

Pipes

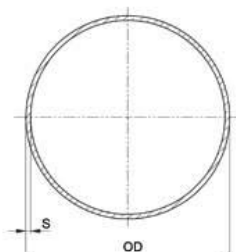


Specifications:

DIN 86019, DIN EN 12449 and similar*.

Material:

OSNA[®]-10 (CuNi 90/10) and
OSNA[®]-30 (CuNi 70/30)



Seamless Pipe

Size			Wall Thickness			
DN		OD	Standard		Special*	
in	mm	mm	S	kg/m	S	kg/m
	4	8	1	0.20		
½	6	10	1	0.25		
¾	8	12	1	0.31		
¾	12	16	1	0.42	1.5	0.61
½	16	20	1	0.53	1.5	0.78
¾	20	25	1.5	0.90	2	1.20
1	25	30	1.5	1.20	2	1.57
1¼	32	38	1.5	1.53	2	2.01
1½	40	44.5	1.5	1.80	2	2.38
2	50	57	1.5	2.33	2	3.08
2½	65	76	2	4.14	2.5	5.18
3	80	88.9 (89.0)	2	4.87	2.5	6.09
4	100	108	2.5	7.37	3	8.84
5	125	133	2.5	9.12	3	10.94
6	150	159	2.5	10.93	3	13.08
7	175	194	3	16.01		
8	200	219.1 (219)	3	18.12	3.5	21.12
10	250	267	3	22.13	4	29.47
12	300	323.9 (324)	4	36.80	5	44.75
14	350	368	4	40.70	5.5	55.96
16	400	419	4	46.40	6	60.60
18	450	457	4.5	57.48		

For offshore wall thickness see separate catalogue.

Seam welded Pipe

20	500	508*	5	70.32
24	600	610*	5	84.56
28	700	711*	6	118.28
32	800	813*	6	135.38
36	900	914*	8	202.66

Other dimensions on request.

*) similar to

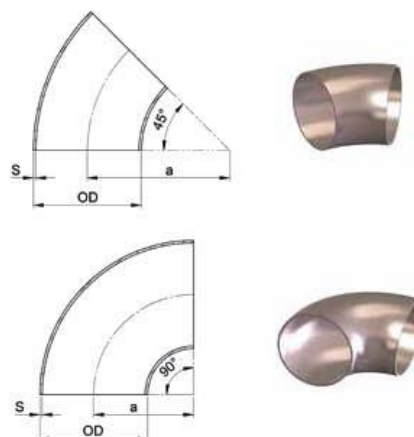
Elbows

Long radius 1.5 D

Specification:
DIN 86090 and similar*.

Material:
OSNA®-10 - copper-nickel

Type and Construction:
Elbows for pipes up to and including 14" 368 mm in size are normally supplied seamless. Elbows for larger diameter pipes are made from half shells, longitudinally welded. 45° and 90° elbows are available in all sizes.



Size			Wall Thickness S mm	Radius a mm	r-e mm	Approx. Weight (~ kg)	
DN in	mm	OD mm				45°	90°
Seamless							
½	16	20*	1	25	10,4	0,013	0,026
¾	20	25*	1,5	27,5	11,4	0,020	0,058
1	25	30	1,5	33,5	14	0,035	0,07
1¼	32	38	1,5	45	19	0,06	0,12
1½	40	44,5	1,5	51	21	0,07	0,15
2	50	57	1,5	72	30	0,14	0,29
2 ½	65	76	2	95	39	0,34	0,69
3	80	89	2	114,5	47	0,47	0,95
4	100	108	2,5	142,5	59	0,90	1,80
5	125	133	2,5	181	75	1,45	2,90
6	150	159	2,5	216	89	2,30	4,60
7	175	194	3	270	112	4,05	8,10
8	200	219	3	305	126	4,55	9,10
10	250	267	3	378	157	7,70	15,40
12	300	324	4	457	189	13,00	26,00
14	350	368	4	533,5	221	21,00	42,00
16	400	419	4	609,5	252	29,50	59,00
18	450	457	4,5	686	284	36,00	72,00
20	500	508	5	762	316	45,00	90,00
24	600	610	5	914	379	60,00	120,00
28	700	711*	6	1067	442	99,00	198,00
32	800	813*	6	1219	505	129,50	259,00
36	900	914*	8	1372	568	218,50	437,00

Other dimensions on request.

*1) similar to

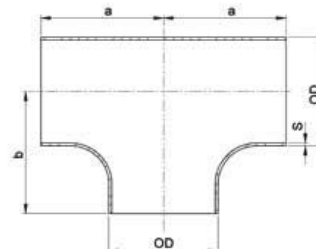
Tee Pieces, equal



Specification
DIN 86088 and similar*

Material:
OSNA®-10 - copper-nickel

Type and Construction:
Tees for pipes up to and including 8"/ 219 mm are normally supplied as one-piece and seamless.



Size			Wall Thickness		a	b	Approx. Weight kg /piece
DN	mm	OD mm	S mm				
1/2	16	20*	1		25	25	0.11
3/4	20	25*	1.5		29	29	0.14
1	25	30	1.5		38	38	0.19
1 1/4	32	38	1.5		48	48	0.37
1 1/2	40	44.5	1.5		57	57	0.56
2	50	57	1.5		64	64	0.72
2 1/2	65	76	2		76	76	1.25
3	80	89	2		86	86	1.74
4	100	108	2.5		105	105	2.94
5	125	133	2.5		124	124	4.01
6	150	159	2.5		143	143	5.25
8	200	219	3		178	178	11.60
10	250	267	3		216	216	14.90
12	300	324	4		264	264	21.30
14	350	368	4		279	279	26.90
16	400	419	4		306	306	33.40
18	450	467	4.5		343	343	48.60
20	500	508	5		381	381	63.20
24	600	610	5.5		432	432	93.80

Other dimensions on request.

* similar to

Reducers

Specification:

DIN 86089 and similar*

Material:

OSNA®-10 – copper-nickel

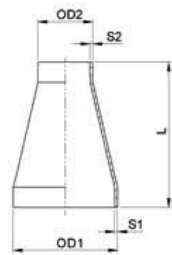
Type and Construction:

Concentric reducers up to and including 14" / 368 mm are normally supplied as one-piece and seamless.

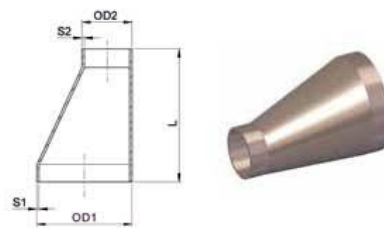
Eccentric reducers up to and including 14" / 368 mm are normally supplied as one-piece and seamless.

Size			Wall Thickness		Length	Approx.
DN	OD ₁	OD ₂	S ₁	S ₂	L	Weight
in	mm	mm	mm	mm	mm	kg /piece
½ x ¾	16 x 12	20 x 16*	1 x 1		30	0.01
¾ x ¾	20 x 12	25 x 16*	1.5 x 1		30	0.02
¾ x ½	20 x 16	25 x 20*	1.5 x 1		30	0.03
1 x ¾	25 x 12	30 x 16*	1.5 x 1		35	0.03
1 x ½	25 x 16	30 x 20*	1.5 x 1		35	0.04
1 x ¾	25 x 20	30 x 25	1.5 x 1.5		35	0.06
1¼ x ¾	32 x 12	38 x 16*	1.5 x 1		50	0.05
1¼ x ½	32 x 16	38 x 20*	1.5 x 1		50	0.06
1¼ x ¾	32 x 20	38 x 25	1.5 x 1.5		50	0.08
1¼ x 1	32 x 25	38 x 30	1.5 x 1.5		50	0.10
1½ x ½	40 x 16	44.5 x 20*	1.5 x 1		80	0.09
1½ x ¾	40 x 20	44.5 x 25	1.5 x 1.5		80	0.15
1½ x 1	40 x 25	44.5 x 30	1.5 x 1.5		80	0.16
1½ x 1¼	40 x 32	44.5 x 38	1.5 x 1.5		80	0.17
2 x ¾	50 x 20	57 x 25	1.5 x 1.5		80	0.17
2 x 1	50 x 25	57 x 30	1.5 x 1.5		80	0.18
2 x 1¼	50 x 32	57 x 38	1.5 x 1.5		80	0.19
2 x 1½	50 x 40	57 x 44.5	1.5 x 1.5		80	0.21
2½ x 1	65 x 25	76 x 30	2 x 1.5		90	0.28
2½ x 1¼	65 x 32	76 x 38	2 x 1.5		90	0.29
2½ x 1½	65 x 40	76 x 44.5	2 x 1.5		90	0.30
2½ x 2	65 x 50	76 x 57	2 x 1.5		90	0.31
3 x 1¼	80 x 32	89 x 38	2 x 1.5		90	0.33
3 x 1½	80 x 40	89 x 44.5	2 x 1.5		90	0.35
3 x 2	80 x 50	89 x 57	2 x 1.5		90	0.37
3 x 2½	80 x 65	89 x 76	2 x 2		90	0.39
4 x 1½	100 x 40	108 x 44.5	2.5 x 1.5		100	0.59
4 x 2	100 x 50	108 x 57	2.5 x 1.5		100	0.61
4 x 2½	100 x 65	108 x 76	2.5 x 2		100	0.63
4 x 3	100 x 80	108 x 89	2.5 x 2		100	0.65

concentric



eccentric



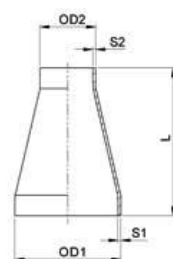
Size		OD ₁ mm	OD ₂ mm	Wall Thickness		Length L mm	Approx. Weight kg /piece
in	DN			S ₁ mm	S ₂ mm		
5 x 2	125 x 50	133 x 57	133 x 57	2.5 x 1.5	2.5 x 1.5	140	1.22
5 x 2½	125 x 65	133 x 76	133 x 76	2.5 x 2	2.5 x 2	140	1.28
5 x 3	125 x 80	133 x 89	133 x 89	2.5 x 2	2.5 x 2	140	1.29
5 x 4	125 x 100	133 x 108	133 x 108	2.5 x 2.5	2.5 x 2.5	140	1.46
6 x 2½	150 x 65	159 x 76	159 x 76	2.5 x 2	2.5 x 2	150	1.53
6 x 3	150 x 80	159 x 89	159 x 89	2.5 x 2	2.5 x 2	150	1.57
6 x 4	150 x 100	159 x 108	159 x 108	2.5 x 2.5	2.5 x 2.5	150	1.76
6 x 5	150 x 125	159 x 133	159 x 133	2.5 x 2.5	2.5 x 2.5	150	1.89
7 x 3	175 x 80	194 x 89*	194 x 89*	3 x 2	3 x 2	155	1.94
7 x 4	175 x 100	194 x 108	194 x 108	3 x 2.5	3 x 2.5	155	2.60
7 x 5	175 x 125	194 x 133	194 x 133	3 x 2.5	3 x 2.5	155	2.71
7 x 6	175 x 150	194 x 159	194 x 159	3 x 2.5	3 x 2.5	155	2.86
8 x 4	200 x 100	219 x 108	219 x 108	3 x 2.5	3 x 2.5	155	2.65
8 x 5	200 x 125	219 x 133	219 x 133	3 x 2.5	3 x 2.5	155	2.75
8 x 6	200 x 150	219 x 159	219 x 159	3 x 2.5	3 x 2.5	155	2.96
8 x 7	200 x 175	219 x 194	219 x 194	3 x 3	3 x 3	155	3.00
10 x 5	250 x 125	267 x 133	267 x 133	3 x 2.5	3 x 2.5	210	5.10
10 x 6	250 x 150	267 x 159	267 x 159	3 x 2.5	3 x 2.5	210	5.30
10 x 7	250 x 175	267 x 194	267 x 194	3 x 3	3 x 3	210	5.56
10 x 8	250 x 200	267 x 219	267 x 219	3 x 3	3 x 3	210	6.00
12 x 5	300 x 125	324 x 133*	324 x 133*	4 x 2.5	4 x 2.5	210	6.85
12 x 6	300 x 150	324 x 159	324 x 159	4 x 2.5	4 x 2.5	210	7.02
12 x 7	300 x 175	324 x 194	324 x 194	4 x 3	4 x 3	210	7.28
12 x 8	300 x 200	324 x 219	324 x 219	4 x 3	4 x 3	210	7.40
12 x 10	300 x 250	324 x 267	324 x 267	4 x 3	4 x 3	210	7.55

*1) similar to

Reducers (continued)



concentric



eccentric



Size			Wall Thickness		Length	Approx. Weight
DN	OD ₁	OD ₂	S ₁	S ₂	L	
in	mm	mm	mm	mm	mm	kg / piece
14 x 6	350 x 150	368 x 159*	4 x 2,5		300	10,75
14 x 7	350 x 175	368 x 194	4 x 3		300	10,95
14 x 8	350 x 200	368 x 219	4 x 3		300	11,10
14 x 10	350 x 250	368 x 267	4 x 3		300	11,80
14 x 12	350 x 300	368 x 324	4 x 4		300	12,20
16 x 7	400 x 175	419 x 194*	4 x 3		325	14,80
16 x 8	400 x 200	419 x 219	4 x 3		325	15,31
16 x 10	400 x 250	419 x 267	4 x 3		325	15,93
16 x 12	400 x 300	419 x 324	4 x 4		325	16,77
16 x 14	400 x 350	419 x 368	4 x 4		325	17,68
18 x 8	450 x 200	457 x 219*	4,5 x 3		350	21,40
18 x 10	450 x 250	457 x 267	4,5 x 3		350	21,90
18 x 12	450 x 300	457 x 324	4,5 x 3		350	22,70
18 x 14	450 x 350	457 x 368	4,5 x 4		350	23,20
18 x 16	450 x 400	457 x 419	4,5 x 4		350	23,70
20 x 10	500 x 250	508 x 267*	5 x 3		375	28,70
20 x 12	500 x 300	508 x 324	5 x 4		375	29,50
20 x 14	500 x 350	508 x 368	5 x 4		375	29,70
20 x 16	500 x 400	508 x 419	5 x 4		375	30,10
20 x 18	500 x 450	508 x 457	5 x 4,5		375	30,90
24 x 14	600 x 350	610 x 368	5 x 4		400	45,70
24 x 16	600 x 400	610 x 419	5 x 4		400	46,50
24 x 18	600 x 450	610 x 457	5 x 4,5		400	47,40
24 x 20	600 x 500	610 x 508	5 x 5		400	48,20

Other dimensions on request.

*-) similar to

End Caps

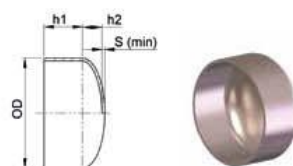


Specification

DIN 28011

Material:

OSNA[®] 10 - copper-nickel



Size			S	h ₁	h ₂	Approx. Weight kg /piece
DN	OD					
in	mm	mm	mm	mm	mm	
1	25	30	1,5	15	5	0,03
1¼	32	38	1,5	15	7	0,05
1½	40	44,5	1,5	15	8	0,06
2	50	57	1,5	20	10	0,10
2½	65	76	2	20	14	0,20
3	80	89	2	20	16	0,26
4	100	108	2,5	20	20	0,45
5	125	133	2,5	20	25	0,63
6	150	159	2,5	20	29	0,85
7	175	194	3	20	36	1,45
8	200	219	3	20	41	1,79
10	250	267	3	20	50	2,56
12	300	324	4	20	61	4,82
14	350	368	4	20	69	6,15
16	400	419	4	20	79	7,83
18	450	457	4,5	20	86	10,36
20	500	508	5	20	96	14,05
24	600	610	5	20	116	19,89
28	700	711	6	25	136	32,65
32	800	813	6	25	156	42,16
36½	900	914,5	8	35	173	72,65

Other dimensions on request.

Welding Necks

Specification:

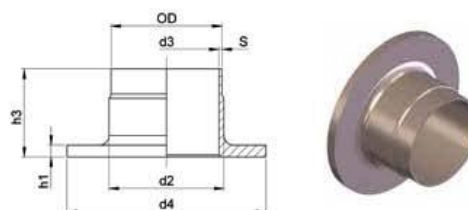
DIN 86037 -2 compatible
with Outer Flanges PN 10, 16

Material:

OSNA®-10 - copper-nickel

Type and Construction:

Weld neck flanges up to and including
12"/ 324 mm are normally supplied as
one-piece and seamless.



Size			Wall Thickness		d ₂ mm	d ₃ mm	d ₄ mm	h ₁ mm	h ₃ mm	Approx. Weight kg/piece
in	DN	OD mm	S mm							
¾	20	25	1.5		27	22	58	5	40	0.15
¾	20	25	2		27	21	58	5	40	0.16
1	25	30	1.5		32	27	68	5	40	0.20
1	25	30	2		32	26	68	5	40	0.21
1¼	32	38	1.5		40	35	78	5	40	0.25
1¼	32	38	2		40	34	78	5	40	0.27
1½	40	44.5	1.5		46.5	41.5	88	6	45	0.36
1½	40	44.5	2		46.5	40.5	88	6	45	0.38
2	50	57	1.5		59	54	102	6	45	0.45
2	50	57	2		59	53	102	6	45	0.48
2½	65	76	2		78	72	122	6	45	0.62
3	80	89	2		91	85	138	7	50	0.86
4	100	108	2.5		110	103	158	7	50	1.10
5	125	133	2.5		135.5	128	188	7	50	1.50
6	150	159	2.5		161.5	154	212	9	50	2.00
7	175	194	3		197	188	242	9	50	2.40
8	200	219	3		222	213	268	9	50	2.70
10	250	267	3		270	261	320	9	50	3.40
12	300	324	4		327	316	370	11	50	4.60
14	350	368	4		371	360	430	11	50	6.30
16	400	419	4		422	411	482	12	50	7.50
18	450	467	4		460	449	530	12	50	9.00
20	500	508	4.5		511	499	585	12	50	11.00
24	600	610	4.5		613	601	685	14	60	15.00
28	700	711	6		714	699	800	14	60	21.00
32	800	813	6		816	801	905	14	60	24.00
36	900	914	8		918	898	1000	14	60	29.00
40	1000	1016	8		1018	1000	1110	14	60	34.00
48	1200	1220	8		1223.5	1204	1335	14	60	46.00

Other dimensions on request.