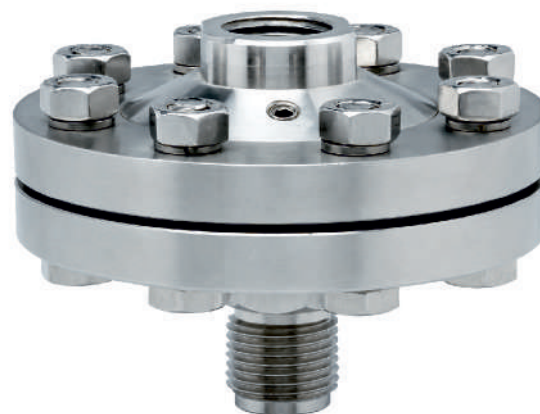


## APPLICATIONS

- Separation systems
- Isolation applications
- Viscous & corrosive media
- High-pressure applications
- High vibration application

## FEATURES

- Rigid construction
- Laser welded diaphragm
- Optional exotic materials



## DESCRIPTION

### General

**Thread design :** ANSI B1.20.1 / BS EN ISO 228-1

**Storage temperature :** -40...+65°C

**Service temperature :** 370°C max.

**Weld joints :** Laser welding for Diaphragm and  
TIG argon arc welding for other parts

### Material of construction

**Sensing element :** Diaphragm

**Top chamber material :** ASTM A105 / AISI 304 SS / AISI 316SS-Made from Solid Bar,

**Diaphragm :** AISI 316L SS / Monel 400 / Hastelloy C-276  
Inconel 600 / Titanium / Tantalum

**Bottom chamber material :** AISI 304SS / AISI 316 SS  
AISI 316L SS / Monel / Titanium / Tantalum  
Hastelloy C-276 / PVC / PVDF / Polypropylene  
PTFE -Made from solid Bar

**Hardware :** AISI 304 SS

**GASKET :** PTFE

**Capillary :** AISI 304 SS / AISI 316 SS

**Armour :** AISI 304 SS / AISI 316 SS / PVC

**Remote distance :** 0.25 Mtr. to 25 Mtr.

Check temperature & pressure rating with factory before ordering.

## DIRECT COUPLED DIAPHRAGM SEAL - TMC22-1

### Standard version

**Seal type :** -1...0...21 bar [Eco] / -1...0...70 bar  
[Standard] / 100...400 bar [High pressure]

**Instrument connection :** ½" NPT (F) / ½" BSP (F)

**Sealing fluid :** Silicon DC 200 [-40...205°C]

**Process connection :** ½" NPT (M) / ½" BSP (M)

### Wetted parts protection

**Lining on bottom chamber [Code E67]**

**Material :** PTFE - 2 mm thick

**Service temperature :** 200°C max.

**Lining on Diaphragm [Code E68]**

**Material :** PTFE - 100 Micron thick

**Service temperature :** 150°C max.

**Coating on Bottom chamber & diaphragm [Code E69]**

**Material :** PTFE [spray coated & oven baked]

**Service temperature :** 150°C max.

### Filling liquids Vs Temperature range

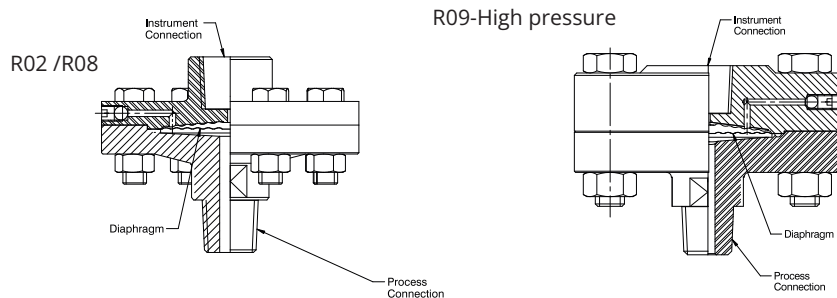
| Code | Fluid Name     | Temperature Range |
|------|----------------|-------------------|
| L1   | Silicon DC 200 | -40°C to 205°C    |
| L2   | Glycerin       | 10°C to 150°C     |
| L3   | Food Grade oil | -20°C to 140°C    |
| L4   | Syltherm 800   | -40°C to 315°C    |
| L5   | Silicon DC 710 | 7°C to 371°C      |

## ORDERING CODES

| MODEL                                           |                                                   |     |                               |     |                               | TMC22-1 |
|-------------------------------------------------|---------------------------------------------------|-----|-------------------------------|-----|-------------------------------|---------|
| TMC22-1 Direct coupled diaphragm seal           |                                                   |     |                               |     |                               |         |
| SEAL TYPE                                       |                                                   |     |                               |     |                               | R02     |
| R02                                             | -1...0...70 bar [Standard]                        | R08 | 100...210 bar [High Pr. 1]    | R09 | 250...400 bar [High Pr. 2]    |         |
| TOP CHAMBER                                     |                                                   |     |                               |     |                               | S01     |
| S09                                             | ASTM A105                                         | S01 | AISI 304 SS                   | S02 | AISI 316 SS                   |         |
| DIAPHRAGM                                       |                                                   |     |                               |     |                               | S03     |
| S03                                             | AISI 316L SS                                      | S05 | Monel 400                     | S10 | Hastelloy C-276               |         |
| S06                                             | Inconel 600                                       | S07 | Titanium                      | S08 | Tantalum                      |         |
| BOTTOM CHAMBER                                  |                                                   |     |                               |     |                               | S02     |
| S01                                             | AISI 304 SS                                       | S02 | AISI 316 SS                   | S03 | AISI 316L SS                  |         |
| S05                                             | Monel 400                                         | S10 | Hastelloy C-276               | S07 | Titanium                      |         |
| S08                                             | Tantalum                                          | S11 | PTFE                          | S16 | PVC                           |         |
| S18                                             | Polypropylene                                     | S19 | PVDF                          |     |                               |         |
| INSTRUMENT CONNECTION                           |                                                   |     |                               |     |                               | P28     |
| P28                                             | ½" NPT (F)                                        | P23 | ¼" BSP (F)                    | P27 | ½" BSP (F)                    |         |
| P24                                             | ¼" NPT (F)                                        |     |                               |     |                               |         |
| PROCESS CONNECTION                              |                                                   |     |                               |     |                               | P08     |
| P04                                             | ¼" NPT (M)                                        | P08 | ½" NPT (M)                    | P20 | M20 X 1.5 mm (M)              |         |
| P03                                             | ¼" BSP (M)                                        | P05 | 3/8" BSP (M)                  | P07 | ½" BSP (M)                    |         |
| P25                                             | ½" NPT (F)                                        | P23 | ¼" BSP (F)                    | P27 | ½" BSP (F)                    |         |
| P24                                             | ¼" NPT (F)                                        |     |                               |     |                               |         |
| All other connections are available on request. |                                                   |     |                               |     |                               |         |
| SEALING FLUID                                   |                                                   |     |                               |     |                               | L1      |
| XX                                              | As per Filling liquid Vs Temperature Rating table |     |                               |     |                               |         |
| EXECUTION                                       |                                                   |     |                               |     |                               | R1      |
| R1                                              | Direct                                            | R2  | Remote                        |     |                               |         |
| CAPILLARY MATERIAL                              |                                                   |     |                               |     |                               | XX      |
| S01                                             | AISI 304 SS                                       | S02 | AISI 316 SS                   |     |                               |         |
| ARMOUR MATERIAL                                 |                                                   |     |                               |     |                               | XX      |
| S01                                             | AISI 304 SS                                       | S02 | AISI 316 SS                   | S16 | PVC [Ambient ≤60°C]           |         |
| REMOTE DISTANCE                                 |                                                   |     |                               |     |                               | XXXXX   |
| XXXXX                                           | 500 mm (Min.) to 25000 mm (Max.)                  |     |                               |     |                               |         |
| OTHER OPTIONS                                   |                                                   |     |                               |     |                               | XXX     |
| E77                                             | Dry Seal                                          | E31 | Material test certificate 3.1 | E32 | Material test certificate 2.2 |         |

**Ordering Example : TMC22-1-R02.S01.S03.S02.P28.P08.L1.R1/XX.XX.XXXXX/XXX**

### GA DRAWING



#### NOTES

- Standard GA Drawing. Not to scale.
- Detailed GA Drawings are available, kindly contact factory.