The selection is detailed on page 4

H18

Threaded Type Embedded Diaphragm

Product application

Food and beverage production

Wine industry

Soft drink production

Filling system

Filtration, separation, pasteurization

Functional characteristics

Quick installation and removal

Quick cleaning of measuring points without residue

Suitable for COP applications

Product description

Diaphragm seals are used to protect pressure measuring instruments from various media in applications. In a diaphragm seal system, a diaphragm seal separates the meter from the medium. The pressure is transmitted to the measuring instrument through a system filled with liquid inside the diaphragm seal system.

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

The type H18 diaphragm seal is designed with a threaded connection and is particularly suitable for the food industry. The diaphragm seal system can withstand very high cleaning steam temperatures during the process, thus achieving a sterile connection between the tested medium and the diaphragm seal.

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

The upper chamber of the diaphragm seal and the liquid receiving parts can be made of the same or different materials. The liquid parts can also choose the electropolished material.

✆ 400-860-9760

For more product information, please visit www.ludwig-schneider.com.cn

LUDWIG INSTRUMENT

Technical parameter

Model H18	Standard	selectable
Allowable pressure	0... 0.1 MPa to 0... 4 MPa [0... 14.5 psi to 0... 580 psi] or all other negative or positive pressure ranges	
Cleanliness level of liquid connected components	No oil, no fat, in accordance with ASTM G93-03 standard F(<1,000 mg/m²)	No oil, no fat, in accordance with ASTM G93-03 standard C and ISO 15001 standard (<66mg/m²)
		No oil, no fat, in accordance with ASTM G93-03 standard C and ISO 15001 standard (<220mg/m2)
Origin of raw materials for liquid parts	Internation	European Union, Switzerland, United States
Surface roughness of liquid connecting parts	Ra≤0.76 μm，Comply with ASME BPE SF3 (except welds)	Ra≤0.38 μm，In accordance with ASME BPE SF4, only applicable to electropolished surfaces (except welds)
Materials	Stainless Steel 1.4435 (316L)	-
How the instrument is connected	Axial adapter	Through G1/2, G1/4, 1/2NPT or 1/4NPT (internal thread) axial adapters
Installation mode	Direct connection	capillaries
		Cooling element
Vacuum service	Basic vacuum treatment	Advanced high temperature and high vacuum treatment
		High temperature and high vacuum treatment
Assembly part	Flange, Stainless steel 1.4435(316L)	Welded flange for DRD connection, Stainless steel 1.4435 (316L)
	Hexagonal screws M10 x 20, stainless steel	
Diaphragm seal marks	-	Meets valid 3-A standards
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

Installation example

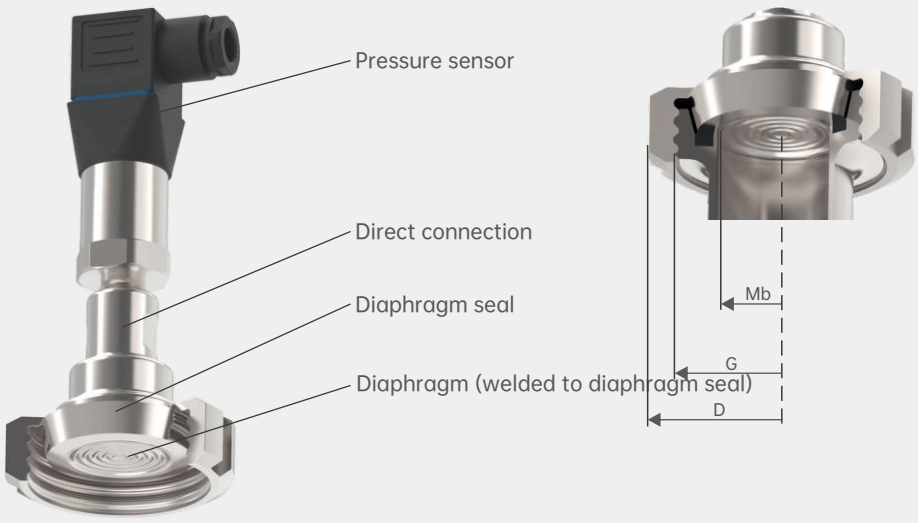
Pressure sensor with type H18 diaphragm seal installed

legend

Mb Effective diaphragm diameter

G Screw thread

D Diaphragm seal outer diameter/retainer flange



Combination of materials

Diaphragm seals the upper part	Liquid connection unit	Maximum permissible process temperature (°C/°F)[1)]
Stainless steel 1.4435 (316L)	Stainless steel 1.4435 (316L)	400/752
hastelloy C22 (2.4602)	hastelloy C22 (2.4602)	400/752
hastelloy C276 (2.4819)	hastelloy C276 (2.4819)	

1) Process temperature limits for diaphragm sealing systems depend on the connection type, system filling fluid, and measuring instrument

Size mm [in]

Type H18, threaded pipe connection according to DIN 11851

Emote

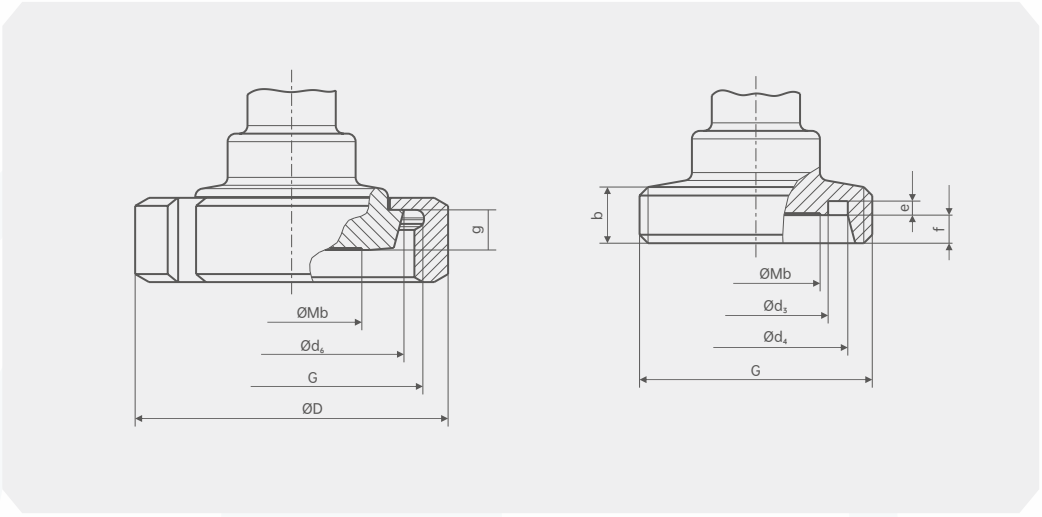
Mb Effective diameter of the diaphragm

TL Extend the diaphragm length

b Thickness of diaphragm seal

d_4 Diameter of sealing surface

d_5 Extend the diaphragm diameter



DN	Pipe diameter x wall thickness	PN	Size mm [in]									
			G	b	Mb	D	d_3	d_4	d_6	e	f	g
25	29x1.5 (1.142x0.059)	40	RD 52x1/6	14 (0.551)	25 (0.984)	63 (2.48)	30 (1.181)	39.8 (1.567)	44 (1.732)	3.5 (0.138)	7 (0.276)	10 (0.394)
32	35x1.5 (1.378x0.059)		RD 58x1/6		32 (1.26)	70 (2.756)	36 (1.417)	45.8 (1.803)	50 (1.968)			
40	41x1.5 (1.614x0.059)		RD 65x1/6		35 (1.378)	78 (30.71)	42 (1.653)	51.8 (2.039)	56 (2.205)			
50	53x1.5 (2.087x0.059)	25	RD 78x1/6		52 (2.047)	92 (3.622)	54 (2.126)	63.8 (2.512)	68.5 (2.697)			11 (0.433)
65	70x1.5 (2.756x0.059)		RD 95x1/6	16 (0.63)		112 (4.409)	71 (2.795)	80.8 (3.181)	86 (3.386)			12 (0.472)
80	85x2 (3.345x0.059)		RD 110x1/4	20 (0.787)	72 (2.835)	127 (5)	85 (3.346)	94.8 (3.732)	100 (3.937)		8 (0.3156)	

H18-Selection composition

Selection example H18 H / N / Y
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	1NPT
	O	1/2NPT
	P	M20*1.5
	Q	M27*2
	R	G1
	S	G1/2

3.material	X	Carbon steel
	Y	304SS
	Z	316L
	T( )	Other materials

Instructions:

It indicates that the H18 diaphragm seal is connected to the instrument with the specification of G1/2, and the field connection specification is DN25, and the material is 304 stainless steel.

Product Certification

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