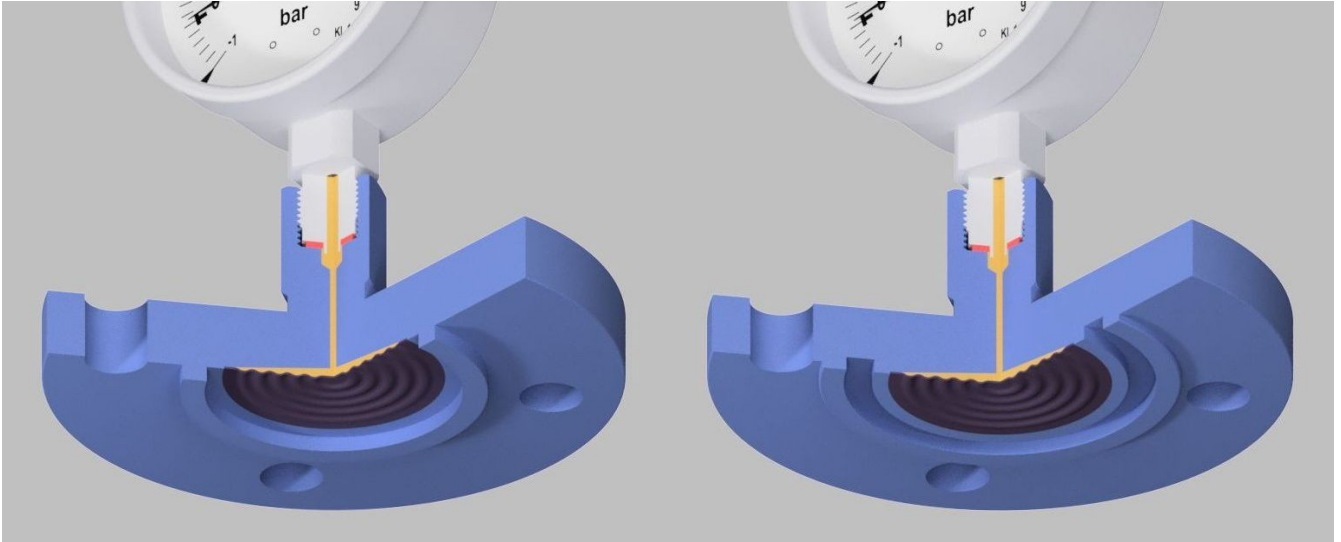


## Chemical seal type P flange (tongue, groove) with flushed diaphragm

The chemical seal protects the pressure gauge from the intrusion of the measuring medium. It is used for pressure measurement of solidifying or crystallising substances, aggressive substances (acids, alkalis, etc.) or hot substances (variants with cooler or capillary).

The flanges can be completed with both pressure transmitters and pressure gauges. Connection is by thread, weld or capillary line.



### Dimensional standard

- according to **EN 1092-1 / C, D** (tongue, groove)
- according to **ANSI B 16,5 / T, G** (tongue, groove)

### Material

- Diaphragm: stainless steel SS 316L / 1.4435 (other on request)
- Body: stainless steel SS 316L / 1.4404)

### Working temperature

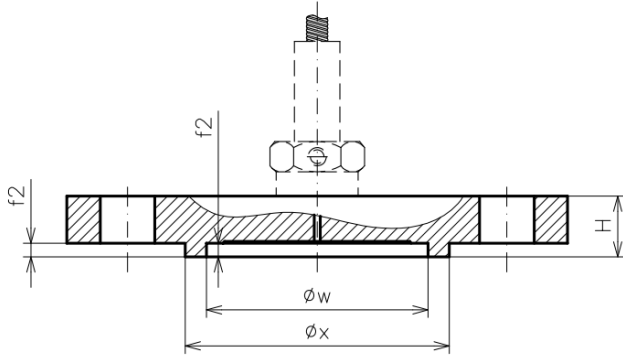
- Medium: -20 ... +100 °C
- Ambient: -20 ... +60°C
- other conditions on request

### Roughness of the front surface:

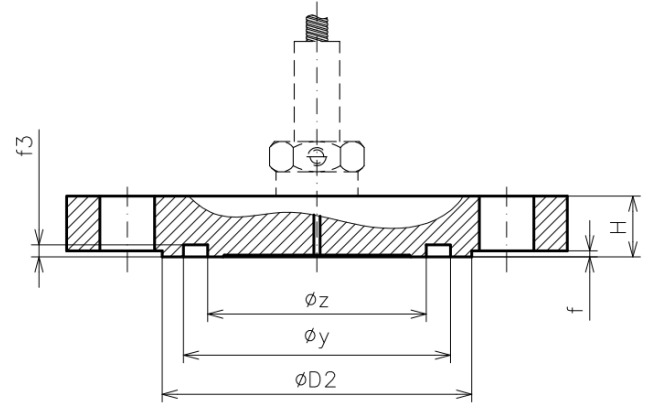
| Type of the front surface | Roughness according to Ra [ $\mu\text{m}$ ] | Roughness according to Rz [ $\mu\text{m}$ ] | Note   |
|---------------------------|---|---|--|
| Form A, B1, E, F          | 3,2 – 12,5                                  | 12,5 – 50                                   | B1 is used for PN 2,5 - PN 40<br>B2 is used for PN 63 - PN 100 |
| Form B2, C, D, G, H       | 0,8 – 3,2                                   | 3,2 – 12,5                                  |  |
| RF, FF                    | up to 6,3                                   |   | Smooth sealing surface   |
| RTJ                       | up to 1,6                                   |   | O-ring seal  |
| M&F, T&G                  | up to 3,2                                   |   | Pre-setting - setting, tongue - groove                         |

**Table of dimensions:**

**EN 1092-1 / C (tongue)  
ANSI B 16,5 / T (tongue)  
(large tongue)**



**EN 1092-1 / D (groove)  
ANSI B 16,5 / G (groove)  
(large groove)**



| Size |            |                |                 | Dimensions (mm) |   |     |     |     |     |     |     |
|------|------------|----------------|-----------------|-----------------|---|-----|-----|-----|-----|-----|-----|
| DN   | øD2<br>PN6 | øD2<br>PN10-16 | øD2<br>PN25-100 | øDm             | f | f2  | f3  | øw  | øx  | øy  | øz  |
| 15   | 40         | 47             | 47              | 23              | 2 | 4,5 | 4,0 | 29  | 39  | 40  | 28  |
| 20   | 50         | 58             | 58              | 28              | 2 | 4,5 | 4,0 | 36  | 50  | 51  | 35  |
| 25   | 60         | 68             | 68              | 34              | 2 | 4,5 | 4,0 | 43  | 57  | 58  | 42  |
| 32   | 70         | 78             | 78              | 38              | 2 | 4,5 | 4,0 | 51  | 65  | 66  | 50  |
| 40   | 80         | 88             | 88              | 48              | 2 | 4,5 | 4,0 | 61  | 75  | 76  | 60  |
| 50   | 90         | 102            | 102             | 60              | 2 | 4,5 | 4,0 | 73  | 87  | 88  | 72  |
| 65   | 110        | 122            | 122             | 78              | 2 | 4,5 | 4,0 | 95  | 109 | 110 | 94  |
| 80   | 128        | 138            | 138             | 89              | 2 | 4,5 | 4,0 | 106 | 120 | 121 | 105 |
| 100  | 148        | 158            | 162             | 89              | 2 | 5,0 | 4,5 | 129 | 149 | 150 | 128 |

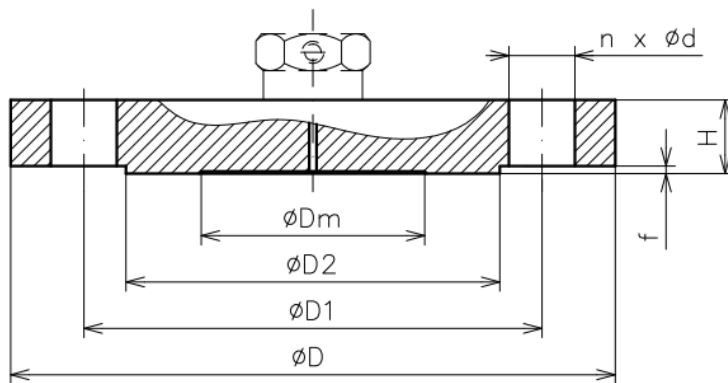
Note: Basic flange dimensions - see table for EN 1092-1 / B

| Size         |               |     | Dimensions (mm) |     |     |     |       |       |       |       |  |
|--------------|---------------|-----|-----------------|-----|-----|-----|-------|-------|-------|-------|--|
| DN<br>[inch] | PN<br>[class] | øD2 | øDm             | f * | f2  | f3  | øw    | øx    | øy    | øz    |  |
| ½"           | 150 - 300     | 46  | 18              | 1,6 | 7,0 | 5,0 | 25,4  | 34,9  | 36,5  | 23,8  |  |
| ¾"           | 150 - 300     | 54  | 23              | 1,6 | 7,0 | 5,0 | 33,3  | 42,9  | 44,4  | 31,8  |  |
| 1"           | 150 - 300     | 62  | 28              | 1,6 | 7,0 | 5,0 | 38,1  | 50,8  | 52,4  | 36,5  |  |
| 1 ½"         | 150 - 2500    | 84  | 42              | 1,6 | 7,0 | 5,0 | 54    | 73    | 74,6  | 52,4  |  |
| 2"           | 150 - 2500    | 103 | 60              | 1,6 | 7,0 | 5,0 | 73    | 92,1  | 93,7  | 71,4  |  |
| 3"           | 150 - 2500    | 138 | 89              | 1,6 | 7,0 | 5,0 | 108   | 127   | 128,6 | 106,4 |  |
| 4"           | 150 - 2500    | 168 | 89              | 1,6 | 7,0 | 5,0 | 131,8 | 157,2 | 158,8 | 130,2 |  |

Note: Basic flange dimensions - see table for ANSI B 16.5/RF

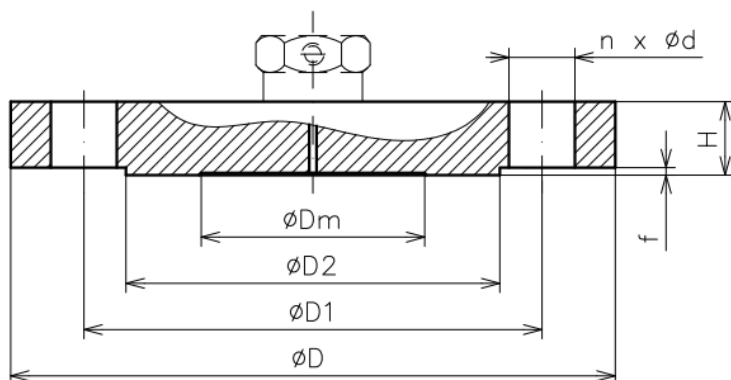
Note: fitting f for pressure class above PN 300 is 6.4 mm.

**Dimension table (EN 1092-1/B)**



| EN 1092-1 / B |      |        |                 |     |    |    |     |   |     |                 |
|---------------|------|--------|-----------------|-----|----|----|-----|---|-----|-----------------|
| Type BHV      | Size |        | Dimensions (mm) |     |    |    |     |   |     | Number of holes |
|               | DN   | PN     | ØDm             | ØD  | H  | ød | ØD1 | f | ØD2 |                 |
| P15           | 15   | 6      | 23              | 80  | 12 | 11 | 55  | 2 | 40  | 4               |
|               | 15   | 10/40  | 23              | 95  | 14 | 14 | 65  | 2 | 47  | 4               |
|               | 20   | 6      | 28              | 90  | 14 | 11 | 65  | 2 | 50  | 4               |
|               | 20   | 10/40  | 28              | 105 | 16 | 14 | 75  | 2 | 58  | 4               |
| P25           | 25   | 6      | 34              | 100 | 14 | 11 | 75  | 2 | 60  | 4               |
|               | 25   | 10/40  | 34              | 115 | 16 | 14 | 85  | 2 | 68  | 4               |
| P32           | 32   | 6      | 38              | 120 | 14 | 14 | 90  | 2 | 70  | 4               |
|               | 32   | 10/40  | 38              | 140 | 16 | 18 | 100 | 2 | 78  | 4               |
| P40           | 40   | 6      | 48              | 130 | 16 | 14 | 100 | 2 | 80  | 4               |
|               | 40   | 10/40  | 48              | 150 | 18 | 18 | 110 | 3 | 88  | 4               |
|               | 40   | 63/100 | 48              | 170 | 26 | 22 | 125 | 3 | 88  | 4               |
|               | 40   | 160    | 48              | 170 | 28 | 22 | 125 | 3 | 88  | 4               |
|               | 40   | 250    | 48              | 185 | 34 | 26 | 135 | 3 | 88  | 4               |
| P50           | 50   | 6      | 60              | 140 | 16 | 14 | 110 | 3 | 90  | 4               |
|               | 50   | 10/40  | 60              | 165 | 20 | 18 | 125 | 3 | 102 | 4               |
|               | 50   | 63     | 60              | 180 | 26 | 22 | 135 | 3 | 102 | 4               |
|               | 50   | 100    | 60              | 195 | 28 | 26 | 145 | 3 | 102 | 4               |
|               | 50   | 160    | 60              | 195 | 30 | 26 | 145 | 3 | 102 | 4               |
| P65           | 50   | 250    | 60              | 200 | 38 | 26 | 150 | 3 | 102 | 8               |
|               | 65   | 6      | 78              | 160 | 16 | 14 | 130 | 3 | 110 | 4               |
|               | 65   | 10/16  | 78              | 185 | 20 | 18 | 145 | 3 | 122 | 4               |
|               | 65   | 25/40  | 78              | 185 | 22 | 18 | 145 | 3 | 122 | 8               |
|               | 65   | 63     | 78              | 205 | 26 | 22 | 160 | 3 | 122 | 8               |
| P80           | 65   | 100    | 78              | 220 | 30 | 26 | 170 | 3 | 122 | 8               |
|               | 80   | 6      | 89              | 190 | 18 | 18 | 150 | 3 | 128 | 4               |
|               | 80   | 10/16  | 89              | 200 | 20 | 18 | 160 | 3 | 138 | 8               |
|               | 80   | 25/40  | 89              | 200 | 24 | 18 | 160 | 3 | 138 | 8               |
|               | 80   | 63     | 89              | 215 | 28 | 22 | 170 | 3 | 138 | 8               |
|               | 80   | 100    | 89              | 230 | 32 | 26 | 180 | 3 | 138 | 8               |
|               | 80   | 160    | 89              | 230 | 36 | 26 | 180 | 3 | 138 | 8               |
| P100          | 80   | 250    | 89              | 255 | 46 | 30 | 200 | 3 | 138 | 8               |
|               | 100  | 6      | 89              | 210 | 18 | 18 | 170 | 3 | 148 | 4               |
|               | 100  | 10/16  | 89              | 220 | 20 | 18 | 180 | 3 | 158 | 8               |
|               | 100  | 25/40  | 89              | 235 | 24 | 22 | 190 | 3 | 162 | 8               |
|               | 100  | 63     | 89              | 250 | 30 | 26 | 200 | 3 | 162 | 8               |
|               | 100  | 100    | 89              | 265 | 36 | 30 | 210 | 3 | 162 | 8               |
|               | 100  | 160    | 89              | 265 | 40 | 30 | 210 | 3 | 162 | 8               |
|               | 100  | 250    | 89              | 300 | 54 | 33 | 235 | 3 | 162 | 8               |

### Dimension table (ANSI B 16.5/RF)



| ANSI B 16,5 / RF |              |               |                   |                 |      |                 |                   |     |                   |                    |
|------------------|--------------|---------------|-------------------|-----------------|------|-----------------|-------------------|-----|-------------------|--------------------|
| Type<br>BHV      | Size         |               | Dimensions (mm)   |                 |      |                 |                   |     |                   | Number<br>of holes |
|                  | DN<br>[inch] | PN<br>[class] | $\varnothing D_m$ | $\varnothing D$ | H    | $\varnothing d$ | $\varnothing D_1$ | f   | $\varnothing D_2$ |                    |
|                  | 1/2          | 150           | 18                | 95              | 13   | 16              | 60.5              | 1,6 | 35                | 4                  |
|                  | 1/2          | 300           | 18                | 95              | 16   | 16              | 66.5              | 1,6 | 35                | 4                  |
|                  | 3/4          | 150           | 23                | 100             | 15   | 16              | 70                | 1,6 | 43                | 4                  |
|                  | 3/4          | 300           | 23                | 120             | 17,5 | 20              | 82.5              | 1,6 | 43                | 4                  |
|                  | 1            | 150           | 28                | 110             | 16   | 16              | 79.5              | 1,6 | 51                | 4                  |
|                  | 1            | 300           | 28                | 125             | 19   | 20              | 89                | 1,6 | 51                | 4                  |
|                  | 1 1/2        | 150           | 42                | 130             | 19   | 16              | 98.5              | 1,6 | 73                | 4                  |
|                  | 1 1/2        | 300           | 42                | 155             | 22   | 22              | 114.5             | 1,6 | 73                | 4                  |
|                  | 1 1/2        | 600           | 42                | 155             | 29.5 | 22              | 114.5             | 6,4 | 73                | 4                  |
|                  | 1 1/2        | 1500          | 42                | 180             | 39   | 30              | 124               | 6,4 | 73                | 4                  |
|                  | 1 1/2        | 2500          | 42                | 205             | 51.5 | 33              | 146               | 6,4 | 73                | 4                  |
|                  | 2            | 150           | 60                | 150             | 21   | 20              | 120.5             | 1,6 | 92                | 4                  |
|                  | 2            | 300           | 60                | 165             | 24   | 20              | 127               | 1,6 | 92                | 8                  |
|                  | 2            | 600           | 60                | 165             | 32   | 20              | 127               | 6,4 | 92                | 8                  |
|                  | 2            | 1500          | 60                | 215             | 45   | 26              | 165               | 6,4 | 92                | 8                  |
|                  | 2            | 2500          | 60                | 235             | 57.5 | 30              | 171.5             | 6,4 | 92                | 8                  |
|                  | 3            | 150           | 89                | 190             | 26   | 20              | 152.5             | 1,6 | 127               | 4                  |
|                  | 3            | 300           | 89                | 210             | 30   | 22              | 168.5             | 1,6 | 127               | 8                  |
|                  | 3            | 600           | 89                | 210             | 38.5 | 22              | 168.5             | 6,4 | 127               | 8                  |
|                  | 3            | 900           | 89                | 240             | 45   | 26              | 190.5             | 6,4 | 127               | 8                  |
|                  | 3            | 1500          | 89                | 270             | 54.3 | 33              | 203               | 6,4 | 127               | 8                  |
|                  | 3            | 2500          | 89                | 305             | 73   | 36              | 228.5             | 6,4 | 127               | 8                  |
|                  | 4            | 150           | 89                | 230             | 26   | 20              | 190.5             | 1,6 | 158               | 8                  |
|                  | 4            | 300           | 89                | 255             | 33,5 | 22              | 200               | 1,6 | 158               | 8                  |
|                  | 4            | 400           | 89                | 255             | 41.5 | 26              | 200               | 6,4 | 158               | 8                  |
|                  | 4            | 600           | 89                | 275             | 45   | 26              | 216               | 6,4 | 158               | 8                  |
|                  | 4            | 900           | 89                | 295             | 51   | 32              | 235               | 6,4 | 158               | 8                  |
|                  | 4            | 1500          | 89                | 310             | 60.5 | 36              | 241.5             | 6,4 | 158               | 8                  |
|                  | 4            | 2500          | 89                | 355             | 83   | 42              | 273               | 6,4 | 158               | 8                  |