

## Steel pipes - single - series 1

5.1



### Steel pipes - single - series 1

Steel pipe		Jacket pipe		Weight	Water quantity	Std length	
DN	d outside mm	Wall thickness mm	D outside mm	Wall thickness mm	kg/m	kg/m	L m
20	26,9	2,6	90	3,0	2,7	0,37	6
25	33,7	3,2	90	3,0	3,6	0,59	6
32	42,4	3,2	110	3,0	4,6	1,02	6/12
40	48,3	3,2	110	3,0	5,1	1,38	6/12
50	60,3	3,2	125	3,0	6,3	2,28	6/12
65	76,1	3,2	140	3,0	7,7	3,82	6/12
80	88,9	3,2	160	3,0	9,2	5,35	6/12
100	114,3	3,6	200	3,2	13,2	9,01	12/16
125	139,7	3,6	225	3,4	16,1	13,79	12/16
150	168,3	4,0	250	3,6	20,8	20,18	12/16
200	219,1	4,5	315	4,1	30,6	34,67	12/16
250	273,0	5,0	400	4,8	43,6	54,33	12/16
300	323,9	5,6	450	5,2	56,4	76,80	12/16
350	355,6	5,6	500	5,6	63,6	93,16	12/16
400	406,4	6,3	560	6,0	80,5	121,80	12/16
450	457,2	6,3	630	6,6	93,1	155,25	12/16
500	508,0	6,3	710	7,2	107,2	192,75	12/16
600	610,0	7,1	800	7,9	139,5	278,80	12/16

Larger dimensions are also available.

All pipes are available with alarm wires.

Series 1 pipes are normally supplied as traditionally produced pipes without an inserted diffusion barrier. However, dimensions with jacket pipes  $\leq \text{ø}355 \text{ mm}$  can be supplied as a special delivery.



## Steel pipes - single - series 2

Steel pipe		Jacket pipe		Weight	Water quantity	Std length	
DN	d outside mm	Wall thickness mm	D outside mm	Wall thickness mm	kg/m	l/m	L m
20	26,9	2,6	110	3,0	3,2	0,37	6/12
25	33,7	3,2	110	3,0	4,0	0,59	6/12
32	42,4	3,2	125	3,0	5,0	1,02	6/12
40	48,3	3,2	125	3,0	5,4	1,38	6/12
50	60,3	3,2	140	3,0	6,6	2,28	6/12
65	76,1	3,2	160	3,0	8,3	3,82	6/12
80	88,9	3,2	180	3,0	9,8	5,35	6/12
100	114,3	3,6	225	3,4	14,4	9,01	12/16
125	139,7	3,6	250	3,6	17,2	13,79	12/16
150	168,3	4,0	280	3,9	22,3	20,18	12/16
200	219,1	4,5	355	4,5	33,0	34,67	12/16
250	273,0	5,0	450	5,2	47,4	54,33	12/16
300	323,9	5,6	500	5,6	60,6	76,80	12/16
350	355,6	5,6	560	6,0	69,2	93,16	12/16
400	406,4	6,3	630	6,6	88,0	121,80	12/16
450	457,2	6,3	710	7,2	102,4	155,25	12/16
500	508,0	6,3	800	7,9	119,0	192,75	12/16
600	610,0	7,1	900	8,7	154,3	278,42	12/16

Larger dimensions are also available.  
 All pipes are available with alarm wires.  
 Continuously produced pipe of 6 m not supplied as standard.

### Diffusion barrier

isoplus can produce pipes with jacket pipes in jacket pipe dimensions of  $\leq \text{ø}355$  mm as energy-saving, continuously produced pipes with a diffusion barrier inserted between the jacket pipe and the polyurethane foam. For pipes with jacket pipes in dimension of  $>\text{ø}355$  mm, the jacket pipe functions as a diffusion barrier due to its thickness. The diffusion barrier secures isoplus pre-insulated pipes against ageing, and the heat loss is therefore constant throughout the pipe's technical service life.

## Steel pipes - single - series 3

5.1.2



### Steel pipes - single - series 3

Steel pipe		Jacket pipe		Weight	Water quantity	Std length	
DN	d outside mm	Wall thickness mm	D outside mm	Wall thickness mm	kg/m	l/m	L m
20	26,9	2,6	125	3,0	3,5	0,37	6/12
25	33,7	3,2	125	3,0	4,3	0,59	6/12
32	42,4	3,2	140	3,0	5,3	1,02	6/12
40	48,3	3,2	140	3,0	5,8	1,38	6/12
50	60,3	3,2	160	3,0	7,2	2,28	6/12
65	76,1	3,2	180	3,0	8,9	3,82	6/12
80	88,9	3,2	200	3,2	10,5	5,35	6/12
100	114,3	3,6	250	3,6	15,4	9,01	12/16
125	139,7	3,6	280	3,9	18,7	13,79	12/16
150	168,3	4,0	315	4,1	24,1	20,18	12/16
200	219,1	4,5	400	4,8	36,0	34,67	12/16
250	273,0	5,0	500	5,6	51,6	54,33	12/16
300	323,9	5,6	560	6,0	66,2	76,80	12/16
350	355,6	5,6	630	6,6	76,6	93,16	12/16
400	406,4	6,3	710	7,2	97,3	121,80	12/16
450	457,2	6,3	800	7,9	114,2	155,25	12/16
500	508,0	6,3	900	8,7	133,8	192,75	12/16
600	610,0	7,1	1000	9,4	170,5	278,42	12/16

Larger dimensions are also available.  
 All pipes are available with alarm wires.  
 Continuously produced pipe of 6 m not supplied as standard.

#### Diffusion barrier

isoplus can produce pipes with jacket pipes in jacket pipe dimensions of  $\leq \varnothing 355$  mm as energy-saving, continuously produced pipes with a diffusion barrier inserted between the jacket pipe and the polyurethane foam. For pipes with jacket pipes in dimension of  $> \varnothing 355$  mm, the jacket pipe functions as a diffusion barrier due to its thickness. The diffusion barrier secures isoplus pre-insulated pipes against ageing, and the heat loss is therefore constant throughout the pipe's technical service life.



Curved pipes - single					
Steel pipe		Design radius	Max. permissible angle $\alpha^\circ$	Max. permissible angle $\alpha^\circ$	Max. permissible angle $\alpha^\circ$
DN	d outside mm	r [M]	6 m pipe lengths	12 m pipe lengths	16 m pipe lengths
20	26,9	8,4	41°	-	-
25	33,7	12,8	27°	-	-
32	42,4	13,4	26°	52°	-
40	48,3	15,4	22°	44°	-
50	60,3	17,2	20°	40°	-
65	76,1	19,6	18°	36°	-
80	88,9	20,2	17°	34°	-
100	114,3	22,9 (12m) 20,8 (16m)	-	30°	44°
125	139,7	22,9 (12m) 20,8 (16m)	-	30°	44°
150	168,3	25,5 (12m) 22,9 (16m)	-	27°	40°
200	219,1	28,6 (12m) 26,2 (16m)	-	24°	35°
250	273	32,7 (12m) 29,6 (16m)	-	21°	31°
300	323,9	36,2 (12m) 32,7 (16m)	-	19°	28°
350	355,6	68,8 (12m) 65,5 (16m)	-	10°	14°
400	406,4	76,4 (12m) 70,5 (16m)	-	9° (S1)	13° (S1)
400	406,4	105,8 (12m) 87,3 (16m)	-	6,5° (S2+S3)	10,5° (S2+S3)
450	457,2	137,5 (12m) 114,6 (16m)	-	5°	8°
500	508	171,9 (12m) 152,8 (16m)	-	4° (S1)	6° (S1)

Pre-bent pipes  $\leq \text{Ø}560$  jacket bends with 1.5 m straight end lengths.

$\text{Ø}560$  jacket bends with 2 m straight end lengths.

Jackets  $> \text{Ø}560$  jacket bends with 3 m straight end lengths.

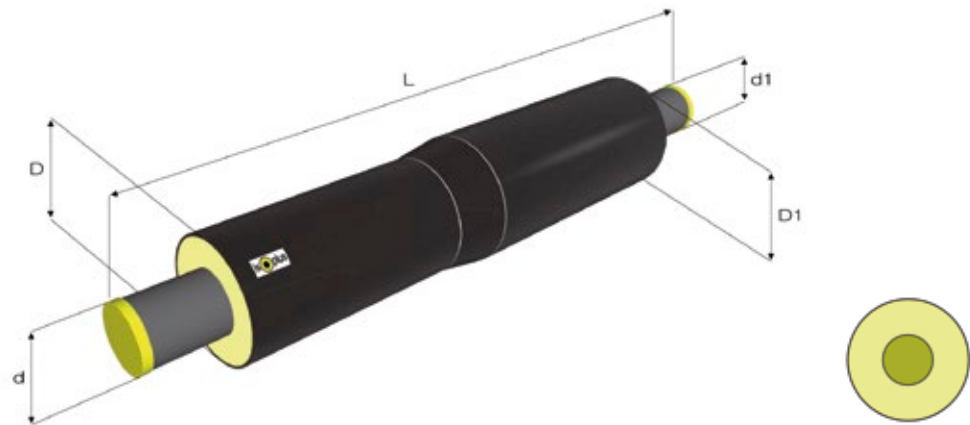
Curved pipes with jacket diameters greater than 710 mm are available to order.

When ordering curved pipes, please state the angle  $\alpha$  or radius r. The direction of the curve, left/right/upwards/downwards, must also be stated on account of the alarm wires.

DN 20 - DN 80 pipes are bent on site. Bending tool must be used.

## Reducers - single

5.3



Reducers - single								
		Series 1		Series 2		Series 3		
Steel pipe	Steel pipe	Jacket pipe	Jacket pipe	Jacket pipe	Jacket pipe	Jacket pipe	Jacket pipe	Length
d outside mm	d1 outside mm	d outside mm	d1 outside mm	d outside mm	d1 outside mm	d outside mm	d1 outside mm	L mm
26,9	33,7	90	90	110	110	125	125	1500
26,9	42,4	90	110	110	125	125	140	1500
33,7	42,4	90	110	110	125	125	140	1500
33,7	48,3	90	110	110	125	125	140	1500
42,4	48,3	110	110	125	125	140	140	1500
42,4	60,3	110	125	125	140	140	160	1500
48,3	60,3	110	125	125	140	140	160	1500
48,3	76,1	110	140	125	160	140	180	1500
60,3	76,1	125	140	140	160	160	180	1500
60,3	88,9	125	160	140	180	160	200	1500
76,1	88,9	140	160	160	180	180	200	1500
76,1	114,3	140	200	160	225	180	250	1500
88,9	114,3	160	200	180	225	200	250	1500
88,9	139,7	160	225	180	250	200	280	1500
114,3	139,7	200	225	225	250	250	280	1500
114,3	168,3	200	250	225	280	250	315	1500
139,7	168,3	225	250	250	280	280	315	1500
139,7	219,1	225	315	250	355	280	400	1500
168,3	219,1	250	315	280	355	315	400	1500
168,3	273,0	250	400	280	450	315	500	1500
219,1	273,0	315	400	355	450	400	500	1500
219,1	323,9	315	450	355	500	400	560	1500
273,0	323,9	400	450	450	500	500	560	1500

Reducers are also available in larger dimensions and with a greater number of steps.



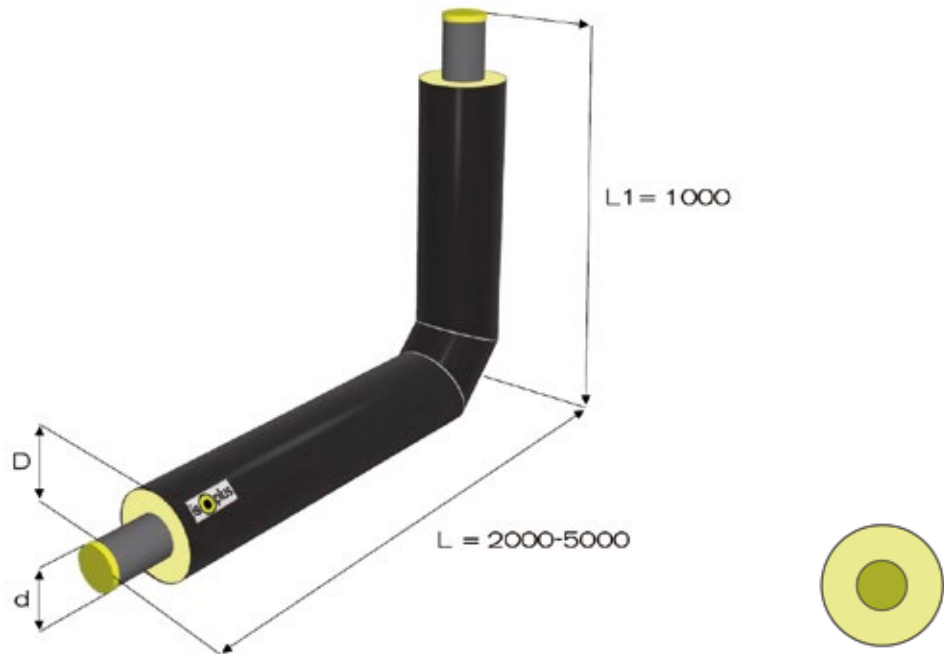
### Bends 45°/90° - single

	Series 1	Series 2	Series 3		
Steel pipe	Jacket pipe	Jacket pipe	Jacket pipe	Short leg length	Standard leg length
d outside mm	D outside mm	D outside mm	D outside mm	L mm	L mm
26,9	90	110	125	600 x 600	1000 x 1000
33,7	90	110	125	600 x 600	1000 x 1000
42,4	110	125	140	600 x 600	1000 x 1000
48,3	110	125	140	600 x 600	1000 x 1000
60,3	125	140	160	600 x 600	1000 x 1000
76,1	140	160	180	600 x 600	1000 x 1000
88,9	160	180	200	600 x 600	1000 x 1000
114,3	200	225	250	700 x 700	1000 x 1000
139,7	225	250	280	750 x 750	1000 x 1000
168,3	250	280	315	800 x 800	1000 x 1000
219,1	315	355	400	-	1000 x 1000
273,0	400	450	500	-	1000 x 1000
323,9	450	500	560	-	1000 x 1000
355,6	500	560	630	-	1000 x 1000
406,4	560	630	710	-	1000 x 1000
457,2	630	710	800	-	1100 x 1100
508,0	710	800	900	-	1200 x 1200
610,0	800	900	1000	-	1300 x 1300

Bends are also available with other angles and leg lengths.

## House entry pipe - single

5.5

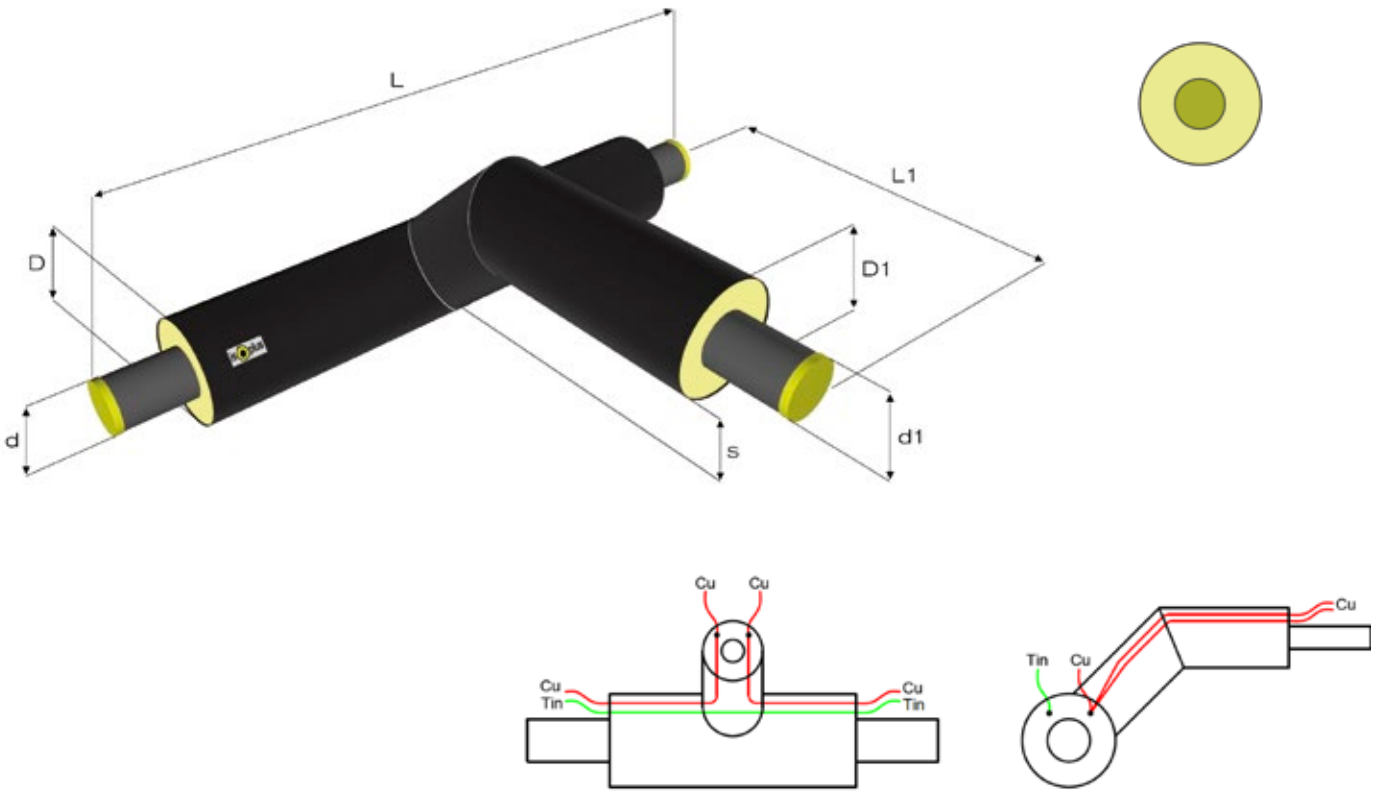


House entry pipe - single			
	Series 1	Series 2	Series 3
Steel pipe	Jacket pipe	Jacket pipe	Jacket pipe
d outside mm	D outside mm	D outside mm	D outside mm
26,9	90	110	125
33,7	90	110	125
42,4	110	125	140
48,3	110	125	140
60,3	125	140	160
76,1	140	160	180
88,9	160	180	200
114,3	200	225	250
139,7	225	250	280
168,3	250	280	315

House entry pipes are also available with other angles and leg lengths.

# Branches with 45° - single

5.6



## Branches with 45° - single - series 1

		d (mm)	26,9	33,7	42,4	48,3	60,3	76,1	88,9	114,3	139,7	168,3	219,1	273,0	323,9	355,6	406,4	
		D (mm)	90	90	110	110	125	140	160	200	225	250	315	400	450	500	560	
d1 mm	D1 m	s mm	Run pipe/Branch L/L1															
26,9	90	70	1100/695	1100/695	1100/705	1100/705	1100/710	1100/720	1100/730	1100/750	1100/760	1100/775	1100/805	1100/850	1100/875	1100/900	1100/930	
33,7	90	70		1100/695	1100/705	1100/705	1100/710	1100/720	1100/730	1100/750	1100/760	1100/775	1100/805	1100/850	1100/875	1100/900	1100/930	
42,4	110	70			1100/715	1100/715	1100/720	1100/730	1100/740	1100/760	1100/770	1100/785	1100/815	1100/860	1100/885	1100/910	1100/940	
48,3	110	70				1100/715	1100/720	1100/730	1100/740	1100/760	1100/770	1100/785	1100/815	1100/860	1100/885	1100/910	1100/940	
60,3	125	70					1100/730	1100/735	1100/745	1100/765	1100/780	1100/790	1100/825	1100/865	1100/890	1100/915	1100/945	
76,1	140	70						1100/745	1100/745	1100/775	1100/785	1100/800	1100/830	1100/875	1100/900	1100/925	1100/955	
88,9	160	70							1200/800	1200/800	1200/800	1200/800	1100/850	1100/900	1200/900	1200/950	1200/950	
114,3	200	70								1200/800	1200/800	1200/800	1200/850	1200/900	1200/950	1200/950	1200/1000	
139,7	225	70									1300/850	1300/850	1300/850	1300/900	1300/950	1300/950	1300/1000	
168,3	250	70										1300/850	1300/850	1300/950	1300/950	1300/1000	1300/1000	
219,1	315	70												1400/950	1400/1000	1400/1000	1400/1050	1400/1050
273,0	400	70													1500/1050	1500/1050	1500/1100	1500/1100
323,9	450	70														1600/1100	1600/1150	1600/1150
355,6	500	70															1700/1200	1700/1200
406,4	560	70																1700/1250

Branches are also available with other angles and leg lengths.



## Branches with 45° - single

5.6.1

### Branches with 45° - single - series 2

		d (mm)	26,9	33,7	42,4	48,3	60,3	76,1	88,9	114,3	139,7	168,3	219,1	273,0	323,9	355,6	406,4
		D (mm)	110	110	125	125	140	160	180	225	250	280	355	450	500	560	630
d1 mm	D1 m	s mm	Run pipe/Branch L/L1														
26,9	110	70	1100/712	1100/715	1100/720	1100/720	1100/730	1100/740	1100/750	1100/770	1100/785	1100/800	1100/835	1100/885	1100/910	1100/940	1100/975
33,7	110	70		1100/715	1100/720	1100/720	1100/730	1100/740	1100/750	1100/770	1100/785	1100/800	1100/835	1100/885	1100/910	1100/940	1100/975
42,4	125	70			1100/730	1100/730	1100/735	1100/745	1100/755	1100/780	1100/790	1100/805	1100/845	1100/890	1100/915	1100/945	1100/980
48,3	125	70				1100/730	1100/735	1100/745	1100/755	1100/780	1100/790	1100/805	1100/845	1100/890	1100/915	1100/945	1100/980
60,3	140	70					1100/745	1100/755	1100/765	1100/785	1100/800	1100/815	1100/850	1100/900	1100/925	1100/955	1100/990
76,1	160	70						1100/765	1100/775	1100/795	1100/810	1100/825	1100/860	1100/910	1100/935	1100/965	1100/1000
88,9	180	70							1200/800	1200/800	1200/800	1200/850	1200/850	1200/900	1200/950	1100/950	1200/1000
114,3	225	70								1200/850	1200/850	1200/850	1200/900	1200/950	1200/950	1200/1000	1200/1050
139,7	250	70									1300/850	1300/850	1300/900	1300/950	1300/1000	1200/1000	1300/1050
168,3	280	70										1300/900	1300/950	1300/1000	1300/1000	1200/1050	1300/1100
219,1	355	70											1400/1000	1400/1050	1400/1050	1400/1100	1400/1150
273,0	450	70												1500/1100	1500/1100	1500/1150	1500/1200
323,9	500	70													1600/1150	1600/1200	1600/1250
355,6	560	70														1700/1250	1700/1300
406,4	630	70															1700/1350

Branches are also available with other angles and leg lengths.

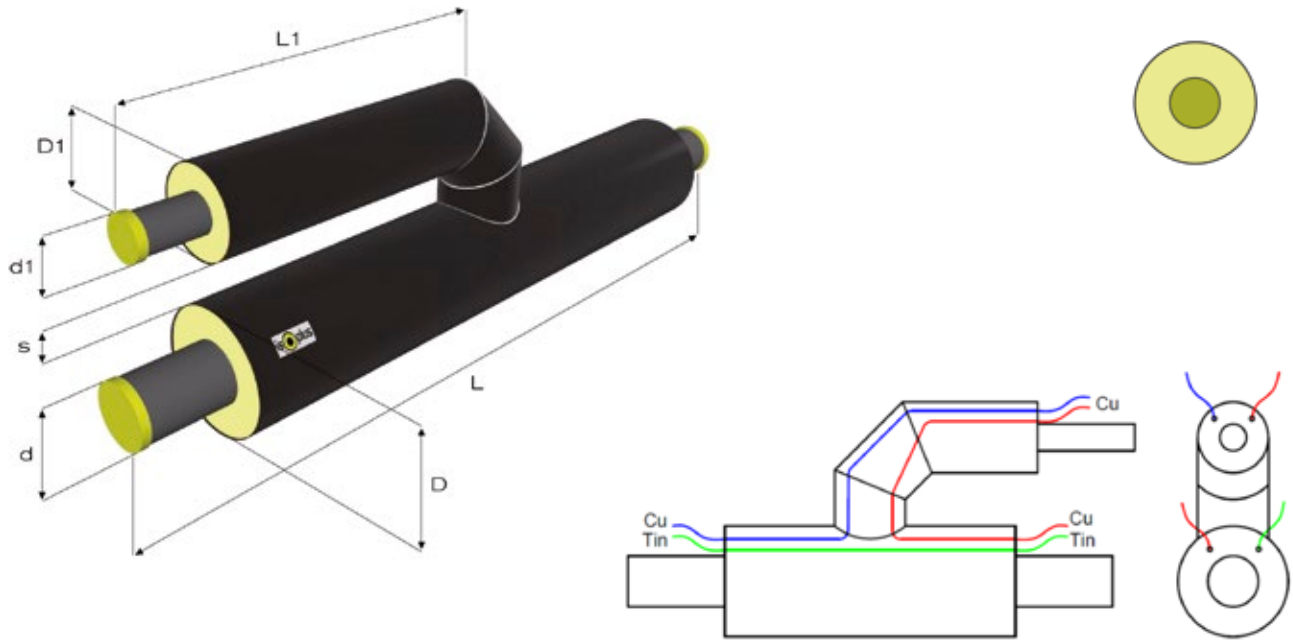
### Branches with 45° - single - series 3

		d (mm)	26,9	33,7	42,4	48,3	60,3	76,1	88,9	114,3	139,7	168,3	219,1	273,0	323,9	355,6	406,4
		D (mm)	125	125	140	140	160	180	200	250	280	315	400	500	560	630	710
d1 mm	D1 m	s mm	Run pipe/Branch L/L1														
26,9	125	70	1100/700	110/730	1100/735	110/735	1100/745	1100/755	1100/765	1100/790	1100/805	1100/825	1100/865	1100/915	1100/945	1100/980	1100/1000
33,7	125	70		1100/730	1100/735	1100/735	1100/745	1100/755	1100/765	1100/790	1100/805	1100/825	1100/865	1100/915	1100/945	1100/980	1100/1000
42,4	140	70			1100/745	1100/745	1100/755	1100/765	1100/775	1100/800	1100/815	1100/830	1100/875	1100/925	1100/955	1100/990	1100/1010
48,3	140	70				1100/745	1100/755	1100/765	1100/775	1100/800	1100/815	1100/830	1100/875	1100/925	1100/955	1100/990	1100/1010
60,3	160	70					1100/765	1100/775	1100/785	1100/810	1100/825	1100/840	1100/885	1100/935	1100/965	1100/1000	1100/1020
76,1	180	70						1100/785	1100/795	1100/820	1100/835	1100/850	1100/895	1100/945	1100/965	1100/1010	1100/1030
88,9	200	70							1200/800	1200/850	1200/850	1200/850	1200/950	1200/1000	1200/1000	1200/1050	1200/1050
114,3	250	70								1200/850	1200/900	1200/900	1200/950	1200/1000	1200/1000	1200/1050	1200/1100
139,7	280	70									1300/900	1300/950	1300/1000	1300/1050	1300/1050	1300/1100	1300/1100
168,3	315	70										1300/950	1300/1000	1300/1050	1300/1050	1300/1100	1300/1150
219,1	400	70											1400/1050	1400/1100	1400/1150	1400/1150	1400/1200
273,0	500	70												1500/1200	1500/1200	1500/1250	1500/1250
323,9	560	70													1600/1250	1600/1300	1600/1300
355,6	630	70														1700/1350	1700/1350
406,4	710	70															1700/1400

Branches are also available with other angles and leg lengths.

# Branches - parallel - single

# 5.6.2



Branches - parallel - single - series 1																		
		d (mm)	26,9	33,7	42,4	48,3	60,3	76,1	88,9	114,3	139,7	168,3	219,1	273,0	323,9	355,6	406,4	
		D (mm)	90	90	110	110	125	140	160	200	225	250	315	400	450	500	560	
d1 mm	D1 m	s mm	Run pipe/Branch L/L1															
26,9	90	120	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600
33,7	90	120		1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600
42,4	110	120			1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600
48,3	110	120				1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600
60,3	125	120					1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600
76,1	140	120						1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600
88,9	160	120							1200/600	1200/600	1200/600	1200/600	1200/600	1200/600	1200/600	1200/600	1200/600	1200/600
114,3	200	120								1200/550	1200/550	1200/550	1200/550	1200/550	1200/550	1200/550	1200/550	1200/550
139,7	225	120									1300/600	1300/600	1300/600	1300/600	1300/600	1300/600	1300/600	1300/600
168,3	250	120										1300/650	1300/650	1300/650	1300/650	1300/650	1300/650	1300/650
219,1	315	120											1400/700	1400/700	1400/700	1400/700	1400/700	1400/750
273,0	400	120												1500/800	1500/800	1500/800	1500/800	1500/800
323,9	450	120													1600/850	1600/850	1600/850	1600/850
355,6	500	120															1700/900	1700/900
406,4	560	120																1700/1000

Branches are also available with other angles and leg lengths.

## Branches - parallel - single

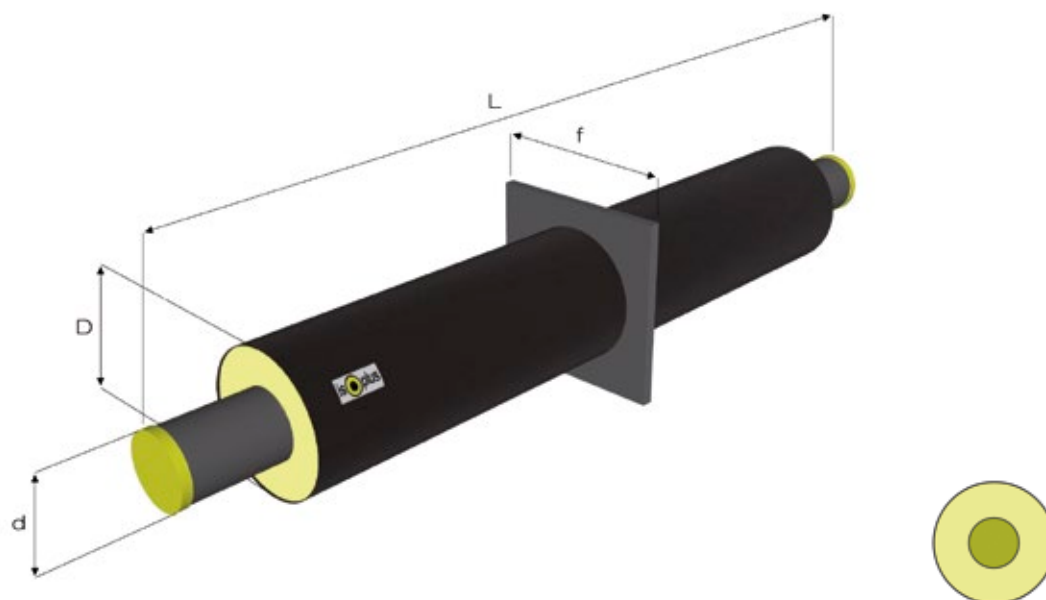
5.6.3

Branches - parallel - single - series 2																	
		d (mm)	26,9	33,7	42,4	48,3	60,3	76,1	88,9	114,3	139,7	168,3	219,1	273,0	323,9	355,6	406,4
		D (mm)	110	100	125	125	140	160	180	225	250	280	355	450	500	560	630
d1 mm	D1 m	s mm	Run pipe/Branch L/L1														
26,9	110	120	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600
33,7	110	120		1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600
42,4	125	120			1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600
48,3	125	120				1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600
60,3	140	120					1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600
76,1	160	120						1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600
88,9	180	120							1200/600	1200/600	1200/600	1200/600	1200/600	1200/600	1200/600	1200/600	1200/600
114,3	225	120								1200/600	1200/600	1200/600	1200/600	1200/600	1200/600	1200/600	1200/600
139,7	250	120									1300/600	1300/600	1300/600	1300/600	1300/600	1300/600	1300/600
168,3	280	140										1300/650	1300/650	1300/650	1300/650	1300/650	1300/650
219,1	355	128-160											1400/750	1400/750	1400/750	1400/750	1400/750
273,0	450	147-180												1500/800	1500/800	1500/800	1500/800
323,9	500	193-237													1600/850	1600/850	1600/850
355,6	560	243-260														1700/900	1700/900
406,4	630	285-300															1700/1000

Branches are also available with other angles and leg lengths.

Branches - parallel - single - series 3																	
		d (mm)	26,9	33,7	42,4	48,3	60,3	76,1	88,9	114,3	139,7	168,3	219,1	273,0	323,9	355,6	406,4
		D (mm)	125	125	140	140	160	180	200	250	280	315	400	500	560	630	710
d1 mm	D1 m	s mm	Run pipe/Branch L/L1														
26,9	125	120	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600
33,7	125	120		1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600
42,4	140	120			1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600
48,3	140	120				1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600
60,3	160	120					1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600
76,1	180	120						1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600	1100/600
88,9	200	120							1200/600	1200/600	1200/600	1200/600	1200/600	1200/600	1200/600	1200/600	1200/600
114,3	250	120								1200/600	1200/600	1200/600	1200/600	1200/600	1200/600	1200/600	1200/600
139,7	280	120									1300/600	1300/600	1300/600	1300/600	1300/600	1300/600	1300/600
168,3	315	120										1300/650	1300/650	1300/650	1300/650	1300/650	1300/650
219,1	400	120-140											1400/750	1400/750	1400/750	1400/750	1400/750
273,0	500	120-150												1500/800	1500/800	1500/800	1500/800
323,9	560	150-195													1600/850	1600/850	1600/850
355,6	630	180-245														1700/900	1700/900
406,4	710	230-250															1700/1000

Branches are also available with other angles and leg lengths.



## Anchors - single

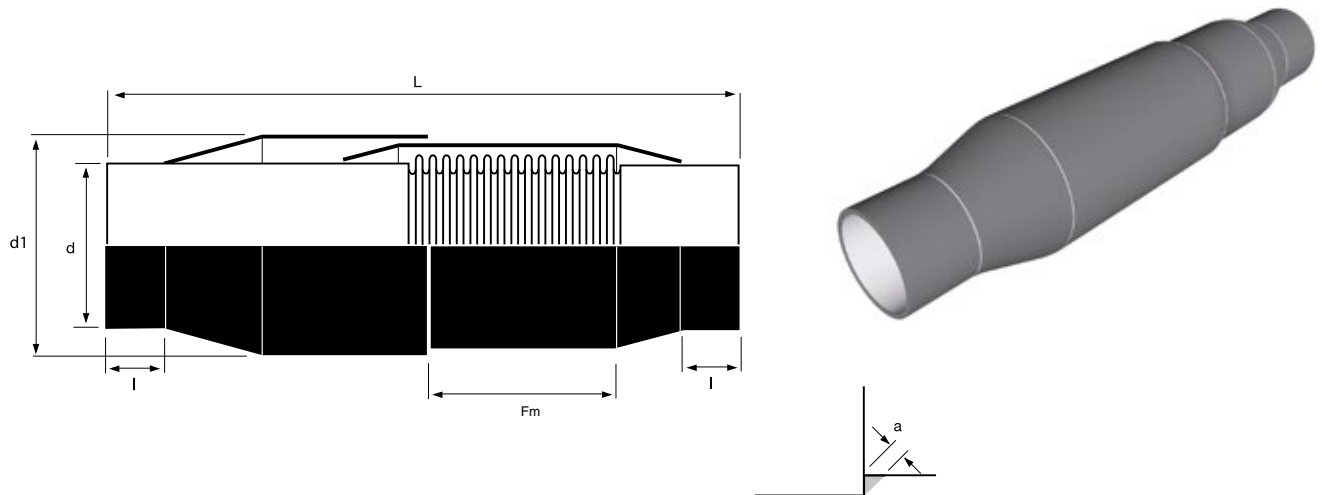
	Series 1	Series 2	Series 3	Stålfjäns		Bygglängd
Steel pipe	Jacket pipe	Jacket pipe	Jacket pipe	f mm	Godstj. mm	L mm
d outside mm	D outside mm	D outside mm	D outside mm			
26,9	90	110	125	200	15	2000
33,7	90	110	125	200	15	2000
42,4	110	125	140	200	15	2000
48,3	110	125	140	200	15	2000
60,3	125	140	160	250	20	2000
76,1	140	160	180	250	20	2000
88,9	160	180	200	250	20	2000
114,3	200	225	250	330	25	2000
139,7	225	250	280	330	25	2000
168,3	250	280	315	380	25	2000
219,1	315	355	400	500	25	2000
273,0	400	450	500	600	30	2000
323,9	450	500	560	700	30	2000

Anchors are also available with other angles and leg lengths.

Anchor is not a standard product. Can be delivered on request.

## Prestressing elements

5.8



### Prestressing elements

Steel pipe			Length	Max. expansion	Min. weld size	Weld end
d outside mm	Wall thickness mm	d1 outside mm	L mm	Fm mm	a mm	l mm
33,7	3,2	56,0	275	50	1,9	33
42,4	3,2	73,0	275	50	2,1	33
48,3	3,2	73,0	275	50	2,1	33
60,3	3,2	86,0	275	50	2,1	33
76,1	3,2	106,0	335	70	2,3	35
88,9	3,2	122,0	345	70	2,5	37
114,3	3,6	139,7	390	80	2,5	30
139,7	3,6	168,3	400	80	2,8	31
168,3	4,0	193,7	475	100	2,8	33
219,1	4,5	268,0	515	120	3,2	40
273,0	5,0	323,9	515	120	4,0	40
323,9	5,6	355,6	660	140	4,0	40
355,6	5,6	406,4	650	140	4,2	60
406,4	6,3	457,2	650	140	4,5	50
457,2	6,3	508,0	660	150	5,7	50
508,0	6,3	560,0	660	150	5,7	50

Operating pressure max. 25 bar.

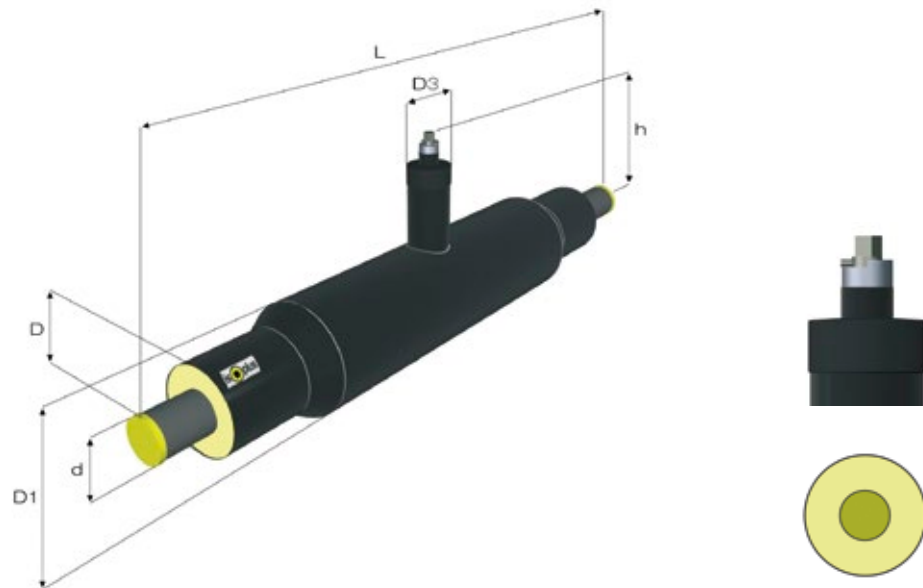
Test pressure with 20°C water acc. to EN13941 = 1.3 x max. design pressure.

Can be supplied prestressed.

#### Important:

Remember to use long joint casings where prestressing elements are used.

Prestressing element is not a standard product. Can be delivered on request.



## Shut-off valves - single

Shut-off valves - single										
	Series 1		Series 2		Series 3		Valve stem			Length
Steel pipe	Jacket pipe	Jacket pipe	Jacket pipe	Jacket pipe	Jacket pipe	Jacket pipe	D3 mm	h mm	hex. valve top mm	L mm
d outside mm	d outside mm	d outside mm	d outside mm	d outside mm	d outside mm	d outside mm	D3 mm	h mm	hex. valve top mm	L mm
26,9	90	110	110	110	125	125	110	480	19	1510
33,7	90	110	110	110	125	125	110	480	19	1510
42,4	110	125	125	125	140	140	110	485	19	1510
48,3	110	125	125	125	140	140	110	494	19	1510
60,3	125	140	140	140	160	160	110	500	19	1510
76,1	140	160	160	180	180	180	110	505	19	1510
88,9	160	180	180	200	200	200	110	515	19	1510
114,3	200	225	225	225	250	250	140	525	<sup>1)</sup> 27/70	1510
139,7	225	250	250	280	280	280	140	545	<sup>1)</sup> 27/70	1510
168,3	250	280	280	280	315	315	140	565	<sup>1)</sup> 27/70	1510
219,1	315	355	355	355	400	400	140	585	<sup>2)</sup> 50/90	1510
273,0	400	450	450	450	500	500	180	614	<sup>2)</sup> 50/90	1510
323,9	450	560	500	560	560	560	180	664	<sup>2)</sup> 50/90	1810

<sup>1)</sup> Backstop can be used here. Backstops are supplied separately, depending on the supplier.

<sup>2)</sup> Backstop must be used here.

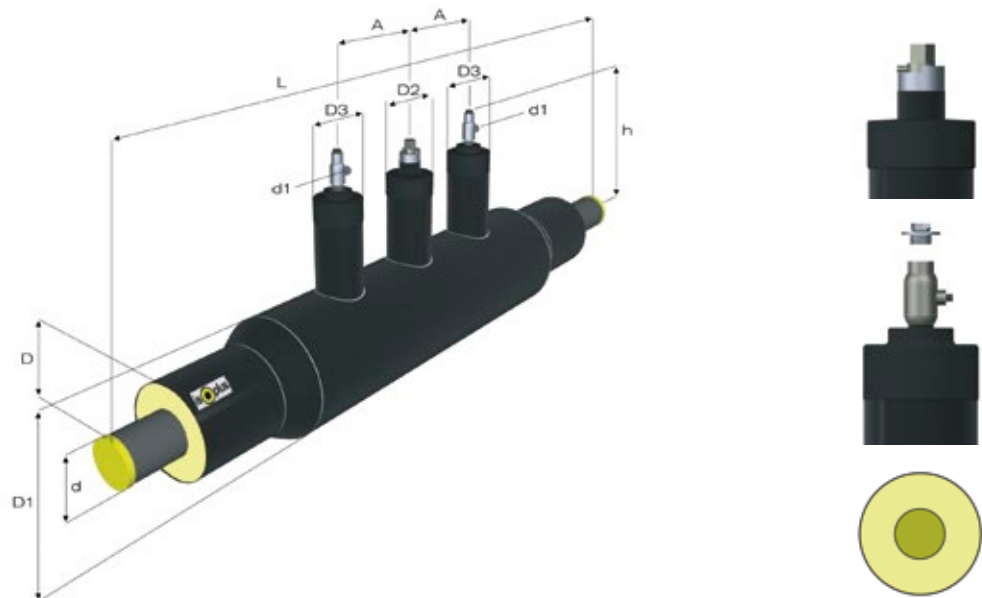
**Important:** Shut-off valves must be open during welding.

Pre-insulated shut-off valves are produced in accordance with DS/EN 13941-1. Pre-insulated shut-off valves are maintenance-free ball valves with polished stainless ball, spring-loaded teflon seats and fully welded housing. Shut-off valves have a reduced through conduit. The stem top is made of stainless steel. Valves are available with larger dimensions and other stem heights (h). Hydraulically operated valves are available. High-stress valves supplied as standard.

D1, L and h may vary depending on make.

## Shut-off valves with 2 vent/drain valves - single

5.9.1



### Shut-off valves with 2 vent/drain valves - single

Series 1		Series 2		Series 3		Valve stem/vent/drain						Length	
Steel pipe	Jacket pipe	Jacket pipe	Jacket pipe	Jacket pipe	Jacket pipe	Jacket pipe							
d outside mm	D outside mm	D1 outside mm	D outside mm	D1 outside mm	D outside mm	D1 outside mm	D2 mm	D3 mm	d1 mm	h mm	A mm	hex. valve top mm	L mm
26,9	90	110	110	110	125	125	110	110	33,7	480	250	19	1510
33,7	90	110	110	110	125	125	110	110	33,7	480	250	19	1510
42,4	110	125	125	125	140	140	110	110	33,7	485	250	19	1510
48,3	110	125	125	125	140	140	110	125	48,3	494	250	19	1510
60,3	125	140	140	140	160	160	110	125	48,3	500	250	19	1510
76,1	140	160	160	180	180	180	110	125	48,3	505	250	19	1510
88,9	160	180	180	200	200	200	110	125	48,3	515	250	19	1510
114,3	200	225	225	225	250	250	140	140	60,3	525	250	<sup>1)</sup> 27/70	1510
139,7	225	250	250	280	280	280	140	140	60,3	545	250	<sup>1)</sup> 27/70	1510
168,3	250	280	280	280	315	315	140	140	60,3	565	250	<sup>1)</sup> 27/70	1510
219,1	315	355	355	355	400	400	140	140	60,3	585	250	<sup>2)</sup> 50/90	1510
273,0	400	450	450	450	500	500	180	140	60,3	614	305	<sup>2)</sup> 50/90	1510
323,9	450	560	500	560	560	560	180	140	60,3	664	370	<sup>2)</sup> 50/90	1810

<sup>1)</sup> Backstop can be used here. Backstops are supplied separately, depending on the supplier.

<sup>2)</sup> Backstop must be used here.

**Important:** Shut-off valves must be open during welding.

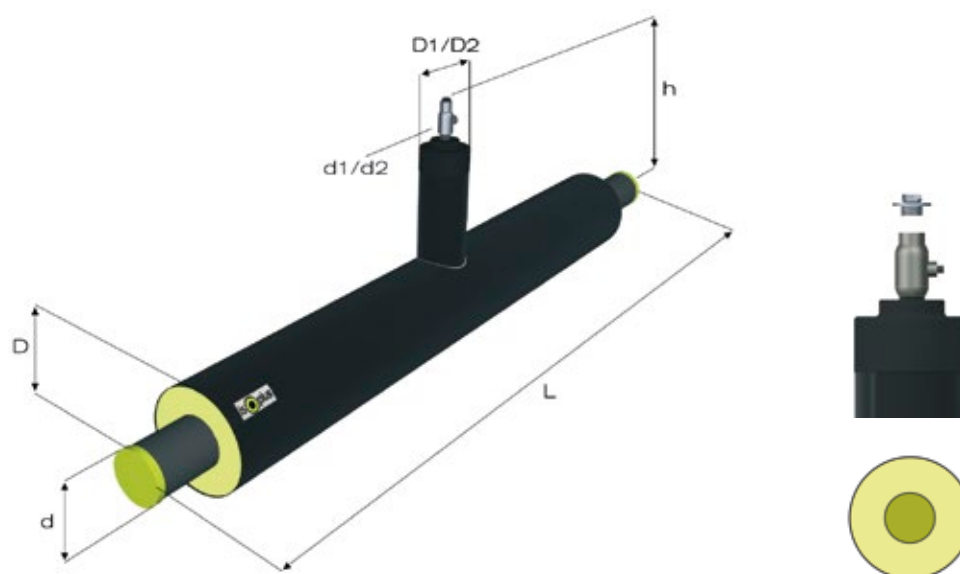
Pre-insulated shut-off valves are produced in accordance with DS/EN 13941-1. Pre-insulated shut-off valves are maintenance-free ball valves with polished stainless ball, spring-loaded teflon seats and fully welded housing. Shut-off valves have a reduced through conduit. The stem top is made of stainless steel. Valves are available with larger dimensions and other stem heights (h). Also available with 1 vent/drain valve. High-stress valves supplied as standard. D1, A, h and L may vary depending on make.

Service valves are stainless with inside pipe thread.

Ø 33,7 - 1"

Ø 48.3 - 1 1/2"

Ø 60.3 - 2"


**Vent/drain valves - single**

Vent/drain valves - single									
	Series 1	Series 2	Series 3						
Steel pipe	Jacket pipe	Jacket pipe	Jacket pipe	Vent	Drain	Jacket pipe		Vent/drain	Length
d outside mm	D outside mm	D outside mm	D outside mm	d1 mm	d2 mm	D1 mm	D2 mm	h mm	L mm
26,9	90	110	125	26,9	26,9	110	110	500	1000
33,7	90	110	125	33,7	33,7	110	110	500	1000
42,4	110	125	140	33,7	42,4	110	110	500	1000
48,3	110	125	140	33,7	48,3	110	125	500	1000
60,3	125	140	160	33,7	60,3	110	140	500	1000
76,1	140	160	180	33,7	60,3	110	140	500	1000
88,9	160	180	200	33,7	60,3	110	140	500	1000
114,3	200	225	250	33,7	60,3	110	140	500	1000
139,7	225	250	280	33,7	60,3	110	140	500	1000
168,3	250	280	315	33,7	60,3	110	140	500	1000
219,1	315	355	400	33,7	60,3	110	140	500	1000
273,0	400	450	500	33,7	60,3	110	140	500	1000
323,9	450	500	560	33,7	60,3	110	140	500	1000

Vent/drain valves are also available with other angles and leg lengths.

Vent/drain is not a standard product. Can be delivered on request.