]	90 [3.543]	27 [1.063]
G3/4A	20 [0.787]	72 [2.835]	90 [3.543]	30 [1.181]
G 1 A	28 [1.102]	80 [3.15]	90 [3.543]	36 [1.417]
G 1 1/2 A	28 [1.102]	80 [3.15]	90 [3.543]	41 [1.614]
1/4NPT	13 [5.512]	65 [2.559]	90 [3.543]	27 [1.063]



Nominal pressure PN 100 external thread

G	Size mm[in]			
	h	H	Mb	SW
3/8NPT	19 [0.748]	71 [2.798]	90 [3.543]	27 [1.063]
1/2NPT	20 [0.787]	72 [2.835]	90 [3.543]	30 [1.181]
3/4NPT	25 [0.984]	77 [3.031]	90 [3.543]	36 [1.417]
1 NPT	26 [1.024]	78 [3.071]	90 [3.543]	41 [1.614]
1 1/2 NPT	20 [0.787]	72 [2.835]	90 [3.543]	27 [1.063]
R1/4	15 [0.591]	67 [2.638]	90 [3.543]	22 [0.866]
R3/8	18 [0.709]	67 [2.638]	90 [3.543]	22 [0.866]
R1/2	19 [0.748]	71 [2.798]	90 [3.543]	22 [0.866]
R3/4	20 [0.787]	72 [2.835]	90 [3.543]	27 [1.063]

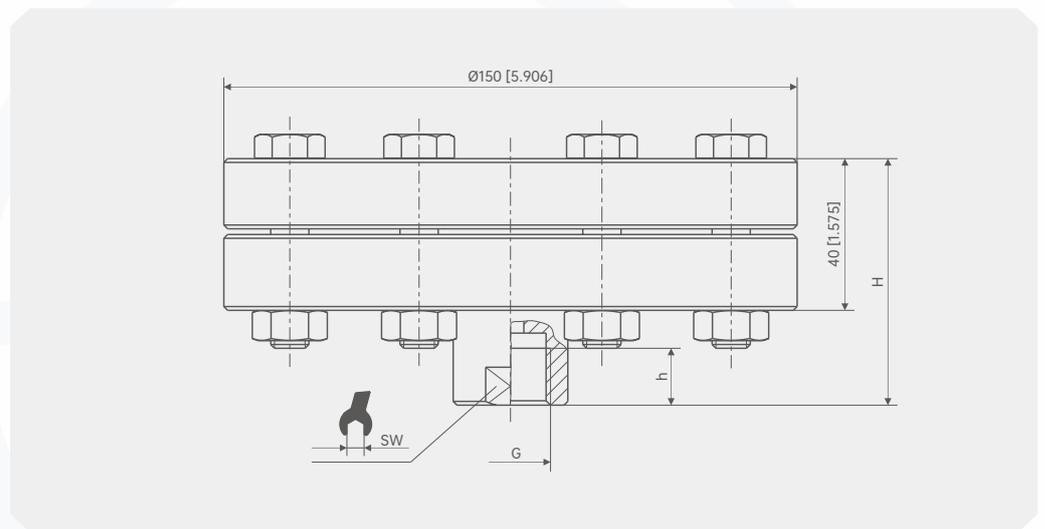
Nominal pressure PN 100
Internal thread

legend

Mb Diaphragm diameter

G Screw thread

SW Wrench width



G	Size mm[in]			
	h	H	Mb	SW
G1/4	10 [0.394]	63 [2.480]	90 [3.543]	27 [1.063]
G3/8	12 [0.472]	63 [2.480]	90 [3.543]	27 [1.063]
G1/2	14 [0.551]	65 [2.559]	90 [3.543]	27 [1.063]
G3/4	16 [0.63]	68 [2.677]	90 [3.543]	36 [1.417]
G 1	18 [0.709]	73 [2.874]	90 [3.543]	41 [1.614]
1/4NPT	-	63 [2.480]	90 [3.543]	27 [1.614]
3/8NPT	-	63 [2.480]	90 [3.543]	27 [1.063]
1/2NPT	-	65 [2.559]	90 [3.543]	27 [1.063]
3/4NPT	-	68 [2.677]	90 [3.543]	36 [1.417]
1 NPT	-	73 [2.874]	90 [3.543]	41 [1.614]
M20*1.5	15.5 [0.61]	65 [2.559]	90 [3.543]	27 [1.063]

H40-Selection composition

Selection example **H40** **H** / **U** / **X**

1 2 3

1.Meter connection specification	A	1 NPT
	B	1/2NPT
	C	1/4NPT
	D	M14*1.5
	E	M20*1.5
	F	M27*2
	G	G 1
	H	G1/2
	I	G1/4
	T ()	Other connection specifications
2.Field connection specification	N	1 NPT
	O	1/2NPT
	P	1/4NPT
	Q	M14*1.5
	R	M20*1.5
	S	M27*2
	Z	G 1
	U	G1/2
	V	G1/4
	T ()	Other connection specifications
3.material	W	Carbon steel
	X	304SS
	Y	316L
	T ()	Other materials

Instructions:

It indicates that the H40 diaphragm seal is connected to the instrument with the specification of G1/2, and the field connection specification is G1/2, and the material is 304 stainless steel.

Product Certification

Compliance and approval; Rodewieg pressure gauges meet key standards and certifications for process measurement technology; Thus guaranteeing the highest reliability in such Settings;