

Chemical seals

Flange connection,
Fast connection

Process connection: flange connection: to DIN 2 501
or ANSI B 16.5
fast connection: to DIN 11 887
or clamp



Description

Chemical seals are used when the measured media can falsify the measured pressure due to too high temperature, high viscosity (pastious measured media) or when there is a tendency for this media to crystallize.

Chemical seals transfer the process pressure to the pressure measuring instrument but the chemical seal diaphragms are hermetically separated from the measured media and the measuring instrument.

Through the different process connections given **pipe chemical seals** are suitable for fast disconnection or fixed installation in pipelines and for use with flowing, highly viscous measured media more especially in the food industry, biochemistry, analytical technology and in filling plants.

The diaphragm is designed as a round pipe with no corners or edges

There are no dead spaces in the transitions to the measured media line nor or any cross section constrictions. The pressure measuring instrument or the pressure sensor, respectively, can be fitted by welding or by means of a connection piece.

The parts wetted by the measured media are produced as standard in high grade stainless steel and can be used in conjunction with a bourdon tube pressure gauge or pressure sensor for measuring ranges from 0 ... 0.6 bar to 0 ... 400 bar.

The parts coming into contact with the measured media can be produced in special materials to meet extreme requirements.

Features

- o Various process connections possible
- o For measured media up to 400°C
- o With absolutely no dead spaces or cross section constrictions.
- o Special materials to meet extreme requirements
- o Can be fitted to MSR instruments

Pressure ranges

Flange connection
0 ... 0.6 bar to 0 ... 400 bar

Fast connection
0 ... 1 bar to 0 ... 40 bar

Nominal pressure


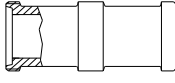
max. NP 40 or NP 400

Areas of application

Food industry,
biochemistry,
analytical technology,
filling plants.

Series: P3027

Technical data

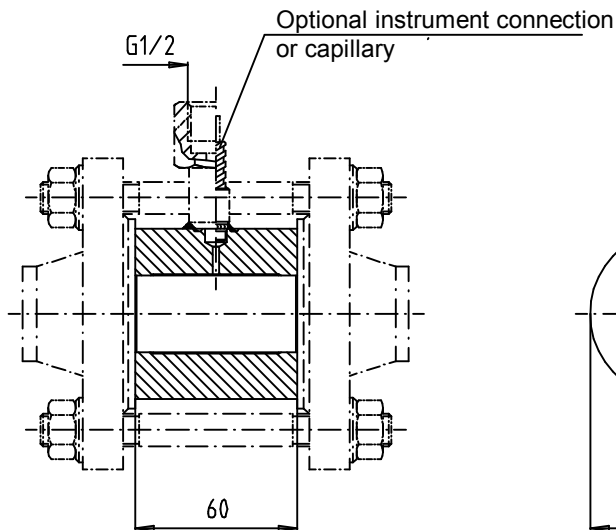
| Series | P3027 | | | | Options |
|-------------------------------------|---|-------------------------------|--|-------------------------------|---|
| Type |  | |  | | |
| Nominal pressure | NP 400 | Class 2500 | NP 40 (25) | NP 40 (25) | |
| Process connection | DIN 2 501 ND 25 to 150 | ANSI B 16.5 ND 1" to 6" | DIN 11 887 ND 15 to 100 | Clamp ND 15 to 4" | Others to order |
| Material | High grade stainless steel | High grade stainless steel | High grade stainless steel | High grade stainless steel | |
| Measuring instrument connection | Connection piece G 1/2 to DIN 16 288 Form Z High grade stainless steel | | without, Gauges directly welded High grade stainless steel | | Capillary extension, Adaptor, Cooling tower for >140°C |
| Material | High grade stainless steel 1.4571 | | High grade stainless steel 1.4435 | | Special materials to order |
| Diaphragm material with welded body | High grade stainless steel 1.4571 | | High grade stainless steel 1.4435 | | Special materials to order |
| Contact faces | DIN 2 526 Type E | ANSI RFSF | -- | -- | |
| Fluid | depending on requirements | | to food standards | | Others depending on requirements |
| Working temperature | max. 400°C | | | | |

Important notes on selection of chemical seals

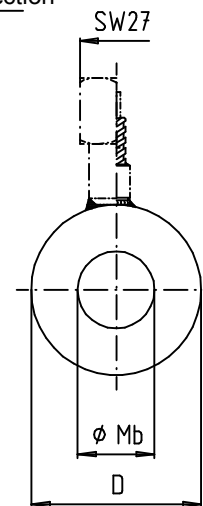
The process pressure to be measured is transferred by the chemical seal to the pressure measuring instrument by means of a special fluid. Very often the chemical seal and the measuring instrument are connected by capillary lines several metres in length so that both instruments can indicate different temperatures (which vary up to several 100°C). As a result display errors caused by temperature, which can be a multiple of the accuracy of the measuring instrument, are possible. Therefore the chemical seal and measuring instrument must be very carefully matched and we shall be only too pleased to help you in this.

Dimensions (mm)

Connection to DIN 2 501



Connection to ANSI B 16.5

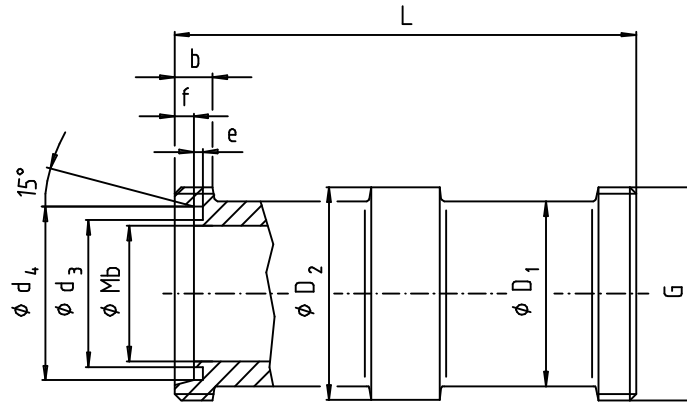


| ND [mm] | PN [bar] | Dimensions [mm] | | | Weight [kg] |
|---------|-----------|-----------------|------|----|-------------|
| | | D | Mb | L | |
| 25 | 6 ... 400 | 63 | 28.5 | 60 | 1.4 |
| 40 | 6 ... 400 | 85 | 43 | 60 | 2.2 |
| 50 | 6 ... 400 | 95 | 54.5 | 60 | 2.5 |
| 80 | 6 ... 400 | 130 | 82.5 | 60 | 4.0 |
| 100 | 6 ... 400 | 150 | 107 | 60 | 4.7 |
| 125 | 6 ... 400 | 195 | 132 | 60 | 6.8 |
| 150 | 6 ... 400 | 212 | 159 | 60 | 9.5 |

| ND [in.] | Class | Dimensions [mm] | | | Weight [kg] |
|----------|--------------|-----------------|------|----|-------------|
| | | D | Mb | L | |
| 1 | 150 ... 2500 | 63 | 28.5 | 60 | 1.4 |
| 1 1/2 | 150 ... 2500 | 85 | 43 | 60 | 2.2 |
| 2 | 150 ... 2500 | 95 | 54.5 | 60 | 2.5 |
| 3 | 150 ... 2500 | 130 | 82.5 | 60 | 4.0 |
| 4 | 150 ... 2500 | 150 | 107 | 60 | 4.7 |
| 5 | 150 ... 2500 | 186 | 132 | 60 | 6.8 |
| 6 | 150 ... 2500 | 216 | 159 | 60 | 9.5 |

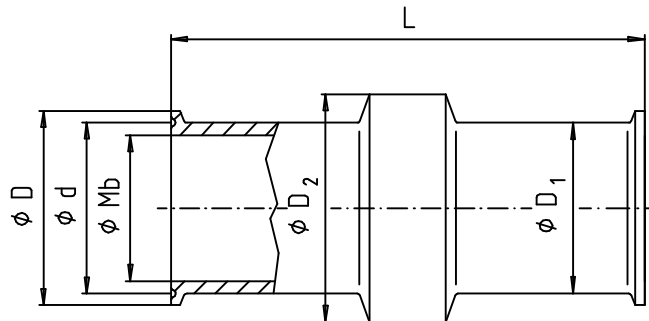
Dimensions (mm)

Connection with thread connectors to DIN 11 887



| ND [mm] | NP [bar] | Dimensions [mm] | | | | | | | | | |
|---------|----------|-----------------|-----|-------|-------|----|----|-----|-------|-------|-------|
| | | G | L | d_3 | d_4 | b | f | e | D_1 | D_2 | M_b |
| 15 | 40 | Rd 34 x 1/8 | 104 | 18 | 25.8 | 12 | 4 | 3 | 28 | 40 | 16 |
| 25 | 40 | Rd 52 x 1/6 | 128 | 30 | 39.5 | 14 | 7 | 3.5 | 38 | 52 | 26 |
| 40 | 40 | Rd 65 x 1/6 | 160 | 42 | 51.8 | 14 | 7 | 3.5 | 55 | 65 | 38 |
| 50 | 25 | Rd 78 x 1/6 | 170 | 54 | 63.8 | 14 | 7 | 3.5 | 68 | 78 | 50 |
| 65 | 25 | Rd 95 x 1/6 | 182 | 71 | 80.8 | 16 | 8 | 3.5 | 85 | 95 | 66 |
| 80 | 25 | Rd 110 x 1/4 | 182 | 85 | 94.8 | 20 | 8 | 3.5 | 110 | 110 | 81 |
| 100 | 25 | Rd 130 x 1/4 | 182 | 104 | 113.8 | 20 | 10 | 4 | 130 | 130 | 100 |

Clamp connection



| ND | NP [bar] | Dimensions [mm] | | | | | |
|--------|----------|-----------------|------|------|-------|-------|-------|
| | | L | D | d | D_1 | D_2 | M_b |
| 15 mm | 40 | 96 | 50 | 43.6 | 36 | 50 | 15 |
| 1" | 40 | 114 | 50 | 43.6 | 36 | 50 | 25.4 |
| 1 1/2" | 40 | 146 | 50 | 43.6 | 43 | 55 | 38 |
| 2" | 40 | 156 | 64 | 56.3 | 56 | 64 | 48 |
| 2 1/2" | 25 | 156 | 77.4 | 70.6 | 68 | 77.4 | 60 |
| 3" | 25 | 156 | 91 | 83.5 | 82 | 91 | 73 |
| 3 1/2" | 25 | 156 | 106 | 97 | 94 | 106 | 85 |
| 4" | 25 | 156 | 119 | 110 | 108 | 119 | 97.3 |

Ordering:

Series/process connection (size/standard), material (parts in contact with measured media), measuring instrument connection, fluid, fitting to pressure measuring instrument, operating conditions in accordance with questionnaire