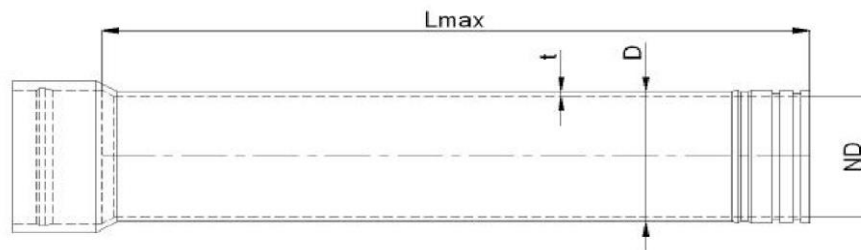


## DIN filament wound pipe CSVE

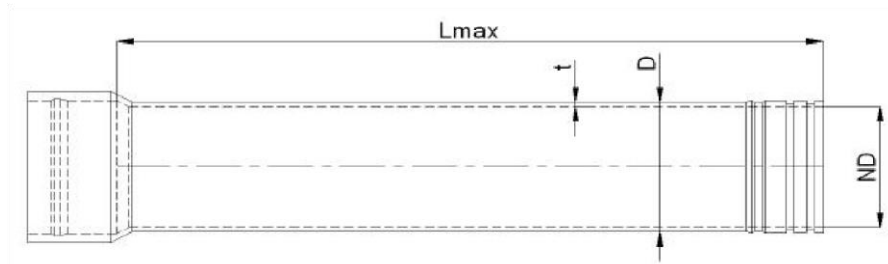
|                          |  |
|--------------------------|--|
| <b>System:</b>           | Vinyl ester resin  |
| <b>Pressure range:</b>   | up to 20 bar   |
| <b>Stiffness:</b>        | up to SN 10000   |
| <b>Temperature:</b>      | max. 90°C  |
| <b>Chemical barrier:</b> | 2,5 mm chemical barrier  |
| <b>Standard:</b>         | according to DIN 16965 part 4                                  |
| <b>Connection type:</b>  | bell and spigot joint with O-Ring<br>plain ends for lamination |

**DIN filament wound pipe 2,5  
mm chemical barrier**

Description: DIN filament wound pipe CSVE  
 Connection: bell and spigot joint with O-Ring;  
 plain ends for lamination  
 Standard: in dependence on DIN 16965 part 4  
 Diameter: DN 25 - 2000  
 Pressure class: PN 6, PN 10, PN 16, PN 20



|      | PN6    |      |            | PN10  |      |            | PN16  |      |            | PN20  |      |            |
|------|--------|------|------------|-------|------|------------|-------|------|------------|-------|------|------------|
| DN   | ø D    | t    | weigh<br>t | ø D   | t    | weigh<br>t | ø D   | t    | weigh<br>t | ø D   | t    | weigh<br>t |
| [mm] | [mm]   | [mm] | [kg/m]     | [mm]  | [mm] | [kg/m]     | [mm]  | [mm] | [kg/m]     | [mm]  | [mm] | [kg/m]     |
| 25   | 33,00  | 4,0  | 0,7        | 33,0  | 4,0  | 0,7        | 33,0  | 4,0  | 0,7        | 33,0  | 4,0  | 0,7        |
| 40   | 48,00  | 4,0  | 1,0        | 48,0  | 4,0  | 1,0        | 48,0  | 4,0  | 1,0        | 48,0  | 4,0  | 1,0        |
| 50   | 58,00  | 4,0  | 1,3        | 58,0  | 4,0  | 1,3        | 58,0  | 4,0  | 1,3        | 58,0  | 4,0  | 1,3        |
| 65   | 73,00  | 4,0  | 1,6        | 73,0  | 4,0  | 1,6        | 73,0  | 4,0  | 1,6        | 73,0  | 4,0  | 1,6        |
| 80   | 88,00  | 4,0  | 2,0        | 88,0  | 4,0  | 2,0        | 88,0  | 4,0  | 2,0        | 88,0  | 4,0  | 2,0        |
| 100  | 108,00 | 4,0  | 2,5        | 108,0 | 4,0  | 2,5        | 108,0 | 4,0  | 2,5        | 108,0 | 4,0  | 2,5        |
| 125  | 133,00 | 4,0  | 3,0        | 133,0 | 4,0  | 3,0        | 133,0 | 4,0  | 3,0        | 133,0 | 4,0  | 3,0        |
| 150  | 158,00 | 4,0  | 3,6        | 158,0 | 4,0  | 3,6        | 158,0 | 4,0  | 3,6        | 158,2 | 4,1  | 3,7        |
| 200  | 208,00 | 4,0  | 4,8        | 208,0 | 4,0  | 4,8        | 208,6 | 4,3  | 5,1        | 209,8 | 4,9  | 5,9        |
| 250  | 258,00 | 4,0  | 6,0        | 258,0 | 4,0  | 6,0        | 259,8 | 4,9  | 7,4        | 261,4 | 5,7  | 8,6        |
| 300  | 308,00 | 4,0  | 7,2        | 308,2 | 4,1  | 7,4        | 311,0 | 5,5  | 10,0       | 313,0 | 6,5  | 11,8       |
| 350  | 358,00 | 4,0  | 8,4        | 359,0 | 4,5  | 9,4        | 362,4 | 6,2  | 13,0       | 364,6 | 7,3  | 15,4       |
| 400  | 408,40 | 4,2  | 10,0       | 409,8 | 4,9  | 11,7       | 413,6 | 6,8  | 16,4       | 416,2 | 8,1  | 19,5       |
| 450  | 459,20 | 4,6  | 12,3       | 460,6 | 5,3  | 14,2       | 465,7 | 7,9  | 20,2       | 467,8 | 8,9  | 24,1       |
| 500  | 510,00 | 5,0  | 14,9       | 511,4 | 5,7  | 17,0       | 516,2 | 8,1  | 24,3       | 519,4 | 9,7  | 29,2       |
| 550  | 560,80 | 5,4  | 17,7       | 562,2 | 6,1  | 20,0       | 567,4 | 8,7  | 28,8       | 571,0 | 10,5 | 34,8       |
| 600  | 611,60 | 5,8  | 20,7       | 613,0 | 6,5  | 23,3       | 618,8 | 9,4  | 33,8       | 622,6 | 11,3 | 40,8       |
| 700  | 713,20 | 6,6  | 27,5       | 714,6 | 7,3  | 30,5       | 721,4 | 10,7 | 44,7       | 725,8 | 12,9 | 54,3       |

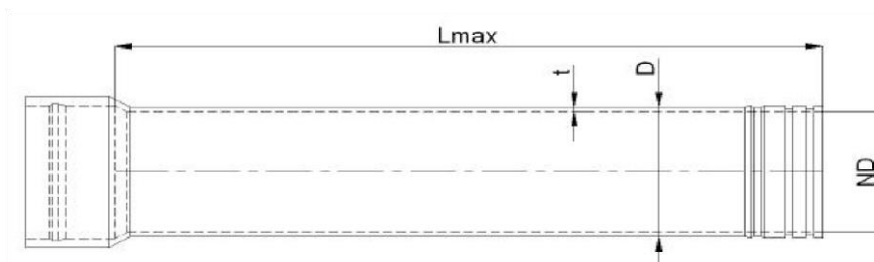


| DN   | PN6    |      |         | PN10   |      |         | PN16   |      |         | PN20   |      |         |
|------|--------|------|---------|--------|------|---------|--------|------|---------|--------|------|---------|
|      | ø D    | t    | weigh t | ø D    | t    | weigh t | ø D    | t    | weigh t | ø D    | t    | weigh t |
| [mm] | [mm]   | [mm] | [kg/m]  | [mm]   | [mm] | [kg/m]  | [mm]   | [mm] | [kg/m]  | [mm]   | [mm] | [kg/m]  |
| 750  | 764,0  | 7,0  | 31,3    | 765,4  | 7,7  | 34,4    | 772,6  | 11,3 | 50,8    | 777,4  | 13,7 | 61,8    |
| 800  | 814,8  | 7,4  | 35,3    | 816,2  | 8,1  | 38,6    | 823,8  | 11,9 | 57,3    | 829,0  | 14,5 | 69,8    |
| 900  | 916,4  | 8,2  | 44,0    | 917,8  | 8,9  | 47,8    | 926,4  | 13,2 | 71,3    | 932,2  | 16,1 | 87,1    |
| 1000 | 1018,0 | 9,0  | 53,6    | 1019,4 | 9,7  | 57,8    | 1029,0 | 14,5 | 86,9    | 1035,4 | 17,7 | 106,4   |
| 1100 | 1119,6 | 9,8  | 64,2    | 1121,0 | 10,5 | 68,8    | 1131,6 | 15,8 | 104,0   |        |      |         |
| 1200 | 1221,2 | 10,6 | 75,7    | 1222,6 | 11,3 | 80,8    | 1234,2 | 17,1 | 122,6   |        |      |         |
| 1300 | 1322,8 | 11,4 | 88,2    | 1324,2 | 12,1 | 93,7    | 1336,6 | 18,3 | 142,8   |        |      |         |
| 1400 | 1424,4 | 12,2 | 101,7   | 1425,8 | 12,9 | 107,6   | 1439,2 | 19,6 | 164,5   |        |      |         |
| 1500 | 1526,0 | 13,0 | 116,1   | 1527,4 | 13,7 | 122,4   | 1541,8 | 20,9 | 187,7   |        |      |         |
| 1600 | 1627,6 | 13,8 | 131,5   | 1629,0 | 14,5 | 138,2   |        |      |         |        |      |         |
| 1700 | 1729,2 | 14,6 | 147,8   | 1730,6 | 15,3 | 154,9   |        |      |         |        |      |         |
| 1800 | 1830,8 | 15,4 | 165,0   | 1832,2 | 16,1 | 172,6   |        |      |         |        |      |         |
| 2000 | 2034,0 | 17,0 | 202,4   | 2035,4 | 17,7 | 210,8   |        |      |         |        |      |         |

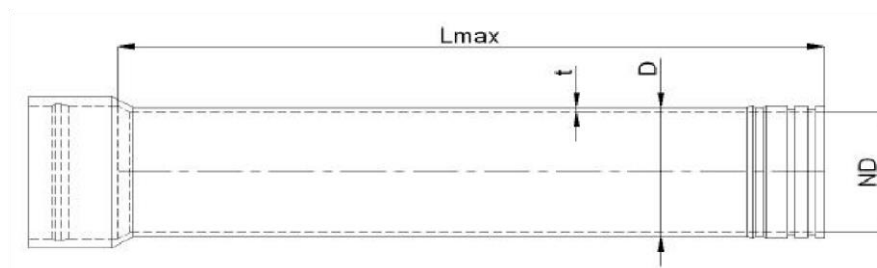
Delivery length up to DN 150 = 6 m; Delivery length from DN 150 = 11,7 m

**DIN filament wound pipe**  
**2,5 mm chemical barrier**

Description: DIN filament wound pip CSVE  
 Connection: bell and spigot joint with O-Ring;  
 plain end for lamination  
 Standard: in dependence on DIN 16965 part 4  
 Diameter: DN 25 - 2000  
 Stiffness: SN 1250, SN 2500, SN 5000, SN 10000



| DN   | SN 1250 |      |         | SN 2500 |      |         | SN 5000 |      |         | SN 10000 |      |         |
|------|---------|------|---------|---------|------|---------|---------|------|---------|----------|------|---------|
|      | ø D     | t    | weigh t | ø D     | t    | weigh t | ø D     | t    | weigh t | ø D      | t    | weigh t |
| [mm] | [mm]    | [mm] | [kg/m]  | [mm]    | [mm] | [kg/m]  | [mm]    | [mm] | [kg/m]  | [mm]     | [mm] | [kg/m]  |
| 25   | 33,0    | 4,0  | 0,7     | 33,0    | 4,0  | 0,7     | 33,0    | 4,0  | 0,7     | 33,0     | 4,0  | 0,7     |
| 40   | 48,0    | 4,0  | 1,0     | 48,0    | 4,0  | 1,0     | 48,0    | 4,0  | 1,0     | 48,0     | 4,0  | 1,0     |
| 50   | 58,0    | 4,0  | 1,3     | 58,0    | 4,0  | 1,3     | 58,0    | 4,0  | 1,3     | 58,0     | 4,0  | 1,3     |
| 65   | 73,0    | 4,0  | 1,6     | 73,0    | 4,0  | 1,6     | 73,0    | 4,0  | 1,6     | 73,0     | 4,0  | 1,6     |
| 80   | 88,0    | 4,0  | 2,0     | 88,0    | 4,0  | 2,0     | 88,0    | 4,0  | 2,0     | 88,0     | 4,0  | 2,0     |
| 100  | 108,0   | 4,0  | 2,5     | 108,0   | 4,0  | 2,5     | 108,0   | 4,0  | 2,5     | 108,0    | 4,0  | 2,5     |
| 125  | 133,0   | 4,0  | 3,0     | 133,0   | 4,0  | 3,0     | 133,0   | 4,0  | 3,0     | 133,0    | 4,0  | 3,0     |
| 150  | 158,0   | 4,0  | 3,6     | 158,0   | 4,0  | 3,6     | 158,0   | 4,0  | 3,6     | 158,0    | 4,0  | 3,6     |
| 200  | 208,0   | 4,0  | 4,8     | 208,0   | 4,0  | 4,8     | 208,0   | 4,0  | 4,8     | 208,4    | 4,2  | 5,1     |
| 250  | 258,0   | 4,0  | 6,0     | 258,0   | 4,0  | 6,0     | 258,4   | 4,2  | 6,3     | 260,0    | 5,0  | 7,5     |
| 300  | 308,0   | 4,0  | 7,2     | 308,0   | 4,0  | 7,2     | 309,6   | 4,8  | 8,7     | 311,6    | 5,8  | 10,5    |
| 350  | 358,0   | 4,0  | 8,4     | 359,0   | 4,5  | 9,5     | 360,8   | 5,4  | 11,4    | 363,2    | 6,6  | 13,9    |
| 400  | 408,4   | 4,2  | 10,0    | 410,0   | 5,0  | 12,0    | 412,2   | 6,1  | 14,6    | 414,8    | 7,4  | 17,8    |
| 450  | 459,2   | 4,6  | 12,3    | 461,0   | 5,5  | 14,9    | 463,4   | 6,7  | 18,1    | 466,4    | 8,2  | 22,2    |
| 500  | 510,0   | 5,0  | 14,9    | 512,0   | 6,0  | 18,0    | 514,6   | 7,3  | 22,0    | 518,0    | 9,0  | 27,0    |
| 550  | 560,8   | 5,4  | 17,7    | 563,0   | 6,5  | 21,5    | 566,0   | 8,0  | 26,3    | 569,6    | 9,8  | 32,4    |
| 600  | 611,6   | 5,8  | 20,7    | 614,0   | 7,0  | 25,3    | 617,2   | 8,6  | 31,0    | 621,2    | 10,6 | 38,2    |
| 700  | 713,2   | 6,6  | 27,5    | 716,2   | 8,1  | 33,7    | 719,8   | 9,9  | 41,4    | 724,4    | 12,2 | 51,3    |

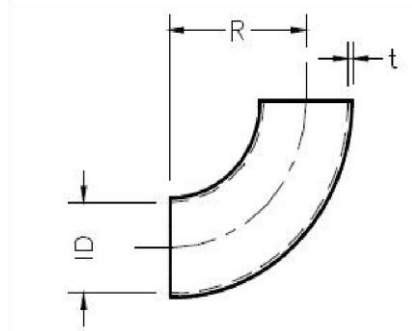


|      | SN 1250 |      |         | SN 2500 |       |         | SN 5000 |      |         | SN 10000 |      |         |
|------|---------|------|---------|---------|-------|---------|---------|------|---------|----------|------|---------|
| DN   | ø D     | t    | weigh t | ø D     | t     | weigh t | ø D     | t    | weigh t | ø D      | t    | weigh t |
| [mm] | [mm]    | [mm] | [kg/m]  | [mm]    | [mm]  | [kg/m]  | [mm]    | [mm] | [kg/m]  | [mm]     | [mm] | [kg/m]  |
| 750  | 764,0   | 7,0  | 31,3    | 767,2   | 8,6   | 38,3    | 771,0   | 10,5 | 47,2    | 776,0    | 13,0 | 58,6    |
| 800  | 814,8   | 7,4  | 35,3    | 818,2   | 9,1   | 43,3    | 822,4   | 11,2 | 53,4    | 827,6    | 13,8 | 66,3    |
| 900  | 916,4   | 8,2  | 44,0    | 920,2   | 10,1  | 54,1    | 924,8   | 12,4 | 66,9    | 930,8    | 15,4 | 83,2    |
| 1000 | 1018,0  | 9,0  | 53,6    | 1022,2  | 11,1  | 66,1    | 1027,4  | 13,7 | 82,0    | 1034,0   | 17,0 | 102,1   |
| 1100 | 1119,6  | 9,8  | 64,2    | 1124,2  | 12,1  | 79,3    | 1130,0  | 15,0 | 98,5    | 1137,2   | 18,6 | 122,8   |
| 1200 | 1221,2  | 10,6 | 75,7    | 1226,2  | 13,1  | 93,8    | 1232,4  | 16,2 | 116,6   | 1240,4   | 20,2 | 145,5   |
| 1300 | 1322,8  | 11,4 | 88,2    | 1328,2  | 14,1  | 109,4   | 1335,0  | 17,5 | 133,6   | 1343,6   | 21,8 | 170,1   |
| 1400 | 1424,4  | 12,2 | 101,7   | 1430,2  | 15,1  | 126,2   | 1437,6  | 18,8 | 157,3   | 1446,8   | 23,4 | 196,6   |
| 1500 | 1526,0  | 13,0 | 116,1   | 1822,0  | 161,0 | 144,3   | 1540,0  | 20,0 | 179,9   | 1550,0   | 25,0 | 225,0   |
| 1600 |         |      |         | 1634,2  | 17,1  | 163,5   | 1642,6  | 21,3 | 204,0   | 1653,2   | 26,6 | 255,4   |
| 1700 |         |      |         | 1736,2  | 18,1  | 183,9   | 1745,2  | 22,6 | 229,7   | 1756,4   | 28,2 | 287,7   |
| 1800 |         |      |         | 1838,2  | 19,1  | 205,6   | 1847,6  | 23,8 | 256,9   | 1859,6   | 29,8 | 321,9   |
| 2000 |         |      |         | 2042,2  | 21,1  | 252,4   | 2052,8  | 26,4 | 315,8   | 2066,0   | 33,0 | 396,0   |

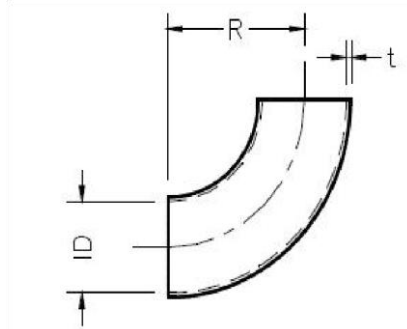
Delivery length up to DN 150 = 6 m; Delivery length from DN 150 = 11,7 m

### Elbow 90°

Description: Elbow90°  
 Connection: plain ends for lamination  
 System: Vinyl ester  
 Diameter: DN 25 - 2000  
 Pressure class: PN 6, PN 10, PN 16, PN 20



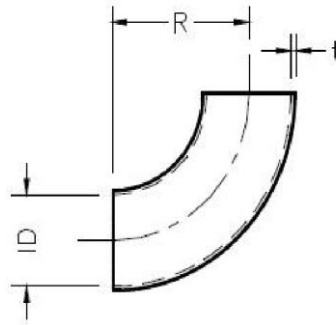
| DN   | PN6  |        | PN10 |        | PN16 |        | PN20 |        |
|------|------|--------|------|--------|------|--------|------|--------|
|      | t    | R      | t    | R      | t    | R      | t    | R      |
| [mm] | [mm] | [kg/m] | [mm] | [kg/m] | [mm] | [kg/m] | [mm] | [kg/m] |
| 25   | 4,0  | 37,5   | 4,0  | 37,5   | 4,0  | 37,5   | 4,0  | 37,5   |
| 40   | 4,0  | 60,0   | 4,0  | 60,0   | 4,0  | 60,0   | 4,0  | 60,0   |
| 50   | 4,0  | 75,0   | 4,0  | 75,0   | 4,0  | 75,0   | 4,0  | 75,0   |
| 65   | 4,0  | 97,5   | 4,0  | 97,5   | 4,0  | 97,5   | 4,0  | 97,5   |
| 80   | 4,0  | 120,0  | 4,0  | 120,0  | 4,0  | 120,0  | 4,3  | 120,0  |
| 100  | 4,0  | 150,0  | 4,0  | 150,0  | 4,3  | 150,0  | 4,9  | 150,0  |
| 125  | 4,0  | 187,5  | 4,0  | 187,5  | 4,9  | 187,5  | 5,7  | 187,5  |
| 150  | 4,0  | 225,0  | 4,1  | 225,0  | 5,5  | 225,0  | 6,5  | 225,0  |
| 200  | 4,0  | 300,0  | 4,9  | 300,0  | 6,8  | 300,0  | 8,1  | 300,0  |
| 250  | 4,0  | 375,0  | 5,7  | 375,0  | 8,1  | 375,0  | 9,7  | 375,0  |
| 300  | 4,0  | 450,0  | 6,5  | 450,0  | 9,4  | 450,0  | 11,3 | 450,0  |
| 350  | 4,5  | 525,0  | 7,3  | 525,0  | 10,7 | 525,0  | 12,9 | 525,0  |
| 400  | 5,0  | 600,0  | 8,1  | 600,0  | 11,9 | 600,0  | 14,5 | 600,0  |
| 450  | 5,5  | 675,0  | 8,9  | 675,0  | 13,2 | 675,0  | 16,1 | 675,0  |
| 500  | 6,0  | 750,0  | 9,7  | 750,0  | 14,5 | 750,0  | 17,7 | 750,0  |
| 550  | 6,5  | 825,0  | 10,5 | 825,0  | 15,8 | 825,0  | 19,3 | 825,0  |
| 600  | 7,0  | 900,0  | 11,3 | 900,0  | 17,1 | 900,0  | 20,9 | 900,0  |
| 700  | 8,1  | 1050,0 | 12,9 | 1050,0 | 19,6 | 1050,0 | 24,1 | 1050,0 |



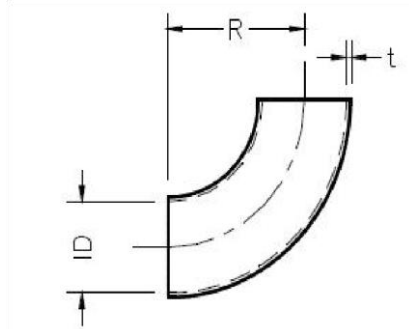
| DN   | PN6  |        | PN10 |        | PN16 |        | PN20 |        |
|------|------|--------|------|--------|------|--------|------|--------|
|      | t    | R      | t    | R      | t    | R      | t    | R      |
| [mm] | [mm] | [kg/m] | [mm] | [kg/m] | [mm] | [kg/m] | [mm] | [kg/m] |
| 750  | 8,6  | 1125,0 | 13,7 | 1125,0 | 20,9 | 1125,0 | 25,7 | 1125,0 |
| 800  | 9,1  | 1200,0 | 14,5 | 1200,0 | 22,2 | 1200,0 | 27,3 | 1200,0 |
| 900  | 10,1 | 1350,0 | 16,1 | 1350,0 | 24,7 | 1350,0 |      |        |
| 1000 | 11,1 | 1500,0 | 17,7 | 1500,0 | 27,3 | 1500,0 |      |        |
| 1100 | 12,1 | 1650,0 | 19,3 | 1650,0 | 29,9 | 1650,0 |      |        |
| 1200 | 13,1 | 1800,0 | 20,9 | 1800,0 | 32,4 | 1800,0 |      |        |
| 1300 | 14,1 | 1950,0 | 22,5 | 1950,0 | 35,0 | 1950,0 |      |        |
| 1400 | 15,1 | 2100,0 | 24,1 | 2100,0 | 37,5 | 2100,0 |      |        |
| 1500 | 16,1 | 2250,0 | 25,7 | 2250,0 | 40,1 | 2250,0 |      |        |
| 1600 | 17,1 | 2400,0 | 27,3 | 2400,0 |      |        |      |        |
| 1700 | 18,1 | 2550,0 | 28,9 | 2550,0 |      |        |      |        |
| 1800 | 19,1 | 2700,0 | 30,5 | 2700,0 |      |        |      |        |
| 2000 | 21,1 | 3000,0 | 33,7 | 3000,0 |      |        |      |        |

### Elbow90°

Description: Elbow90°  
 Connection: plain ends for lamination  
 System: Vinyl ester  
 Diameter: DN 25 - 2000  
 Stiffness: SN 1250, SN 2500, SN 5000, SN 10000



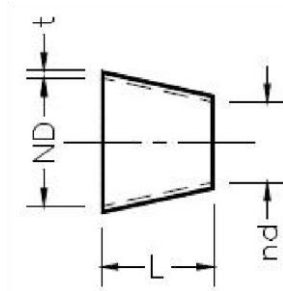
| DN   | SN 1250 |        | SN 2500 |        | SN 5000 |        | SN 10000 |        |
|------|---------|--------|---------|--------|---------|--------|----------|--------|
|      | t       | R      | t       | R      | t       | R      | t        | R      |
| [mm] | [mm]    | [kg/m] | [mm]    | [kg/m] | [mm]    | [kg/m] | [mm]     | [kg/m] |
| 25   | 4,0     | 37,5   | 4,0     | 37,5   | 4,0     | 37,5   | 4,0      | 37,5   |
| 40   | 4,0     | 60,0   | 4,0     | 60,0   | 4,0     | 60,0   | 4,0      | 60,0   |
| 50   | 4,0     | 75,0   | 4,0     | 75,0   | 4,0     | 75,0   | 4,0      | 75,0   |
| 65   | 4,0     | 97,5   | 4,0     | 97,5   | 4,0     | 97,5   | 4,0      | 97,5   |
| 80   | 4,0     | 120,0  | 4,0     | 120,0  | 4,0     | 120,0  | 4,0      | 120,0  |
| 100  | 4,0     | 150,0  | 4,0     | 150,0  | 4,0     | 150,0  | 4,0      | 150,0  |
| 125  | 4,0     | 187,5  | 4,0     | 187,5  | 4,0     | 187,5  | 4,0      | 187,5  |
| 150  | 4,0     | 225,0  | 4,0     | 225,0  | 4,0     | 225,0  | 4,0      | 225,0  |
| 200  | 4,0     | 300,0  | 4,0     | 300,0  | 4,2     | 300,0  | 5,0      | 300,0  |
| 250  | 4,0     | 375,0  | 4,2     | 375,0  | 5,0     | 375,0  | 6,0      | 375,0  |
| 300  | 4,0     | 450,0  | 4,8     | 450,0  | 5,8     | 450,0  | 7,0      | 450,0  |
| 350  | 4,5     | 525,0  | 5,4     | 525,0  | 6,6     | 525,0  | 8,1      | 525,0  |
| 400  | 5,0     | 600,0  | 6,1     | 600,0  | 7,4     | 600,0  | 9,1      | 600,0  |
| 450  | 5,5     | 675,0  | 6,7     | 675,0  | 8,2     | 675,0  | 10,1     | 675,0  |
| 500  | 6,0     | 750,0  | 7,3     | 750,0  | 9,0     | 750,0  | 11,1     | 750,0  |
| 550  | 6,5     | 825,0  | 8,0     | 825,0  | 9,8     | 825,0  | 12,1     | 825,0  |
| 600  | 7,0     | 900,0  | 8,6     | 900,0  | 10,6    | 900,0  | 13,1     | 900,0  |
| 700  | 8,1     | 1050,0 | 9,9     | 1050,0 | 12,2    | 1050,0 | 15,1     | 1050,0 |



| DN   | SN 1250 |        | SN 2500 |        | SN 5000 |        | SN 10000 |        |
|------|---------|--------|---------|--------|---------|--------|----------|--------|
|      | t       | R      | t       | R      | t       | R      | t        | R      |
| [mm] | [mm]    | [kg/m] | [mm]    | [kg/m] | [mm]    | [kg/m] | [mm]     | [kg/m] |
| 750  | 8,6     | 1125,0 | 10,5    | 1125,0 | 12,2    | 1050,0 | 16,1     | 1125,0 |
| 800  | 9,1     | 1200,0 | 11,2    | 1200,0 | 13,0    | 1125,0 | 17,1     | 1200,0 |
| 900  | 10,1    | 1350,0 | 12,4    | 1350,0 | 13,8    | 1200,0 | 19,1     | 1350,0 |
| 1000 | 11,1    | 1500,0 | 13,7    | 1500,0 | 15,4    | 1350,0 | 21,1     | 1500,0 |
| 1100 | 12,1    | 1650,0 | 15,0    | 1650,0 | 17,0    | 1500,0 | 23,2     | 1650,0 |
| 1200 | 13,1    | 1800,0 | 16,2    | 1800,0 | 18,6    | 1650,0 | 25,2     | 1800,0 |
| 1300 | 14,1    | 1950,0 | 17,5    | 1950,0 | 20,2    | 1800,0 | 27,2     | 1950,0 |
| 1400 | 15,1    | 2100,0 | 18,8    | 2100,0 | 21,8    | 1950,0 | 29,2     | 2100,0 |
| 1500 | 16,1    | 2250,0 | 20,0    | 2250,0 | 23,4    | 2100,0 | 31,2     | 2250,0 |
| 1600 |         |        | 21,3    | 2400,0 | 25,0    | 2250,0 | 33,2     | 2400,0 |
| 1700 |         |        | 22,6    | 2550,0 | 26,6    | 2400,0 | 35,2     | 2550,0 |
| 1800 |         |        | 23,8    | 2700,0 | 28,2    | 2550,0 | 37,3     | 2700,0 |
| 2000 |         |        | 26,4    | 3000,0 | 29,8    | 2700,0 | 41,3     | 3000,0 |

### Concentric reducer

Description: Concentric reducer  
 Connection: plain ends for lamination  
 System: Vinyl ester  
 Diameter: DN 25 - 2000  
 Pressure class: PN 6, PN 10, PN 16, PN 20



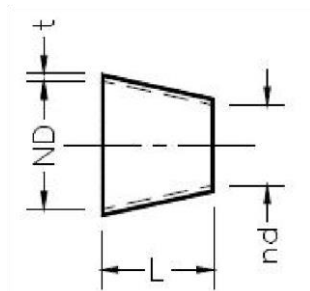
|      |      | PN6  |        | PN10 |        | PN16 |        | PN20 |        |
|------|------|------|--------|------|--------|------|--------|------|--------|
| DN   | dn   | t    | R      | t    | R      | t    | R      | t    | R      |
| [mm] | [mm] | [mm] | [kg/m] | [mm] | [kg/m] | [mm] | [kg/m] | [mm] | [kg/m] |
| 40   | 25   | 4,0  | 38     | 4,0  | 38     | 4,0  | 38     | 4,0  | 38     |
| 50   | 25   | 4,0  | 63     | 4,0  | 63     | 4,0  | 63     | 4,0  | 63     |
| 50   | 40   | 4,0  | 25     | 4,0  | 25     | 4,0  | 25     | 4,0  | 25     |
| 65   | 25   | 4,0  | 100    | 4,0  | 100    | 4,0  | 100    | 4,0  | 100    |
| 65   | 40   | 4,0  | 63     | 4,0  | 63     | 4,0  | 63     | 4,0  | 63     |
| 65   | 50   | 4,0  | 38     | 4,0  | 38     | 4,0  | 38     | 4,0  | 38     |
| 80   | 40   | 4,0  | 100    | 4,0  | 100    | 4,0  | 100    | 4,3  | 100    |
| 80   | 50   | 4,0  | 75     | 4,0  | 75     | 4,0  | 75     | 4,3  | 75     |
| 80   | 65   | 4,0  | 38     | 4,0  | 38     | 4,0  | 38     | 4,3  | 38     |
| 100  | 50   | 4,0  | 125    | 4,0  | 125    | 4,3  | 125    | 4,9  | 125    |
| 100  | 65   | 4,0  | 88     | 4,0  | 88     | 4,3  | 88     | 4,9  | 88     |
| 100  | 80   | 4,0  | 50     | 4,0  | 50     | 4,3  | 50     | 4,9  | 50     |
| 125  | 65   | 4,0  | 150    | 4,0  | 150    | 4,9  | 150    | 5,7  | 150    |
| 125  | 80   | 4,0  | 113    | 4,0  | 113    | 4,9  | 113    | 5,7  | 113    |
| 125  | 100  | 4,0  | 63     | 4,0  | 63     | 4,9  | 63     | 5,7  | 63     |
| 150  | 80   | 4,0  | 175    | 4,1  | 175    | 5,5  | 175    | 6,5  | 175    |
| 150  | 100  | 4,0  | 125    | 4,1  | 125    | 5,5  | 125    | 6,5  | 125    |
| 150  | 125  | 4,0  | 63     | 4,1  | 63     | 5,5  | 63     | 6,5  | 63     |
| 200  | 100  | 4,0  | 250    | 4,9  | 250    | 6,8  | 250    | 8,1  | 250    |

|      |      | PN6  |        | PN10 |        | PN16 |        | PN20 |        |
|------|------|------|--------|------|--------|------|--------|------|--------|
| DN   | dn   | t    | R      | t    | R      | t    | R      | t    | R      |
| [mm] | [mm] | [mm] | [kg/m] | [mm] | [kg/m] | [mm] | [kg/m] | [mm] | [kg/m] |
| 200  | 125  | 4,0  | 188    | 4,9  | 188    | 6,8  | 188    | 8,1  | 188    |
| 200  | 150  | 4,0  | 125    | 4,9  | 125    | 6,8  | 125    | 8,1  | 125    |
| 250  | 125  | 4,0  | 313    | 5,7  | 313    | 8,1  | 313    | 9,7  | 313    |
| 250  | 150  | 4,0  | 250    | 5,7  | 250    | 8,1  | 250    | 9,7  | 250    |
| 250  | 200  | 4,0  | 125    | 5,7  | 125    | 8,1  | 125    | 9,7  | 125    |
| 300  | 150  | 4,0  | 375    | 6,5  | 375    | 9,4  | 375    | 11,3 | 375    |
| 300  | 200  | 4,0  | 250    | 6,5  | 250    | 9,4  | 250    | 11,3 | 250    |
| 300  | 250  | 4,0  | 125    | 6,5  | 125    | 9,4  | 125    | 11,3 | 125    |
| 350  | 200  | 4,5  | 375    | 7,3  | 375    | 10,7 | 375    | 12,9 | 375    |
| 350  | 250  | 4,5  | 250    | 7,3  | 250    | 10,7 | 250    | 12,9 | 250    |
| 350  | 300  | 4,5  | 125    | 7,3  | 125    | 10,7 | 125    | 12,9 | 125    |
| 400  | 250  | 5,0  | 375    | 8,1  | 375    | 11,9 | 375    | 14,5 | 375    |
| 400  | 300  | 5,0  | 250    | 8,1  | 250    | 11,9 | 250    | 14,5 | 250    |
| 400  | 350  | 5,0  | 125    | 8,1  | 125    | 11,9 | 125    | 14,5 | 125    |
| 450  | 300  | 5,5  | 375    | 8,9  | 375    | 13,2 | 375    | 16,1 | 375    |
| 450  | 350  | 5,5  | 250    | 8,9  | 250    | 13,2 | 250    | 16,1 | 250    |
| 450  | 400  | 5,5  | 125    | 8,9  | 125    | 13,2 | 125    | 16,1 | 125    |
| 500  | 350  | 6,0  | 375    | 9,7  | 375    | 14,5 | 375    | 17,7 | 375    |
| 500  | 400  | 6,0  | 250    | 9,7  | 250    | 14,5 | 250    | 17,7 | 250    |
| 500  | 450  | 6,0  | 125    | 9,7  | 125    | 14,5 | 125    | 17,7 | 125    |
| 550  | 400  | 6,5  | 375    | 10,5 | 375    | 15,8 | 375    | 19,3 | 375    |
| 550  | 450  | 6,5  | 250    | 10,5 | 250    | 15,8 | 250    | 19,3 | 250    |
| 550  | 500  | 6,5  | 125    | 10,5 | 125    | 15,8 | 125    | 19,3 | 125    |
| 600  | 450  | 7,0  | 375    | 11,3 | 375    | 17,1 | 375    | 20,9 | 375    |
| 600  | 500  | 7,0  | 250    | 11,3 | 250    | 17,1 | 250    | 20,9 | 250    |
| 600  | 550  | 7,0  | 125    | 11,3 | 125    | 17,1 | 125    | 20,9 | 125    |
| 700  | 500  | 8,1  | 500    | 12,9 | 500    | 19,6 | 500    | 24,1 | 500    |
| 700  | 550  | 8,1  | 375    | 12,9 | 375    | 19,6 | 375    | 24,1 | 375    |
| 700  | 600  | 8,1  | 250    | 12,9 | 250    | 19,6 | 250    | 24,1 | 250    |
| 750  | 550  | 8,6  | 500    | 13,7 | 500    | 20,9 | 500    | 25,7 | 500    |
| 750  | 600  | 8,6  | 375    | 13,7 | 375    | 20,9 | 375    | 25,7 | 375    |
| 750  | 700  | 8,6  | 125    | 13,7 | 125    | 20,9 | 125    | 25,7 | 125    |
| 800  | 600  | 9,1  | 500    | 14,5 | 500    | 22,2 | 500    | 27,3 | 500    |
| 800  | 700  | 9,1  | 250    | 14,5 | 250    | 22,2 | 250    | 27,3 | 250    |
| 800  | 750  | 9,1  | 125    | 14,5 | 125    | 22,2 | 125    | 27,3 | 125    |
| 900  | 700  | 10,1 | 500    | 16,1 | 500    | 24,7 | 500    |      |        |

|      |      | PN6  |        | PN10 |        | PN16 |        | PN20 |        |
|------|------|------|--------|------|--------|------|--------|------|--------|
| DN   | dn   | t    | R      | t    | R      | t    | R      | t    | R      |
| [mm] | [mm] | [mm] | [kg/m] | [mm] | [kg/m] | [mm] | [kg/m] | [mm] | [kg/m] |
| 900  | 750  | 10,1 | 375    | 16,1 | 375    | 24,7 | 375    |      |        |
| 900  | 800  | 10,1 | 250    | 16,1 | 250    | 24,7 | 250    |      |        |
| 1000 | 750  | 11,1 | 625    | 17,7 | 625    | 27,3 | 625    |      |        |
| 1000 | 800  | 11,1 | 500    | 17,7 | 500    | 27,3 | 500    |      |        |
| 1000 | 900  | 11,1 | 250    | 17,7 | 250    | 27,3 | 250    |      |        |
| 1100 | 800  | 12,1 | 750    | 19,3 | 750    | 29,9 | 750    |      |        |
| 1100 | 900  | 12,1 | 500    | 19,3 | 500    | 29,9 | 500    |      |        |
| 1100 | 1000 | 12,1 | 250    | 19,3 | 250    | 29,9 | 250    |      |        |
| 1200 | 900  | 13,1 | 750    | 20,9 | 750    | 32,4 | 750    |      |        |
| 1200 | 1000 | 13,1 | 500    | 20,9 | 500    | 32,4 | 500    |      |        |
| 1200 | 1100 | 13,1 | 250    | 20,9 | 250    | 32,4 | 250    |      |        |
| 1300 | 1000 | 14,1 | 750    | 22,5 | 750    | 35,0 | 750    |      |        |
| 1300 | 1100 | 14,1 | 500    | 22,5 | 500    | 35,0 | 500    |      |        |
| 1300 | 1200 | 14,1 | 250    | 22,5 | 250    | 35,0 | 250    |      |        |
| 1400 | 1100 | 15,1 | 750    | 24,1 | 750    | 37,5 | 750    |      |        |
| 1400 | 1200 | 15,1 | 500    | 24,1 | 500    | 37,5 | 500    |      |        |
| 1400 | 1300 | 15,1 | 250    | 24,1 | 250    | 37,5 | 250    |      |        |
| 1500 | 1200 | 16,1 | 750    | 25,7 | 750    | 40,1 | 750    |      |        |
| 1500 | 1300 | 16,1 | 500    | 25,7 | 500    | 40,1 | 500    |      |        |
| 1500 | 1400 | 16,1 | 250    | 25,7 | 250    | 40,1 | 250    |      |        |
| 1600 | 1300 | 17,1 | 750    | 27,3 | 750    |      |        |      |        |
| 1600 | 1400 | 17,1 | 500    | 27,3 | 500    |      |        |      |        |
| 1600 | 1500 | 17,1 | 250    | 27,3 | 250    |      |        |      |        |
| 1700 | 1400 | 18,1 | 750    | 28,9 | 750    |      |        |      |        |
| 1700 | 1500 | 18,1 | 500    | 28,9 | 500    |      |        |      |        |
| 1700 | 1600 | 18,1 | 250    | 28,9 | 250    |      |        |      |        |
| 1800 | 1500 | 19,1 | 750    | 30,5 | 750    |      |        |      |        |
| 1800 | 1600 | 19,1 | 500    | 30,5 | 500    |      |        |      |        |
| 1800 | 1700 | 19,1 | 250    | 30,5 | 250    |      |        |      |        |
| 2000 | 1600 | 21,1 | 1000   | 33,7 | 1000   |      |        |      |        |
| 2000 | 1700 | 21,1 | 750    | 33,7 | 750    |      |        |      |        |
| 2000 | 1800 | 21,1 | 500    | 33,7 | 500    |      |        |      |        |

### Concentric reducer

Description: Concentric reducer  
 Connection: plain ends for lamination  
 System: Vinyl ester  
 Diameter: DN 25 - 2000  
 Stiffness: SN 1250, SN 2500, SN 5000, SN 10000



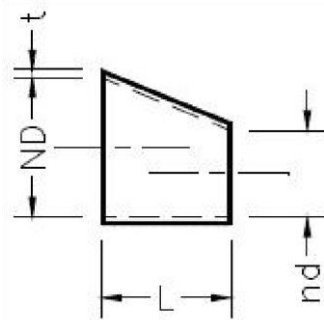
|      |      | SN 1250 |        | SN 2500 |        | SN 5000 |        | SN 10000 |        |
|------|------|---------|--------|---------|--------|---------|--------|----------|--------|
| DN   | dn   | t       | R      | t       | R      | t       | R      | t        | R      |
| [mm] | [mm] | [mm]    | [kg/m] | [mm]    | [kg/m] | [mm]    | [kg/m] | [mm]     | [kg/m] |
| 40   | 25   | 4,0     | 38     | 4,0     | 38     | 4,0     | 38     | 4,0      | 38     |
| 50   | 25   | 4,0     | 63     | 4,0     | 63     | 4,0     | 63     | 4,0      | 63     |
| 50   | 40   | 4,0     | 25     | 4,0     | 25     | 4,0     | 25     | 4,0      | 25     |
| 65   | 25   | 4,0     | 100    | 4,0     | 100    | 4,0     | 100    | 4,0      | 100    |
| 65   | 40   | 4,0     | 63     | 4,0     | 63     | 4,0     | 63     | 4,0      | 63     |
| 65   | 50   | 4,0     | 38     | 4,0     | 38     | 4,0     | 38     | 4,0      | 38     |
| 80   | 40   | 4,0     | 100    | 4,0     | 100    | 4,0     | 100    | 4,0      | 100    |
| 80   | 50   | 4,0     | 75     | 4,0     | 75     | 4,0     | 75     | 4,0      | 75     |
| 80   | 65   | 4,0     | 38     | 4,0     | 38     | 4,0     | 38     | 4,0      | 38     |
| 100  | 50   | 4,0     | 125    | 4,0     | 125    | 4,0     | 125    | 4,0      | 125    |
| 100  | 65   | 4,0     | 88     | 4,0     | 88     | 4,0     | 88     | 4,0      | 88     |
| 100  | 80   | 4,0     | 50     | 4,0     | 50     | 4,0     | 50     | 4,0      | 50     |
| 125  | 65   | 4,0     | 150    | 4,0     | 150    | 4,0     | 150    | 4,0      | 150    |
| 125  | 80   | 4,0     | 113    | 4,0     | 113    | 4,0     | 113    | 4,0      | 113    |
| 125  | 100  | 4,0     | 63     | 4,0     | 63     | 4,0     | 63     | 4,0      | 63     |
| 150  | 80   | 4,0     | 175    | 4,0     | 175    | 4,0     | 175    | 4,0      | 175    |
| 150  | 100  | 4,0     | 125    | 4,0     | 125    | 4,0     | 125    | 4,0      | 125    |
| 150  | 125  | 4,0     | 63     | 4,0     | 63     | 4,0     | 63     | 4,0      | 63     |
| 200  | 100  | 4,0     | 250    | 4,0     | 250    | 4,2     | 250    | 5,0      | 250    |

|      |      | SN 1250 |        | SN 2500 |        | SN 5000 |        | SN 10000 |        |
|------|------|---------|--------|---------|--------|---------|--------|----------|--------|
| DN   | dn   | t       | R      | t       | R      | t       | R      | t        | R      |
| [mm] | [mm] | [mm]    | [kg/m] | [mm]    | [kg/m] | [mm]    | [kg/m] | [mm]     | [kg/m] |
| 200  | 125  | 4,0     | 188    | 4,0     | 188    | 4,2     | 188    | 5,0      | 188    |
| 200  | 150  | 4,0     | 125    | 4,0     | 125    | 4,2     | 125    | 5,0      | 125    |
| 250  | 125  | 4,0     | 313    | 4,2     | 313    | 5,0     | 313    | 6,0      | 313    |
| 250  | 150  | 4,0     | 250    | 4,2     | 250    | 5,0     | 250    | 6,0      | 250    |
| 250  | 200  | 4,0     | 125    | 4,2     | 125    | 5,0     | 125    | 6,0      | 125    |
| 300  | 150  | 4,0     | 375    | 4,8     | 375    | 5,8     | 375    | 7,0      | 375    |
| 300  | 200  | 4,0     | 250    | 4,8     | 250    | 5,8     | 250    | 7,0      | 250    |
| 300  | 250  | 4,0     | 125    | 4,8     | 125    | 5,8     | 125    | 7,0      | 125    |
| 350  | 200  | 4,5     | 375    | 5,4     | 375    | 6,6     | 375    | 8,1      | 375    |
| 350  | 250  | 4,5     | 250    | 5,4     | 250    | 6,6     | 250    | 8,1      | 250    |
| 350  | 300  | 4,5     | 125    | 5,4     | 125    | 6,6     | 125    | 8,1      | 125    |
| 400  | 250  | 5,0     | 375    | 6,1     | 375    | 7,4     | 375    | 9,1      | 375    |
| 400  | 300  | 5,0     | 250    | 6,1     | 250    | 7,4     | 250    | 9,1      | 250    |
| 400  | 350  | 5,0     | 125    | 6,1     | 125    | 7,4     | 125    | 9,1      | 125    |
| 450  | 300  | 5,5     | 375    | 6,7     | 375    | 8,2     | 375    | 10,1     | 375    |
| 450  | 350  | 5,5     | 250    | 6,7     | 250    | 8,2     | 250    | 10,1     | 250    |
| 450  | 400  | 5,5     | 125    | 6,7     | 125    | 8,2     | 125    | 10,1     | 125    |
| 500  | 350  | 6,0     | 375    | 7,3     | 375    | 9,0     | 375    | 11,1     | 375    |
| 500  | 400  | 6,0     | 250    | 7,3     | 250    | 9,0     | 250    | 11,1     | 250    |
| 500  | 450  | 6,0     | 125    | 7,3     | 125    | 9,0     | 125    | 11,1     | 125    |
| 550  | 400  | 6,5     | 375    | 8,0     | 375    | 9,8     | 375    | 12,1     | 375    |
| 550  | 450  | 6,5     | 250    | 8,0     | 250    | 9,8     | 250    | 12,1     | 250    |
| 550  | 500  | 6,5     | 125    | 8,0     | 125    | 9,8     | 125    | 12,1     | 125    |
| 600  | 450  | 7,0     | 375    | 8,6     | 375    | 10,6    | 375    | 13,1     | 375    |
| 600  | 500  | 7,0     | 250    | 8,6     | 250    | 10,6    | 250    | 13,1     | 250    |
| 600  | 550  | 7,0     | 125    | 8,6     | 125    | 10,6    | 125    | 13,1     | 125    |
| 700  | 500  | 8,1     | 500    | 9,9     | 500    | 12,2    | 500    | 15,1     | 500    |
| 700  | 550  | 8,1     | 375    | 9,9     | 375    | 12,2    | 375    | 15,1     | 375    |
| 700  | 600  | 8,1     | 250    | 9,9     | 250    | 12,2    | 250    | 15,1     | 250    |
| 750  | 550  | 8,6     | 500    | 10,5    | 500    | 13,0    | 500    | 16,1     | 500    |
| 750  | 600  | 8,6     | 375    | 10,5    | 375    | 13,0    | 375    | 16,1     | 375    |
| 750  | 700  | 8,6     | 125    | 10,5    | 125    | 13,0    | 125    | 16,1     | 125    |
| 800  | 600  | 9,1     | 500    | 11,2    | 500    | 13,8    | 500    | 17,1     | 500    |
| 800  | 700  | 9,1     | 250    | 11,2    | 250    | 13,8    | 250    | 17,1     | 250    |
| 800  | 750  | 9,1     | 125    | 11,2    | 125    | 13,8    | 125    | 17,1     | 125    |
| 900  | 700  | 10,1    | 500    | 12,4    | 500    | 15,4    | 500    | 19,1     | 500    |

|      |      | SN 1250 |        | SN 2500 |        | SN 5000 |        | SN 10000 |        |
|------|------|---------|--------|---------|--------|---------|--------|----------|--------|
| DN   | dn   | t       | R      | t       | R      | t       | R      | t        | R      |
| [mm] | [mm] | [mm]    | [kg/m] | [mm]    | [kg/m] | [mm]    | [kg/m] | [mm]     | [kg/m] |
| 900  | 750  | 10,1    | 375    | 12,4    | 375    | 15,4    | 375    | 19,1     | 375    |
| 900  | 800  | 10,1    | 250    | 12,4    | 250    | 15,4    | 250    | 19,1     | 250    |
| 1000 | 750  | 11,1    | 625    | 13,7    | 625    | 17,0    | 625    | 21,1     | 625    |
| 1000 | 800  | 11,1    | 500    | 13,7    | 500    | 17,0    | 500    | 21,1     | 500    |
| 1000 | 900  | 11,1    | 250    | 13,7    | 250    | 17,0    | 250    | 21,1     | 250    |
| 1100 | 800  | 12,1    | 750    | 15,0    | 750    | 18,6    | 750    | 23,2     | 750    |
| 1100 | 900  | 12,1    | 500    | 15,0    | 500    | 18,6    | 500    | 23,2     | 500    |
| 1100 | 1000 | 12,1    | 250    | 15,0    | 250    | 18,6    | 250    | 23,2     | 250    |
| 1200 | 900  | 13,1    | 750    | 16,2    | 750    | 20,2    | 750    | 25,2     | 750    |
| 1200 | 1000 | 13,1    | 500    | 16,2    | 500    | 20,2    | 500    | 25,2     | 500    |
| 1200 | 1100 | 13,1    | 250    | 16,2    | 250    | 20,2    | 250    | 25,2     | 250    |
| 1300 | 1000 | 14,1    | 750    | 17,5    | 750    | 21,8    | 750    | 27,2     | 750    |
| 1300 | 1100 | 14,1    | 500    | 17,5    | 500    | 21,8    | 500    | 27,2     | 500    |
| 1300 | 1200 | 14,1    | 250    | 17,5    | 250    | 21,8    | 250    | 27,2     | 250    |
| 1400 | 1100 | 15,1    | 750    | 18,8    | 750    | 23,4    | 750    | 29,2     | 750    |
| 1400 | 1200 | 15,1    | 500    | 18,8    | 500    | 23,4    | 500    | 29,2     | 500    |
| 1400 | 1300 | 15,1    | 250    | 18,8    | 250    | 23,4    | 250    | 29,2     | 250    |
| 1500 | 1200 | 16,1    | 750    | 20,0    | 750    | 25,0    | 750    | 31,2     | 750    |
| 1500 | 1300 | 16,1    | 500    | 20,0    | 500    | 25,0    | 500    | 31,2     | 500    |
| 1500 | 1400 | 16,1    | 250    | 20,0    | 250    | 25,0    | 250    | 31,2     | 250    |
| 1600 | 1300 |         |        | 21,3    | 750    | 26,6    | 750    | 33,2     | 750    |
| 1600 | 1400 |         |        | 21,3    | 500    | 26,6    | 500    | 33,2     | 500    |
| 1600 | 1500 |         |        | 21,3    | 250    | 26,6    | 250    | 33,2     | 250    |
| 1700 | 1400 |         |        | 22,6    | 750    | 28,2    | 750    | 35,2     | 750    |
| 1700 | 1500 |         |        | 22,6    | 500    | 28,2    | 500    | 35,2     | 500    |
| 1700 | 1600 |         |        | 22,6    | 250    | 28,2    | 250    | 35,2     | 250    |
| 1800 | 1500 |         |        | 23,8    | 750    | 29,8    | 750    | 37,3     | 750    |
| 1800 | 1600 |         |        | 23,8    | 500    | 29,8    | 500    | 37,3     | 500    |
| 1800 | 1700 |         |        | 23,8    | 250    | 29,8    | 250    | 37,3     | 250    |
| 2000 | 1600 |         |        | 26,4    | 1000   | 33,0    | 1000   | 41,3     | 1000   |
| 2000 | 1700 |         |        | 26,4    | 750    | 33,0    | 750    | 41,3     | 750    |
| 2000 | 1800 |         |        | 26,4    | 500    | 33,0    | 500    | 41,3     | 500    |

### Eccentric reducer

Description: Eccentric reducer  
 Connection: plain ends for lamination  
 System: Vinyl ester  
 Diameter: DN 25 - 2000  
 Pressure class: PN 6, PN 10, PN 16, PN 20



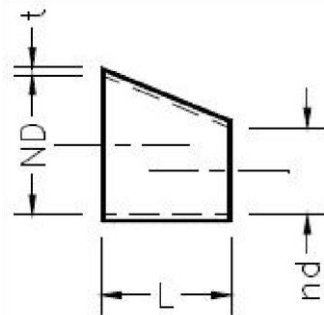
|      |      | PN6  |        | PN10 |        | PN16 |        | PN20 |        |
|------|------|------|--------|------|--------|------|--------|------|--------|
| DN   | dn   | t    | R      | t    | R      | t    | R      | t    | R      |
| [mm] | [mm] | [mm] | [kg/m] | [mm] | [kg/m] | [mm] | [kg/m] | [mm] | [kg/m] |
| 40   | 25   | 4,0  | 38     | 4,0  | 38     | 4,0  | 38     | 4,0  | 38     |
| 50   | 25   | 4,0  | 63     | 4,0  | 63     | 4,0  | 63     | 4,0  | 63     |
| 50   | 40   | 4,0  | 25     | 4,0  | 25     | 4,0  | 25     | 4,0  | 25     |
| 65   | 25   | 4,0  | 100    | 4,0  | 100    | 4,0  | 100    | 4,0  | 100    |
| 65   | 40   | 4,0  | 63     | 4,0  | 63     | 4,0  | 63     | 4,0  | 63     |
| 65   | 50   | 4,0  | 38     | 4,0  | 38     | 4,0  | 38     | 4,0  | 38     |
| 80   | 40   | 4,0  | 100    | 4,0  | 100    | 4,0  | 100    | 4,3  | 100    |
| 80   | 50   | 4,0  | 75     | 4,0  | 75     | 4,0  | 75     | 4,3  | 75     |
| 80   | 65   | 4,0  | 38     | 4,0  | 38     | 4,0  | 38     | 4,3  | 38     |
| 100  | 50   | 4,0  | 125    | 4,0  | 125    | 4,3  | 125    | 4,9  | 125    |
| 100  | 65   | 4,0  | 88     | 4,0  | 88     | 4,3  | 88     | 4,9  | 88     |
| 100  | 80   | 4,0  | 50     | 4,0  | 50     | 4,3  | 50     | 4,9  | 50     |
| 125  | 65   | 4,0  | 150    | 4,0  | 150    | 4,9  | 150    | 5,7  | 150    |
| 125  | 80   | 4,0  | 113    | 4,0  | 113    | 4,9  | 113    | 5,7  | 113    |
| 125  | 100  | 4,0  | 63     | 4,0  | 63     | 4,9  | 63     | 5,7  | 63     |
| 150  | 80   | 4,0  | 175    | 4,1  | 175    | 5,5  | 175    | 6,5  | 175    |
| 150  | 100  | 4,0  | 125    | 4,1  | 125    | 5,5  | 125    | 6,5  | 125    |
| 150  | 125  | 4,0  | 63     | 4,1  | 63     | 5,5  | 63     | 6,5  | 63     |
| 200  | 100  | 4,0  | 250    | 4,9  | 250    | 6,8  | 250    | 8,1  | 250    |

|      |      | PN6  |        | PN10 |        | PN16 |        | PN20 |        |
|------|------|------|--------|------|--------|------|--------|------|--------|
| DN   | dn   | t    | R      | t    | R      | t    | R      | t    | R      |
| [mm] | [mm] | [mm] | [kg/m] | [mm] | [kg/m] | [mm] | [kg/m] | [mm] | [kg/m] |
| 200  | 125  | 4,0  | 188    | 4,9  | 188    | 6,8  | 188    | 8,1  | 188    |
| 200  | 150  | 4,0  | 125    | 4,9  | 125    | 6,8  | 125    | 8,1  | 125    |
| 250  | 125  | 4,0  | 313    | 5,7  | 313    | 8,1  | 313    | 9,7  | 313    |
| 250  | 150  | 4,0  | 250    | 5,7  | 250    | 8,1  | 250    | 9,7  | 250    |
| 250  | 200  | 4,0  | 125    | 5,7  | 125    | 8,1  | 125    | 9,7  | 125    |
| 300  | 150  | 4,0  | 375    | 6,5  | 375    | 9,4  | 375    | 11,3 | 375    |
| 300  | 200  | 4,0  | 250    | 6,5  | 250    | 9,4  | 250    | 11,3 | 250    |
| 300  | 250  | 4,0  | 125    | 6,5  | 125    | 9,4  | 125    | 11,3 | 125    |
| 350  | 200  | 4,5  | 375    | 7,3  | 375    | 10,7 | 375    | 12,9 | 375    |
| 350  | 250  | 4,5  | 250    | 7,3  | 250    | 10,7 | 250    | 12,9 | 250    |
| 350  | 300  | 4,5  | 125    | 7,3  | 125    | 10,7 | 125    | 12,9 | 125    |
| 400  | 250  | 5,0  | 375    | 8,1  | 375    | 11,9 | 375    | 14,5 | 375    |
| 400  | 300  | 5,0  | 250    | 8,1  | 250    | 11,9 | 250    | 14,5 | 250    |
| 400  | 350  | 5,0  | 125    | 8,1  | 125    | 11,9 | 125    | 14,5 | 125    |
| 450  | 300  | 5,5  | 375    | 8,9  | 375    | 13,2 | 375    | 16,1 | 375    |
| 450  | 350  | 5,5  | 250    | 8,9  | 250    | 13,2 | 250    | 16,1 | 250    |
| 450  | 400  | 5,5  | 125    | 8,9  | 125    | 13,2 | 125    | 16,1 | 125    |
| 500  | 350  | 6,0  | 375    | 9,7  | 375    | 14,5 | 375    | 17,7 | 375    |
| 500  | 400  | 6,0  | 250    | 9,7  | 250    | 14,5 | 250    | 17,7 | 250    |
| 500  | 450  | 6,0  | 125    | 9,7  | 125    | 14,5 | 125    | 17,7 | 125    |
| 550  | 400  | 6,5  | 375    | 10,5 | 375    | 15,8 | 375    | 19,3 | 375    |
| 550  | 450  | 6,5  | 250    | 10,5 | 250    | 15,8 | 250    | 19,3 | 250    |
| 550  | 500  | 6,5  | 125    | 10,5 | 125    | 15,8 | 125    | 19,3 | 125    |
| 600  | 450  | 7,0  | 375    | 11,3 | 375    | 17,1 | 375    | 20,9 | 375    |
| 600  | 500  | 7,0  | 250    | 11,3 | 250    | 17,1 | 250    | 20,9 | 250    |
| 600  | 550  | 7,0  | 125    | 11,3 | 125    | 17,1 | 125    | 20,9 | 125    |
| 700  | 500  | 8,1  | 500    | 12,9 | 500    | 19,6 | 500    | 24,1 | 500    |
| 700  | 550  | 8,1  | 375    | 12,9 | 375    | 19,6 | 375    | 24,1 | 375    |
| 700  | 600  | 8,1  | 250    | 12,9 | 250    | 19,6 | 250    | 24,1 | 250    |
| 750  | 550  | 8,6  | 500    | 13,7 | 500    | 20,9 | 500    | 25,7 | 500    |
| 750  | 600  | 8,6  | 375    | 13,7 | 375    | 20,9 | 375    | 25,7 | 375    |
| 750  | 700  | 8,6  | 125    | 13,7 | 125    | 20,9 | 125    | 25,7 | 125    |
| 800  | 600  | 9,1  | 500    | 14,5 | 500    | 22,2 | 500    | 27,3 | 500    |
| 800  | 700  | 9,1  | 250    | 14,5 | 250    | 22,2 | 250    | 27,3 | 250    |
| 800  | 750  | 9,1  | 125    | 14,5 | 125    | 22,2 | 125    | 27,3 | 125    |
| 900  | 700  | 10,1 | 500    | 16,1 | 500    | 24,7 | 500    |      |        |

|      |      | PN6  |        | PN10 |        | PN16 |        | PN20 |        |
|------|------|------|--------|------|--------|------|--------|------|--------|
| DN   | dn   | t    | R      | t    | R      | t    | R      | t    | R      |
| [mm] | [mm] | [mm] | [kg/m] | [mm] | [kg/m] | [mm] | [kg/m] | [mm] | [kg/m] |
| 900  | 750  | 10,1 | 375    | 16,1 | 375    | 24,7 | 375    |      |        |
| 900  | 800  | 10,1 | 250    | 16,1 | 250    | 24,7 | 250    |      |        |
| 1000 | 750  | 11,1 | 625    | 17,7 | 625    | 27,3 | 625    |      |        |
| 1000 | 800  | 11,1 | 500    | 17,7 | 500    | 27,3 | 500    |      |        |
| 1000 | 900  | 11,1 | 250    | 17,7 | 250    | 27,3 | 250    |      |        |
| 1100 | 800  | 12,1 | 750    | 19,3 | 750    | 29,9 | 750    |      |        |
| 1100 | 900  | 12,1 | 500    | 19,3 | 500    | 29,9 | 500    |      |        |
| 1100 | 1000 | 12,1 | 250    | 19,3 | 250    | 29,9 | 250    |      |        |
| 1200 | 900  | 13,1 | 750    | 20,9 | 750    | 32,4 | 750    |      |        |
| 1200 | 1000 | 13,1 | 500    | 20,9 | 500    | 32,4 | 500    |      |        |
| 1200 | 1100 | 13,1 | 250    | 20,9 | 250    | 32,4 | 250    |      |        |
| 1300 | 1000 | 14,1 | 750    | 22,5 | 750    | 35,0 | 750    |      |        |
| 1300 | 1100 | 14,1 | 500    | 22,5 | 500    | 35,0 | 500    |      |        |
| 1300 | 1200 | 14,1 | 250    | 22,5 | 250    | 35,0 | 250    |      |        |
| 1400 | 1100 | 15,1 | 750    | 24,1 | 750    | 37,5 | 750    |      |        |
| 1400 | 1200 | 15,1 | 500    | 24,1 | 500    | 37,5 | 500    |      |        |
| 1400 | 1300 | 15,1 | 250    | 24,1 | 250    | 37,5 | 250    |      |        |
| 1500 | 1200 | 16,1 | 750    | 25,7 | 750    | 40,1 | 750    |      |        |
| 1500 | 1300 | 16,1 | 500    | 25,7 | 500    | 40,1 | 500    |      |        |
| 1500 | 1400 | 16,1 | 250    | 25,7 | 250    | 40,1 | 250    |      |        |
| 1600 | 1300 | 17,1 | 750    | 27,3 | 750    |      |        |      |        |
| 1600 | 1400 | 17,1 | 500    | 27,3 | 500    |      |        |      |        |
| 1600 | 1500 | 17,1 | 250    | 27,3 | 250    |      |        |      |        |
| 1700 | 1400 | 18,1 | 750    | 28,9 | 750    |      |        |      |        |
| 1700 | 1500 | 18,1 | 500    | 28,9 | 500    |      |        |      |        |
| 1700 | 1600 | 18,1 | 250    | 28,9 | 250    |      |        |      |        |
| 1800 | 1500 | 19,1 | 750    | 30,5 | 750    |      |        |      |        |
| 1800 | 1600 | 19,1 | 500    | 30,5 | 500    |      |        |      |        |
| 1800 | 1700 | 19,1 | 250    | 30,5 | 250    |      |        |      |        |
| 2000 | 1600 | 21,1 | 1000   | 33,7 | 1000   |      |        |      |        |
| 2000 | 1700 | 21,1 | 750    | 33,7 | 750    |      |        |      |        |
| 2000 | 1800 | 21,1 | 500    | 33,7 | 500    |      |        |      |        |

### Eccentric reducer

Description: Eccentric reducer  
 Connection: plain ends for lamination  
 System: Vinyl ester  
 Diameter: DN 25 - 2000  
 Stiffness: SN 1250, SN 2500, SN 5000, SN 10000



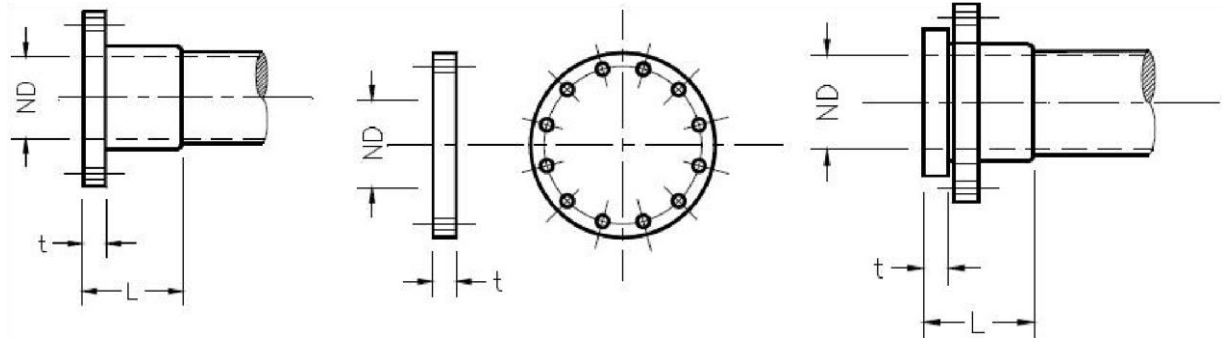
|      |      | SN 1250 |        | SN 2500 |        | SN 5000 |        | SN 10000 |        |
|------|------|---------|--------|---------|--------|---------|--------|----------|--------|
| DN   | dn   | t       | R      | t       | R      | t       | R      | t        | R      |
| [mm] | [mm] | [mm]    | [kg/m] | [mm]    | [kg/m] | [mm]    | [kg/m] | [mm]     | [kg/m] |
| 40   | 25   | 4,0     | 38     | 4,0     | 38     | 4,0     | 38     | 4,0      | 38     |
| 50   | 25   | 4,0     | 63     | 4,0     | 63     | 4,0     | 63     | 4,0      | 63     |
| 50   | 40   | 4,0     | 25     | 4,0     | 25     | 4,0     | 25     | 4,0      | 25     |
| 65   | 25   | 4,0     | 100    | 4,0     | 100    | 4,0     | 100    | 4,0      | 100    |
| 65   | 40   | 4,0     | 63     | 4,0     | 63     | 4,0     | 63     | 4,0      | 63     |
| 65   | 50   | 4,0     | 38     | 4,0     | 38     | 4,0     | 38     | 4,0      | 38     |
| 80   | 40   | 4,0     | 100    | 4,0     | 100    | 4,0     | 100    | 4,0      | 100    |
| 80   | 50   | 4,0     | 75     | 4,0     | 75     | 4,0     | 75     | 4,0      | 75     |
| 80   | 65   | 4,0     | 38     | 4,0     | 38     | 4,0     | 38     | 4,0      | 38     |
| 100  | 50   | 4,0     | 125    | 4,0     | 125    | 4,0     | 125    | 4,0      | 125    |
| 100  | 65   | 4,0     | 88     | 4,0     | 88     | 4,0     | 88     | 4,0      | 88     |
| 100  | 80   | 4,0     | 50     | 4,0     | 50     | 4,0     | 50     | 4,0      | 50     |
| 125  | 65   | 4,0     | 150    | 4,0     | 150    | 4,0     | 150    | 4,0      | 150    |
| 125  | 80   | 4,0     | 113    | 4,0     | 113    | 4,0     | 113    | 4,0      | 113    |
| 125  | 100  | 4,0     | 63     | 4,0     | 63     | 4,0     | 63     | 4,0      | 63     |
| 150  | 80   | 4,0     | 175    | 4,0     | 175    | 4,0     | 175    | 4,0      | 175    |
| 150  | 100  | 4,0     | 125    | 4,0     | 125    | 4,0     | 125    | 4,0      | 125    |
| 150  | 125  | 4,0     | 63     | 4,0     | 63     | 4,0     | 63     | 4,0      | 63     |
| 200  | 100  | 4,0     | 250    | 4,0     | 250    | 4,2     | 250    | 5,0      | 250    |

|      |      | SN 1250 |        | SN 2500 |        | SN 5000 |        | SN 10000 |        |
|------|------|---------|--------|---------|--------|---------|--------|----------|--------|
| DN   | dn   | t       | R      | t       | R      | t       | R      | t        | R      |
| [mm] | [mm] | [mm]    | [kg/m] | [mm]    | [kg/m] | [mm]    | [kg/m] | [mm]     | [kg/m] |
| 200  | 125  | 4,0     | 188    | 4,0     | 188    | 4,2     | 188    | 5,0      | 188    |
| 200  | 150  | 4,0     | 125    | 4,0     | 125    | 4,2     | 125    | 5,0      | 125    |
| 250  | 125  | 4,0     | 313    | 4,2     | 313    | 5,0     | 313    | 6,0      | 313    |
| 250  | 150  | 4,0     | 250    | 4,2     | 250    | 5,0     | 250    | 6,0      | 250    |
| 250  | 200  | 4,0     | 125    | 4,2     | 125    | 5,0     | 125    | 6,0      | 125    |
| 300  | 150  | 4,0     | 375    | 4,8     | 375    | 5,8     | 375    | 7,0      | 375    |
| 300  | 200  | 4,0     | 250    | 4,8     | 250    | 5,8     | 250    | 7,0      | 250    |
| 300  | 250  | 4,0     | 125    | 4,8     | 125    | 5,8     | 125    | 7,0      | 125    |
| 350  | 200  | 4,5     | 375    | 5,4     | 375    | 6,6     | 375    | 8,1      | 375    |
| 350  | 250  | 4,5     | 250    | 5,4     | 250    | 6,6     | 250    | 8,1      | 250    |
| 350  | 300  | 4,5     | 125    | 5,4     | 125    | 6,6     | 125    | 8,1      | 125    |
| 400  | 250  | 5,0     | 375    | 6,1     | 375    | 7,4     | 375    | 9,1      | 375    |
| 400  | 300  | 5,0     | 250    | 6,1     | 250    | 7,4     | 250    | 9,1      | 250    |
| 400  | 350  | 5,0     | 125    | 6,1     | 125    | 7,4     | 125    | 9,1      | 125    |
| 450  | 300  | 5,5     | 375    | 6,7     | 375    | 8,2     | 375    | 10,1     | 375    |
| 450  | 350  | 5,5     | 250    | 6,7     | 250    | 8,2     | 250    | 10,1     | 250    |
| 450  | 400  | 5,5     | 125    | 6,7     | 125    | 8,2     | 125    | 10,1     | 125    |
| 500  | 350  | 6,0     | 375    | 7,3     | 375    | 9,0     | 375    | 11,1     | 375    |
| 500  | 400  | 6,0     | 250    | 7,3     | 250    | 9,0     | 250    | 11,1     | 250    |
| 500  | 450  | 6,0     | 125    | 7,3     | 125    | 9,0     | 125    | 11,1     | 125    |
| 550  | 400  | 6,5     | 375    | 8,0     | 375    | 9,8     | 375    | 12,1     | 375    |
| 550  | 450  | 6,5     | 250    | 8,0     | 250    | 9,8     | 250    | 12,1     | 250    |
| 550  | 500  | 6,5     | 125    | 8,0     | 125    | 9,8     | 125    | 12,1     | 125    |
| 600  | 450  | 7,0     | 375    | 8,6     | 375    | 10,6    | 375    | 13,1     | 375    |
| 600  | 500  | 7,0     | 250    | 8,6     | 250    | 10,6    | 250    | 13,1     | 250    |
| 600  | 550  | 7,0     | 125    | 8,6     | 125    | 10,6    | 125    | 13,1     | 125    |
| 700  | 500  | 8,1     | 500    | 9,9     | 500    | 12,2    | 500    | 15,1     | 500    |
| 700  | 550  | 8,1     | 375    | 9,9     | 375    | 12,2    | 375    | 15,1     | 375    |
| 700  | 600  | 8,1     | 250    | 9,9     | 250    | 12,2    | 250    | 15,1     | 250    |
| 750  | 550  | 8,6     | 500    | 10,5    | 500    | 13,0    | 500    | 16,1     | 500    |
| 750  | 600  | 8,6     | 375    | 10,5    | 375    | 13,0    | 375    | 16,1     | 375    |
| 750  | 700  | 8,6     | 125    | 10,5    | 125    | 13,0    | 125    | 16,1     | 125    |
| 800  | 600  | 9,1     | 500    | 11,2    | 500    | 13,8    | 500    | 17,1     | 500    |
| 800  | 700  | 9,1     | 250    | 11,2    | 250    | 13,8    | 250    | 17,1     | 250    |
| 800  | 750  | 9,1     | 125    | 11,2    | 125    | 13,8    | 125    | 17,1     | 125    |
| 900  | 700  | 10,1    | 500    | 12,4    | 500    | 15,4    | 500    | 19,1     | 500    |

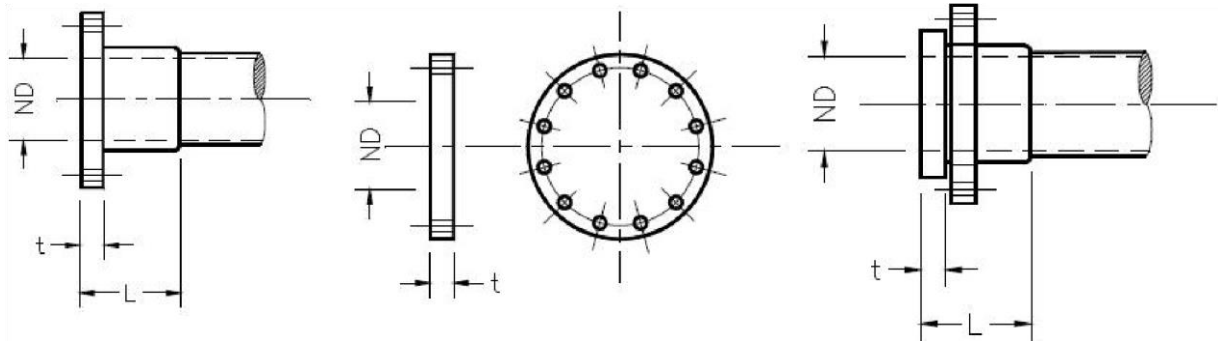
|      |      | SN 1250 |        | SN 2500 |        | SN 5000 |        | SN 10000 |        |
|------|------|---------|--------|---------|--------|---------|--------|----------|--------|
| DN   | dn   | t       | R      | t       | R      | t       | R      | t        | R      |
| [mm] | [mm] | [mm]    | [kg/m] | [mm]    | [kg/m] | [mm]    | [kg/m] | [mm]     | [kg/m] |
| 900  | 750  | 10,1    | 375    | 12,4    | 375    | 15,4    | 375    | 19,1     | 375    |
| 900  | 800  | 10,1    | 250    | 12,4    | 250    | 15,4    | 250    | 19,1     | 250    |
| 1000 | 750  | 11,1    | 625    | 13,7    | 625    | 17,0    | 625    | 21,1     | 625    |
| 1000 | 800  | 11,1    | 500    | 13,7    | 500    | 17,0    | 500    | 21,1     | 500    |
| 1000 | 900  | 11,1    | 250    | 13,7    | 250    | 17,0    | 250    | 21,1     | 250    |
| 1100 | 800  | 12,1    | 750    | 15,0    | 750    | 18,6    | 750    | 23,2     | 750    |
| 1100 | 900  | 12,1    | 500    | 15,0    | 500    | 18,6    | 500    | 23,2     | 500    |
| 1100 | 1000 | 12,1    | 250    | 15,0    | 250    | 18,6    | 250    | 23,2     | 250    |
| 1200 | 900  | 13,1    | 750    | 16,2    | 750    | 20,2    | 750    | 25,2     | 750    |
| 1200 | 1000 | 13,1    | 500    | 16,2    | 500    | 20,2    | 500    | 25,2     | 500    |
| 1200 | 1100 | 13,1    | 250    | 16,2    | 250    | 20,2    | 250    | 25,2     | 250    |
| 1300 | 1000 | 14,1    | 750    | 17,5    | 750    | 21,8    | 750    | 27,2     | 750    |
| 1300 | 1100 | 14,1    | 500    | 17,5    | 500    | 21,8    | 500    | 27,2     | 500    |
| 1300 | 1200 | 14,1    | 250    | 17,5    | 250    | 21,8    | 250    | 27,2     | 250    |
| 1400 | 1100 | 15,1    | 750    | 18,8    | 750    | 23,4    | 750    | 29,2     | 750    |
| 1400 | 1200 | 15,1    | 500    | 18,8    | 500    | 23,4    | 500    | 29,2     | 500    |
| 1400 | 1300 | 15,1    | 250    | 18,8    | 250    | 23,4    | 250    | 29,2     | 250    |
| 1500 | 1200 | 16,1    | 750    | 20,0    | 750    | 25,0    | 750    | 31,2     | 750    |
| 1500 | 1300 | 16,1    | 500    | 20,0    | 500    | 25,0    | 500    | 31,2     | 500    |
| 1500 | 1400 | 16,1    | 250    | 20,0    | 250    | 25,0    | 250    | 31,2     | 250    |
| 1600 | 1300 |         |        | 21,3    | 750    | 26,6    | 750    | 33,2     | 750    |
| 1600 | 1400 |         |        | 21,3    | 500    | 26,6    | 500    | 33,2     | 500    |
| 1600 | 1500 |         |        | 21,3    | 250    | 26,6    | 250    | 33,2     | 250    |
| 1700 | 1400 |         |        | 22,6    | 750    | 28,2    | 750    | 35,2     | 750    |
| 1700 | 1500 |         |        | 22,6    | 500    | 28,2    | 500    | 35,2     | 500    |
| 1700 | 1600 |         |        | 22,6    | 250    | 28,2    | 250    | 35,2     | 250    |
| 1800 | 1500 |         |        | 23,8    | 750    | 29,8    | 750    | 37,3     | 750    |
| 1800 | 1600 |         |        | 23,8    | 500    | 29,8    | 500    | 37,3     | 500    |
| 1800 | 1700 |         |        | 23,8    | 250    | 29,8    | 250    | 37,3     | 250    |
| 2000 | 1600 |         |        | 26,4    | 1000   | 33,0    | 1000   | 41,3     | 1000   |
| 2000 | 1700 |         |        | 26,4    | 750    | 33,0    | 750    | 41,3     | 750    |
| 2000 | 1800 |         |        | 26,4    | 500    | 33,0    | 500    | 41,3     | 500    |

## Flange

Description: Flange  
 Standard: DIN, ANSI (acc. to customer request )  
 System Vinyl ester  
 Diameter: DN 25 - 2000  
 Pressure class: PN 6, PN 10, PN 16, PN 20



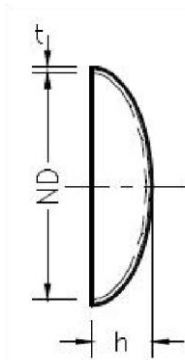
|            | PN6       |           | PN10      |           | PN16      |           | PN20      |        |
|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------|
| DN<br>[mm] | t<br>[mm] | L<br>[mm] | t<br>[mm] | L<br>[mm] | t<br>[mm] | L<br>[mm] | t<br>[mm] | L [mm] |
| 25         | 20        | 100       | 20        | 100       | 20        | 100       | 20        | 100    |
| 40         | 20        | 100       | 20        | 100       | 20        | 100       | 20        | 100    |
| 50         | 20        | 100       | 20        | 100       | 20        | 100       | 20        | 100    |
| 65         | 20        | 100       | 20        | 100       | 20        | 100       | 20        | 100    |
| 80         | 25        | 100       | 25        | 100       | 25        | 100       | 25        | 100    |
| 100        | 25        | 100       | 25        | 100       | 25        | 100       | 25        | 100    |
| 125        | 25        | 100       | 25        | 100       | 25        | 100       | 25        | 100    |
| 150        | 25        | 100       | 25        | 100       | 25        | 100       | 30        | 120    |
| 200        | 25        | 100       | 25        | 100       | 30        | 120       | 35        | 140    |
| 250        | 25        | 100       | 25        | 100       | 35        | 140       | 45        | 180    |
| 300        | 25        | 100       | 30        | 120       | 45        | 180       | 55        | 220    |
| 350        | 25        | 100       | 30        | 120       | 50        | 200       | 65        | 260    |
| 400        | 25        | 100       | 35        | 140       | 60        | 240       | 70        | 280    |
| 450        | 30        | 120       | 40        | 160       | 65        | 260       | 80        | 320    |
| 500        | 30        | 120       | 45        | 180       | 70        | 280       | 90        | 360    |
| 550        | 35        | 1140      | 50        | 200       | 80        | 320       | 100       | 400    |
| 600        | 35        | 140       | 55        | 220       | 85        | 340       | 105       | 420    |
| 700        | 45        | 180       | 60        | 240       | 100       | 400       | 125       | 500    |



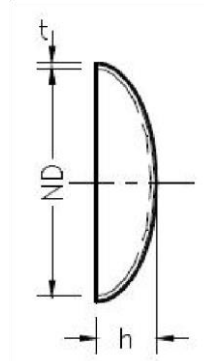
| DN<br>[mm] | PN6       |           | PN10      |           | PN16      |           | PN20      |           |
|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|            | t<br>[mm] | L<br>[mm] | t<br>[mm] | L<br>[mm] | t<br>[mm] | L<br>[mm] | t<br>[mm] | L<br>[mm] |
| 750        | 45        | 180       | 65        | 260       | 105       | 420       | 135       | 540       |
| 800        | 50        | 200       | 70        | 280       | 115       | 460       | 140       | 560       |
| 900        | 55        | 220       | 80        | 320       | 125       | 500       |           |           |
| 1000       | 60        | 240       | 90        | 360       | 140       | 560       |           |           |
| 1100       | 65        | 260       | 95        | 380       | 155       | 620       |           |           |
| 1200       | 70        | 280       | 105       | 420       | 170       | 680       |           |           |
| 1300       | 75        | 300       | 115       | 460       | 180       | 720       |           |           |
| 1400       | 80        | 320       | 120       | 480       | 190       | 760       |           |           |
| 1500       | 90        | 360       | 130       | 520       | 210       | 840       |           |           |
| 1600       | 95        | 380       | 140       | 560       |           |           |           |           |
| 1700       | 100       | 400       | 150       | 600       |           |           |           |           |
| 1800       | 105       | 420       | 155       | 620       |           |           |           |           |
| 2000       | 115       | 460       | 170       | 680       |           |           |           |           |

## Cap

Description: Cap  
 Connection: plain ends for lamination  
 System: Vinyl ester  
 Diameter: DN 25 - 2000  
 Pressure class: PN 6, PN 10, PN 16, PN 20



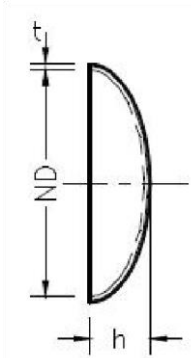
| DN   | PN6  |        | PN10 |        | PN16 |        | PN20 |        |
|------|------|--------|------|--------|------|--------|------|--------|
|      | t    | h      | t    | h      | t    | h      | t    | h      |
| [mm] | [mm] | [kg/m] | [mm] | [kg/m] | [mm] | [kg/m] | [mm] | [kg/m] |
| 25   | 4,0  | 6,3    | 4,0  | 6,3    | 4,0  | 6,3    | 4,0  | 6,3    |
| 40   | 4,0  | 10,0   | 4,0  | 10,0   | 4,0  | 10,0   | 4,0  | 10,0   |
| 50   | 4,0  | 12,5   | 4,0  | 12,5   | 4,0  | 12,5   | 4,0  | 12,5   |
| 65   | 4,0  | 16,3   | 4,0  | 16,3   | 4,0  | 16,3   | 4,0  | 16,3   |
| 80   | 4,0  | 20,0   | 4,0  | 20,0   | 4,0  | 20,0   | 4,3  | 20,0   |
| 100  | 4,0  | 25,0   | 4,0  | 25,0   | 4,3  | 25,0   | 4,9  | 25,0   |
| 125  | 4,0  | 31,3   | 4,0  | 31,3   | 4,9  | 31,3   | 5,7  | 31,3   |
| 150  | 4,0  | 37,5   | 4,1  | 37,5   | 5,5  | 37,5   | 6,5  | 37,5   |
| 200  | 4,0  | 50,0   | 4,9  | 50,0   | 6,8  | 50,0   | 8,1  | 50,0   |
| 250  | 4,0  | 62,5   | 5,7  | 62,5   | 8,1  | 62,5   | 9,7  | 62,5   |
| 300  | 4,0  | 75,0   | 6,5  | 75,0   | 9,4  | 75,0   | 11,3 | 75,0   |
| 350  | 4,5  | 87,5   | 7,3  | 87,5   | 10,7 | 87,5   | 12,9 | 87,5   |
| 400  | 5,0  | 100,0  | 8,1  | 100,0  | 11,9 | 100,0  | 14,5 | 100,0  |
| 450  | 5,5  | 112,5  | 8,9  | 112,5  | 13,2 | 112,5  | 16,1 | 112,5  |
| 500  | 6,0  | 125,0  | 9,7  | 125,0  | 14,5 | 125,0  | 17,7 | 125,0  |
| 550  | 6,5  | 137,5  | 10,5 | 137,5  | 15,8 | 137,5  | 19,3 | 137,5  |
| 600  | 7,0  | 150,0  | 11,3 | 150,0  | 17,1 | 150,0  | 20,9 | 150,0  |
| 700  | 8,1  | 175,0  | 12,9 | 175,0  | 19,6 | 175,0  | 24,1 | 175,0  |



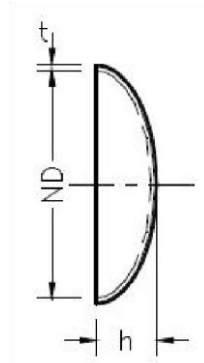
| DN<br>[mm] | PN6       |             | PN10      |             | PN16      |             | PN20      |             |
|------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|
|            | t<br>[mm] | h<br>[kg/m] | t<br>[mm] | h<br>[kg/m] | t<br>[mm] | h<br>[kg/m] | t<br>[mm] | h<br>[kg/m] |
| 750        | 8,6       | 187,5       | 13,7      | 187,5       | 20,9      | 187,5       | 25,7      | 187,5       |
| 800        | 9,1       | 200,0       | 14,5      | 200,0       | 22,2      | 200,0       | 27,3      | 200,0       |
| 900        | 10,1      | 225,0       | 16,1      | 225,0       | 24,7      | 225,0       |           |             |
| 1000       | 11,1      | 250,0       | 17,7      | 250,0       | 27,3      | 250,0       |           |             |
| 1100       | 12,1      | 275,0       | 19,3      | 275,0       | 29,9      | 275,0       |           |             |
| 1200       | 13,1      | 300,0       | 20,9      | 300,0       | 32,4      | 300,0       |           |             |
| 1300       | 14,1      | 325,0       | 22,5      | 325,0       | 35,0      | 325,0       |           |             |
| 1400       | 15,1      | 350,0       | 24,1      | 350,0       | 37,5      | 350,0       |           |             |
| 1500       | 16,1      | 375,0       | 25,7      | 375,0       | 40,1      | 375,0       |           |             |
| 1600       | 17,1      | 400,0       | 27,3      | 400,0       |           |             |           |             |
| 1700       | 18,1      | 425,0       | 28,9      | 425,0       |           |             |           |             |
| 1800       | 19,1      | 450,0       | 30,5      | 450,0       |           |             |           |             |
| 2000       | 21,1      | 500,0       | 33,7      | 500,0       |           |             |           |             |

### Cap

Description: Cap  
 Connection: plain ends for lamination  
 System: Vinyl ester  
 Diameter: DN 25 - 2000  
 Stiffness: SN 1250, SN 2500, SN 5000, SN 10000



| DN<br>[mm] | SN 1250   |             | SN 2500   |             | SN 5000   |             | SN 10000  |             |
|------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|
|            | t<br>[mm] | h<br>[kg/m] | t<br>[mm] | h<br>[kg/m] | t<br>[mm] | h<br>[kg/m] | t<br>[mm] | h<br>[kg/m] |
| 25         | 4,0       | 6,3         | 4,0       | 6,3         | 4,0       | 6,3         | 4,0       | 6,3         |
| 40         | 4,0       | 10,0        | 4,0       | 10,0        | 4,0       | 10,0        | 4,0       | 10,0        |
| 50         | 4,0       | 12,5        | 4,0       | 12,5        | 4,0       | 12,5        | 4,0       | 12,5        |
| 65         | 4,0       | 16,3        | 4,0       | 16,3        | 4,0       | 16,3        | 4,0       | 16,3        |
| 80         | 4,0       | 20,0        | 4,0       | 20,0        | 4,0       | 20,0        | 4,0       | 20,0        |
| 100        | 4,0       | 25,0        | 4,0       | 25,0        | 4,0       | 25,0        | 4,0       | 25,0        |
| 125        | 4,0       | 31,3        | 4,0       | 31,3        | 4,0       | 31,3        | 4,0       | 31,3        |
| 150        | 4,0       | 37,5        | 4,0       | 37,5        | 4,0       | 37,5        | 4,0       | 37,5        |
| 200        | 4,0       | 50,0        | 4,0       | 50,0        | 4,2       | 50,0        | 5,0       | 50,0        |
| 250        | 4,0       | 62,5        | 4,2       | 62,5        | 5,0       | 62,5        | 6,0       | 62,5        |
| 300        | 4,0       | 75,0        | 4,8       | 75,0        | 5,8       | 75,0        | 7,0       | 75,0        |
| 350        | 4,5       | 87,5        | 5,4       | 87,5        | 6,6       | 87,5        | 8,1       | 87,5        |
| 400        | 5,0       | 100,0       | 6,1       | 100,0       | 7,4       | 100,0       | 9,1       | 100,0       |
| 450        | 5,5       | 112,5       | 6,7       | 112,5       | 8,2       | 112,5       | 10,1      | 112,5       |
| 500        | 6,0       | 125,0       | 7,3       | 125,0       | 9,0       | 125,0       | 11,1      | 125,0       |
| 550        | 6,5       | 137,5       | 8,0       | 137,5       | 9,8       | 137,5       | 12,1      | 137,5       |
| 600        | 7,0       | 150,0       | 8,6       | 150,0       | 10,6      | 150,0       | 13,1      | 150,0       |
| 700        | 8,1       | 175,0       | 9,9       | 175,0       | 12,2      | 175,0       | 15,1      | 175,0       |



| DN   | SN 1250   |             | SN 2500   |             | SN 5000   |             | SN 10000  |             |
|------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|
|      | t<br>[mm] | h<br>[kg/m] | t<br>[mm] | h<br>[kg/m] | t<br>[mm] | h<br>[kg/m] | t<br>[mm] | h<br>[kg/m] |
| 750  | 8,6       | 187,5       | 10,5      | 187,5       | 13,0      | 187,5       | 16,1      | 187,5       |
| 800  | 9,1       | 200,0       | 11,2      | 200,0       | 13,8      | 200,0       | 17,1      | 200,0       |
| 900  | 10,1      | 225,0       | 12,4      | 225,0       | 15,4      | 225,0       | 19,1      | 225,0       |
| 1000 | 11,1      | 250,0       | 13,7      | 250,0       | 17,0      | 250,0       | 21,1      | 250,0       |
| 1100 | 12,1      | 275,0       | 15,0      | 275,0       | 18,6      | 275,0       | 23,2      | 275,0       |
| 1200 | 13,1      | 300,0       | 16,2      | 300,0       | 20,2      | 300,0       | 25,2      | 300,0       |
| 1300 | 14,1      | 325,0       | 17,5      | 325,0       | 21,8      | 325,0       | 27,2      | 325,0       |
| 1400 | 15,1      | 350,0       | 18,8      | 350,0       | 23,4      | 350,0       | 29,2      | 350,0       |
| 1500 | 16,1      | 375,0       | 20,0      | 375,0       | 25,0      | 375,0       | 31,2      | 375,0       |
| 1600 |           |             | 21,3      | 400,0       | 26,6      | 400,0       | 33,2      | 400,0       |
| 1700 |           |             | 22,6      | 425,0       | 28,2      | 425,0       | 35,2      | 425,0       |
| 1800 |           |             | 23,8      | 450,0       | 29,8      | 450,0       | 37,3      | 450,0       |
| 2000 |           |             | 26,4      | 3000,0      | 33,0      | 500,0       | 41,3      | 500,0       |