

SINGLE PIPES

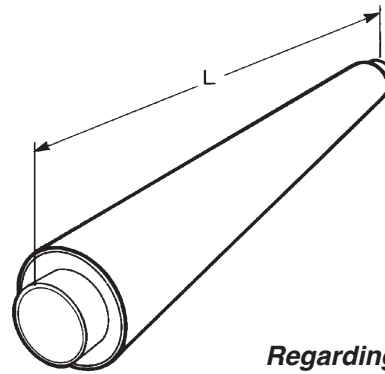
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Straight pipes

Series 1

Article no 12 m, Series 1: 1103-DN-000-000
Article no 16 m, Series 1: 1104-DN-000-000

PN 16/PN25



*Regarding heat losses
Please see chapter 9!*

ARTICLE NO 1103, 1104

| DN | Service pipe Dy x s [mm] | Jacket pipe DY [mm] | Weight [kg/m] | Water - content [l/m] | Transmission capacity $\Delta T = 50^{\circ}C$ | |
|-----------------|-----------------------------|------------------------|------------------|--------------------------|---|---------|
| | | | | | [m/s] | [kW] |
| L = 12 m | | | | | | |
| 25 | 33,7 x 2,3 | 90 | 3,1 | 0,6 | 0,8 | 100 |
| 32 | 42,4 x 2,6 | 110 | 4,3 | 1,1 | 0,8 | 180 |
| 40 | 48,3 x 2,6 | 110 | 4,6 | 1,5 | 0,9 | 230 |
| 50 | 60,3 x 2,9 | 125 | 6,1 | 2,3 | 0,9 | 370 |
| 65 | 76,1 x 2,9 | 140 | 7,4 | 3,9 | 1,0 | 700 |
| 80 | 88,9 x 3,2 | 160 | 9,4 | 5,3 | 1,0 | 1.000 |
| 100 | 114,3 x 3,6 | 200 | 13,6 | 9,0 | 1,1 | 1.800 |
| 125 | 139,7 x 3,6 | 225 | 16,6 | 13,8 | 1,3 | 3.300 |
| 150 | 168,3 x 4,0 | 250 | 21,5 | 20,2 | 1,4 | 5.000 |
| 200 | 219,1 x 4,5 | 315 | 31,9 | 34,7 | 1,6 | 10.000 |
| 250 | 273,0 x 5,0 | 400 | 46,3 | 54,3 | 1,8 | 18.000 |
| 300 | 323,9 x 5,6 | 450 | 60,0 | 76,8 | 2,0 | 28.000 |
| 350 | 355,6 x 5,6 | 500 | 68,3 | 93,1 | 2,0 | 34.000 |
| 400 | 406,4 x 6,3 | 560 | 86,9 | 122,0 | 2,0 | 45.000 |
| 450 | 457,0 x 6,3 | 560 | 91,6 | 155,0 | 2,0 | 65.000 |
| 500 | 508,0 x 6,3 | 630 | 105,4 | 193,0 | 2,0 | 80.000 |
| 600 | 610,0 x 7,1 | 710 | 138,0 | 277,0 | 2,0 | 110.000 |
| 700 | 711,0 x 8,0 | 800 | 190,2 | 378,0 | 2,0 | 160.000 |
| 800 | 813,0 x 8,8 | 900 | 222,0 | 497,0 | 2,0 | 210.000 |
| 900 | 914,0 x 10,0 | 1000 | 261,0 | 627,0 | 2,0 | 265,000 |
| L = 16 m | | | | | | |
| 100 | 114,3 x 3,6 | 200 | 13,6 | 9,0 | 1,1 | 1.800 |
| 125 | 139,7 x 3,6 | 225 | 16,6 | 13,8 | 1,3 | 3.300 |
| 150 | 168,3 x 4,0 | 250 | 21,5 | 20,2 | 1,4 | 5.000 |
| 200 | 219,1 x 4,5 | 315 | 31,9 | 34,7 | 1,6 | 10.000 |
| 250 | 273,0 x 5,0 | 400 | 46,3 | 54,3 | 1,9 | 18.000 |
| 300 | 323,9 x 5,6 | 450 | 60,0 | 76,8 | 2,0 | 28.000 |
| 350 | 355,6 x 5,6 | 500 | 68,3 | 93,1 | 2,0 | 34.000 |
| 400 | 406,4 x 6,3 | 560 | 86,9 | 122,0 | 2,0 | 45.000 |
| 450 | 457,0 x 6,3 | 560 | 91,6 | 155,0 | 2,0 | 65.000 |
| 500 | 508,0 x 6,3 | 630 | 105,4 | 193,0 | 2,0 | 80.000 |
| 600 | 610,0 x 7,1 | 710 | 138,0 | 277,0 | 2,0 | 110.000 |
| 700 | 711,2 x 8,0 | 800 | 190,2 | 378,0 | 2,0 | 160.000 |
| 800 | 812,8 x 8,8 | 900 | 222,0 | 497,0 | 2,0 | 210.000 |
| 900 | 914,0 x 10,0 | 1000 | 261,0 | 627,0 | 2,0 | 265,000 |

SINGLE PIPES

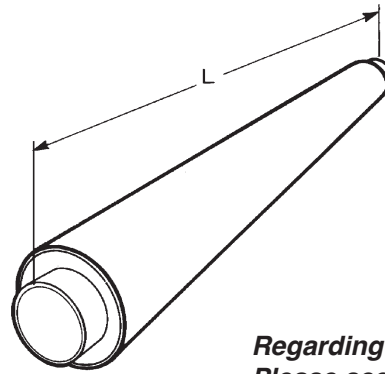
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Straight pipes

Series 2

Article no 12 m, Series 2: 1203-DN-000-000
Article no 16 m, Series 2: 1204-DN-000-000

PN 16/PN25



Regarding heat losses
Please see chapter 9!

ARTICLE NO 1203, 1204

| DN | Service pipe Dy x s [mm] | Jacket pipe DY [mm] | Weight [kg/m] | Water - content [l/m] | Transmission capacity $\Delta T = 50^{\circ}\text{C}$ | |
|-----------------|-----------------------------|------------------------|------------------|--------------------------|--|---------|
| | | | | | [m/s] | [kW] |
| L = 12 m | | | | | | |
| 20 | 26,9x2,0 | 110 | 3,3 | 0,4 | 0,8 | 65 |
| 25 | 33,7x2,3 | 110 | 3,5 | 0,6 | 0,8 | 100 |
| 32 | 42,4x2,6 | 125 | 4,6 | 1,1 | 0,8 | 180 |
| 40 | 48,3x2,6 | 125 | 5,0 | 1,5 | 0,9 | 230 |
| 50 | 60,3x2,9 | 140 | 6,5 | 2,3 | 0,9 | 370 |
| 65 | 76,1x2,9 | 160 | 8,0 | 3,5 | 1,0 | 700 |
| 80 | 88,9x3,2 | 180 | 10,1 | 5,3 | 1,0 | 1.000 |
| 100 | 114,3x3,6 | 225 | 14,8 | 9,0 | 1,1 | 1.800 |
| 125 | 139,7x3,6 | 250 | 17,7 | 13,8 | 1,3 | 3.300 |
| 150 | 168,3x4,0 | 280 | 23,6 | 20,2 | 1,4 | 5.000 |
| 200 | 219,1x4,5 | 355 | 35,1 | 34,7 | 1,6 | 10.000 |
| 250 | 273,0x5,0 | 450 | 51,1 | 54,3 | 1,8 | 18.000 |
| 300 | 323,9x5,6 | 500 | 65,5 | 76,8 | 2,0 | 28.000 |
| 350 | 355,6x5,6 | 560 | 75,7 | 93,1 | 2,0 | 34.000 |
| 400 | 406,4x6,3 | 630 | 96,3 | 121,7 | 2,0 | 45.000 |
| 450 | 457,0x6,3 | 630 | 101,0 | 155,0 | 2,0 | 65.000 |
| 500 | 508,0x6,3 | 710 | 118,0 | 193,0 | 2,0 | 80.000 |
| 600 | 610,0x7,1 | 800 | 153,6 | 277,0 | 2,0 | 110.000 |
| 700 | 711,0x8,0 | 900 | 210,0 | 378,0 | 2,0 | 160.000 |
| 800 | 813,0x8,8 | 1000 | 246,0 | 497,0 | 2,0 | 210.000 |
| 900 | 914,0x10,0 | 1100 | 276,0 | 627,0 | 2,0 | 265.000 |
| L = 16 m | | | | | | |
| 100 | 114,3x3,6 | 225 | 14,8 | 9,0 | 1,1 | 1.800 |
| 125 | 139,7x3,6 | 250 | 17,7 | 13,8 | 1,3 | 3.300 |
| 150 | 168,3x4,0 | 280 | 21,5 | 20,2 | 1,4 | 5.000 |
| 200 | 219,1x4,5 | 355 | 35,1 | 34,7 | 1,6 | 10.000 |
| 250 | 273,0x5,0 | 450 | 51,1 | 54,3 | 1,8 | 18.000 |
| 300 | 323,9x5,6 | 500 | 65,5 | 76,8 | 2,0 | 28.000 |
| 350 | 355,6x5,6 | 560 | 75,7 | 93,1 | 2,0 | 34.000 |
| 400 | 406,4x6,3 | 630 | 96,3 | 122,0 | 2,0 | 45.000 |
| 450 | 457,0x6,3 | 630 | 101,0 | 155,0 | 2,0 | 65.000 |
| 500 | 508,0x6,3 | 710 | 118,0 | 193,0 | 2,0 | 80.000 |
| 600 | 610,0x7,1 | 800 | 153,6 | 277,0 | 2,0 | 110.000 |
| 700 | 711,0x8,0 | 900 | 210,0 | 378,0 | 2,0 | 160.000 |
| 800 | 813,0x8,8 | 1000 | 246,0 | 497,0 | 2,0 | 210.000 |
| 900 | 914,0x10,0 | 1100 | 276,0 | 627,0 | 2,0 | 265.000 |

SINGLE PIPES

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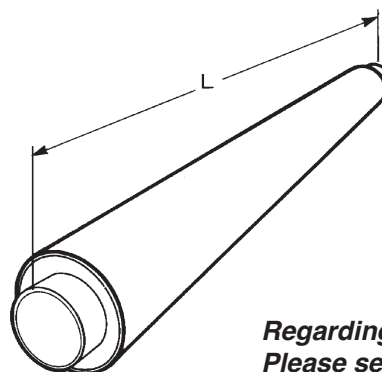
Straight pipes

Series 3

Article no 12 m, Series 3: 1303-DN-000-000

Article no 16 m, Series 3: 1304-DN-000-000

PN 16/PN25



Regarding heat losses
Please see chapter 9!

ARTICLE NO 1303, 1304

| DN | Service pipe Dy x s [mm] | Jacket pipe DY [mm] | Weight [kg/m] | Water - content [l/m] | Transmission capacity $\Delta T = 50^{\circ}\text{C}$ | |
|-----------------|-----------------------------|------------------------|------------------|--------------------------|--|---------|
| | | | | | [m/s] | [kW] |
| L = 12 m | | | | | | |
| 20 | 26,9x2,0 | 125 | 3,7 | 0,4 | 0,8 | 65 |
| 25 | 33,7x2,3 | 125 | 3,9 | 0,6 | 0,8 | 100 |
| 32 | 42,4x2,6 | 140 | 5,0 | 1,1 | 0,8 | 180 |
| 40 | 48,3x2,6 | 140 | 5,4 | 1,5 | 0,9 | 230 |
| 50 | 60,3x2,9 | 160 | 7,1 | 2,3 | 0,9 | 370 |
| 65 | 76,1x2,9 | 180 | 8,7 | 3,5 | 1,0 | 700 |
| 80 | 88,9x3,2 | 200 | 10,9 | 5,3 | 1,0 | 1.000 |
| 100 | 114,3x3,6 | 250 | 16,2 | 9,0 | 1,1 | 1.800 |
| 125 | 139,7x3,6 | 280 | 19,9 | 13,8 | 1,3 | 3.300 |
| 150 | 168,3x4,0 | 315 | 25,7 | 20,2 | 1,4 | 5.000 |
| 200 | 219,1x4,5 | 400 | 39,0 | 34,7 | 1,6 | 10.000 |
| 250 | 273,0x5,0 | 500 | 46,3 | 54,3 | 1,8 | 18.000 |
| 300 | 323,9x5,6 | 560 | 76,9 | 76,8 | 2,0 | 28.000 |
| 350 | 355,6x5,6 | 630 | 85,1 | 93,1 | 2,0 | 34.000 |
| 400 | 406,4x6,3 | 710 | 108,8 | 122,0 | 2,0 | 45.000 |
| 450 | 457,0x6,3 | 710 | 113,5 | 155,0 | 2,0 | 65.000 |
| 500 | 508,0x6,3 | 800 | 133,6 | 193,0 | 2,0 | 80.000 |
| 600 | 610,0x7,1 | 900 | 173,0 | 277,0 | 2,0 | 110.000 |
| 700 | 711,0x8,0 | 1000 | 231,8 | 378,0 | 2,0 | 160.000 |
| 800 | 812,8x8,8 | 1100 | 267,0 | 497,0 | 2,0 | 210.000 |
| L = 16 m | | | | | | |
| 100 | 114,3x3,6 | 250 | 16,2 | 9,0 | 1,1 | 1.800 |
| 125 | 139,7x3,6 | 280 | 19,9 | 13,8 | 1,3 | 3.300 |
| 150 | 168,3x4,0 | 315 | 25,7 | 20,2 | 1,4 | 5.000 |
| 200 | 219,1x4,5 | 400 | 39,0 | 34,7 | 1,6 | 10.000 |
| 250 | 273,0x5,0 | 500 | 46,3 | 54,3 | 1,8 | 18.000 |
| 300 | 323,9x5,6 | 560 | 76,9 | 76,8 | 2,0 | 28.000 |
| 350 | 355,6x5,6 | 630 | 85,1 | 93,1 | 2,0 | 34.000 |
| 400 | 406,4x6,3 | 710 | 108,8 | 122,0 | 2,0 | 45.000 |
| 450 | 457,0x6,3 | 710 | 113,5 | 155,0 | 2,0 | 65.000 |
| 500 | 508,0x6,3 | 800 | 133,6 | 193,0 | 2,0 | 80.000 |
| 600 | 610,0x7,1 | 900 | 173,0 | 277,0 | 2,0 | 110.000 |
| 700 | 711,0x8,0 | 1000 | 231,8 | 378,0 | 2,0 | 160.000 |
| 800 | 812,8x8,8 | 1100 | 267,0 | 497,0 | 2,0 | 210.000 |

SINGLE PIPES

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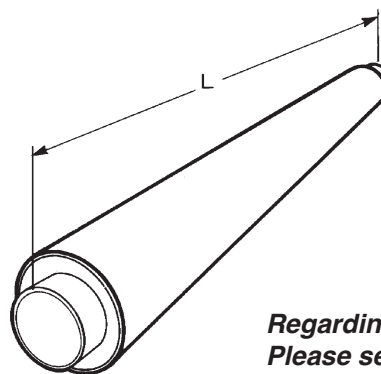
Straight pipes

Series 4

Article no 12 m, Series 4: 1403-DN-000-000

Article no 16 m, Series 4: 1404-DN-000-000

PN 16/PN25



Regarding heat losses
Please see chapter 9!

ARTICLE NO 1403, 1404

| DN | Service pipe Dy x s [mm] | Jacket pipe DY [mm] | Weight [kg/m] | Water - content [l/m] | Transmission capacity $\Delta T = 50^{\circ}\text{C}$ | |
|-----------------|-----------------------------|------------------------|------------------|--------------------------|--|---------|
| | | | | | [m/s] | [kW] |
| L = 12 m | | | | | | |
| 20 | 26,9x2,3 | 140 | 4,1 | 0,4 | 0,8 | 65 |
| 25 | 33,7x2,6 | 140 | 4,4 | 0,6 | 0,8 | 100 |
| 32 | 42,4x2,6 | 160 | 5,5 | 1,1 | 0,8 | 180 |
| 40 | 48,3x2,6 | 160 | 6,0 | 1,5 | 0,9 | 230 |
| 50 | 60,3x2,9 | 180 | 7,8 | 2,3 | 0,9 | 370 |
| 65 | 76,1x2,9 | 200 | 9,6 | 3,5 | 1,0 | 700 |
| 80 | 88,9x3,2 | 225 | 11,9 | 5,3 | 1,0 | 1.000 |
| 100 | 114,3x3,6 | 280 | 17,4 | 9,0 | 1,1 | 1.800 |
| 125 | 139,7x3,6 | 315 | 22,5 | 13,8 | 1,3 | 3.300 |
| 150 | 168,3x4,0 | 355 | 28,0 | 20,2 | 1,4 | 5.000 |
| 200 | 219,1x4,5 | 450 | 42,0 | 34,7 | 1,6 | 10.000 |
| 250 | 273,0x5,0 | 560 | 51,9 | 54,3 | 1,8 | 18.000 |
| 300 | 323,9x5,6 | 630 | 82,5 | 76,8 | 2,0 | 28.000 |
| 350 | 355,6x5,6 | 710 | 93,5 | 93,1 | 2,0 | 34.000 |
| 400 | 406,4x6,3 | 800 | 119,0 | 122,0 | 2,0 | 45.000 |
| 450 | 457,0x6,3 | 800 | 124,0 | 155,0 | 2,0 | 65.000 |
| 500 | 508,0x6,3 | 900 | 147,0 | 193,0 | 2,0 | 80.000 |
| 600 | 610,0x7,1 | 1000 | 189,0 | 277,0 | 2,0 | 110.000 |
| 700 | 711,0x8,0 | 1100 | 248,0 | 378,0 | 2,0 | 160.000 |
| L = 16 m | | | | | | |
| 100 | 114,3x3,6 | 280 | 17,4 | 9,0 | 1,1 | 1.800 |
| 125 | 139,7x3,6 | 315 | 22,5 | 13,8 | 1,3 | 3.300 |
| 150 | 168,3x4,0 | 355 | 28,0 | 20,2 | 1,4 | 5.000 |
| 200 | 219,1x4,5 | 450 | 42,0 | 34,7 | 1,6 | 10.000 |
| 250 | 273,0x5,0 | 560 | 51,9 | 54,3 | 1,8 | 18.000 |
| 300 | 323,9x5,6 | 630 | 82,5 | 76,8 | 2,0 | 28.000 |
| 350 | 355,6x5,6 | 710 | 93,5 | 93,1 | 2,0 | 34.000 |
| 400 | 406,4x6,3 | 800 | 119,0 | 122,0 | 2,0 | 45.000 |
| 450 | 457,0x6,3 | 800 | 124,0 | 155,0 | 2,0 | 65.000 |
| 500 | 508,0x6,3 | 900 | 147,0 | 193,0 | 2,0 | 80.000 |
| 600 | 610,0x7,1 | 1000 | 189,0 | 277,0 | 2,0 | 110.000 |
| 700 | 711,0x8,0 | 1100 | 248,0 | 378,0 | 2,0 | 160.000 |

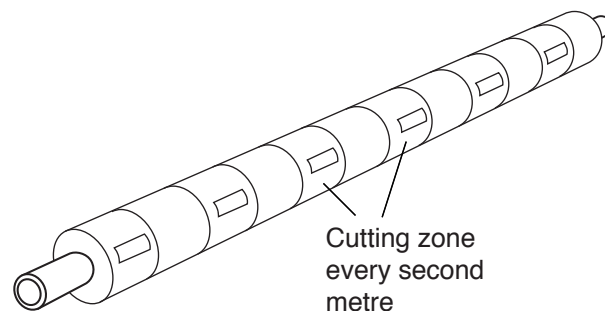
SINGLE PIPES

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Straight pipes for cut to-length

Series 1, 2, 3 and 4

PN 16/PN25



Cut-to-length pipes are manufactured in all dimensions. In these pipes the steel service pipe is covered by a plastic foil every second metre along the entire pipe length. This arrangement allows easy removal of the foam from the steel in the sections. These sections of the pipe are indicated on the outside casing pipe. Whole lengths or parts of pipes cut-to-length can be installed at any place in a district heating distribution system.

CUT-TO-LENGTH PIPE 1113, 1213, 1313, 1413

L = 12 m

Article no. Series 1

1113-DN

Article no. Series 2

For measurement details, see straight pipes!

1213-DN

Article no. Series 3

1313-DN

Article no. Series 4

1413-DN

CUT-TO-LENGTH PIPE 1114, 1214, 1314, 1414

L = 16 m

Article no. Series 1

1114-DN

Article no. Series 2

For measurement details, see straight pipes!

1214-DN

Article no. Series 3

1314-DN

Article no. Series 4

1414-DN

Pipes are available with «center-cut" This will be indicated in separate line of text.

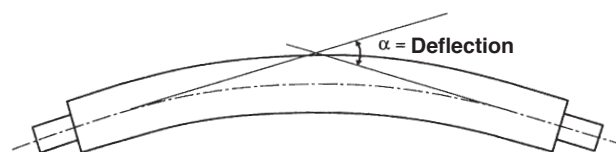
An example of how to order:

Cut-to-length pipe DN 200, series 2, 12 m has Article no. 1213-200-000-000.

Curved pipes

Series 1, 2, 3 and 4

PN 16/PN25



CURVED PIPES 1123, 1124, 1223, 1224, 1323, 1324, 1423, 1424

| Single pipes DN | Max. deflection | | Note |
|--------------------|-----------------|----------|---------------------------------|
| | L = 12 m | L = 16 m | |
| 25 - 80 | 35° | | To be bent at installation site |
| 80 - 100 | 35° | | Bent at Powerpipe works |
| 125 - 150 | 30° | 25° | Bent at Powerpipe works |
| 200 | 25° | 33° | Bent at Powerpipe works |
| 250 | 25° | 33° | Bent at Powerpipe works |
| 300 | 20° | 25° | Bent at Powerpipe works |
| 350 | 14° | 23° | Bent at Powerpipe works |
| 400 | 11-(18)° | 15-(22)° | Bent at Powerpipe works * |
| 450 | 7-(11)° | 11-(18)° | Bent at Powerpipe works * |
| 500 | 5-(9)° | 8-(12)° | Bent at Powerpipe works * |
| 600 | – | 8° | Bent at Powerpipe works* |

* See note below concerning wall thickness.

In parantheses; the specified values relates thickness higher than standard.

| | | |
|-------------------------|--------------|--------|
| Accuracy of manufacture | DN 100 - 200 | +/- 2° |
| | DN 250 - 600 | +/- 1° |

Steel pipes: For the manufacturing either seamless steel pipes or longitudinally welded steel pipes are used. DN 450, DN 500 and DN 600 steel pipes with extra wall thickness will be used. Increased wall thickness for smaller dimensions will allow deflection exceeding above normal max. deflection. This can be delivered on request. However, this means increased prices and longer delivery time. For larger sizes (DN700-900) segment-weldeet curved pipes can be offered. For manufacturing technical reasons, the alarm wires placed in neutral position, ie c. at. 12 and 6.

Article no. series 1

1123-DN-000-000 for 12 m pipe length
1124-DN-000-000 for 16 m pipe length

Article no. series 3

1323-DN-000-000 for 12 m pipe length
1324-DN-000-000 for 16 m pipe length

Article no. series 2

1223-DN-000-000 for 12 m pipe length
1224-DN-000-000 for 16 m pipe length

Article no. series 4

1423-DN-000-000 for 12 m pipe length
1424-DN-000-000 for 16 m pipe length

An example of how to order:

Curved pipe series 1, L = 12 m with dim DN 200.

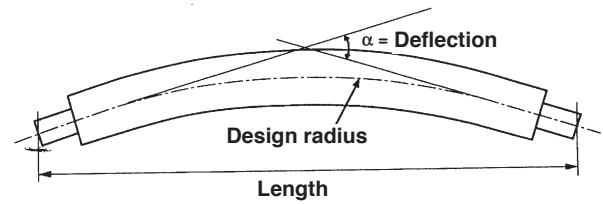
has Article No. 1123-200-000-000, Deflection shall be stated in a separate line of text.

Curved pipes

Deflection versus design radius

Series 1, 2, 3 and 4

PN 16/PN25



CORRELATION BETWEEN DEFLECTION AND DESIGN RADIUS

| Deflection | Design radius | | Deflection | Design radius | |
|------------|---------------|----------|------------|---------------|----------|
| | L = 12 m | L = 16 m | | L = 12 m | L = 16 m |
| 1° | 690 | 910 | 21° | 33,0 | 44,0 |
| 2° | 345 | 460 | 22° | 31,0 | 42,0 |
| 3° | 230 | 305 | 23° | 30,0 | 40,0 |
| 4° | 170 | 230 | 24° | 29,0 | 38,0 |
| 5° | 140 | 185 | 25° | 28,0 | 37,0 |
| 6° | 115 | 155 | 26° | 27,0 | 36,0 |
| 7° | 98 | 130 | 27° | 26,0 | 34,0 |
| 8° | 86 | 115 | 28° | 25,0 | 33,0 |
| 9° | 76 | 100 | 29° | 24,0 | 32,0 |
| 10° | 69 | 92 | 30° | 23,2 | 30,9 |
| 11° | 62 | 83 | 31° | 22,5 | 30,0 |
| 12° | 57 | 76 | 32° | 21,8 | 29,1 |
| 13° | 53 | 71 | 33° | 21,1 | 28,1 |
| 14° | 49 | 65 | 34° | 20,5 | 27,3 |
| 15° | 46 | 61 | 35° | 20,0 | 26,7 |
| 16° | 43 | 57 | 36° | 19,4 | 25,8 |
| 17° | 40 | 54 | 37° | 18,9 | 25,2 |
| 18° | 38 | 51 | 38° | 18,4 | 24,6 |
| 19° | 36 | 48 | 39° | 18,0 | 23,9 |
| 20° | 34 | 46 | 40° | 17,5 | 23,4 |

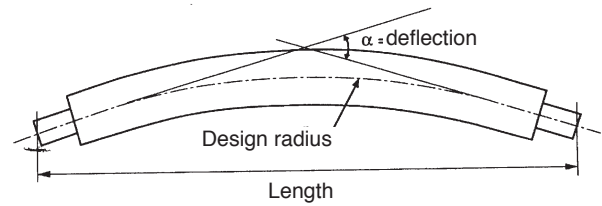
Pipe trench: A pre-insulated pipe $DN \geq 250$ cannot be bent along its entire length. At each pipe end a straight part will remain, which shall be approximately 2 meters in length. This deviation from an ideal curved pipe radius is to be compensated when installing the pipe by making the pipe trench approximately 150 mm wider. The widening should be ~200 mm at deviation $< 10^\circ$. The widening should be ~500 mm at deviation $> 10^\circ$.

Curved pipes

Elastic radius

Series 1, 2, 3 and 4

PN 16/PN25



ELASTIC RADIUS

| Dimension DN | Elastic radius m | Deflection 12 m |
|-----------------|---------------------|--------------------|
| 25 | 15 | 45,0° |
| 40 | 21 | 31,0° |
| 50 | 27 | 25,0° |
| 65 | 34 | 20,0° |
| 80 | 40 | 17,0° |
| 100 | 52 | 13,0° |
| 125 | 63 | 11,0° |
| 150 | 76 | 9,0° |
| 200 | 98 | 7,0° |
| 250 | 122 | 5,6° |
| 300 | 145 | 4,7° |
| 400 | 182 | 3,7° |
| 500 | 227 | 3,0° |
| 600 | 273 | 2,5° |

The above table shows the elastic radius which is the maximum radius or deflection that can be allowed without permanent deformation of the steel pipe.

SINGLE PIPES

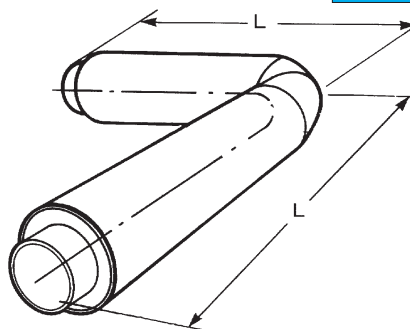
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Bend

Series 1, 2, 3 and 4

Powerpipe bends are manufactured using a special foam with high compressive strength, which means that dilatation absorbent material would normally be unnecessary.

PN 16/PN25



ARTICLE NO 2100, 2200, 2300, 2400

| DN | Service pipe | | Jacket pipe | | | | L [mm] |
|-----|--------------|------------------|------------------|------------------|------------------|------|--------|
| | Dy x s [mm] | Series 1 DY [mm] | Series 2 DY [mm] | Series 3 DY [mm] | Series 4 DY [mm] | | |
| 20 | 26,9x2,3 | - | 110 | 125 | 140 | 1000 | |
| 25 | 33,7x2,6 | 90 | 110 | 125 | 140 | 1000 | |
| 32 | 42,4x2,6 | 110 | 125 | 140 | 160 | 1000 | |
| 40 | 48,3x2,6 | 110 | 125 | 140 | 160 | 1000 | |
| 50 | 60,3x2,9 | 125 | 140 | 160 | 180 | 1000 | |
| 65 | 76,1x2,9 | 140 | 160 | 180 | 200 | 1000 | |
| 80 | 88,9x3,2 | 160 | 180 | 200 | 225 | 1000 | |
| 100 | 114,3x3,6 | 200 | 225 | 250 | 280 | 1000 | |
| 125 | 139,7x3,6 | 225 | 250 | 280 | 315 | 1000 | |
| 150 | 168,3x4,0 | 250 | 280 | 315 | 355 | 1000 | |
| 200 | 219,1x4,5 | 315 | 355 | 400 | 450 | 1000 | |
| 250 | 273,0x5,0 | 400 | 450 | 500 | 560 | 1300 | |
| 300 | 323,9x5,6 | 450 | 500 | 560 | 630 | 1500 | |
| 350 | 355,6x5,6 | 500 | 560 | 630 | 710 | 1600 | |
| 400 | 406,4x6,3 | 560 | 630 | 710 | 800 | 1600 | |
| 450 | 457,0x6,3 | 560 | 530 | 710 | 800 | 1600 | |
| 500 | 508,0x6,3 | 630 | 710 | 800 | 900 | 1600 | |
| 600 | 610,0x7,1 | 710 | 800 | 900 | 1000 | 1600 | |
| 700 | 711,0x8,0 | 800 | 900 | 1000 | 1100 | 1700 | |
| 800 | 813,0x8,8 | 900 | 1000 | 1100 | | 1850 | |
| 900 | 914,0x10,0 | 1000 | 1100 | | | 2000 | |

Bends are, as standard, available as 90° and 45°.

Bends having other degrees, such as 75°, 60°, 30° and 15°, and bends having leg lengths other than specified in the above table can be delivered on special request.

Article no. Series 1

2100-DN-degree of bend-000

Space for sleeve

In order to fit the sleeve at installation of DN50-DN200 extended leg 1200x 1200 mm are offered. State suffix 999

Article no. Series 2

2200-DN-degree of bend-000

Article no. Series 3

2300-DN-degree of bend-000

An example of how to order:

Bend, series 1, dim DN100, 90° has Article No. 2100-100-900-000.

Article no. Series 4

2400-DN-degree of bend-000

SINGLE PIPES

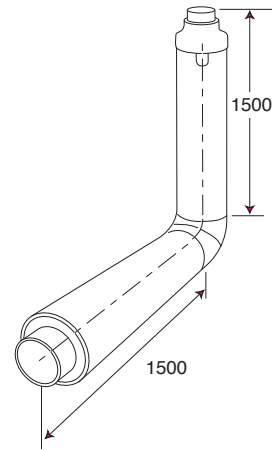
3:202

Termination bend 90°

Series 1, 2, 3 and 4

The termination bend has a special PDPE sealing at one pipe end. This seal will efficiently prevent water from penetrating into the foam when installing the bend. The built in alarm wires are linked outside the sealing.

PN 16/PN25



ARTICLE NO 2110, 2210, 2310

| DN | Service pipe Dy x s [mm] | Jacket pipe | | | |
|-----|-----------------------------|---------------------|---------------------|---------------------|---------------------|
| | | Series 1 DY [mm] | Series 2 DY [mm] | Series 3 DY [mm] | Series 4 DY [mm] |
| 20 | 26,9x2,3 | – | 110 | 125 | 140 |
| 25 | 33,7x2,6 | 90 | 110 | 125 | 140 |
| 32 | 42,4x2,6 | 110 | 125 | 140 | 160 |
| 40 | 48,3x2,6 | 110 | 125 | 140 | 160 |
| 50 | 60,3x2,9 | 125 | 140 | 160 | 180 |
| 65 | 76,1x2,9 | 140 | 160 | 180 | 200 |
| 80 | 88,9x3,2 | 160 | 180 | 200 | 225 |
| 100 | 114,3x3,6 | 200 | 225 | 250 | 280 |
| 125 | 139,0x3,6 | 225 | 250 | 280 | 315 |
| 150 | 168,3x4,0 | 250 | 280 | 315 | 355 |
| 200 | 219,1x4,5 | 315 | 355 | 400 | 450 |
| 250 | 273,0x5,0 | 400 | 450 | 500 | 560 |
| 300 | 323,9x5,6 | 450 | 500 | 560 | 630 |

Other degrees and/or leg lengths can be supplied on request.

Article no. series 1

2110-DN-000-000

Article no. series 2

2210-DN-000-000

Article no. series 3

2310-DN-000-000

Article no. series 4

2410-DN-000-000

Termination bend, 90°, with other leg lengths and deflection can be delivered on request.

An example of how to order:

Termination bend series 1
dim DN 50, has article no. 2110-050-000-000.

Gravel refilling may not reach the end cap, alarm wire or marker tape.
The sealing shall not be below water table continuously.

SINGLE PIPES

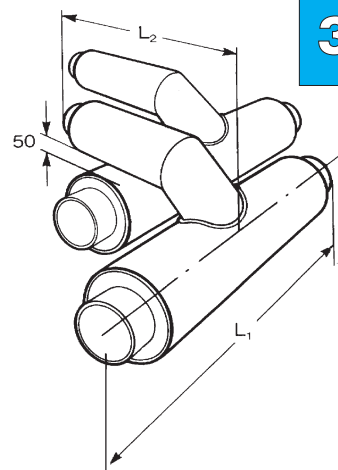
3:301

T-piece

Series 1, 2, 3 and 4

Powerpipe T-pieces are as standard delivered in a reinforced design if not otherwise is indicated.

PN 16/PN25



ARTICLE NO 3100, 3200, 3300, 3400

| Main pipe DN | Branch pipe DN | L1 [mm] | L2 [mm] |
|--------------|----------------|---------|---------|
| 25-200 | 25-80 | 1200 | 1000 |
| 100-200 | 100-200 | 1500 | 1000 |
| 250-900 | 25-80 | 1200 | 1200 |
| 250-900 | 100-200 | 1500 | 1200 |
| 250-900 | 250-600 | 1800 | 1500 |
| 700-900 | 700-900 | 2100 | 1700 |

The branch pipe cannot be designed in dimensions bigger than the main pipe.

Article no. series 1

3100-DN main pipe-DN branch pipe-000

Article no. series 2

3200-DN main pipe-DN branch pipe-000

Article no. series 3

3300-DN main pipe-DN branch pipe-000

Article no. series 4

3400-DN main pipe-DN branch pipe-000

Space for sleeve

In order to fit the sleeve at installation of T-piece with branch pipe max DN200, product with extended L1-dimensions with 800 mm are offered and L2-dimensions with 400 mm for DN 25-80, L2-dimensions with 700 mm for DN 100-200

State suffix: 999.

An example of how to order:

T-piece series 1 med main pipe DN 200 and branch pipe DN 50, has article no. 3100-200-050-000.

Alt. (extended T-piece) has article no. 3100-200-050-999

SINGLE PIPES

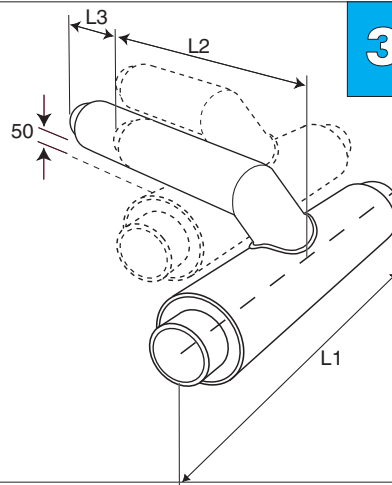
3:302

T-piece with extended branch

Series 1, 2, 3 and 4

Powerpipe T-pieces with extended branch length shall be used in such cases when the systems design require the installation of a valve unit or a transition unit in the branch directly after the T-piece.

PN 16/PN25



ARTICLE NO 3120, 3220, 3320, 3420

| Main pipe DN | For L1 and L2 see page 3:301 | L3 [mm] Series 1 and 2 | L3 [mm] Series 3 and 4 |
|--------------|------------------------------|------------------------|------------------------|
| 25-50 | | 330 | |
| 65-80 | | 370 | |
| 100-125 | | 500 | |
| 150 | | 530 | |
| 200 | | 600 | |
| 250 | | 700 | |
| 300 | | 750 | 860 |
| 350 | | 850 | 930 |
| 400 | | 930 | 1000 |
| 500 | | 1000 | 1100 |
| 600 | | 1100 | 1200 |
| 700 | | 1200 | 1300 |
| 800 | | 1300 | 1400 |
| 900 | | 1400 | 1500 |

The branch pipe cannot be designed in dimensions bigger than the main pipe

Article no. series 1

3120-DN main pipe-DN branch pipe-000

Article no. series 2

3220-DN main pipe-DN branch pipe-000

Article no. series 3

3320-DN main pipe-DN branch pipe-000

Article no. series 4

3420-DN main pipe-DN branch pipe-000

An example of how to order:

T-piece series 1 with main pipe DN 200 and branch pipe DN 50, has Article No. 3120-200-050-000.

SINGLE PIPES

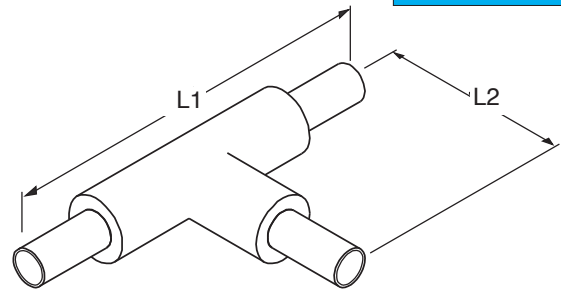
3:303

T-piece, straight

Series 1, 2, 3 and 4

Powerpipe T-pieces are as standard delivered in a reinforced design if not otherwise is indicated.
With T-piece straight branching can be performed at the same level as the main pipe.

PN 16/PN25



ARTICLE NO 3130, 3230, 3330, 3430

| Main pipe DN | Branch pipe DN | L1 [mm] | L2 [mm] |
|--------------|----------------|---------|---------|
| 25-200 | 25-100 | 1200 | 700 |
| 125-200 | 125-200 | 1500 | 700 |
| 250-500 | 25-100 | 1200 | 900 |
| 250-500 | 125-200 | 1500 | 900 |
| 250-500 | 250-400 | 1800 | 900 |
| 600-900 | 25-100 | 1200 | 1100 |
| 600-900 | 125-200 | 1500 | 1100 |
| 600-900 | 250-500 | 1800 | 1100 |
| 600-900 | 600-800 | 2100 | 1100 |

The branch pipe cannot be designed in dimensions bigger than the main pipe.

Article no. series 1

3130-DN main pipe-DN branch pipe-000

Article no. series 2

3230-DN main pipe-DN branch pipe-000

Article no. series 3

3330-DN main pipe-DN branch pipe-000

Article no. series 4

3430-DN main pipe-DN branch pipe-000

An example of how to order:

T-piece series 1 with main pipe DN 200 and branch pipe DN 50, has Article No. 3130-200-050-000.

SINGLE PIPES

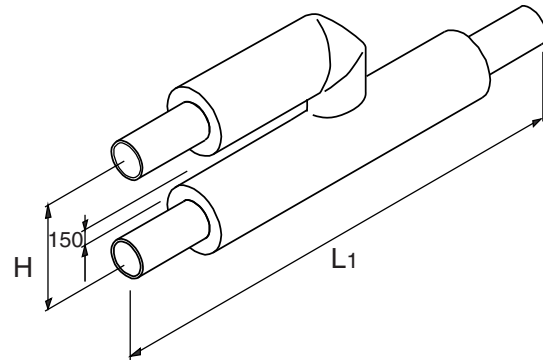
3:304

T-pieces with parallel branch

Series 1, 2, 3 and 4

Powerpipe T-pieces are as standard delivered in a reinforced design if not otherwise is indicated.

PN 16/PN25



ARTICLE NO 3110, 3210, 3310, 3410

| Main pipe DN | Branch pipe DN | L1 [mm] |
|--------------|----------------|---------|
| 25-900 | 25-100 | 1200 |
| 125-900 | 125-200 | 1500 |
| 250-900 | 250-400 | 1800 |
| 450-900 | 450-500 | 2400 |

$$H = \frac{DY \text{ Main pipe} + DY \text{ Branch pipe}}{2} + 150 \text{ (For branch pipe DN450 and DN500 the H-dimension will be 100 mm more)}$$

Example:

Main pipe DN 100/225
Branch pipe DN 40/125

$$H = \frac{225 + 125}{2} + 150 = 325 \text{ mm}$$

The branch pipe cannot be designed in dimensions larger than the main pipe.

Article no. series 1

3110-DN main pipe-DN branch pipe-000

Article no. series 2

3210-DN main pipe-DN branch pipe-000

Article no. series 3

3310-DN main pipe-DN branch pipe-000

Article no. series 4

3410-DN main pipe-DN branch pipe-000

An example of how to order:

T-piece series 1 with main pipe DN 200 and branch pipe DN 50, has Article No. 3110-200-050-000.

SINGLE PIPES

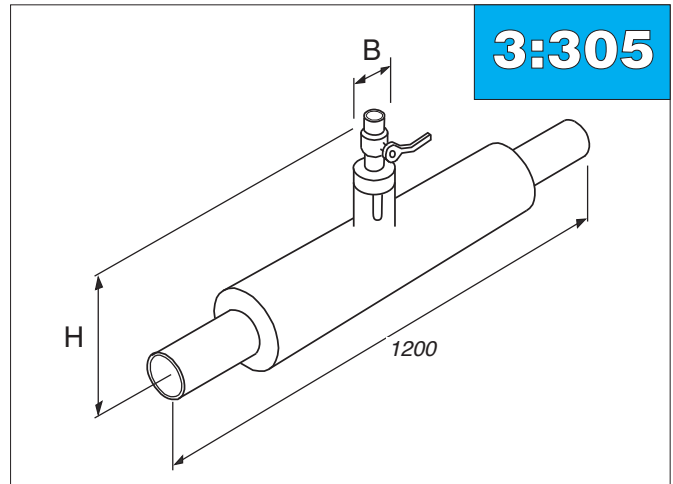
3:305

Air release/ drainage units

Series 1, 2, 3 and 4

The built-in alarmwires are linked outside the sealing.

PN 16/PN25



ARTICLE NO 3140, 3240, 3340, 3440

| Main pipe DN | H [mm] | Air release/ drainage DN | B-measure [mm] |
|--------------|--------|--------------------------|----------------|
| 25 | 409 | 25 | 110 |
| 32 | 414 | 40 | 110 |
| 40 | 417 | 50 | 125 |
| 50 | 423 | 65 | 140 |
| 65 | 431 | | |
| 80 | 438 | | |
| 100 | 450 | | |
| 125 | 463 | | |
| 150 | 477 | | |
| 200 | 502 | | |
| 250 | 530 | | |
| 300 | 554 | | |
| 350 | 570 | | |
| 400 | 596 | | |
| 500 | 650 | | |
| 600 | 700 | | |
| 700 | 758 | | |
| 800 | 800 | | |
| 900 | 850 | | |

Please observe: the included ball valve has to be operated at least twice/year in order to ensure a good function.

The valve is made of stainless steel. Air release/ drainage units are equipped with screwed on plug and comes in DN 25, DN 40, DN 50 and DN65. As air release unit DN25 is recommended and as drain unit DN50 is recommended.

Please observe: Do not refill above the sealing. The sealing shall not be below water table continuously.

The valve is protected by a end cap as a standard. Se sid 8:102

Article no. series 1

3140-DN main pipe-DN release/ drainage-000

Article no. series 3

3340-DN main pipe-DN release/ drainage-000

Article no. series 2

3240-DN main pipe-DN release/ drainage-000

Article no. series 4

3440-DN main pipe-DN release/ drainage-000

An example of how to order:

Air release for main pipe series 1 with main pipe DN 200 and air release DN 25, has Article No. 3140-200-025-000.

SINGLE PIPES

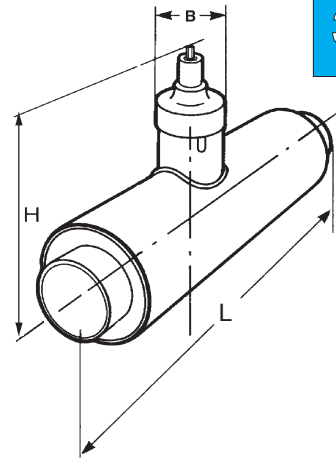
3:401

Valves

Series 1, 2, 3 and 4

The unit consists of a maintenance free ball valve in a fully welded housing together with a corrosion free ball. All valves according to EN448 are supplied to stand the yield strength as the pipe line. The built in alarmwires are linked outside the sealing.

PN 16/PN25



ARTICLE NO 4100, 4200, 4300, 4400

| Main pipe DN | Service pipe Dy x s mm | L [mm] | H [mm] | B [mm] | Wrench size [mm] | Delivered with |
|--------------|------------------------|--------|--------|--------|------------------|---------------------------|
| 25 | 33,7 x 2,3 | 1500 | 382 | 110 | 19 | Adapter for T-key |
| 32 | 42,4 x 2,6 | 1500 | 388 | 110 | 19 | |
| 40 | 48,3 x 2,6 | 1500 | 401 | 110 | 19 | |
| 50 | 60,3 x 2,9 | 1500 | 411 | 110 | 19 | |
| 65 | 76,1 x 2,9 | 1500 | 415 | 110 | 19 | |
| 80 | 88,9 x 3,2 | 1500 | 426 | 110 | 19 | |
| 100 | 114,3 x 3,6 | 1500 | 450 | 125 | 27 | adapter for portable gear |
| 125 | 139,7 x 3,6 | 1500 | 455 | 125 | 27 | |
| 150 | 168,3 x 4,0 | 1500 | 474 | 125 | 27 | |
| 200 | 219,1 x 4,5 | 1500 | 520 | 160 | 50 | adapter for portable gear |
| 250 | 273,0 x 5,0 | 1500 | 557 | 160 | 50 | |
| 300 | 323,9 x 5,6 | 1800 | 664 | 160 | 50 | Mounted gear |
| 350 | 355,6 x 5,6 | 1800 | 906 | 350 | | |
| 400 | 406,4 x 6,3 | 2000 | 977 | 350 | | |
| 500 | 508,3x6,3 | custom | 1056 | 350 | | |
| 600 | 610,0x7,1 | custom | 1183 | 350 | | |

H-measure does not include gear, hydraulic or electric actuator. For valves DN700 and DN800 see separate specification. Gate valve can be quoted on request. Other design for example with full bore can be supplied on request. Valves can be supplied with T-key, portable planetary gear and protection pipe for valve stem extension, length 1500 mm, and hydraulic or electric actuator, see accessories!

AS standard the valves are delivered with:

DN25-DN125 with adapter for T-key.

DN150-DN300 with adapter for portable gear.

DN350-DNxx with fixed gear.

Article no. series 1

4100-DN-000-000

Article no. series 2

4200-DN-000-000

Article no. series 3

4300-DN-000-000

Article no. series 4

4400-DN-000-000

Please observe: the included ball valve has to be operated at least twice/year in order to ensure a good function.

The valve is protected by a end cap of PEH as a standard. See 8:102 Available with separate measuring box as extra order, se 7:302.

An example of how to order:

Valves series 1 with main pipe DN 200, has Article No. 4100-200-000-000.

Please observe: Do not refill above the sealing. The sealing shall not be below water table continuously.

SINGLE PIPES

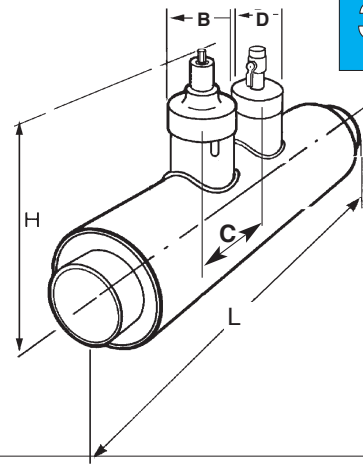
3:402

Preinsulated valve with one air release/ drainage unit

Series 1, 2, 3 and 4

The built in alarmwires are linked outside the sealing.

PN 16/PN25



ARTICLE NO 4141, 4241, 4341, 4441

Air release/ drainage

| Main pipe DN | L [mm] | C [mm] | H [mm] | B [mm] | Wrench size [mm] | Delivered with | DN | D-dim [mm] |
|--------------|--------|--------|--------|--------|------------------|---------------------------|----|------------|
| 25 | 1500 | 250 | 382 | 110 | 19 | Adapter for T-key | 25 | 110 |
| 32 | 1500 | 250 | 388 | 110 | 19 | | 40 | 110 |
| 40 | 1500 | 250 | 401 | 110 | 19 | | 50 | 125 |
| 50 | 1500 | 250 | 411 | 110 | 19 | | 65 | 140 |
| 65 | 1500 | 250 | 415 | 110 | 19 | | | |
| 80 | 1500 | 250 | 426 | 110 | 19 | | | |
| 100 | 1500 | 250 | 450 | 125 | 27 | Adapter for portable gear | | |
| 125 | 1500 | 250 | 455 | 125 | 27 | | | |
| 150 | 1500 | 250 | 474 | 125 | 27 | | | |
| 200 | 1500 | 250 | 520 | 160 | 50 | Adapter for portable gear | | |
| 250 | 1500 | 350 | 557 | 160 | 50 | | | |
| 300 | 1800 | 350 | 664 | 160 | 50 | Mounted gear | | |
| 350 | 1800 | 350 | 906 | 350 | | | | |
| 400 | 2000 | 450 | 977 | 350 | | | | |
| 500 | 2200 | 550 | 1056 | 350 | | | | |
| 600 | 2400 | 640 | 1183 | 350 | | | | |

The valve stems are installed in position towards the stop valve. Air release/ drainage units are manufactured in dimension DN25, DN40, DN50 and DN65 are delivered with a screwed on plug. Both air release/ drainage units are delivered in the same dimension.

The valve is protected by a end cap as a standard. Se sid 8:102

Article no. series 1

4141-DN main pipe-DN air release-000

Article no. series 2

4241-DN main pipe-DN air release-000

Article no. series 3

4341-DN main pipe-DN air release-000

Article no. series 4

4441-DN main pipe-DN air release-000

Available with separate measuring box as extra order, see 7:302

An example of how to order:

Valve series 2 with main pipe DN 100 and air release DN 25, has Article No. 4241-100-025-000.

Please observe: the included ball valve has to be operated at least twice/year in order to ensure a good function.

Please observe: Do not refill above the sealing. The sealing shall not be below water table continuously.

SINGLE PIPES

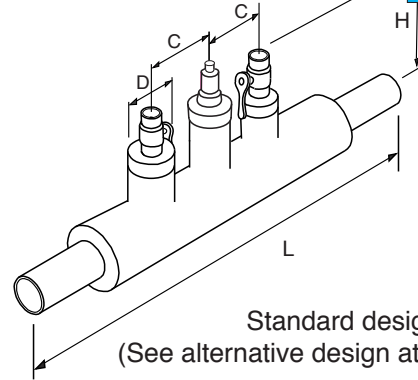
3:403

Valve with double air release/drainage units

Series 1, 2, 3 and 4

The built in alarmwires are linked outside the sealing.

PN 16/PN25



Standard design
(See alternative design at page 3:404)

| ARTICLE NO 4142, 4242, 4342, 4442 | | | | | Air release/ drainage | |
|-----------------------------------|-----------------|--------|--------|------------------|---------------------------|--------------------------|
| Main pipe DN | L Standard [mm] | C [mm] | H [mm] | Wrench size [mm] | DN | D-dim [mm] |
| 25 | 1500 | 250 | 382 | 19 | 25 40 50 65 | 110 110 125 140 |
| 32 | 1500 | 250 | 388 | 19 | | |
| 40 | 1500 | 250 | 401 | 19 | | |
| 50 | 1500 | 250 | 411 | 19 | | |
| 65 | 1500 | 250 | 415 | 19 | | |
| 80 | 1500 | 250 | 426 | 19 | Adapter for T-key | |
| 100 | 1500 | 250 | 450 | 27 | | |
| 125 | 1500 | 250 | 455 | 27 | | |
| 150 | 1500 | 250 | 474 | 27 | | |
| 200 | 1500 | 250 | 520 | 50 | | |
| 250 | 1500 | 350 | 557 | 50 | Adapter for portable gear | |
| 300 | 1800 | 350 | 664 | 50 | | |
| 350 | 1800 | 350 | 906 | | Mounted gear | |
| 400 | 2000 | 450 | 977 | | | |
| 500 | 2200 | 550 | 1056 | | | |
| 600 | 2400 | 640 | 1183 | | | |

The valve stems are installed in position towards the stop valve. Air release/ drainage units are manufactured in dimension DN25, DN40, DN50 and DN65 are delivered with a screwed on plug. Both air release/ drainage units are delivered in the same dimension.

The valve is protected by a end cap as a standard. Se sid 8:102

Article no. series 1

4142-DN main pipe-DN air release-000

Article no. series 2

4242-DN main pipe-DN air release-000

Article no. series 3

4342-DN main pipe-DN air release-000

Article no. series 4

4442-DN main pipe-DN air release-000

An example of how to order:

Valve series 2 with main pipe DN 100 and air release DN 25, has Article No. 4242-100-025-000.

Please observe: the included ball valve has to be operated at least twice/year in order to ensure a good function.

Please observe: Do not refill above the sealing.

The sealing shall not be below water table continuously.

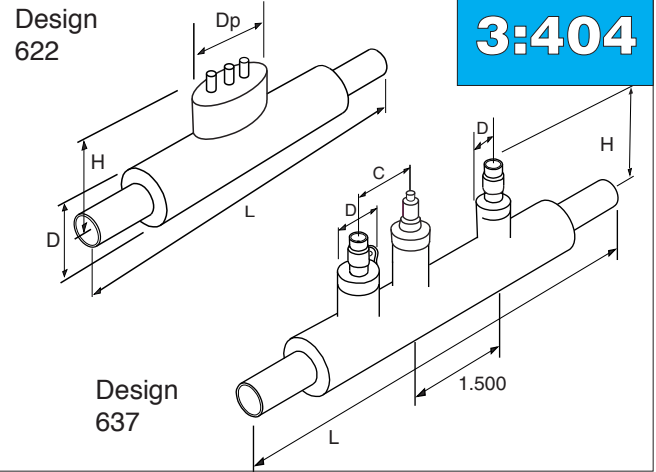
SINGLE PIPES

Valve with 2 pc. air release/drainage (optional design)

Series 1, 2, 3 and 4

The built in alarmwires are linked outside the sealing.

PN 16/PN25



| ARTICLE NO 4142, 4242, 4342, 4442 | | | | | | | Air release/ drainage | | |
|-----------------------------------|------------|------------|--------|--------|---------|------------------|---------------------------|-------------|-----|
| Main pipe DN | L 622 [mm] | L 637 [mm] | C [mm] | H [mm] | Dp [mm] | Wrench size [mm] | DN [mm] | D-mått [mm] | |
| 25 | 1500 | 2750 | 250 | 382 | 235 | 19 | Adapter for T-Key | 25 | 110 |
| 32 | 1500 | 2750 | 250 | 388 | 235 | 19 | | 40 | 110 |
| 40 | 1500 | 2750 | 250 | 401 | 235 | 19 | | 50 | 125 |
| 50 | 1500 | 2750 | 250 | 411 | 235 | 19 | | 65 | 140 |
| 65 | 1500 | 2750 | 250 | 415 | 295 | 19 | | | |
| 80 | 1500 | 2750 | 250 | 426 | 295 | 19 | Adapter for portable gear | | |
| 100 | 1500 | 2750 | 250 | 450 | 295 | 27 | | | |
| 125 | 1500 | 2750 | 250 | 455 | 340 | 27 | Mounted gear | | |
| 150 | 1500 | 2750 | 250 | 474 | 415 | 27 | | | |
| 200 | 1500 | 2750 | 250 | 520 | 415 | 50 | | | |
| 250 | 1500 | 2850 | 350 | 557 | 415 | 50 | | | |
| 300 | 1800 | 2850 | 350 | 664 | 415 | 50 | | | |
| 350 | 1800 | 2850 | 350 | 906 | | | | | |
| 400 | 2000 | 2950 | 450 | 977 | | | | | |
| 500 | 2200 | 3050 | 550 | 1056 | | | | | |
| 600 | 2400 | 3150 | 640 | 1183 | | | | | |

The valve stems are installed in position towards the stop valve. Air release/ drainage units are manufactured in dimension DN25, DN40, DN50 and DN65 are delivered with a screwed on plug. Both air release/ drainage units are delivered in the same dimension.

The valve is protected by a end cap as a standard. Se sid 8:102

Design 622 has suffix 622

Design 637 has suffix 637

An example of how to order:

Valve series 2 with main pipe DN 300 and air release DN 40 in design 622, has Article No. 4242-300-040-622 and design 637 has Article No. 4242-300-040-637

Please observe: the included ball valve has to be operated at least twice/year in order to ensure a good function.

Please observe: Do not refill above the sealing.

The sealing shall not be below water table continuously.

SINGLE PIPES

Valve with 2 pc. protected air release/ drainage (optional design)

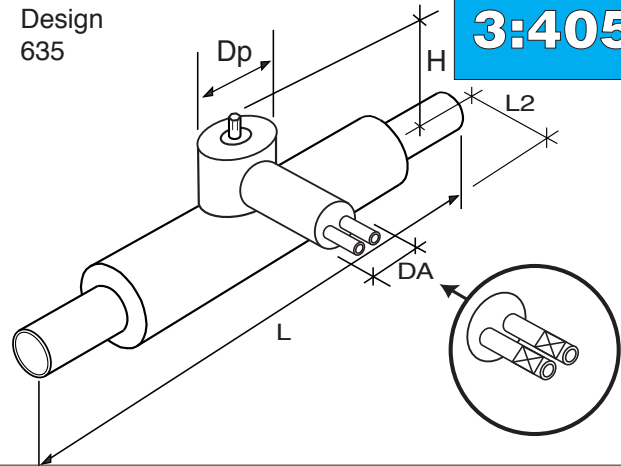
Series 1, 2, 3 and 4

The built in alarmwires are linked outside the sealing.

PN 16/PN25

Design 635

3:405



| ARTICLE NO 4142, 4242, 4342, 4442 | | | Design 635 | | | Air release/ drainage | | |
|-----------------------------------|--------|---------|---------------------|--------|------------------|---------------------------|---------|---------|
| Main pipe DN | L [mm] | Dp [mm] | Air release DN [mm] | H [mm] | Wrench size [mm] | DN | DA [mm] | L2 [mm] |
| 25 | 1500 | | | 382 | 19 | 25 | 150 | 300 |
| 32 | 1500 | | | 388 | 19 | 40 | 180 | 350 |
| 40 | 1500 | 180 | 25 | 401 | 19 | Adapter for T-Key | | |
| 50 | 1500 | 180 | 25 | 411 | 19 | | | |
| 65 | 1500 | 180 | 25 | 415 | 19 | | | |
| 80 | 1500 | 180 | 25 | 426 | 19 | | | |
| 100 | 1500 | 180 | 25 | 450 | 27 | | | |
| 125 | 1500 | 180 | 25 | 455 | 27 | Adapter for portable gear | | |
| 150 | 1500 | 180 | 25 | 474 | 27 | | | |
| 200 | 1500 | 225 | 40 | 520 | 50 | | | |
| 250 | 1500 | 225 | 40 | 557 | 50 | | | |
| 300 | 1800 | 225 | 40 | 664 | 50 | | | |

Air release/ drainage units are manufactured in dimension DN25, DN40, DN50 and DN65 are delivered with a screwed on plug.

Desired connections can be executed in the threaded end. Valve stems are facing upwards.

Both air release / drainage units are delivered in the same dimension.

The valve is protected by a hut made of stainless steel as a standard. Please see 8:102

An example of how to order:

Valve series 2 with main pipe DN 300 and air release DN 40 in design 635, has Article No. 4242-300-040-635

Please observe: the included ball valve has to be operated at least twice/year in order to ensure a good function.

Please observe: Do not refill above the sealing.

The sealing shall not be below water table continuously.

SINGLE PIPES

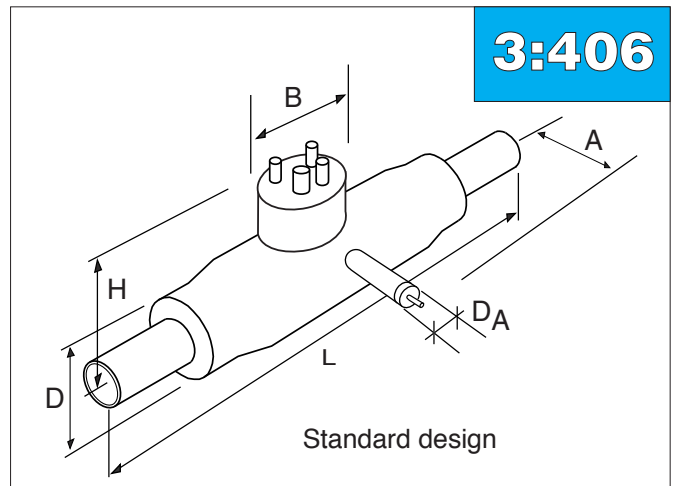
3:406

Combination valve Standard design

Series 1, 2, 3 and 4

- Air release
- Drain
- Bypass

PN 16/PN25



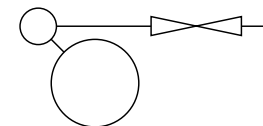
ARTICLE NO 4841, 4842, 4843, 4844

| Main pipe DN | D Series 2 [mm] | By pas valves DN (3 st) Valves | L [mm] | A [mm] | D _A [mm] | B [mm] | H [mm] |
|--------------|-----------------|--------------------------------|--------|--------|---------------------|--------|--------|
| 100 | 225 | 25 | 1800 | 650 | 110 | 415 | 500 |
| 125 | 250 | 25 | 1800 | 650 | 125 | 415 | 500 |
| 150 | 280 | 32 | 1800 | 700 | 125 | 415 | 530 |
| 200 | 355 | 40 | 1800 | 700 | 125 | 415 | 560 |
| 250 | 450 | 40 | 1800 | 700 | 125 | 450 | 600 |
| 300 | 500 | 50 | 2100 | 750 | 140 | 450 | 700 |

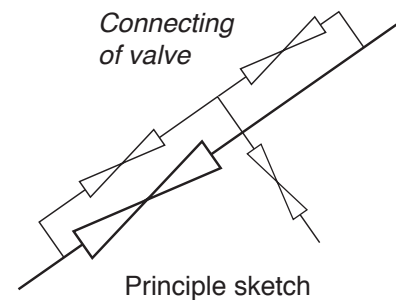
Ball valve comes with adapter for T-key (DN 25-125) or portable gear (DN 150-300).

Drainage pipe and valve are made of stainless steel. The valve is protected with a hut of stainless steel as a standard. Please see 8:102. Design of model B, see page 3:406, can be adapted to customer specific requirements.

A measuring box is located between the by pas valves, please see 7:302



Connecting of valve



Principle sketch

Article no. 1
4841-DN-000-000.

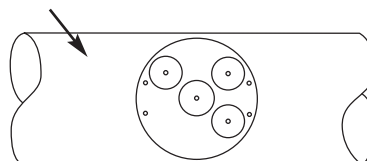
Article no. 2
4842-DN-000-000.

Article no. 3
4843-DN-000-000.

Article no. 4
4844-DN-000-000.

An example of how to order:
Combination valve for DN 200 has article no. 4843-200-000-000.

Seen from above
Alarm wire penetration



Please observe: the included ball valve has to be operated at least twice/year in order to ensure a good function.

Please observe: Do not refill above the sealing. The sealing shall not be below water table continuously.

SINGLE PIPES

Combination valve option design

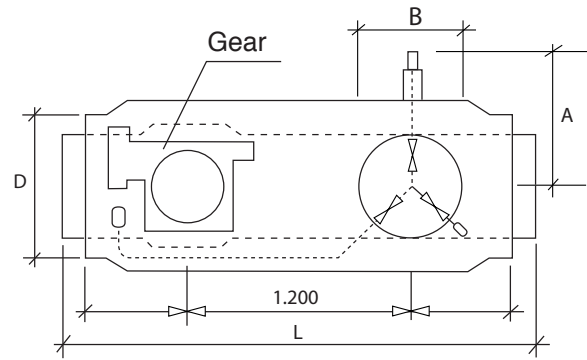
Series 1, 2, 3 and 4

- Air release
- Drain
- Bypass

PN 16/PN25

Model B

3:407



ARTICLE NO 4843 i utforande 637

| Main pipe DN | D Series 2 [mm] | Bypass valves DN (3 st) | L [mm] | A [mm] | D _A [mm] | B [mm] | H [mm] |
|--------------|-----------------|-------------------------|--------|--------|---------------------|--------|--------|
| 200 | 355 | 40 | 3000 | 650 | 125 | 650 | 560 |
| 250 | 450 | 40 | 3000 | 700 | 125 | 650 | 600 |
| 300 | 500 | 50 | 3000 | 750 | 140 | 700 | 700 |
| 350 | 560 | 50 | 3200 | 800 | 140 | | 940 |
| 400 | 680 | 50 | 3400 | 800 | 140 | | 940 |
| 500 | 710 | 50 | 3600 | 900 | 140 | | 1135 |

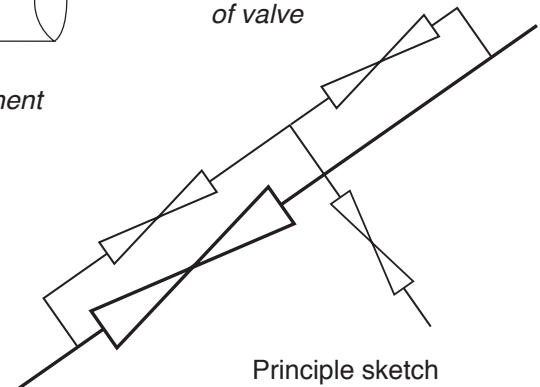
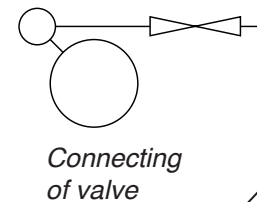
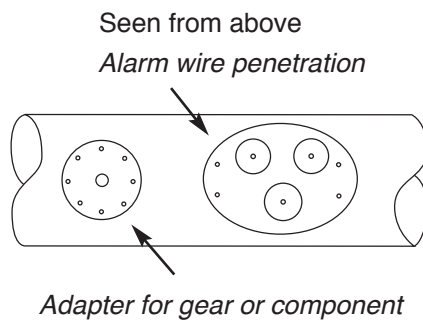
Drainage pipe and valve are made of stainless steel.

The optional design can be adapted to specific customer requirements.

The valve can be fitted with mounted gear, hydraulic actuator or electric component. The design can be adapted for air release or bleed. The length of the outlet pipes can be customised

Article no.
4843-DN-000-637.

An example of how to order:
Combination valve for
DN 200 has article no.
4843-200-000-000.



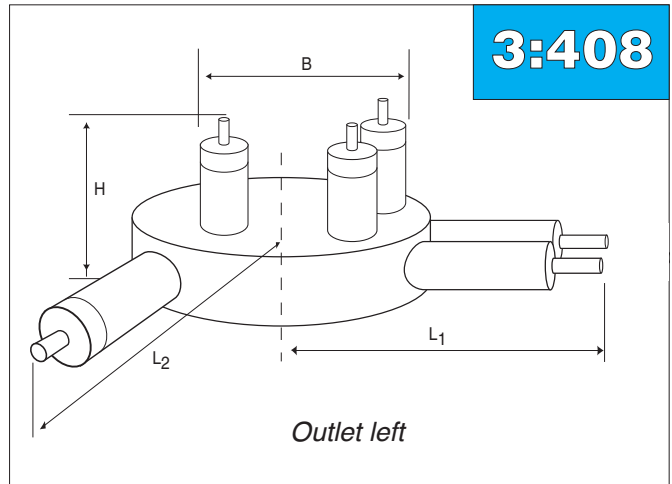
SINGLE PIPES

3:408

Valve unit compact Series 1, 2, 3 and 4

The valve unit is being used for the bleed or air release. It is built to fit in a standard well.

PN 16/PN25



ARTICLE NO 4170, 4270, 4370, 4470

| DN | C-C | H Standard [mm] | H Min [mm] | B [mm] | L1 [mm] | L2 [mm] |
|----|-----|-----------------------|------------------|-----------|------------|------------|
| 25 | 310 | 480 | 190 | 316 | 550 | 570 |
| 40 | 330 | 495 | 200 | 364 | 560 | 600 |
| 50 | 360 | 500 | 210 | 398 | 600 | 625 |
| 65 | 420 | 505 | 210 | 412 | 610 | 625 |
| 80 | 450 | 515 | 225 | 447 | 620 | 700 |

The stem height «H» is available with standard height or min. height i.a. to the table above.
The valve unit can be supplemented with loose stem extensions of 250, 500, 750 or 1000 mm.
The outlet pipe is made of stainless steel. The valves are supplied with adapter for T-key.
The valve is protected by a end cap as a standard. Please see 8:102

This product replaces previous «Valve unit, straight» and «Unit Valve, bend»

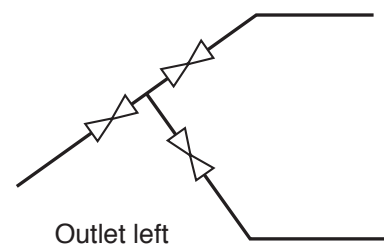
Article no. series 1
4170-DN-000-000

Article no. series 2
4270-DN-000-000

Article no. series 3
4370-DN-000-000

Article no. series 4
4470-DN-000-000

Outlet 45° right has prefix 031
Outlet 45° left has prefix 032.
Valve unit with minimal spindle height has mid-prefix = H-min.



An example of how to order:

Valve unit, compact, right series 2 dim DN50 has article no. 4270-050-000-031.

When ordering a minimum stem height, state as indicated below:
Valve unit, compact, right, Series 2. DN50 with minimal spindle height has article no. 4270-050-210-031

Please observe: the included ball valve has to be operated at least twice/year in order to ensure a good function.

Please observe: Do not refill above the sealing.

The sealing shall not be below water table continuously.

SINGLE PIPES

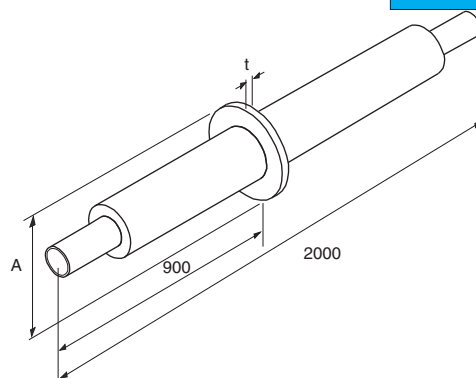
3:501

Anchor units

Series 1, 2, 3 and 4

The anchor unit is designed for casting into concrete of quality K 250. Dimensioning pressure force:
In concrete 5 MN/ m² (50 kg/cm²), standard value
In ground 0,15 MN/ m² (1,5 kg/cm²), standard value

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ARTICLE NO 5100, 5200, 5300, 5400

| DN | Max load (kN) $\Delta T = 60^{\circ}\text{C}$ | A [mm] | t [mm] | Pressure area (Series 2) [cm ²] |
|-----|--|-----------|-----------|--|
| 25 | 38 | 200 | 25 | 191 |
| 32 | 49 | 220 | 25 | 243 |
| 40 | 56 | 220 | 25 | 243 |
| 50 | 78 | 240 | 25 | 289 |
| 65 | 100 | 280 | 25 | 452 |
| 80 | 129 | 300 | 30 | 392 |
| 100 | 187 | 350 | 30 | 565 |
| 125 | 230 | 400 | 30 | 765 |
| 150 | 310 | 450 | 30 | 875 |
| 200 | 455 | 550 | 35 | 1385 |
| 250 | 630 | 650 | 40 | 1730 |
| 300 | 840 | 700 | 40 | 1885 |
| 400 | 1200 | 850 | 40 | 2560 |
| 500 | 1500 | 1000 | 65 | 4000 |
| 600 | 2000 | 1200 | 65 | 6200 |

A and t measurement are given above for Series 2.

Article no. series 1

5100-DN-000-000

Article no. series 2

5200-DN-000-000

Article no. series 3

5300-DN-000-000

Article no. series 4

5400-DN-000-000

An example of how to order:

Ancor unit series 1 with dim DN 200,
has article no. 5100-200-000-000.

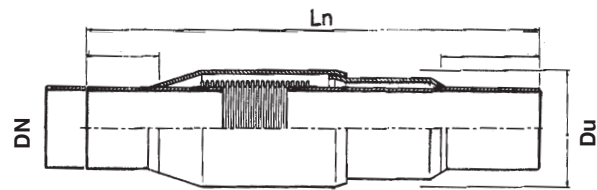
SINGLE PIPES

3:502

Single-use compensator

The single-use compensator can be used for pre-stressing of the pipe line in places where pre-heating for practical reasons cannot be made.

PN 16/PN25



ARTICLE NO 7810

| DN | Max pre-stressing [mm] | L _n | D _u |
|-----|------------------------|----------------|----------------|
| 40 | 50 | 450 | 60 |
| 50 | 50 | 450 | 70 |
| 65 | 70 | 500 | 90 |
| 80 | 70 | 500 | 102 |
| 100 | 80 | 550 | 127 |
| 125 | 80 | 550 | 152 |
| 150 | 100 | 630 | 178 |
| 200 | 120 | 700 | 232 |
| 250 | 120 | 700 | 286 |
| 300 | 140 | 730 | 338 |
| 350 | 140 | 730 | 371 |
| 400 | 140 | 730 | 426 |
| 450 | 150 | 800 | 477 |
| 500 | 150 | 800 | 528 |
| 600 | 150 | 800 | 635 |
| 700 | 150 | 780 | 735 |
| 800 | 150 | 850 | 838 |

Article no.

7810-DN-000-000

An example of how to order:

Single-use compensator for a DN200 pipe line, Article No. 7810-200-000-000, Relatet casing is described in section 6:205

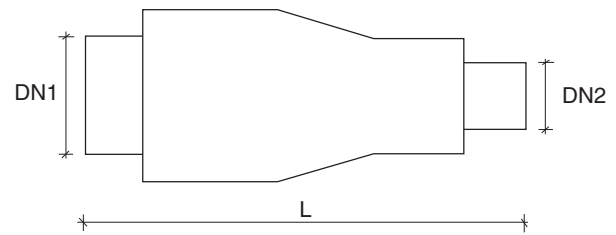
SINGLE PIPES

3:503

Reduction unit

The reduction unit is used at change of dimension.
An option is steel cone + PEH reduction.

PN 16/PN25



ARTICLE NO 1571, 1572, 1573, 1574

| DN1/ DN2 | DN 32 | DN 40 | DN 50 | DN 65 | DN 80 | DN 100 | DN 125 | DN 150 | DN 200 | DN 250 | DN 300 | DN 350 | DN 400 | DN 500 | DN 600 | DN 700 | DN 800 |
|-------------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 25 | x | x | | | | | | | | | | | | | | | |
| 32 | | x | x | | | | | | | | | | | | | | |
| 40 | | | x | x | | | | | | | | | | | | | |
| 50 | | | | x | x | | | | | | | | | | | | |
| 65 | | | | | x | x | | | | | | | | | | | |
| 80 | | | | | | x | x | | | | | | | | | | |
| 100 | | | | | | | x | x | | | | | | | | | |
| 125 | | | | | | | | x | x | | | | | | | | |
| 150 | | | | | | | | | x | x | | | | | | | |
| 200 | | | | | | | | | | x | x | | | | | | |
| 250 | | | | | | | | | | | x | x | | | | | |
| 300 | | | | | | | | | | | | x | x | | | | |
| 350 | | | | | | | | | | | | | x | x | | | |
| 400 | | | | | | | | | | | | | | x | x | | |
| 500 | | | | | | | | | | | | | | | x | x | |
| 600 | | | | | | | | | | | | | | | | x | x |
| 700 | | | | | | | | | | | | | | | | | x |

The reduction unit is used at change of dimension. The table lists the default reduction unit.

Article no. series 1
1571-DN1-DN2-000

Article no. series 2
1572-DN1-DN2-000

Article no. series 3
1573-DN1-DN2-000

Article no. series 4
1574-DN1-DN2-000

An example of how to order:
Reduction unit series 1 with dim DN 200 to DN 150
has article no. 1571-200-150-000.

| DN1 | L [mm] |
|------------|-----------|
| DN 25–300 | 900 |
| DN 350–500 | 1100 |
| DN 600–800 | 1300 |

NOTE:
Consult with the designer where the
reduction shall be placed and what
dimension to choose.