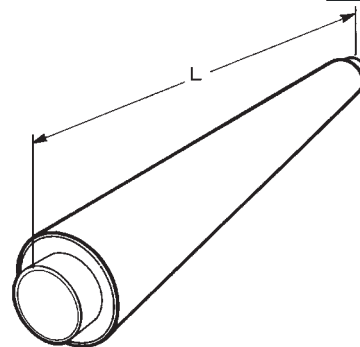


# SINGLE PIPES

3:101

## Straight pipes

### Series 1



#### STRAIGHT PIPES, 1103

Transmission capacity  
 $\Delta T = 50^{\circ}\text{C}$

Article No:	Service pipe DN	Service pipe OD x s [mm]	Jacket pipe OD [mm]	Weight [kg/m]	Water content [l/m]	[m/s]	[kW]
<b>L = 12 m</b>							
1103-025	25	33,7 x 2,3	90	3,1	0,6	0,8	100
1103-032	32	42,4 x 2,6	110	4,3	1,1	0,8	180
1103-040	40	48,3 x 2,6	110	4,6	1,5	0,9	230
1103-050	50	60,3 x 2,9	125	6,1	2,3	0,9	370
1103-065	65	76,1 x 2,9	140	7,4	3,9	1,0	700
1103-080	80	88,9 x 3,2	160	9,4	5,3	1,0	1.000
1103-100	100	114,3 x 3,6	200	13,6	9,0	1,1	1.800
1103-125	125	139,7 x 3,6	225	16,6	13,8	1,3	3.300
1103-150	150	168,3 x 4,0	250	21,5	20,2	1,4	5.000
1103-200	200	219,1 x 4,5	315	31,9	34,7	1,6	10.000
1103-250	250	273,0 x 5,0	400	46,3	54,3	1,8	18.000
1103-300	300	323,9 x 5,6	450	60,0	76,8	2,0	28.000
1103-350	350	355,6 x 5,6	500	68,3	93,1	2,0	34.000
1103-400	400	406,4 x 6,3	560	86,9	122,0	2,0	45.000
1103-450	450	457,0 x 6,3	560	91,6	155,0	2,0	65.000
1103-500	500	508,0 x 6,3	630	105,4	193,0	2,0	80.000
1103-600	600	610,0 x 7,1	710	138,0	277,0	2,0	110.000
1103-700	700	711,0 x 8,8	800	190,2	378,0	2,0	160.000
1103-800	800	813,0 x 8,8	900	222,0	497,0	2,0	210.000

#### STRAIGHT PIPES, 1104

L = 16 m

1104-100	100	114,3 x 3,6	200	13,6	9,0	1,1	1.800
1104-125	125	139,7 x 3,6	225	16,6	13,8	1,3	3.300
1104-150	150	168,3 x 4,0	250	21,5	20,2	1,4	5.000
1104-200	200	219,1 x 4,5	315	31,9	34,7	1,6	10.000
1104-250	250	273,0 x 5,0	400	46,3	54,3	1,9	18.000
1104-300	300	323,9 x 5,6	450	60,0	76,8	2,0	28.000
1104-350	350	355,6 x 5,6	500	68,3	93,1	2,0	34.000
1104-400	400	406,4 x 6,3	560	86,9	122,0	2,0	45.000
1104-450	450	457,0 x 6,3	560	91,6	155,0	2,0	65.000
1104-500	500	508,0 x 6,3	630	105,4	193,0	2,0	80.000
1104-600	600	610,0 x 7,1	710	138,0	277,0	2,0	110.000
1104-700	700	711,2 x 8,8	800	190,2	378,0	2,0	160.000
1104-800	800	812,8 x 8,8	900	222,0	497,0	2,0	210.000

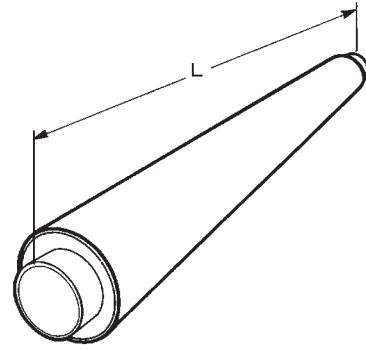
For information about heat losses we refer you to section 9:201

# SINGLE PIPES

3:102

## Straight pipes

### Series 2



#### STRAIGHT PIPES, 1203

Transmission capacity  
 $\Delta T = 50^\circ\text{C}$

Article No:	DN	Service pipe OD x s [mm]	Jacket pipe OD [mm]	Weight [kg/m]	Water - content [l/m]	[m/s]	[kW]
<b>L = 12 m</b>							
1203-025	25	33,7x2,3	110	3,5	0,6	0,8	100
1203-032	32	42,4x2,6	125	4,6	1,1	0,8	180
1203-040	40	48,3x2,6	125	5,0	1,5	0,9	230
1203-050	50	60,3x2,9	140	6,5	2,3	0,9	370
1203-065	65	76,1x2,9	160	8,0	3,5	1,0	700
1203-080	80	88,9x3,2	180	10,1	5,3	1,0	1.000
1203-100	100	114,3x3,6	225	14,8	9,0	1,1	1.800
1203-125	125	139,7x3,6	250	17,7	13,8	1,3	3.300
1203-150	150	168,3x4,0	280	21,5	20,2	1,4	5.000
1203-200	200	219,1x4,5	355	35,1	34,7	1,6	10.000
1203-250	250	273,0x5,0	450	51,1	54,3	1,8	18.000
1203-300	300	323,9x5,6	500	65,5	76,8	2,0	28.000
1203-350	350	355,6x5,6	560	75,7	93,1	2,0	34.000
1203-400	400	406,4x6,3	630	96,3	121,7	2,0	45.000
1203-450	450	457,0x6,3	630	101,0	155,0	2,0	65.000
1203-500	500	508,0x6,3	710	118,0	193,0	2,0	80.000
1203-600	600	610,0x7,1	800	153,6	277,0	2,0	110.000
1203-700	700	711,0x8,8	900	210,0	378,0	2,0	160.000
1203-800	800	813,0x8,8	1000	246,0	497,0	2,0	210.000

#### STRAIGHT PIPES, 1204

L = 16 m

1204-100	100	114,3x3,6	225	14,8	9,0	1,1	1.800
1204-125	125	139,7x3,6	250	17,7	13,8	1,3	3.300
1204-150	150	168,3x4,0	280	21,5	20,2	1,4	5.000
1204-200	200	219,1x4,5	355	35,1	34,7	1,6	10.000
1204-250	250	273,0x5,0	450	51,1	54,3	1,8	18.000
1204-300	300	323,9x5,6	500	65,5	76,8	2,0	28.000
1204-350	350	355,6x5,6	560	75,7	93,1	2,0	34.000
1204-400	400	406,4x6,3	630	96,3	122,0	2,0	45.000
1204-450	450	457,0x6,3	630	101,0	155,0	2,0	65.000
1204-500	500	508,0x6,3	710	118,0	193,0	2,0	80.000
1204-600	600	610,0x7,1	800	153,6	277,0	2,0	110.000
1204-700	700	711,0x8,8	900	210,0	378,0	2,0	160.000
1204-800	800	813,0x8,8	1000	246,0	497,0	2,0	210.000

For information about heat losses we refer you to section 9:201



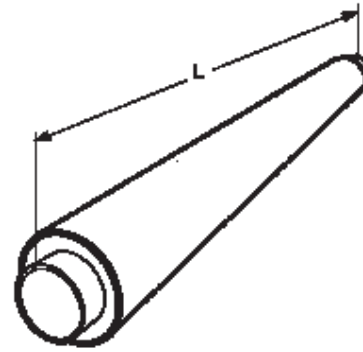
**POWERPIPE**

# SINGLE PIPES

3:103

## Straight pipes

### Series 3



#### STRAIGHT PIPES, 1203

Transmission capacity  
 $\Delta T = 50^\circ\text{C}$

Article No:	DN	Service pipe OD x s [mm]	Jacket pipe OD [mm]	Weight [kg/m]	Water - content [l/m]	[m/s]	[kW]
<b>L = 12 m</b>							
1303-025	25	33,7x2,3	125	3,9	0,6	0,8	100
1303-032	32	42,4x2,6	140	5,0	1,1	0,8	180
1303-040	40	48,3x2,6	140	5,4	1,5	0,9	230
1303-050	50	60,3x2,9	160	7,1	2,3	0,9	370
1303-065	65	76,1x2,9	180	8,7	3,5	1,0	700
1303-080	80	88,9x3,2	200	10,9	5,3	1,0	1.000
1303-100	100	114,3x3,6	250	16,2	9,0	1,1	1.800
1303-125	125	139,7x3,6	280	19,9	13,8	1,3	3.300
1303-150	150	168,3x4,0	315	25,7	20,2	1,4	5.000
1303-200	200	219,1x4,5	400	39,0	34,7	1,6	10.000
1303-250	250	273,0x5,0	500	46,3	54,3	1,8	18.000
1303-300	300	323,9x5,6	560	76,9	76,8	2,0	28.000
1303-350	350	355,6x5,6	630	85,1	93,1	2,0	34.000
1303-400	400	406,4x6,3	710	108,8	122,0	2,0	45.000
1303-450	450	457,0x6,3	710	113,5	155,0	2,0	65.000
1303-500	500	508,0x6,3	800	133,6	193,0	2,0	80.000
1303-600	600	610,0x7,1	900	173,0	277,0	2,0	110.000
1303-700	700	711,0x8,8	1000	231,8	378,0	2,0	160.000

#### STRAIGHT PIPES, 1304

L = 16 m

1304-100	100	114,3x3,6	250	16,2	9,0	1,1	1.800
1304-125	125	139,7x3,6	280	19,9	13,8	1,3	3.300
1304-150	150	168,3x4,0	315	25,7	20,2	1,4	5.000
1304-200	200	219,1x4,5	400	39,0	34,7	1,6	10.000
1304-250	250	273,0x5,0	500	46,3	54,3	1,8	18.000
1304-300	300	323,9x5,6	560	76,9	76,8	2,0	28.000
1304-350	350	355,6x5,6	630	85,1	93,1	2,0	34.000
1304-400	400	406,4x6,3	710	108,8	122,0	2,0	45.000
1304-450	450	457,0x6,3	710	113,5	155,0	2,0	65.000
1304-500	500	508,0x6,3	800	133,6	193,0	2,0	80.000
1304-600	600	610,0x7,1	900	173,0	277,0	2,0	110.000
1304-700	700	711,0x8,8	1000	231,8	378,0	2,0	160.000

For information about heat losses we refer you to section 9:201



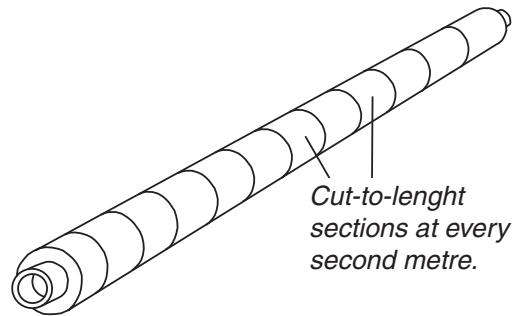
**POWERPIPE**

## SINGLE PIPES

3:104

### Straight pipes for cut to-length

#### Series 1, 2 and 3



Cut-to-length pipes are manufactured in all dimensions, as given in section 3:101 – 3:103. 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. For technical data, we refer you to section 3:101 – 3:103.

#### CUT-TO-LENGTH PIPE, 1113, 1213 and 1313

L = 12 m

**Article No. Series 1**

1113-DN

**Article No. Series 2**

1213-DN

**Article No. Series 3**

1313-DN

#### CUT-TO-LENGTH PIPE, 1114, 1214 and 1314

L = 16 m

**Article No. Series 1**

1114-DN

**Article No. Series 2**

1214-DN

**Article No. Series 3**

1314-DN

**An example of how to order:**

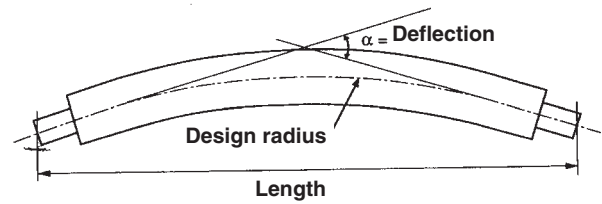
DN200, Series 2, 12 m cut-to-length pipe, Article No. 1213-200-000-000



## Curved pipes

### Deflection versus design radius

#### Series 1, 2 and 3.



#### CORRELATION BETWEEN DEFLECTION AND DESIGN RADIUS

Deflection	Design radius		Deflection	Design radius	
	L=12m	L=16m		L=12m	L=16m
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  $> 10^\circ$ .

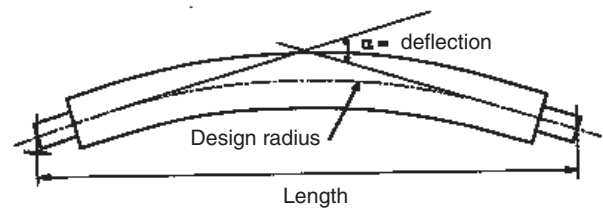
# SINGLE PIPES

3:107

## Curved pipes

### Elastic radius

### Series 1, 2 and 3.



#### 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.

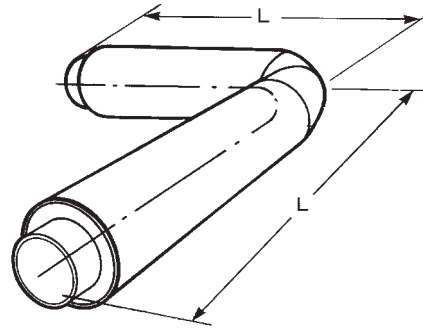
# SINGLE PIPES

3:201

## Bend

### Series 1

Powerpipe pre-insulated bends are manufactured using a special foam with high compressive strength. This design will normally allow installation of Powerpipe bends without the use of foam pads around the jacket pipe of the bend



#### BEND 2100

Article No	DN	Service pipe OD x s [mm]	Jacket pipe OD [mm]	L [mm]
2100-025	25	33,7x2,6	90	1000
2100-032	32	42,4x2,6	110	1000
2100-040	40	48,3x2,6	110	1000
2100-050	50	60,3x2,9	125	1000
2100-065	65	76,1x2,9	140	1000
2100-080	80	88,9x3,2	160	1000
2100-100	100	114,3x3,6	200	1000
2100-125	125	139,7x3,6	225	1000
2100-150	150	168,3x4,0	250	1000
2100-200	200	219,1x4,5	315	1000
2100-250	250	273,0x5,0	400	1300
2100-300	300	323,9x5,6	450	1500
2100-350	350	355,6x5,6	500	1600
2100-400	400	406,4x6,3	560	1600
2100-450	450	457,0x6,3	560	1600
2100-500	500	508,0x6,3	630	1600
2100-600	600	610,0x7,1	710	1600
2100-700	700	711,2x8,8	800	1700
2100-800	800	813,0x8,8	900	1850

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.

2100-DN-degree of bend-000

#### An example of how to order:

Bend, serie 1, dim DN100, 90°  
has Article No. 2100-100-090-000.

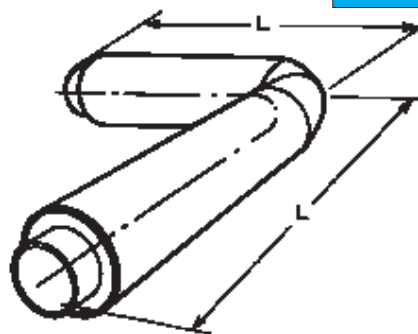
# SINGLE PIPES

3:202

## Bend

### Series 2

Powerpipe pre-insulated bends are manufactured using a special foam with high compressive strength. This design will normally allow installation of Powerpipe bends without the use of foam pads around the jacket pipe of the bend



#### BEND 2200

Article No	DN	Service pipe OD x s [mm]	Jacket pipe OD	L [mm]
2200-025	25	33,7x2,6	110	1000
2200-032	32	42,4x2,6	125	1000
2200-040	40	48,3x2,6	125	1000
2200-050	50	60,3x2,9	140	1000
2200-065	65	76,1x2,9	160	1000
2200-080	80	88,9x3,2	180	1000
2200-100	100	114,3x3,6	225	1000
2200-125	125	139,7x3,6	250	1000
2200-150	150	168,3x4,0	280	1000
2200-200	200	219,1x4,5	355	1000
2200-250	250	273,0x5,0	450	1300
2200-300	300	323,9x5,6	500	1500
2200-350	350	355,6x5,6	560	1600
2200-400	400	406,4x6,3	630	1600
2200-450	450	457,0x6,3	630	1600
2200-500	500	508,0x6,3	710	1600
2200-600	600	610,0x7,1	800	1600
2200-700	700	711,2x8,8	900	1700
2200-800	800	813,0x8,8	1000	1850

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.

2200-DN-degree of bend-000

#### An example of how to order:

Bend, serie 2, dim DN150, 45°  
has Article No. 2200-150-045-000.

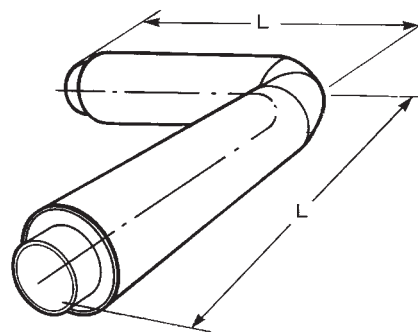
# SINGLE PIPES

3:203

## Bend

### Series 3

Powerpipe pre-insulated bends are manufactured using a special foam with high compressive strength. This design will normally allow installation of Powerpipe bends without the use of foam pads around the jacket pipe of the bend



#### BEND 2300

Article No.	DN	Service pipe OD x s [mm]	Jacket pipe OD [mm]	L [mm]
2300-025	25	33,7x2,3	125	1000
2300-032	32	42,4x2,6	140	1000
2300-040	40	48,3x2,6	140	1000
2300-050	50	60,3x2,9	160	1000
2300-065	65	76,1x2,9	180	1000
2300-080	80	88,9x3,2	200	1000
2300-100	100	114,3x3,6	250	1000
2300-125	125	139,7x3,6	280	1000
2300-150	150	168,3x4,0	315	1000
2300-200	200	219,1x4,5	400	1000
2300-250	250	273,0x5,0	500	1300
2300-300	300	323,9x5,6	560	1500
2300-350	350	355,6x5,6	630	1600
2300-400	400	406,4x6,3	710	1600
2300-450	450	457,0x6,3	710	1600
2300-500	500	508,0x6,3	800	1600
2300-600	600	610,0x7,1	900	1600
2300-700	700	711,0x8,8	1000	1700

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.

#### Artikel nr.

2300-DN-degree of bend-000.

#### An example of how to order:

Bend, Serie 3 with dim DN 65, 90°,  
has Article No. 2300-065-090-000.

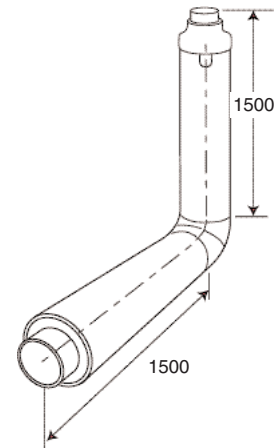
# SINGLE PIPES

3:204

## Termination bend 90°

### Series 1, 2 and 3

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.



#### TERMINATION BENDS, 2110, 2210 and 2310

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

#### Article No. Series 1

2110-DN-000-000

#### Article No. Series 2

2210-DN-000-000

#### Article No. Series 3

2310-DN-000-000

#### An example of how to order:

Termination bend serie 1 med  
dim DN 50, has Article No. 2110-050-000-000.

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

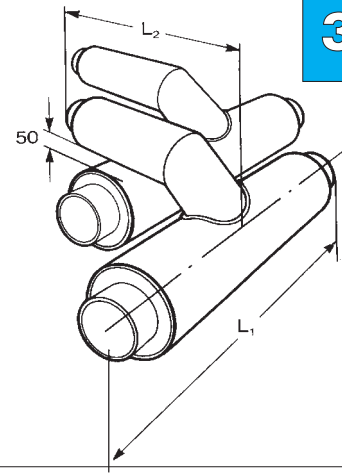
# SINGLE PIPES

3:301

## T-piece

### Series 1, 2 and 3

Powerpipe T-pieces are as standard delivered in a reinforced design. This means that the thickness of the main steel service pipe is locally increased in order to compensate for the area reduction caused by the branch steel service pipe



#### T-PIECES, 3100, 3200 and 3300

Main pipe DN	Branch pipe DN	L1 [mm]	L2 [mm]
25-200	25-80	1200	1000
100-200	100-200	1500	1000
250-800	25-80	1200	1200
250-800	100-200	1500	1200
250-800	250-600	1800	1500

The branch pipe cannot be designed in dimensions bigger than the main pipe. Powerpipe can on request deliver T-pieces in non reinforced design.

#### 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

#### An example of how to order:

Series 1 T-piece with main pipe DN200 and branch pipe DN50,  
Article No 3100-200-050-000.

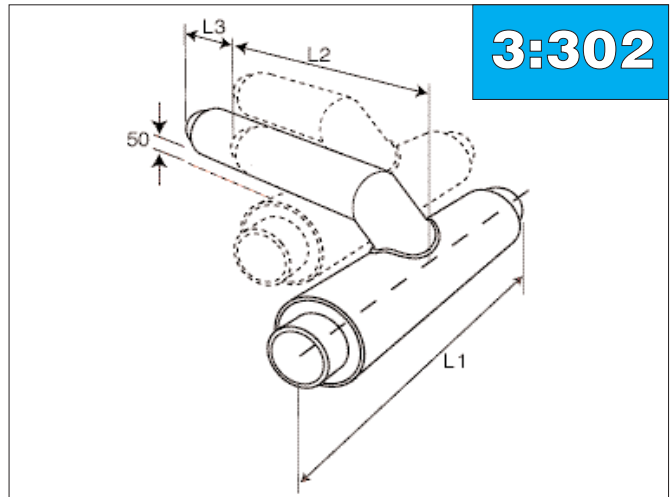
# SINGLE PIPES

3:302

## T-piece with extended branch

### Series 1, 2 and 3

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.



#### T-piece with extended branch 3120, 3220, 3320

Main pipe DN	For L1 and L2 see page 3:301	L3 [mm]	L3 [mm] Serie 3
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

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

#### 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.



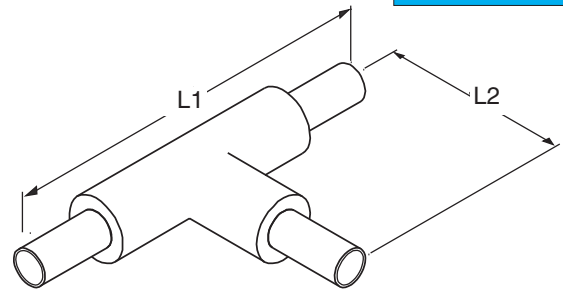
# SINGLE PIPES

3:303

## T-piece, straight

### Series 1, 2 and 3

Powerpipe T-pieces are as standard delivered in a reinforced design. This means that the thickness of the main steel service pipe is locally increased in order to compensate for the area reduction caused by the branch steel service pipe. This T-piece will allow the branch pipe to be installed at the same level as the main pipe.



#### T-PIECE, STRAIGHT 3130, 3230, 3330

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

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

#### An example of how to order:

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

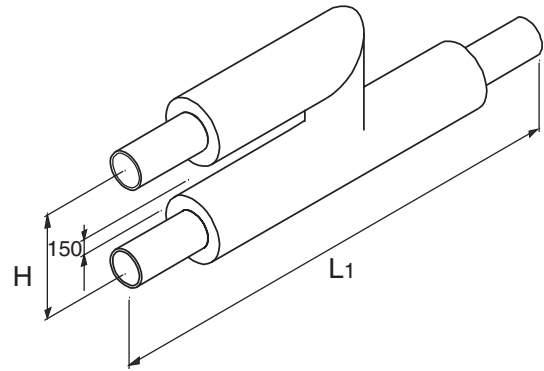
# SINGLE PIPES

3:304

## T-pieces with parallel branch

### Series 1, 2 and 3

Powerpipe T-pieces are as standard delivered in a reinforced design. This means that the thickness of the main steel service pipe is locally increased in order to compensate for the area reduction caused by the branch steel service pipe.



#### T-PIECES WITH PARALLEL BRANCH 3110, 3210 and 3310

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

$$H = \frac{DY \text{ main pipe} + DY \text{ branch}}{2} + 150$$

#### Example

Main pipe DN100 in 225mm casing pipe  
Branch pipe DN40 in 125mm casing pipe

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

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

#### An example of how to order:

Series 1 T-piece with parallel branch leg, with main pipe DN200 and branch pipe DN50, has Article No. 3110-200-050-000.

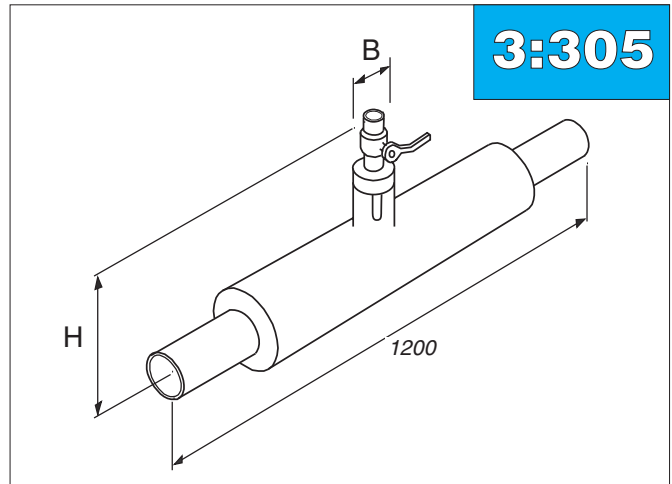
# SINGLE PIPES

3:305

## Air release/ drainage units

### Series 1, 2 and 3

The built in alarmwires are linked outside the sealing.



#### AIR RELEASE/ DRAINAGE UNITS 3140, 3240, 3340

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	431		
80	438		
100	450		
125	463		
150	477		
200	502		
250	530		
300	554		
350	570		
400	596		
500	650		

The valve is made of stainless steel.  
Air release/drainage units manufactured in dimensions DN25, DN40 and DN50 are delivered with a screwed on plug.

The valve is protected by a hut as a standard. Please see 8:102

#### Article No. Series 1

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

#### Article No. Series 2

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

#### Article No. Series 3

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

#### An example of how to order:

Air release unit for a Series 1 main pipe DN200 and DN25 air release unit , has Article No. 3140-200-025-000.

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 ontinously.

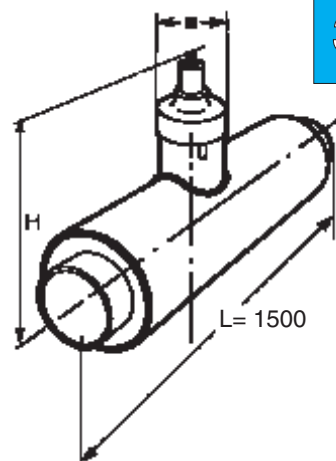
# SINGLE PIPES

3:401

## Preinsulated valves

### Series 1, 2 and 3

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.



#### PREINSULATED VALVES 4100, 4200, 4300

Main pipe DN	Service pipe OD x s mm	H [mm]	B [mm]	Wrench size [mm]
25	33,7 x 2,3	382	110	19
32	42,4 x 2,6	388	110	19
40	48,3 x 2,6	401	110	19
50	60,3 x 2,9	411	110	19
65	76,1 x 2,9	415	110	19
80	88,9 x 3,2	426	110	19
100	114,3 x 3,6	450	125	27
125	139,7 x 3,6	455	125	27
150	168,3 x 4,0	474	125	27
200	219,1 x 4,5	520	160	50
250	273,0 x 5,0	557	160	50
300	323,9 x 5,6	664	160	50
350	355,6 x 5,6	762	160	50
400	406,4 x 6,3	866	160	50

Pre-insulated valves of different designs as specified above can be delivered on request. Accessories such as wrenches, reduction gears and casing pipes for valve spindle extension length 1500mm are specified under section 8:102.

The valve is protected by a hut as a standard. Please see 8:102

#### Article No. Series 1

4100-DN-000-000

#### Article No. Series 2

4200-DN-000-000

#### Article No. Series 3

4300-DN-000-000

#### An example of how to order:

Preinsulated valves series 1 with mainpipe DN 200, has Article No. 4100-200-000-000.

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.

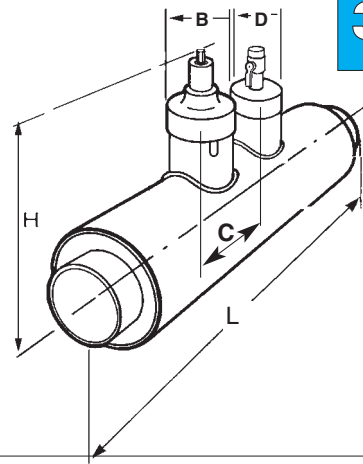
# SINGLE PIPES

3:402

## Preinsulated valve with one air release/ drainage unit

### Series 1, 2 and 3

The built in alarmwires are linked outside the sealing.



#### PREINSULATED VALVE WITH ONE AIR RELEASE/ DRAINAGE UNIT 4141, 4241, 4341

#### Air release/ draining unit

Main pipe DN	C [mm]	H [mm]	B [mm]	Wrench size [mm]		DN	D-measure [mm]
25	1500	250	382	110	19	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	1500	250	415	110	19		
80	1500	250	426	110	19		
100	1500	250	450	125	27		
125	1500	250	455	125	27		
150	1500	250	474	125	27		
200	1500	250	520	160	50		
250	1800	350	557	160	50		
300	1800	350	664	160	50		
350	1800	350	762	160	50		
400	1800	350	866	160	50		

The valve stem is installed in position towards the stop valve. Air release/ drainage units manufactured in dimension DN25, DN40 and DN50 are delivered with a screwed on plug made of stainless steel.

The valve is protected by a hut as a standard. Please see 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

#### An example of how to order:

Series 2 preinsulated valve for main pipe DN100 with air release DN25, 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.

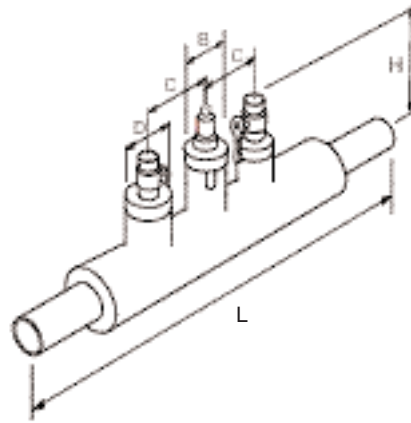
# SINGLE PIPES

3:403

## Preinsulated valve with double air release/drainage units

### Series 1, 2 and 3

The built in alarmwires are linked outside the sealing.



#### PREINSULATED VALVE WITH DOUBLE AIR RELEASE DRAINAGE UNITS, 4142, 4242, 4342

#### AIR RELEASE/ DRAINAGE UNIT

Main pipe DN	L [mm]	C [mm]	H [mm]	B [mm]	Wrench size [mm]	DN	D-measure [mm]
25	1500	250	382	110	19	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	1500	250	415	110	19		
80	1500	250	426	110	19		
100	1500	250	450	125	27		
125	1500	250	455	125	27		
150	1500	250	474	125	27		
200	1500	250	520	160	50		
250	1800	350	557	160	50		
300	1800	350	664	160	50		
350	1800	350	762	160	50		
400	1800	350	866	160	50		

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

The valve is protected by a hut as a standard. Please see 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

#### An example of how to order:

Series 2 preinsulated valve for main pipe DN300 with double air release DN40, Article No 4242-300-040-000.

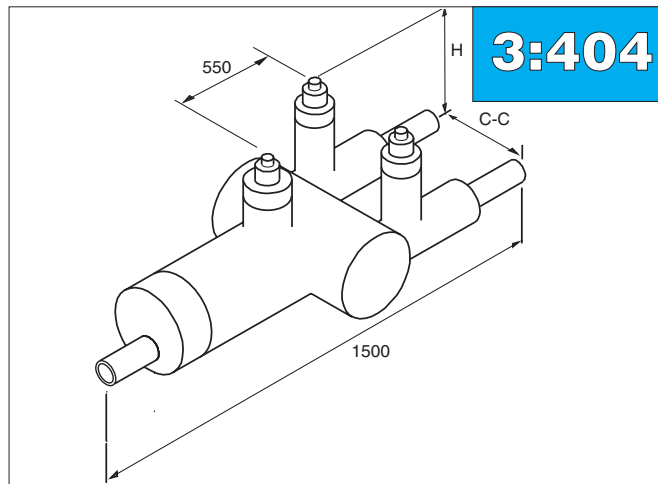
Please observe: the included ball valve has to be operated at least twice/year in order to ensure a good function.

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

# ENKELRÖR

## Preinsulated valve unit

### Series 1, 2 and 3



3:404

#### PREINSULATED VALVE UNITS 4150, 4250, 4350

DN	C-C [mm]	H [mm]
25	310	382
40	330	401
50	340	411
65	360	415
80	380	426

The drainage pipe is manufactured in stainless steel.

The valve is protected by a hut as a standard. Please see 8:102

#### Article No. Series 1

4150-DN-000-000

#### Article No. Series 2

4250-DN-000-000

#### Article No. Series 3

4350-DN-000-000

#### An example of how to order:

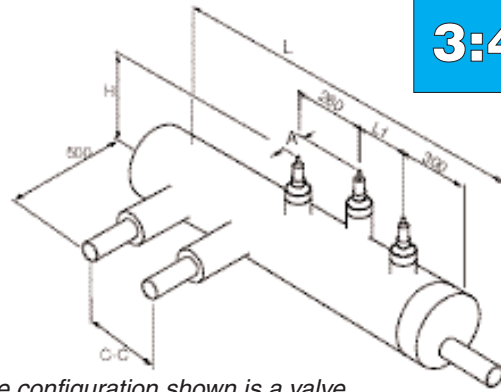
Series 2 valve unit for main pipe DN80, Article No. 4250-080-000-000.

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.

## Preinsulated valve units

### Series 1, 2 and 3



The configuration shown is a valve unit in right hand design. A valve in left hand design will be mirrored to the one shown in the picture.

#### PREINSULATED VALVE UNITS, ANGLE 4150, 4250, 4350

DN	Service pipe [mm]	H [mm]	Wrench size [mm]	C-C [mm]	A [mm]	L1 [mm]	L [mm]
25	33,7 x 2,3	382	19	310	51	370	1600
40	48,3 x 2,6	401	19	330	57	420	1700
50	60,3 x 2,9	411	19	340	80	475	1800
65	76,1 x 2,9	415	19	360	96	535	1900
80	88,9 x 3,2	426	19	380	114	590	2000

The drainage pipe is manufactured in stainless steel.

The valve is protected by a hut as a standard. Please see 8:102

#### Article No. Series 1

4150-DN-000-  
031 = Right-hand design  
032 = Left-hand design

#### Article No. Series 1

4250-DN-000-  
031 = Right-hand design  
032 = Left-hand design

#### Article No. Series 1

4350-DN-000-  
031 = Right-hand design  
032 = Left-hand design

#### An example of how to order:

Series 1 valve unit for main pipe DN80 in left hand design, Article No. 4150-080-000-032.

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.

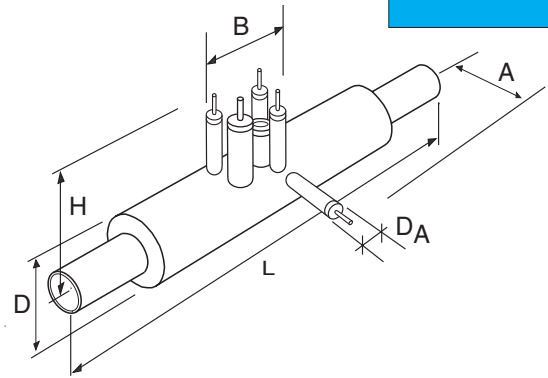
# SINGLE PIPES

3:406

## Combination valve

### Series 1, 2 and 3

- Vent
- Drain
- Bypass



#### COMBINATION VALVE 4843

Main pipe DN	D [mm]	By pas valves DN (3 pc)	L [mm]	A [mm]	D <sub>A</sub> [mm]	B [mm]	H [mm]
100	355	25	1575	600	110		500
125	400	32	1575	600	125	550	500
150	450	32	1725	650	125	550	530
200	500	40	1725	650	125	650	560
250	630	40	1800	700	125	650	600
300	710	50	1800	750	140	700	700
350	800	50		800	140	800	760
400		50		800	140		

Drainage pipe and valve are made of stainless steel.

The valve is protected by a hut as a standard. Please see 8:102

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

**Please observe:** Reduction sleeves, 6:401, are needed for connection to main pipe.

#### Article No.

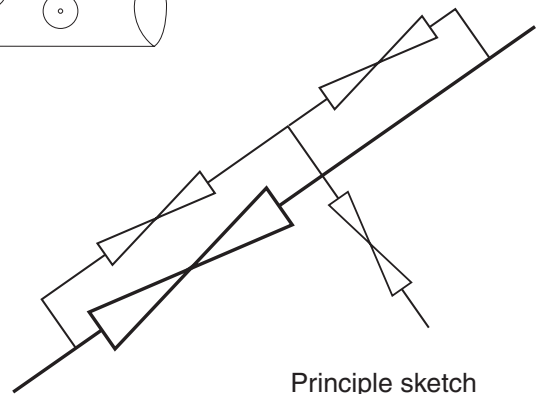
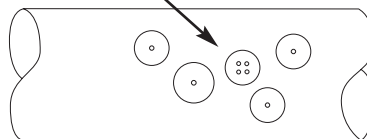
4843-DN-000-000.

#### An example of how to order:

combination valve for DN 200 has  
Article No. 4843-200-000-000.

seen from above

measuring box



Principle sketch

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

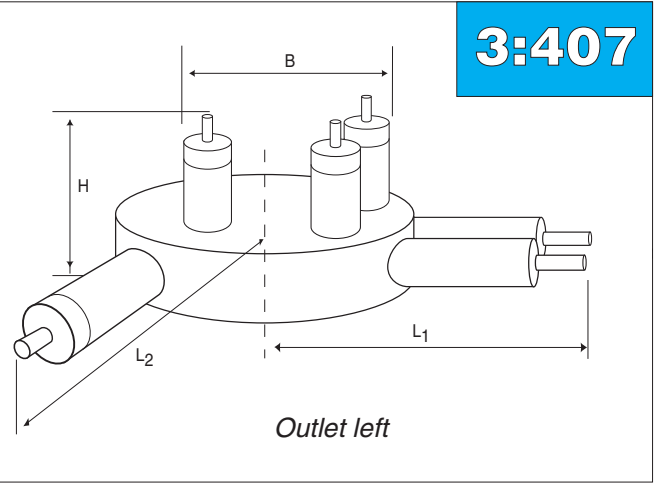
Please observe: Do not refill above the sealing.  
The sealing shall not be below water table continuously.

# SINGLE PIPES

3:407

## Preinsulated valve unit compact

### Series 1, 2 and 3



#### VALVE UNIT COMPACT, 4170, 4270, 4370

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	340	500	210	398	600	625
65	360	505	210	412	610	625
80	380	515	225	447	620	700

Drainage pipe and valve are made of stainless steel.

The valve is protected by a hut as a standard. Please see 8:102

#### Article No. Series 1

4170-DN-000-000

#### Article No. Series 2

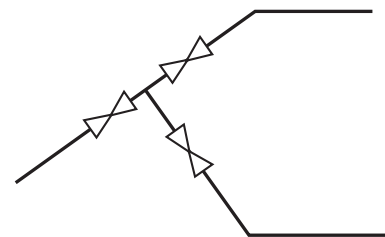
4270-DN-000-000

#### Article No. Series 3

4370-DN-000-000

Outlet 45° right has prefix 031

Outlet 45° left has prefix 032.



Outlet left

#### An example of how to order:

Valve unit compact right series 2 dim DN50 has Article No. 4270-050-000-031.

At order of valve stem height out of standard height and as above please write wanted stem height in a separate text line.

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.

# ENKELRÖR

3:501

## Anchor units

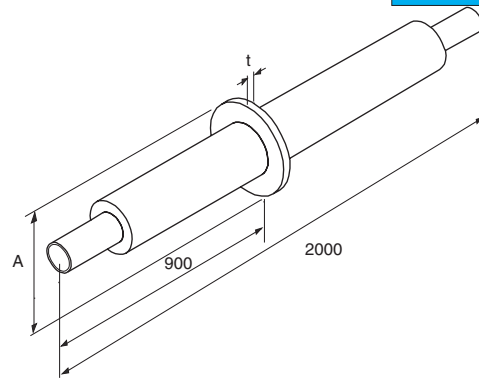
### Series 1, 2 and 3

The anchor unit is designed for casting into concrete.

Dimensioning pressure force:

In concrete 5 MN/ m<sup>2</sup> (50 kg/ cm<sup>2</sup>), standard value

In ground 0,15 MN/ m<sup>2</sup> (1,5 kg/ cm<sup>2</sup>), standard value



#### ANCHOR UNITS, 5100, 5200 and 5300

DN	Max load(kN) $\Delta T = 60^{\circ}\text{C}$	A [mm]	t [mm]	Pressure area [cm <sup>2</sup> ]
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

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

#### An example of how to order:

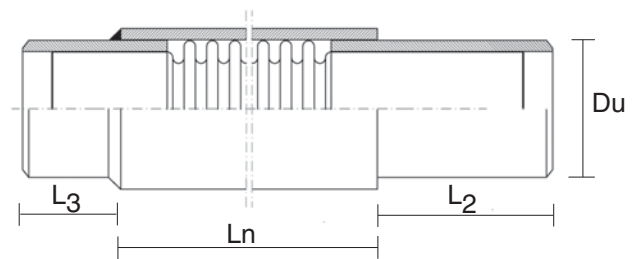
Series 1 anchor unit for DN200 pipe, Article No. 5100-200-000-000.

# 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.



### SINGLE-USE COMPENSATOR, 7810

DN	Max pre-stressing [mm]	$L_n$	$L_2$	$L_3$	$D_u$
40	50	450	210	80	60
50	50	450	210	80	70
65	70	500	220	80	89
80	70	500	220	80	102
100	80	550	220	80	127
125	80	550	220	80	152
150	100	630	220	130	178
200	120	700	210	180	232
250	120	700	210	180	386
300	140	730	210	180	338
350	140	730	210	180	371
400	140	730	210	180	426
450	150	800	230	180	477
500	150	800	230	180	528
600	150	800	230	180	635

#### Article No.

7810-DN-000-000

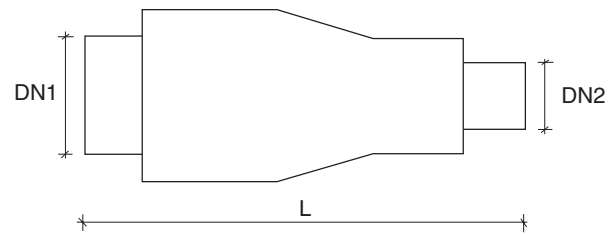
#### An example of how to order:

single-use compensator for a DN200 pipe line, Article No. 7810-200-000-000, PEH casing for the single-use compensator is described in section 6:303.

# SINGLE PIPES

3:503

## Reduction unit



### REDUCTION UNIT 1571, 1572, 1573

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
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

The reduction unit is used at change of dimension.  
The table shows the dimension standard for thin product.

**Artikel No. series 1**  
1571-DN1-DN2-000

**Artikel No. series 2**  
1572-DN1-DN2-000

**Artikel No. series 3**  
1573-DN1-DN2-000

DN1	L [mm]
DN 25–300	900
DN 350–500	1100

**An example of how to order:**  
Reduction pipe series 1 with dim DN 200 to DN 150  
has Article No. 1571-200-150-000.