

# Technical information of flanges

## PN 16

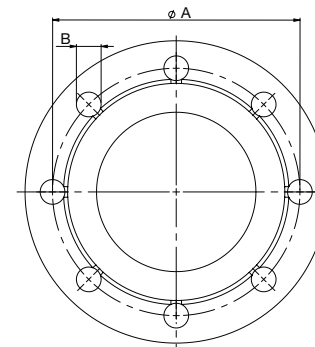
| DN   | Bolt circle<br>Ø (A) | Bolt hole<br>Ø (B) | Bolt qty | Bolt size |
|------|----------------------|--------------------|----------|-----------|
| 10   | 60                   | 14                 | 4        | M12       |
| 15   | 65                   | 14                 | 4        | M12       |
| 20   | 75                   | 14                 | 4        | M12       |
| 25   | 85                   | 14                 | 4        | M12       |
| 32   | 100                  | 18                 | 4        | M16       |
| 40   | 110                  | 18                 | 4        | M16       |
| 50   | 125                  | 18                 | 4        | M16       |
| 65   | 145                  | 18                 | 8        | M16       |
| 80   | 160                  | 18                 | 8        | M16       |
| 100  | 180                  | 18                 | 8        | M16       |
| 125  | 210                  | 18                 | 8        | M16       |
| 150  | 240                  | 22                 | 8        | M20       |
| 200  | 295                  | 22                 | 12       | M20       |
| 250  | 355                  | 26                 | 12       | M24       |
| 300  | 410                  | 26                 | 12       | M24       |
| 350  | 470                  | 26                 | 16       | M24       |
| 400  | 525                  | 30                 | 16       | M27       |
| 450  | 585                  | 30                 | 20       | M27       |
| 500  | 650                  | 33                 | 20       | M30       |
| 600  | 770                  | 36                 | 20       | M33       |
| 700  | 840                  | 36                 | 24       | M33       |
| 800  | 950                  | 39                 | 24       | M36       |
| 900  | 1050                 | 39                 | 28       | M36       |
| 1000 | 1170                 | 42                 | 28       | M39       |
| 1200 | 1390                 | 48                 | 32       | M45       |

Same values also apply to PN 25 and PN 40 flanges

Same values also apply to PN 25 flanges

## PN 25

| DN   | Bolt circle<br>Ø (A) | Bolt hole<br>Ø (B) | Bolt qty | Bolt size |
|------|----------------------|--------------------|----------|-----------|
| 100  | 190                  | 22                 | 8        | M20       |
| 125  | 220                  | 26                 | 8        | M24       |
| 150  | 250                  | 26                 | 8        | M24       |
| 200  | 310                  | 26                 | 12       | M24       |
| 250  | 370                  | 30                 | 12       | M27       |
| 300  | 430                  | 30                 | 16       | M27       |
| 350  | 490                  | 33                 | 16       | M30       |
| 400  | 550                  | 36                 | 16       | M33       |
| 450  | 600                  | 36                 | 20       | M33       |
| 500  | 660                  | 36                 | 20       | M33       |
| 600  | 770                  | 39                 | 20       | M36       |
| 700  | 875                  | 42                 | 24       | M39       |
| 800  | 990                  | 48                 | 24       | M45       |
| 900  | 1090                 | 48                 | 28       | M45       |
| 1000 | 1210                 | 56                 | 28       | M52       |



Flange standard:  
EN1092-1

# Vexve and Naval ball valves, maximum allowed operating torques

| DN-size <sup>1)</sup>             |           | Torque <sup>2)</sup> |       |       |       |       | Max. pressure class <sup>3)</sup> |
|-----------------------------------|-----------|----------------------|-------|-------|-------|-------|-----------------------------------|
| Reduced Bore                      | Full Bore | [Nm]                 |       |       |       |       |                                   |
| DN 10/15                          | DN 10     | 9                    | 10    | 12    | 13    | 15    | PN 40                             |
| DN 20                             | DN 15     | 10                   | 12    | 15    | 16    | 18    |                                   |
| DN 25                             | DN 20     | 15                   | 17    | 19    | 21    | 24    |                                   |
| DN 32                             | DN 25     | 21                   | 23    | 25    | 27    | 30    |                                   |
| DN 40                             | DN 32     | 34                   | 36    | 39    | 43    | 43    |                                   |
| DN 50                             | DN 40     | 42                   | 45    | 50    | 55    | 60    |                                   |
| DN 65                             | DN 50     | 60                   | 63    | 68    | 75    |       | PN 25                             |
| DN 80                             | DN 65     | 80                   | 85    | 98    | 110   |       |                                   |
| DN 100                            | DN 80     | 110                  | 125   | 150   | 250   |       |                                   |
| DN 125                            | DN 100    | 150                  | 200   | 270   | 390   |       |                                   |
| DN 150                            | DN 125    | 280                  | 350   | 520   | 750   |       |                                   |
| DN 200                            | DN 150    | 300                  | 600   | 900   | 1200  |       |                                   |
| DN 250                            | DN 200    | 800                  | 1300  | 1900  | 2500  |       |                                   |
| DN 300                            | DN 250    | 2000                 | 2500  | 3000  | 4000  |       |                                   |
| DN 350                            | DN 300    | 1000                 | 2200  | 2800  | 4000  |       |                                   |
| DN 400                            | DN 350    | 1500                 | 3000  | 4500  | 6500  |       |                                   |
| DN 500                            | DN 400    | 2000                 | 6000  | 9000  | 12000 |       |                                   |
| DN 600                            | DN 500    | 2000                 | 6000  | 9000  | 12000 |       |                                   |
| DN700                             | DN600     | 2500                 | 7500  | 11250 | 15000 | 18000 | PN 40                             |
| DN800                             | DN700     | 3900                 | 11650 | 17500 | 23350 | 28000 |                                   |
|                                   | DN800     | 5200                 | 15650 | 23400 | 31250 | 37500 |                                   |
|                                   |           | 0                    | 10    | 16    | 25    | 40    |                                   |
| Pressure difference <sup>4)</sup> |           |                      |       |       |       |       |                                   |
| [bar]                             |           |                      |       |       |       |       |                                   |

1) DN-size of the valve

2) Max. torque needed to open/close the valve

3) Max. pressure class of the valve available

4) Pressure difference across the valve  $\Delta p$ :

where

$$\Delta p = p_1 - p_2,$$

$p_1$  = pressure before the valve

$p_2$  = pressure after the valve