



## COPPER NICKEL BUTT WELD FITTINGS

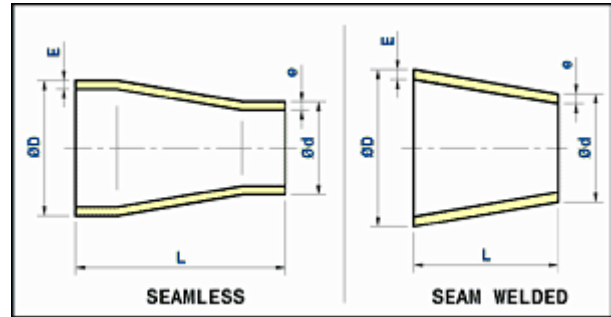
concentric reducers - DIN 86089 / EEMUA 146 in copper nickel

10 bar - DIN 86089

**STANDARD : DIN 86089**

Printable version

PDF version



ØD x Ød		Outside diameter				Wall thickness		Length L mm	Theoretical weight Kg/piece
		nominal inch		actual mm		E mm	e mm		
0.5	x	0.38	20	x	16	1	1	30	0.01
0.75	x	0.38	25	x	16	1.5	1	30	0.02
0.75	x	0.5	25	x	20	1.5	1	30	0.03
1	x	0.38	30	x	16	1.5	1	35	0.03
1	x	0.5	30	x	20	1.5	1	35	0.04
1	x	0.75	30	x	25	1.5	1.5	35	0.05
1.25	x	0.38	38	x	16	1.5	1	50	0.05
1.25	x	0.5	38	x	20	1.5	1	50	0.06
1.25	x	0.75	38	x	25	1.5	1.5	50	0.07
1.25	x	1	38	x	30	1.5	1.5	50	0.08
1.5	x	0.5	44.5	x	20	1.5	1	80	0.09
1.5	x	0.75	44.5	x	25	1.5	1.5	80	0.11
1.5	x	1	44.5	x	30	1.5	1.5	80	0.12
1.5	x	1.25	44.5	x	38	1.5	1.5	80	0.13
2	x	0.75	57	x	25	1.5	1.5	80	0.13
2	x	1	57	x	30	1.5	1.5	80	0.14
2	x	1.25	57	x	38	1.5	1.5	80	0.15
2	x	1.5	57	x	44.5	1.5	1.5	80	0.16
2.5	x	1	76.1	x	30	2	1.5	90	0.24
2.5	x	1.25	76.1	x	38	2	1.5	90	0.25
2.5	x	1.5	76.1	x	44.5	2	1.5	90	0.26
2.5	x	2	76.1	x	57	2	1.5	90	0.29
3	x	1.25	88.9	x	38	2	1.5	90	0.29
3	x	1.5	88.9	x	44.5	2	1.5	90	0.30
3	x	2	88.9	x	57	2	1.5	90	0.32
3	x	2.5	88.9	x	76	2	2	90	0.40
4	x	1.5	108	x	44.5	2.5	1.5	100	0.46
4	x	2	108	x	57	2.5	1.5	100	0.48
4	x	2.5	108	x	76.1	2.5	2	100	0.57
4	x	3	108	x	88.9	2.5	2	100	0.61
5	x	2	133	x	57	2.5	1.5	140	0.8
5	x	2.5	133	x	76.1	2.5	2	140	0.93
5	x	3	133	x	88.9	2.5	2	140	0.98
5	x	4	133	x	108	2.5	2.5	140	1.16
5	x	2	133	x	57	3	1.5	140	0.86

5	x	2.5	133	x	76.1	3	2	140	1.06
5	x	4	133	x	108	3	2.5	140	1.34
6	x	2.5	159	x	76.1	2.5	2	150	1.13
6	x	3	159	x	88.9	2.5	2	150	1.19
6	x	4	159	x	108	2.5	2.5	150	1.38
6	x	5	159	x	133	2.5	2.5	150	1.51
6	x	2.5	159	x	76.1	3	2	150	1.35
6	x	4	159	x	108	3	2.5	150	1.65
7	x	3	193.7	x	88.9	2.5	2	155	1.39
7	x	4	193.7	x	108	2.5	2.5	155	1.58
7	x	5	193.7	x	133	2.5	2.5	155	1.71
7	x	6	193.7	x	159	2.5	2.5	155	1.86
7	x	4	193.7	x	108	3.5	2.5	155	2.21
8	x	4	219.1	x	108	3	2.5	155	2.47
8	x	5	219.1	x	133	3	2.5	155	2.6
8	x	6	219.1	x	159	3	2.5	155	2.74
8	x	7	219.1	x	193.7	3	2.5	155	2.93
8	x	4	219.1	x	108	3.5	2.5	155	2.88
10	x	5	267	x	133	3	2.5	210	3.3
10	x	6	267	x	159	3	2.5	210	3.49
10	x	7	267	x	193.7	3	2.5	210	3.75
10	x	8	267	x	219.1	3	3	210	4.25
12	x	5	323.9	x	133	4	2.5	210	5.3
12	x	6	323.9	x	159	4	2.5	210	5.6
12	x	7	323.9	x	193.7	4	2.5	210	6.02
12	x	8	323.9	x	219.1	4	3	210	6.3
12	x	10	323.9	x	267	4	3	210	6.88
14	x	6	368	x	159	4	2.5	300	8.75
14	x	7	368	x	193.7	4	2.5	300	9.34
14	x	8	368	x	219.1	4	3	300	9.76
14	x	10	368	x	267	4	3	300	10.57
14	x	12	368	x	323.9	4	4	300	11.53
16	x	7	419.1	x	193.7	4	2.5	325	11.04
16	x	8	419.1	x	219.1	4	3	325	11.5
16	x	10	419.1	x	267	4	3	300	12.38
16	x	12	419.1	x	323.9	4	4	300	13.42
16	x	14	419.1	x	368	4	4	300	14.22
18	x	8	457.2	x	219.1	4	3	350	13.14
18	x	10	457.2	x	267	4	3	350	14.08
18	x	12	457.2	x	323.9	4	4	350	15.2
18	x	14	457.2	x	368	4	4	350	16.06
18	x	16	457.2	x	419.1	4	4	350	17.07
20	x	10	508	x	267	4.5	3	375	18.07
20	x	12	508	x	323.9	4.5	4	375	19.42
20	x	14	508	x	368	4.5	4	375	20.47
20	x	16	508	x	419.1	4.5	4	375	21.68
20	x	18	508	x	457.2	4.5	4	375	22.57
24	x	14	508	x	368	5	4	400	27.19
24	x	16	610	x	419.1	5	4	400	28.62
24	x	18	610	x	457.2	5	4	400	29.69
24	x	20	610	x	508	5	4.5	400	31.12

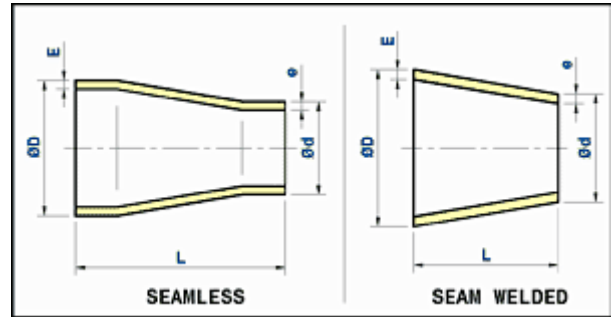


# COPPER NICKEL BUTT WELD FITTINGS

concentric reducers - DIN 86089 / EEMUA 146 in copper nickel  
14 bar - DIN 86089

**STANDARD : DIN 86089**

Printable version  
PDF version



		Outside diameter				Wall thickness		Length	Theoretical weight
ØD x Ød		ØD x Ød				E	e	L	Kg/piece
nominal inch		actual mm			mm	mm			
3	x	1.25	88.9	x	38	2.5	1.5	90	0.33
3	x	1.5	88.9	x	44.5	2.5	1.5	90	0.35
3	x	2	88.9	x	57	2.5	1.5	90	0.38
3	x	2.5	88.9	x	76.1	2.5	2	90	0.48
4	x	3	108	x	88.9	2.5	2.5	100	0.61
5	x	3	133	x	88.9	3	2.5	140	1.13
6	x	3	159	x	88.9	3	2.5	150	1.42
6	x	5	159	x	133	3	3	150	1.81
7	x	3	193.7	x	88.9	3.5	2.5	155	1.94
7	x	5	193.7	x	133	3.5	3	155	2.39
7	x	6	193.7	x	159	3.5	3	155	2.6
8	x	5	219.1	x	133	3.5	3	155	3.03
8	x	6	219.1	x	159	3.5	3	155	3.2
8	x	7	219.1	x	193.7	3.5	3.5	155	3.42
10	x	5	267	x	133	4	3	210	4.4
10	x	6	267	x	159	4	3	210	4.65
10	x	7	267	x	193.7	4	3.5	210	5
10	x	8	267	x	219.1	4	3.5	210	5.65
12	x	5	323.9	x	133	5	3	210	6.62
12	x	6	323.9	x	159	5	3	210	7
12	x	7	323.9	x	193.7	5	3.5	210	7.52
12	x	8	323.9	x	219.1	5	3.5	210	7.9
12	x	10	323.9	x	267	5	4	210	8.6
14	x	6	368	x	159	5.5	3	300	12.03
14	x	7	368	x	193.7	5.5	3	300	12.84
14	x	8	368	x	219.1	5.5	3.5	300	13.42
14	x	10	368	x	267	5.5	4	300	14.53
14	x	12	368	x	323.9	5.5	5	300	15.85
16	x	7	419.1	x	193.7	6	3.5	325	16.56
16	x	8	419.1	x	219.1	6	3.5	325	17.25
16	x	10	419.1	x	267	6	4	325	18.57
16	x	12	419.1	x	323.9	6	5	325	20.13
16	x	14	419.1	x	368	6	5.5	325	21.33
18	x	8	457.2	x	219.1	6	3.5	350	19.7
18	x	10	457.2	x	267	6	4	350	21.1

18	x	12	457.2	x	323.9	6	5	350	22.8
18	x	14	457.2	x	368	6	5.5	350	24.1
18	x	16	457.2	x	419.1	6	6	350	25.8
20	x	10	508	x	267	6.5	4	375	26.1
20	x	12	508	x	323.9	6.5	5	375	28.05
20	x	14	508	x	368	6.5	5.5	375	29.6
20	x	16	508	x	419.1	6.5	6	375	31.3
20	x	18	508	x	457.2	6.5	6	375	32.6
24	x	14	610	x	368	8	5.5	400	43.5
24	x	16	610	x	419.1	8	6	400	45.8
24	x	18	610	x	457.2	8	6	400	47.5
24	x	20	610	x	508	8	6.5	400	49.8



# COPPER NICKEL BUTT WELD FITTINGS

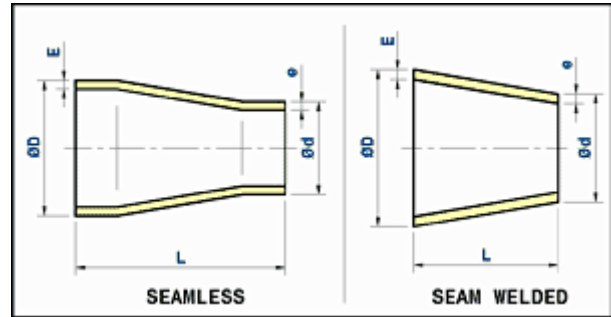
concentric reducers - DIN 86089 / EEMUA 146 in copper nickel

16 bar - EEMUA 146

STANDARD : EEMUA Pub. N° 146

Printable version

PDF version



ØD x Ød		Outside diameter				Wall thickness		Length L mm	Theoretical weight Kg/piece
		nominal inch		actual mm		E mm	e mm		
1	x	0.75	30	x	25	2.5	2	51	0.09
1.25	x	0.75	38	x	25	2.5	2	51	0.1
1.25	x	1	38	x	30	2.5	2.5	51	0.11
1.5	x	0.75	44.5	x	25	2.5	2	64	0.14
1.5	x	1	44.5	x	30	2.5	2.5	64	0.15
1.5	x	1.25	44.5	x	38	2.5	2.5	64	0.17
2	x	1	57	x	30	2.5	2.5	76	0.21
2	x	1.25	57	x	38	2.5	2.5	76	0.23
2	x	1.5	57	x	44.5	2.5	2.5	76	0.25
2.5	x	1.25	76.1	x	38	2.5	2.5	89	0.34
2.5	x	1.5	76.1	x	44.5	2.5	2.5	89	0.36
2.5	x	2	76.1	x	57	2.5	2.5	89	0.4
3	x	1.5	88.9	x	44.5	2.5	2.5	89	0.4
3	x	2	88.9	x	57	2.5	2.5	89	0.44
3	x	2.5	88.9	x	76.1	2.5	2.5	89	0.5
4	x	2	108	x	57	3	2.5	102	0.68
4	x	2.5	108	x	76.1	3	2.5	102	0.76
4	x	3	108	x	88.9	3	2.5	102	0.82
6	x	2	159	x	57	3	2.5	140	1.3
6	x	2.5	159	x	76.1	3	2.5	140	1.35
6	x	3	159	x	88.9	3	2.5	140	1.42
6	x	4	159	x	108	3	3	140	1.54
8	x	2.5	219.1	x	76.1	4	2.5	152	2.45
8	x	3	219.1	x	88.9	4	2.5	152	2.55
8	x	4	219.1	x	108	4	3	152	2.72
8	x	6	219.1	x	159	4	3	152	3.16
10	x	4	267	x	108	4.5	3	178	4.11
10	x	6	267	x	159	4.5	3	178	4.69
10	x	8	267	x	219.1	4.5	4	178	5.36
12	x	6	323.9	x	159	5.5	3	203	7.39
12	x	8	323.9	x	219.1	5.5	4	203	8.33
12	x	10	323.9	x	267	5.5	4.5	203	9.09
14	x	8	368	x	219.1	6.5	4	330	17.28
14	x	10	368	x	267	6.5	4.5	330	18.73
14	x	12	368	x	323.9	6.5	5.5	330	20.44

16	x	10	419.1	x	267	7	4.5	356	23.51
16	x	12	419.1	x	323.9	7	5.5	356	25.51
16	x	14	419.1	x	368	7	6.5	356	27.04
18	x	12	457.2	x	323.9	8	5.5	381	32.72
18	x	14	457.2	x	368	8	6.5	381	34.61
18	x	16	457.2	x	419.1	8	7	381	36.80
20	x	14	508	x	368	8.5	6.5	508	52.07
20	x	16	508	x	419.1	8.5	7	508	55.17
20	x	18	508	x	457.2	8.5	8	508	57.48
24	x	16	610	x	419.1	10.5	7	508	75.49
24	x	18	610	x	457.2	10.5	8	508	78.34
24	x	20	610	x	508	10.5	8.5	508	82.15
28	x	18	711	x	457.2	12	8	610	117.58
28	x	20	711	x	508	12	8.5	610	122.82
28	x	24	711	x	610	12	10.5	610	133.30
32	x	24	813	x	610	13.5	10.5	610	161.42
32	x	28	813	x	711	13.5	12	610	173.09
36	x	24	914	x	610	15.5	10.5	610	274.48
36	x	28	914	x	711	15.5	12	610	287.89
36	x	32	914	x	813	15.5	13.5	610	301.43

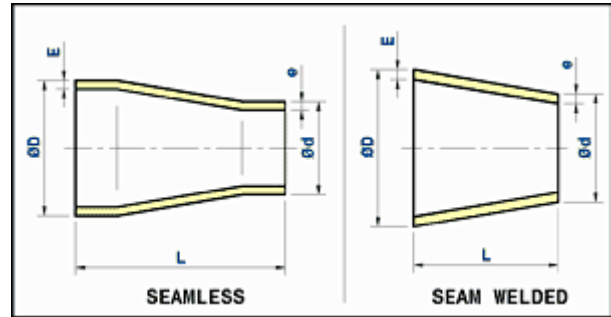


## COPPER NICKEL BUTT WELD FITTINGS

concentric reducers - DIN 86089 / EEMUA 146 in  
copper nickel  
20 bar - EEMUA 146

STANDARD : EEMUA Pub. N° 146

Printable version  
PDF version



ØD x Ød		Outside diameter		Wall thickness		Length L mm	Theoretical weight Kg/piece		
		nominal inch	actual mm	E mm	e mm				
1	x	0.75	30	x	25	2.5	2	51	0.09
1.25	x	0.75	38	x	25	2.5	2	51	0.1
1.25	x	1	38	x	30	2.5	2.5	51	0.11
1.5	x	0.75	44.5	x	25	2.5	2	64	0.14
1.5	x	1	44.5	x	30	2.5	2.5	64	0.15
1.5	x	1.25	44.5	x	38	2.5	2.5	64	0.17
2	x	1	57	x	30	2.5	2.5	76	0.21
2	x	1.25	57	x	38	2.5	2.5	76	0.23
2	x	1.5	57	x	44.5	2.5	2.5	76	0.25
2.5	x	1.25	76.1	x	38	2.5	2.5	89	0.34
2.5	x	1.5	76.1	x	44.5	2.5	2.5	89	0.36
2.5	x	2	76.1	x	57	2.5	2.5	89	0.4
3	x	1.5	88.9	x	44.5	2.5	2.5	89	0.4
3	x	2	88.9	x	57	2.5	2.5	89	0.44
3	x	2.5	88.9	x	76.1	2.5	2.5	89	0.5
4	x	2	108	x	57	3	2.5	102	0.68
4	x	2.5	108	x	76.1	3	2.5	102	0.76
4	x	3	108	x	88.9	3	2.5	102	0.82
6	x	2	159	x	57	3.5	2.5	140	1.5
6	x	2.5	159	x	76.1	3.5	2.5	140	1.56
6	x	3	159	x	88.9	3.5	2.5	140	1.65
6	x	4	159	x	108	3.5	3	140	1.78
8	x	2.5	219.1	x	76.1	4.5	2.5	152	2.74
8	x	3	219.1	x	88.9	4.5	2.5	152	2.87
8	x	4	219.1	x	108	4.5	3	152	3.05
8	x	6	219.1	x	159	4.5	3.5	152	3.54
10	x	4	267	x	108	5.5	3	178	5.00
10	x	6	267	x	159	5.5	3.5	178	5.70
10	x	8	267	x	219.1	5.5	4.5	178	6.53
12	x	6	323.9	x	159	7	3.5	203	9.35
12	x	8	323.9	x	219.1	7	4.5	203	10.55
12	x	10	323.9	x	267	7	5.5	203	11.52
14	x	8	368	x	219.1	8	4.5	330	21.16
14	x	10	368	x	267	8	5.5	330	22.95
14	x	12	368	x	323.9	8	7	330	25.06

16	x	10	419.1	x	267	9	5.5	356	30.05
16	x	12	419.1	x	323.9	9	7	356	32.62
16	x	14	419.1	x	368	9	8	356	34.60
18	x	12	457.2	x	323.9	9.5	7	381	38.85
18	x	14	457.2	x	368	9.5	8	381	41.10
18	x	16	457.2	x	419.1	9.5	9	381	43.70
20	x	14	508	x	368	11	8	508	67.38
20	x	16	508	x	419.1	11	9	508	71.39
20	x	18	508	x	457.2	11	9.5	508	74.38
24	x	16	610	x	419.1	13	9	508	93.46
24	x	18	610	x	457.2	13	9.5	508	96.99
24	x	20	610	x	508	13	11	508	101.70
28	x	18	711	x	457.2	15	9.5	610	146.97
28	x	20	711	x	508	15	11	610	153.52
28	x	24	711	x	610	15	13	610	166.62
32	x	24	813	x	610	17	13	610	203.26
32	x	28	813	x	711	17	15	610	217.96
36	x	24	914	x	610	19	13	610	336.45
36	x	28	914	x	711	19	15	610	352.89
36	x	32	914	x	813	19	17	610	369.49



## COPPER NICKEL BUTT WELD FITTINGS

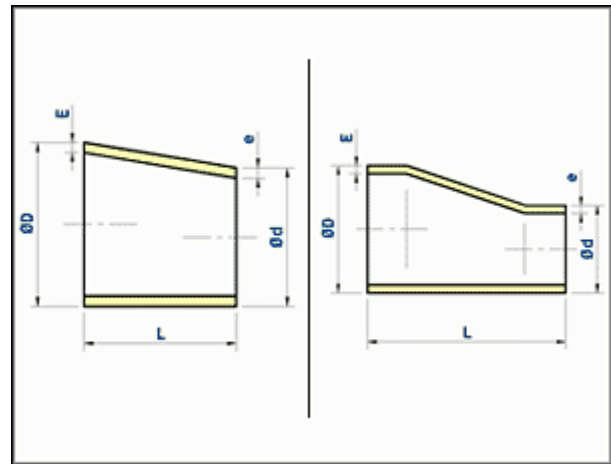
eccentric reducers - Ext. from DIN 86089 / EEMUA  
146 in copper nickel

10 bar - Ext. from DIN 86089

**STANDARD : DIN 86089**

Printable version

PDF version



ØD x Ød		Outside diameter				Wall thickness		Length L mm	Theoretical weight Kg/piece
		nominal inch		actual mm		E mm	e mm		
0.5	x	0.38	20	x	16	1	1	30	0.01
0.75	x	0.38	25	x	16	1.5	1	30	0.02
0.75	x	0.5	25	x	20	1.5	1	30	0.03
1	x	0.38	30	x	16	1.5	1	35	0.03
1	x	0.5	30	x	20	1.5	1	35	0.04
1	x	0.75	30	x	25	1.5	1.5	35	0.05
1.25	x	0.38	38	x	16	1.5	1	50	0.05
1.25	x	0.5	38	x	20	1.5	1	50	0.06
1.25	x	0.75	38	x	25	1.5	1.5	50	0.07
1.25	x	1	38	x	30	1.5	1.5	50	0.08
1.5	x	0.5	44.5	x	20	1.5	1	80	0.09
1.5	x	0.75	44.5	x	25	1.5	1.5	80	0.11
1.5	x	1	44.5	x	30	1.5	1.5	80	0.12
1.5	x	1.25	44.5	x	38	1.5	1.5	80	0.13
2	x	0.75	57	x	25	1.5	1.5	80	0.13
2	x	1	57	x	30	1.5	1.5	80	0.14
2	x	1.25	57	x	38	1.5	1.5	80	0.15
2	x	1.5	57	x	44.5	1.5	1.5	80	0.16
2.5	x	1	76.1	x	30	2	1.5	90	0.24
2.5	x	1.25	76.1	x	38	2	1.5	90	0.25
2.5	x	1.5	76.1	x	44.5	2	1.5	90	0.26
2.5	x	2	76.1	x	57	2	1.5	90	0.29
3	x	1.25	88.9	x	38	2	1.5	90	0.29
3	x	1.5	88.9	x	44.5	2	1.5	90	0.30
3	x	2	88.9	x	57	2	1.5	90	0.32
3	x	2.5	88.9	x	76	2	2	90	0.40
4	x	1.5	108	x	44.5	2.5	1.5	100	0.46
4	x	2	108	x	57	2.5	1.5	100	0.48
4	x	2.5	108	x	76.1	2.5	2	100	0.57
4	x	3	108	x	88.9	2.5	2	100	0.61
5	x	2	133	x	57	2.5	1.5	140	0.80
5	x	2.5	133	x	76.1	2.5	2	140	0.93
5	x	3	133	x	88.9	2.5	2	140	0.98
5	x	4	133	x	108	2.5	2.5	140	1.16
5	x	2	133	x	57	3	1.5	140	0.86

5	x	2.5	133	x	76.1	3	2	140	1.06
5	x	4	133	x	108	3	2.5	140	1.34
6	x	2.5	159	x	76.1	2.5	2	150	1.13
6	x	3	159	x	88.9	2.5	2	150	1.19
6	x	4	159	x	108	2.5	2.5	150	1.38
6	x	5	159	x	133	2.5	2.5	150	1.51
6	x	2.5	159	x	76.1	3	2	150	1.35
6	x	4	159	x	108	3	2.5	150	1.65
7	x	3	193.7	x	88.9	2.5	2	155	1.39
7	x	4	193.7	x	108	2.5	2.5	155	1.58
7	x	5	193.7	x	133	2.5	2.5	155	1.71
7	x	6	193.7	x	159	2.5	2.5	155	1.85
7	x	4	193.7	x	108	3.5	2.5	155	2.21
8	x	4	219.1	x	108	3	2.5	155	2.47
8	x	5	219.1	x	133	3	2.5	155	2.60
8	x	6	219.1	x	159	3	2.5	155	2.74
8	x	7	219.1	x	193.7	3	2.5	155	2.93
8	x	4	219.1	x	108	3.5	2	155	2.88
10	x	5	267	x	133	3	2.5	210	3.30
10	x	6	267	x	159	3	2.5	210	3.49
10	x	7	267	x	193.7	3	2.5	210	3.75
10	x	8	267	x	219.1	3	3	210	4.25
12	x	5	323.9	x	133	4	2.5	210	5.30
12	x	6	323.9	x	159	4	2.5	210	5.60
12	x	7	323.9	x	193.7	4	2.5	210	6.02
12	x	8	323.9	x	219.1	4	3	210	6.30
12	x	10	323.9	x	267	4	3	210	6.88
14	x	6	368	x	159	4	2.5	300	8.75
14	x	7	368	x	193.7	4	2.5	300	9.34
14	x	8	368	x	219.1	4	3	300	9.76
14	x	10	368	x	267	4	3	300	10.57
14	x	12	368	x	323.3	4	4	300	11.53
16	x	7	419.1	x	193.7	4	2.5	325	11.04
16	x	8	419.1	x	219.1	4	3	325	11.50
16	x	10	419.1	x	267	4	3	325	12.38
16	x	12	419.1	x	323.9	4	4	325	13.42
16	x	14	419.1	x	368	4	4	325	14.22
18	x	8	457.2	x	219.1	4	3	350	13.14
18	x	10	457.2	x	267	4	3	350	14.08
18	x	12	457.2	x	323.9	4	4	350	15.20
18	x	14	457.2	x	368	4	4	350	16.06
18	x	16	457.2	x	419.1	4	4	350	17.07
20	x	10	508	x	267	4.5	3	375	18.07
20	x	12	508	x	323.9	4.5	4	375	19.42
20	x	14	508	x	368	4.5	4	375	20.47
20	x	16	508	x	419.1	4.5	4	375	21.68
20	x	18	508	x	457.2	4.5	4	375	22.57
24	x	14	610	x	368	5	4	400	27.19
24	x	16	610	x	419.1	5	4	400	28.62
24	x	18	610	x	457.2	5	4	400	29.69
24	x	20	610	x	508	5	4.5	400	31.12



## COPPER NICKEL BUTT WELD FITTINGS

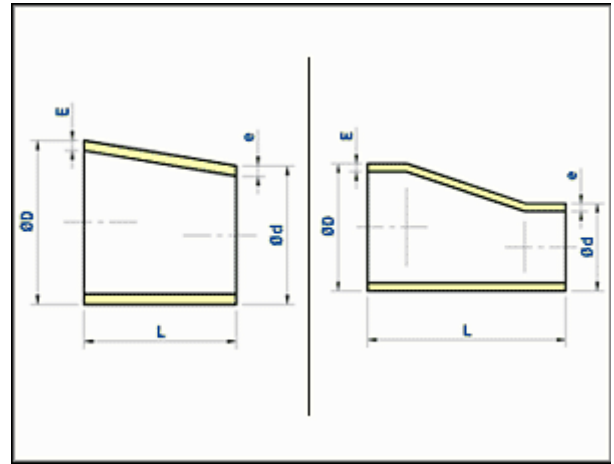
eccentric reducers - Ext. from DIN 86089 / EEMUA  
146 in copper nickel

14 bar - Ext. from DIN 86089

**STANDARD : DIN 86089**

Printable version

PDF version



ØD x Ød		Outside diameter		Wall thickness		Length	Theoretical weight		
		nominal inch	actual mm					E mm	e mm
3	x	1.25	88.9	x	38	2.5	1.5	90	0.29
3	x	1.5	88.9	x	44.5	2.5	1.5	90	0.3
3	x	2	88.9	x	57	2.5	1.5	90	0.32
3	x	2.5	88.9	x	76.1	2.5	2	90	0.4
4	x	3	108	x	88.9	2.5	2.5	100	0.61
5	x	3	133	x	88.9	3	2.5	140	1.13
6	x	3	159	x	88.9	3	2.5	150	1.42
6	x	5	159	x	133	3	3	150	1.81
7	x	3	193.7	x	88.9	3.5	2.5	155	1.94
7	x	5	193.7	x	133	3.5	3	155	2.39
7	x	6	193.7	x	159	3.5	3	155	2.60
8	x	5	219.1	x	133	3.5	3	155	3.03
8	x	6	219.1	x	159	3.5	3	155	3.20
8	x	7	219.1	x	193.7	3.5	3	155	3.42
10	x	5	267	x	133	4	3	210	4.40
10	x	6	267	x	159	4	3	210	4.65
10	x	7	267	x	193.7	4	3.5	210	5.00
10	x	8	267	x	219.1	4	3.5	210	5.65
12	x	5	323.9	x	133	5	3	210	6.62
12	x	6	323.9	x	159	5	3	210	7.00
12	x	7	323.9	x	193.7	5	3.5	210	7.52
12	x	8	323.9	x	219.1	5	3.5	210	7.90
12	x	10	323.9	x	267	5	4	210	8.60
14	x	6	368	x	159	5.5	3	300	12.03
14	x	7	368	x	193.7	5.5	3	300	12.84
14	x	8	368	x	219.1	5.5	3.5	300	13.42
14	x	10	368	x	267	5.5	4	300	14.53
14	x	12	368	x	323.3	5.5	5	300	15.85
16	x	7	419.1	x	193.7	6	3.5	325	16.56
16	x	8	419.1	x	219.1	6	3.5	325	17.25
16	x	10	419.1	x	267	6	4	325	18.57
16	x	12	419.1	x	323.9	6	5	325	20.13
16	x	14	419.1	x	368	6	5.5	325	21.33
18	x	8	457.2	x	219.1	6	3.5	350	19.70
18	x	10	457.2	x	267	6	4	350	21.10

18	x	12	457.2	x	323.9	6	5	350	22.80
18	x	14	457.2	x	368	6	5.5	350	24.10
18	x	16	457.2	x	419.1	6	6	350	25.60
20	x	10	508	x	267	6.5	4	375	26.10
20	x	12	508	x	323.9	6.5	5	375	28.05
20	x	14	508	x	368	6.5	5.5	375	29.60
20	x	16	508	x	419.1	6.5	6	375	31.30
20	x	18	508	x	457.2	6.5	6	375	32.60
24	x	14	610	x	368	8	5.5	400	43.50
24	x	16	610	x	419.1	8	6	400	45.80
24	x	18	610	x	457.2	8	6	400	47.50
24	x	20	610	x	508	8	6.5	400	49.80

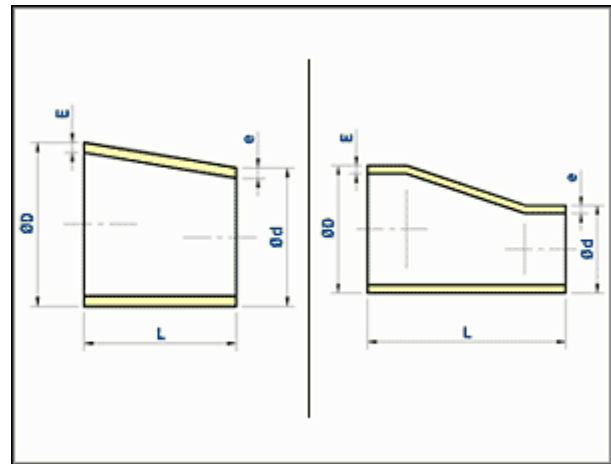


# COPPER NICKEL BUTT WELD FITTINGS

eccentric reducers - Ext. from DIN 86089 / EEMUA  
 146 in copper nickel  
 16 bar - EEMUA 146

**STANDARD : EEMUA Pub. N° 146**

Printable version  
 PDF version



ØD x Ød		Outside diameter		Wall thickness		Length L mm	Theoretical weight Kg/piece		
		nominal inch	actual mm	E mm	e mm				
1	x	0.75	30	x	25	2.5	2	51	0.09
1.25	x	0.75	38	x	25	2.5	2	51	0.10
1.25	x	1	38	x	30	2.5	2.5	51	0.11
1.5	x	0.75	44.5	x	25	2.5	2	64	0.14
1.5	x	1	44.5	x	30	2.5	2.5	64	0.15
1.5	x	1.25	44.5	x	38	2.5	2.5	64	0.17
2	x	1	57	x	30	2.5	2.5	76	0.21
2	x	1.25	57	x	38	2.5	2.5	76	0.23
2	x	1.5	57	x	44.5	2.5	2.5	76	0.25
2.5	x	1.25	76.1	x	38	2.5	2.5	89	0.34
2.5	x	1.5	76.1	x	44.5	2.5	2.5	89	0.36
2.5	x	2	76.1	x	57	2.5	2.5	89	0.40
3	x	1.5	88.9	x	44.5	2.5	2.5	89	0.40
3	x	2	88.9	x	57	2.5	2.5	89	0.44
3	x	2.5	88.9	x	76.1	2.5	2.5	89	0.50
4	x	2	108	x	57	3	2.5	102	0.68
4	x	2.5	108	x	76.1	3	2.5	102	0.76
4	x	3	108	x	88.9	3	2.5	102	0.82
6	x	2	159	x	57	3	2.5	140	1.30
6	x	2.5	159	x	76.1	3	2.5	140	1.35
6	x	3	159	x	88.9	3	2.5	140	1.42
6	x	4	159	x	108	3	3	140	1.54
8	x	2.5	219.1	x	76.1	4	2.5	152	2.45
8	x	3	219.1	x	88.9	4	2.5	152	2.55
8	x	4	219.1	x	108	4	3	152	2.72
8	x	6	219.1	x	159	4	3	152	3.16
10	x	4	267	x	108	4.5	3	178	4.11
10	x	6	267	x	159	4.5	3	178	4.69
10	x	8	267	x	219.1	4.5	4	178	5.36
12	x	6	323.9	x	159	5.5	3	203	7.39
12	x	8	323.9	x	219.1	5.5	4	203	8.33
12	x	10	323.9	x	267	5.5	4.5	203	9.09
14	x	8	368	x	219.1	6.5	4	330	17.28
14	x	10	368	x	267	6.5	4.5	330	18.73
14	x	12	368	x	323.9	6.5	5.5	330	20.44

16	x	10	419.1	x	267	7	4.5	356	23.51
16	x	12	419.1	x	323.9	7	5.5	356	25.51
16	x	14	419.1	x	368	7	6.5	356	27.04
18	x	12	457.2	x	323.9	8	5.5	381	32.72
18	x	14	457.2	x	368	8	6.5	381	34.61
18	x	16	457.2	x	419.1	8	7	381	36.80
20	x	14	508	x	368	8.5	6.5	508	52.07
20	x	16	508	x	419.1	8.5	7	508	55.17
20	x	18	508	x	457.2	8.5	8	508	57.48
24	x	16	610	x	419.1	10.5	7	508	75.49
24	x	18	610	x	457.2	10.5	8	508	78.34
24	x	20	610	x	508	10.5	8.5	508	82.15
28	x	18	711	x	457.2	12	8	610	117.58
28	x	20	711	x	508	12	8.5	610	122.82
28	x	24	711	x	610	12	10.5	610	133.30
32	x	24	813	x	610	13.5	10.5	610	161.42
32	x	28	813	x	711	13.5	12	610	173.09
36	x	24	914	x	610	15.5	10.5	610	274.48
36	x	28	914	x	711	15.5	12	610	287.89
36	x	32	914	x	813	15.5	13.5	610	301.43

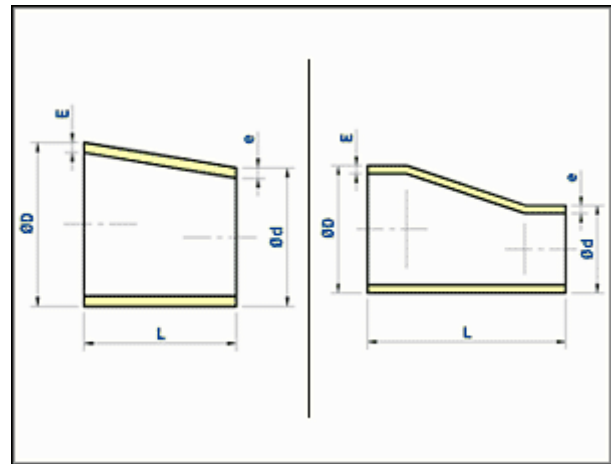


## COPPER NICKEL BUTT WELD FITTINGS

eccentric reducers - Ext. from DIN 86089 / EEMUA  
 146 in copper nickel  
 20 bar - EEMUA 146

**STANDARD : EEMUA Pub. N° 146**

Printable version  
 PDF version



ØD x Ød		Outside diameter		Wall thickness		Length L mm	Theoretical weight Kg/piece		
		nominal inch	actual mm	E mm	e mm				
1	x	0.75	30	x	25	2.5	2	51	0.09
1.25	x	0.75	38	x	25	2.5	2	51	0.10
1.25	x	1	38	x	30	2.5	2.5	51	0.11
1.5	x	0.75	44.5	x	25	2.5	2	64	0.14
1.5	x	1	44.5	x	30	2.5	2.5	64	0.15
1.5	x	1.25	44.5	x	38	2.5	2.5	64	0.17
2	x	1	57	x	30	2.5	2.5	76	0.21
2	x	1.25	57	x	38	2.5	2.5	76	0.23
2	x	1.5	57	x	44.5	2.5	2.5	76	0.25
2.5	x	1.25	76.1	x	38	2.5	2.5	89	0.34
2.5	x	1.5	76.1	x	44.5	2.5	2.5	89	0.36
2.5	x	2	76.1	x	57	2.5	2.5	89	0.40
3	x	1.5	88.9	x	44.5	2.5	2.5	89	0.40
3	x	2	88.9	x	57	2.5	2.5	89	0.44
3	x	2.5	88.9	x	76.1	2.5	2.5	89	0.50
4	x	2	108	x	57	3	2.5	102	0.68
4	x	2.5	108	x	76.1	3	2.5	102	0.76
4	x	3	108	x	88.9	3	2.5	102	0.82
6	x	2	159	x	57	3.5	2.5	140	1.50
6	x	2.5	159	x	76.1	3.5	2.5	140	1.56
6	x	3	159	x	88.9	3.5	2.5	140	1.65
6	x	4	159	x	108	3.5	3	140	1.78
8	x	2.5	219.1	x	76.1	4.5	2.5	152	2.74
8	x	3	219.1	x	88.9	4.5	2.5	152	2.87
8	x	4	219.1	x	108	4.5	3	152	3.05
8	x	6	219.1	x	159	4.5	3.5	152	3.54
10	x	4	267	x	108	5.5	3	178	5.00
10	x	6	267	x	159	5.5	3.5	178	5.70
10	x	8	267	x	219.1	5.5	4.5	178	6.53
12	x	6	323.9	x	159	7	3.5	203	9.35
12	x	8	323.9	x	219.1	7	4.5	203	10.55
12	x	10	323.9	x	267	7	5.5	203	11.52
14	x	8	368	x	219.1	8	4.5	330	21.16
14	x	10	368	x	267	8	5.5	330	22.95
14	x	12	368	x	323.9	8	7	330	25.06

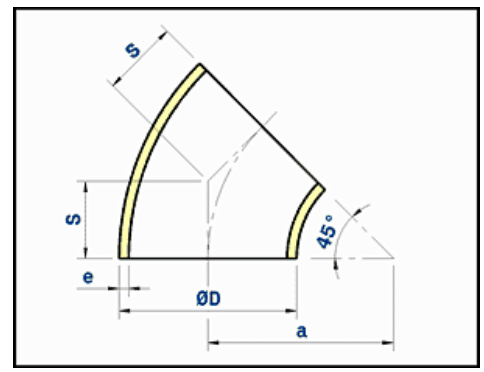
16	x	10	419.1	x	267	9	5.5	356	30.05
16	x	12	419.1	x	323.9	9	7	356	32.62
16	x	14	419.1	x	368	9	8	356	35.60
18	x	12	457.2	x	323.9	9.5	7	381	38.85
18	x	14	457.2	x	368	9.5	8	381	41.10
18	x	16	457.2	x	419.1	9.5	9	381	43.70
20	x	14	508	x	368	11	8	508	67.38
20	x	16	508	x	419.1	11	9	508	71.39
20	x	18	508	x	457.2	11	9.5	508	74.38
24	x	16	610	x	419.1	13	9	508	93.46
24	x	18	610	x	457.2	13	9.5	508	96.99
24	x	20	610	x	508	13	11	508	101.70
28	x	18	711	x	457.2	15	9.5	610	146.97
28	x	20	711	x	508	15	11	610	153.52
28	x	24	711	x	610	15	13	610	166.62
32	x	24	813	x	610	17	13	610	203.26
32	x	28	813	x	711	17	15	610	217.96
36	x	24	914	x	610	19	13	610	336.45
36	x	28	914	x	711	19	15	610	352.89
36	x	32	914	x	813	19	17	610	369.49

**COPPER NICKEL BUTT WELD  
FITTINGS**

elbows - long radius - DIN 86090 / EEMUA 146 in  
copper nickel

45° - 10 bar - DIN 86090

**STANDARD : DIN 86090**



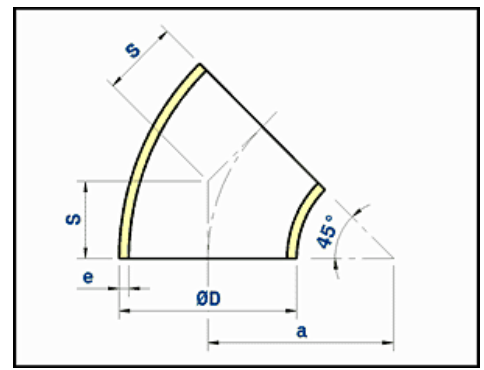
Outside diameter of pipe ØD		Wall thickness e mm	Radius a mm	s mm	Theoretical weight Kg/piece
nominal inch	actual mm				
0.5	20	1	25	10.4	0.01
0.75	25	1.5	27.5	11.4	0.02
1	30	1.5	33.5	14	0.03
1.25	38	1.5	45	19	0.05
1.5	44.5	1.5	51	21	0.07
2	57	1.5	72	30	0.13
2.5	76.1	2	95	39	0.30
3	88.9	2	114.5	47	0.43
4	108	2.5	142.5	59	0.82
5	133	2.5	181	75	1.29
6	159	2.5	216	89	1.85
7	193.7	2.5	270	112	2.82
8	219.1	3	305	126	4.33
10	267	3	378	157	6.55
12	323.9	4	457	189	12.80
14	368	4	533.5	221	17.00
16	419.1	4	609.5	252	29.90
18	457.2	4	686	284	30.70
20	508	4.5	762	316	41.90
24	610	5	915	379	60.62

## COPPER NICKEL BUTT WELD FITTINGS

elbows - long radius - DIN 86090 / EEMUA 146 in  
copper nickel

45° - 14 bar - DIN 86090

STANDARD : DIN 86090



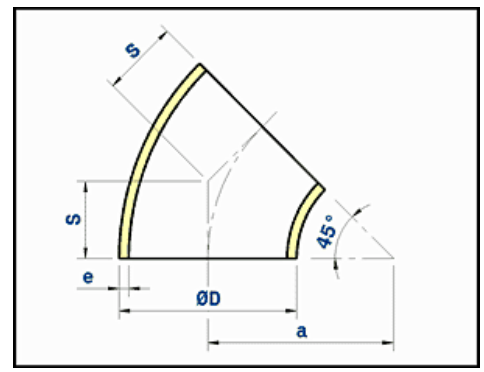
Outside diameter of pipe ØD		Wall thickness e mm	Radius a mm	s mm	Theoretical weight Kg/piece
nominal inch	actual mm				
3	88.9	2.5	114.5	47	0.54
5	133	3	181	75	1.55
6	159	3	216	89	2.22
7	193.7	3.5	270	112	3.94
8	219.1	3.5	305	126	5.04
10	267	4	378	157	8.73
12	323.9	5	457	189	16.00
14	368	5.5	533.5	221	23.37
16	419.1	6	609.5	252	33.20
18	457.2	6	686	284	46.05
20	508	6.5	762	316	62.85
24	610	8	915	379	97.00

## COPPER NICKEL BUTT WELD FITTINGS

elbows - long radius - DIN 86090 / EEMUA 146 in  
copper nickel

45° - 16 bar - EEMUA 146

STANDARD : EEMUA Pub. N° 146



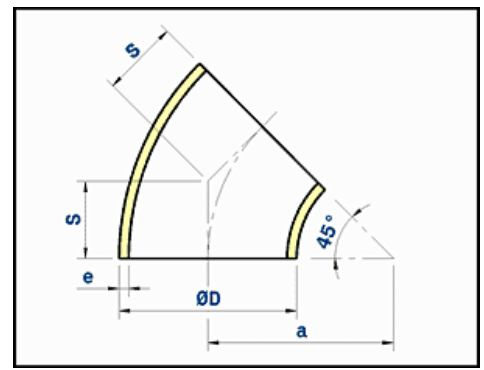
Outside diameter of pipe ØD		Wall thickness e mm	Radius a mm	s mm	Theoretical weight Kg/piece
nominal inch	actual mm				
1	30	2.5	38	22	0.06
1.25	38	2.5	48	25	0.09
1.5	44.5	2.5	57	29	0.13
2	57	2.5	76	35	0.23
2.5	76.1	2.5	95	44	0.38
3	88.9	2.5	114	51	0.54
4	108	3	152	64	1.05
6	159	3	229	95	2.35
8	219.1	4	305	127	5.75
10	267	4.5	381	159	9.85
12	323.9	5.5	457	190	17.53
14	368	6.5	533	222	27.46
16	419.1	7	610	254	38.50
18	457.2	8	686	286	54.10
20	508	8.5	762	318	70.93
24	610	10.5	914	381	126.42
28	711	12	1067	438	196.30
32	813	13.5	1219	502	288.00
36	914	15.5	1372	565	418.60

## COPPER NICKEL BUTT WELD FITTINGS

elbows - long radius - DIN 86090 / EEMUA 146 in  
copper nickel

45° - 20 bar - EEMUA 146

STANDARD : EEMUA Pub. N° 146



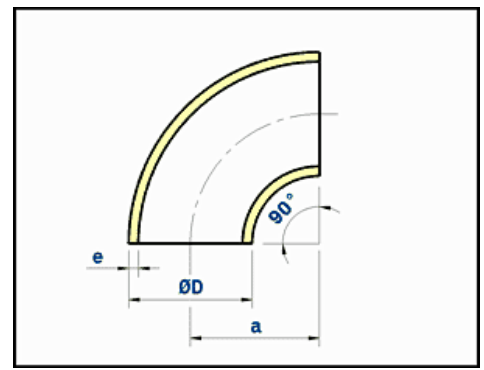
Outside diameter of pipe ØD		Wall thickness e mm	Radius a mm	s mm	Theoretical weight Kg/piece
nominal inch	actual mm				
1	30	2.5	38	22	0.06
1.25	38	2.5	48	25	0.09
1.5	44.5	2.5	57	29	0.13
2	57	2.5	76	35	0.23
2.5	76.1	2.5	95	44	0.38
3	88.9	2.5	114	51	0.54
4	108	3	152	64	1.05
6	159	3.5	229	95	2.74
8	219.1	4.5	305	127	6.47
10	267	5.5	381	159	12.04
12	323.9	7	457	190	22.30
14	368	8	533	222	33.80
16	419.1	9	610	254	49.50
18	457.2	9.5	686	286	64.25
20	508	11	762	318	91.80
24	610	13	914	381	156.60
28	711	15	1067	438	245.40
32	813	17	1219	502	363.85
36	914	19	1372	565	513.13

**COPPER NICKEL BUTT WELD  
FITTINGS**

elbows - long radius - DIN 86090 / EEMUA 146 in  
copper nickel

90° - 10 bar - DIN 86090

STANDARD : DIN 86090



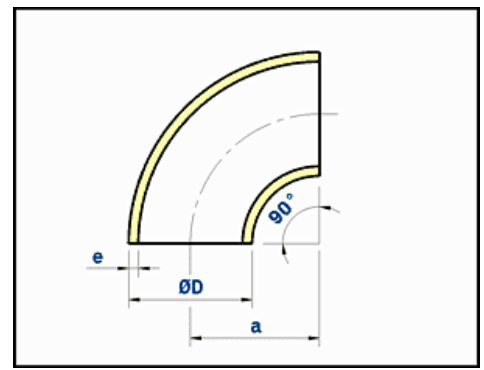
Outside diameter of pipe ØD		Wall thickness e mm	Radius a mm	Theoretical weight Kg/piece
nominal inch	actual mm			
0.5	20	1	25	0.02
0.75	25	1.5	27.5	0.04
1	30	1.5	33.5	0.06
1.25	38	1.5	45	0.10
1.5	44.5	1.5	51	0.14
2	57	1.5	72	0.26
2.5	76.1	2	95	0.61
3	88.9	2	114.5	0.87
4	108	2.5	142.5	1.64
5	133	2.5	181	2.58
6	159	2.5	216	3.70
7	193.7	2.5	270	5.65
8	219.1	3	305	8.66
10	267	3	378	13.10
12	323.9	4	457	25.61
14	368	4	533.5	34.00
16	419.1	4	609.5	39.40
18	457.2	4	686	48.40
20	508	4.5	762	75.62
24	610	5	915	121.24

**COPPER NICKEL BUTT WELD  
FITTINGS**

elbows - long radius - DIN 86090 / EEMUA 146 in  
copper nickel

90° - 14 bar - DIN 86090

STANDARD : DIN 86090



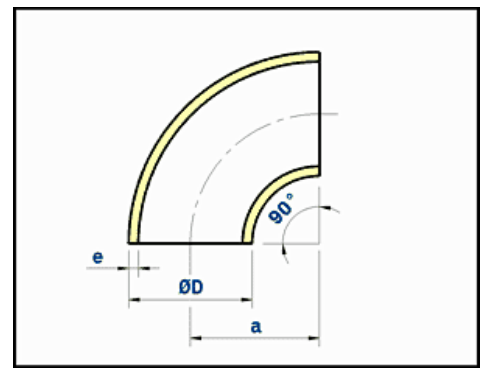
Outside diameter of pipe ØD		Wall thickness e mm	Radius a mm	Theoretical weight Kg/piece
nominal inch	actual mm			
3	88.9	2.5	114.5	1.08
5	133	3	181	3.10
6	159	3	216	4.44
7	193.7	3.5	1270	7.88
8	219.1	3.5	305	10.08
10	267	4	378	17.46
12	323.9	5	457	32.00
14	368	5.5	533.5	46.74
16	419.1	6	609.5	66.40
18	457.2	6	686	72.63
20	508	6.5	762	125.70
24	610	8	915	194.00

## COPPER NICKEL BUTT WELD FITTINGS

elbows - long radius - DIN 86090 / EEMUA 146 in  
copper nickel

90° - 16 bar - EEMUA 146

STANDARD : EEMUA Pub. N° 146



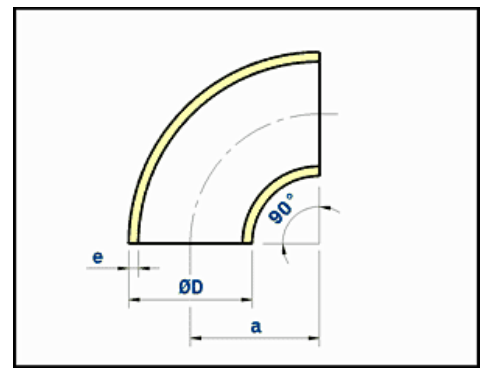
Outside diameter of pipe ØD		Wall thickness e mm	Radius a mm	Theoretical weight Kg/piece
nominal inch	actual mm			
1	30	2.5	38	0.12
1.25	38	2.5	48	0.18
1.5	44.5	2.5	57	0.26
2	57	2.5	76	0.46
2.5	76.1	2.5	95	0.76
3	88.9	2.5	114	1.08
4	108	3	152	2.10
6	159	3	229	4.70
8	219.1	4	305	11.50
10	267	4.5	381	19.70
12	323.9	5.5	457	35.06
14	368	6.5	533	54.92
16	419.1	7	610	77.00
18	457.2	8	686	108.20
20	508	8.5	762	141.86
24	610	10.5	914	252.94
28	711	12	1067	392.60
32	813	13.5	1219	577.90
36	914	15.5	1372	837.20

## COPPER NICKEL BUTT WELD FITTINGS

elbows - long radius - DIN 86090 / EEMUA 146 in  
copper nickel

90° - 20 bar - EEMUA 146

STANDARD : EEMUA Pub. N° 146



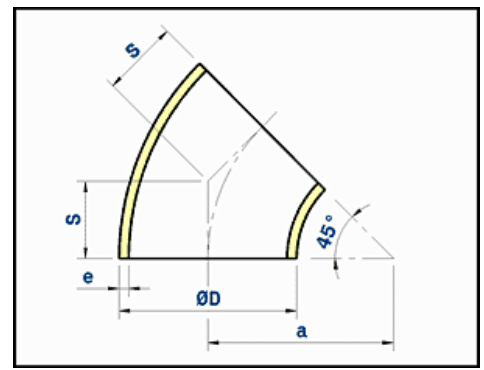
Outside diameter of pipe ØD		Wall thickness e mm	Radius a mm	Theoretical weight Kg/piece
nominal inch	actual mm			
1	30	2.5	38	0.12
1.25	38	2.5	48	0.18
1.5	44.5	2.5	57	0.26
2	57	2.5	76	0.46
2.5	76.1	2.5	95	0.76
3	88.9	2.5	114	1.08
4	108	3	152	2.10
6	159	3.5	229	5.48
8	219.1	4.5	305	12.94
10	267	5.5	381	24.08
12	323.9	7	457	44.60
14	368	8	533	67.60
16	419.1	9	610	99.00
18	457.2	9.5	686	128.50
20	508	11	762	183.60
24	610	13	914	313.30
28	711	15	1067	490.80
32	813	17	1219	727.70
36	914	19	1372	1026.26

## COPPER NICKEL BUTT WELD FITTINGS

elbows - short radius - Ext. from DIN 86090 in copper  
nickel

45° - 10 bar

STANDARD : Extrapolated from DIN 86090



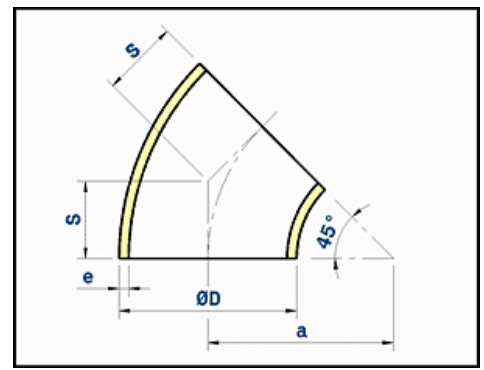
Outside diameter of pipe ØD		Wall thickness e mm	Radius a mm	s mm	Theoretical weight Kg/piece
nominal inch	actual mm				
1	30	1.5	30	12	0.02
1.25	38	1.5	32.5	14	0.04
1.5	44.5	1.5	40	17	0.06
2	57	1.5	52.5	22	0.10
2.5	76.1	2	70	29	0.22
3	88.9	2	82.5	34	0.32
4	108	2.5	100	41	0.58
5	133	2.5	125	52	0.90
6	159	2.5	150	62	1.30
7	193.7	2.5	180	75	1.90
8	219.1	3	210	87	3.00
10	267	3	255	106	4.40
12	323.9	4	305	126	8.60
14	368	4	352.5	146	11.30
16	419.1	4	400	166	16.40
18	457.2	4	455	188	20.40
20	508	4.5	505	209	28.10
24	610	5	610	253	40.90

## COPPER NICKEL BUTT WELD FITTINGS

elbows - short radius - Ext. from DIN 86090 in copper  
nickel

45° - 14 bar

STANDARD : Extrapolated from DIN 86090



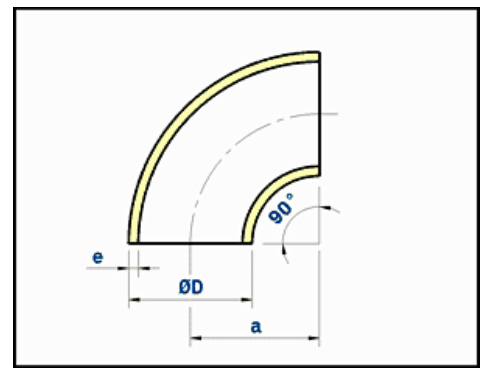
Outside diameter of pipe ØD		Wall thickness e mm	Radius a mm	s mm	Theoretical weight Kg/piece
nominal inch	actual mm				
3	88.9	2.5	82.5	34	0.40
5	133	3	125	52	1.08
6	159	3	150	62	1.56
7	193.7	3.5	180	75	2.66
8	219.1	3.5	210	87	3.50
10	267	4	255	106	5.87
12	323.9	5	305	126	10.75
14	368	5.5	352.5	146	15.54
16	419.1	6	400	166	21.87
18	457.2	6	455	188	30.60
20	508	6.5	505	209	42.15
24	610	8	610	253	65.45

## COPPER NICKEL BUTT WELD FITTINGS

elbows - short radius - Ext. from DIN 86090 in copper  
nickel

90° - 10 bar

STANDARD : Extrapolated from DIN 86090



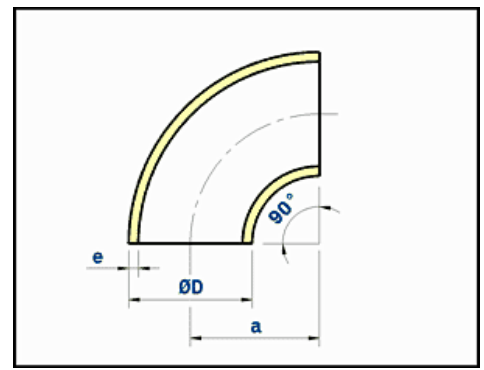
Outside diameter of pipe ØD		Wall thickness e mm	Radius a mm	Theoretical weight Kg/piece
nominal inch	actual mm			
1	30	1.5	30	0.04
1.25	38	1.5	32.5	0.08
1.5	44.5	1.5	40	0.12
2	57	1.5	52.5	0.20
2.5	76.1	1.5	70	0.44
3	88.9	2	82.5	0.64
4	108	2.5	100	1.16
5	133	2.5	125	1.80
6	159	2.5	150	2.60
7	193.7	2.5	180	3.80
8	219.1	3	210	6.00
10	267	3	255	8.80
12	323.9	4	305	17.20
14	368	4	352.5	22.60
16	419.1	4	400	32.80
18	457.2	4	455	40.80
20	508	4.5	505	56.20
24	610	5	610	81.80

## COPPER NICKEL BUTT WELD FITTINGS

elbows - short radius - Ext. from DIN 86090 in copper  
nickel

90° - 14 bar

STANDARD : Extrapolated from DIN 86090



Outside diameter of pipe ØD		Wall thickness e mm	Radius a mm	Theoretical weight Kg/piece
nominal inch	actual mm			
3	88.9	2.5	82.5	0.80
5	133	3	125	2.16
6	159	3	150	3.12
7	193.7	3.5	180	5.32
8	219.1	3.5	210	7.00
10	267	4	255	11.74
12	323.9	5	305	21.50
14	368	5.5	352.5	31.08
16	419.1	6	400	43.74
18	457.2	6	455	61.20
20	508	6.5	505	84.30
24	610	8	610	130.90



## COPPER NICKEL BUTT WELD FITTINGS

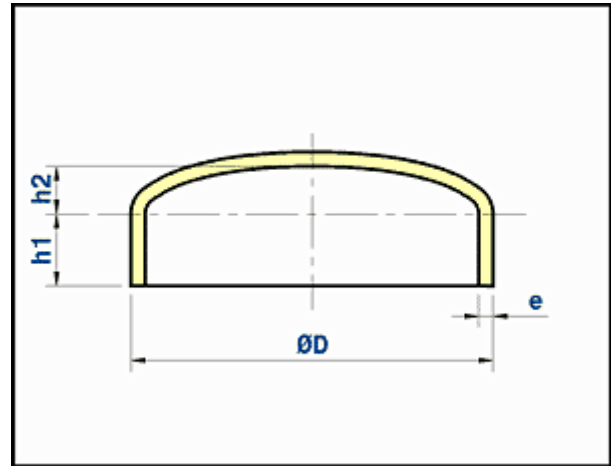
end caps - DIN 28011 / EEMUA 146 in copper nickel

10 bar - DIN 28011

**STANDARD : DIN 28011**

Printable version

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Outside diameter of pipe ØD		Wall thickness e mm	Heigh		Theoretical weight Kg/piece
nominal inch	actual mm		h1 mm	h2 mm	
1	30	1.5	14	5	0.07
1.25	38	1.5	14	6.5	0.10
1.5	44.5	1.5	14	8	0.12
2	57	1.5	18	10	0.18
2.5	76.1	2	18	14	0.31
3	88.9	2	20	16	0.39
4	108	2.5	20	20	0.75
5	133	2.5	20	24	0.95
6	159	2.5	20	29	1.35
7	193.7	2.5	20	36	1.95
8	219.1	3	20	41	2.60
10	267	3	20	50	3.85
12	323.9	4	20	61	6.60
14	368	4	20	69	8.80
16	419.1	4	20	79	12.20
18	457.2	4	20	87	12.55
20	508	4.5	20	96	18.80
24	610	5	20	115	26.70



## COPPER NICKEL BUTT WELD FITTINGS

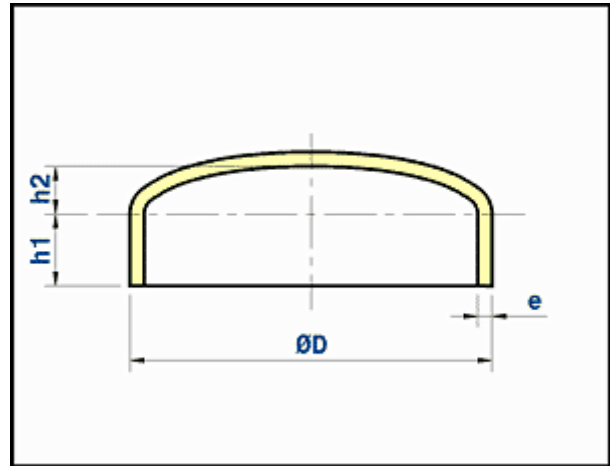
end caps - DIN 28011 / EEMUA 146 in copper nickel

14 bar - DIN 28011

**STANDARD : DIN 28011**

Printable version

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Outside diameter of pipe ØD		Wall thickness e mm	Heigh		Theoretical weight Kg/piece
nominal inch	actual mm		h1 mm	h2 mm	
3	88.9	2.5	20	16	0.53
5	133	3	20	24	1.2
6	159	3	20	29	1.6
7	193.7	3.5	20	36	2.4
8	219.1	3.5	20	41	3.10
10	267	4	20	50	4.85
12	323.9	5	20	61	8.20
14	368	5.5	20	69	12.60
16	419.1	6	25	79	17.40
18	457.2	6	25	87	17.90
20	508	6.5	25	96	26.35
24	610	8	35	115	49.6



## COPPER NICKEL BUTT WELD FITTINGS

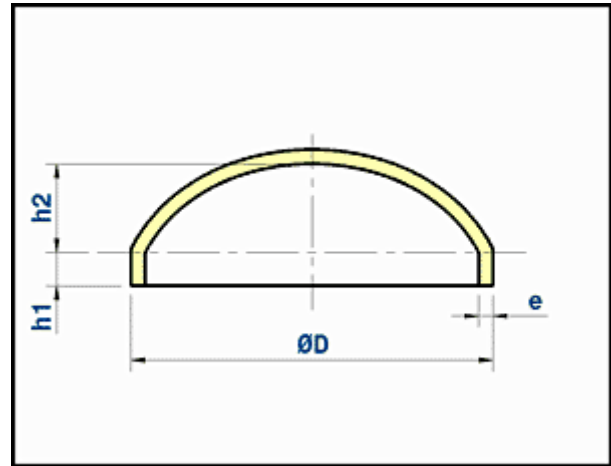
end caps - DIN 28011 / EEMUA 146 in copper nickel

16 bar - EEMUA 146

STANDARD : EEMUA Pub. N° 146

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Outside diameter of pipe ØD		Wall thickness e mm	Heigh	Theoretical weight Kg/piece
nominal inch	actual mm		h1 + h2 mm	
1.5	44.5	2.5	19.6	0.13
2	57	2.5	22	0.19
2.5	76.1	2.5	25.7	0.31
3	88.9	2.5	28.2	0.40
4	108	3	31.7	0.75
6	159	3	41	1.50
8	219.1	4	55	2.75
10	267	4.5	69	4.9
12	323.9	5.5	80	9.17
14	368	6.5	93	14.05
16	419.1	7	102	18.6
18	457.2	8	119	22.75
20	508	8.5	129	31.7
24	610	10.5	148	55.16
28	711	12	176	85.55
32	813	13.5	200	125.4
36	914	15.5	221	175.40



## COPPER NICKEL BUTT WELD FITTINGS

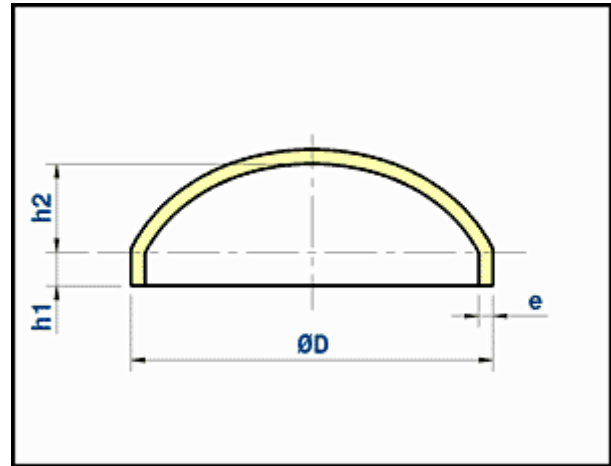
end caps - DIN 28011 / EEMUA 146 in copper nickel

20 bar - EEMUA 146

STANDARD : EEMUA Pub. N° 146

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Outside diameter of pipe ØD		Wall thickness e mm	Heigh	Theoretical weight Kg/piece
nominal inch	actual mm		h1 + h2 mm	
1.5	44.5	2.5	19.6	0.13
2	57	2.5	22	0.19
2.5	76.1	2.5	25.7	0.31
3	88.9	2.5	28.2	0.40
4	108	3	31.7	0.75
6	159	3.5	44	1.75
8	219.1	4.5	60	3.1
10	267	5.5	69	5.96
12	323.9	7	85	11.68
14	368	8	103	17.3
16	419.1	9	112	23.9
18	457.2	9.5	119	27
20	508	11	139	41
24	610	13	163	68.3
28	711	15	191	106.9
32	813	17	210	157.9
36	914	19	231	215



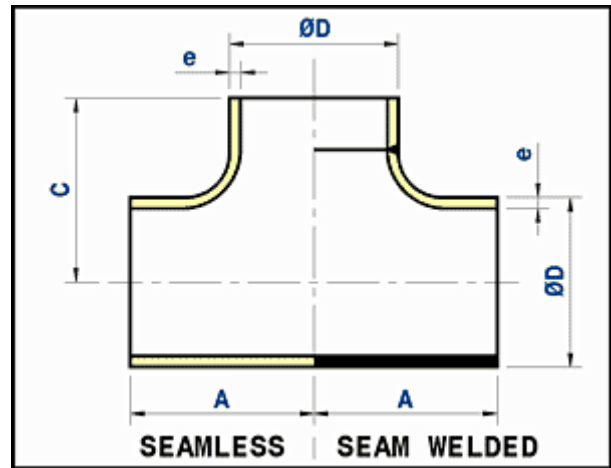
## COPPER NICKEL BUTT WELD FITTINGS

equal tees - DIN 86088 / EEMUA 146 in copper nickel

10 bar - DIN 86088

**STANDARD : DIN 86088**

Printable version  
PDF version



Outside diameter of pipe ØD		Wall thickness e mm	A mm	C mm	Theoretical weight Kg/piece
nominal inch	actual mm				
0.5	20	1	25	25	0.05
0.75	25	1.5	29	29	0.07
1	30	1.5	38	38	0.10
1.25	38	1.5	48	48	0.13
1.5	44.5	1.5	57	57	0.19
2	57	1.5	64	64	0.29
2.5	76.1	2	76	76	0.65
3	88.9	2	86	86	0.82
4	108	2.5	105	105	1.60
6	159	2.5	143	143	4.40
7	193.7	2.5	157	157	4.70
8	219.1	3	178	178	12.8
10	267	3	216	216	16.6
12	323.9	4	254	254	31.5
14	368	4	279	279	39.4
16	419.1	4	305	305	55.1
18	457.2	4	343	343	67.65
20	508	4.5	381	381	92.8
24	610	5	432	432	126.6



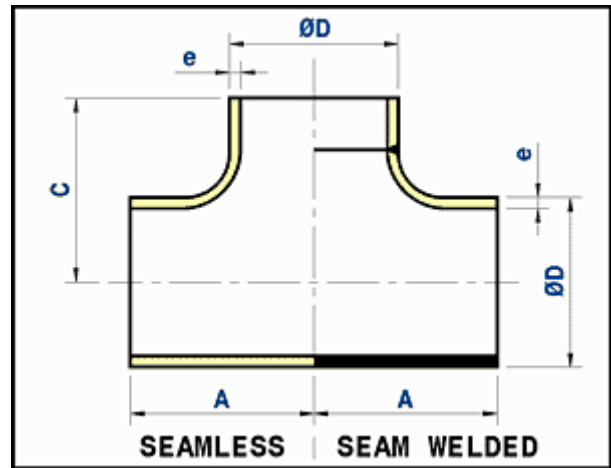
## COPPER NICKEL BUTT WELD FITTINGS

equal tees - DIN 86088 / EEMUA 146 in copper nickel

14 bar - DIN 86088

**STANDARD : DIN 86088**

Printable version  
PDF version



Outside diameter of pipe ØD		Wall thickness e mm	A mm	C mm	Theoretical weight Kg/piece
nominal inch	actual mm				
3	88.9	2.5	86	86	1.03
5	133	2.5	124	124	2.8
5	133	3	124	124	3.36
6	159	3	143	143	5.28
7	193.7	3	157	157	6.6
8	219.1	3.5	178	178	14.95
10	267	4	216	216	22.1
12	323.9	5	254	254	39.4
14	368	5.5	279	279	54.2
16	419.1	6	305	305	82.65
18	457.2	6	343	343	101.5
20	508	6.5	381	381	134.1
24	610	8	432	432	202.6



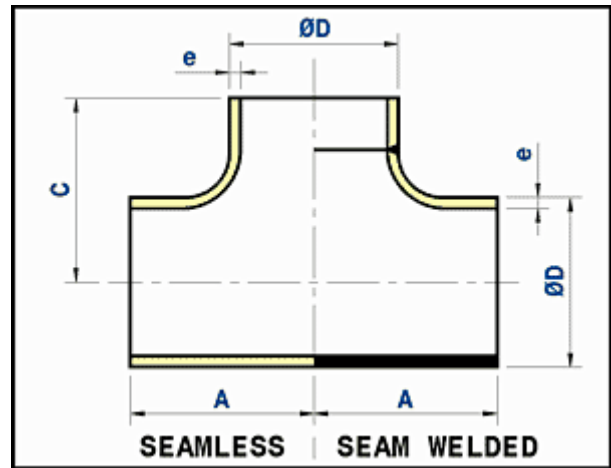
## COPPER NICKEL BUTT WELD FITTINGS

equal tees - DIN 86088 / EEMUA 146 in copper nickel

16 bar - EEMUA 146

**STANDARD : EEMUA Pub. N° 146**

Printable version  
PDF version



Outside diameter of pipe ØD		Wall thickness e mm	A mm	C mm	Theoretical weight Kg/piece
nominal inch	actual mm				
1	30	2.5	38	38	0.18
1.25	38	2.5	48	48	0.29
1.5	44.5	2.5	57	57	0.43
2	57	2.5	64	64	0.57
2.5	76.1	2.5	76	76	0.88
3	88.9	2.5	86	86	1.16
4	108	3	105	105	2.09
6	159	3	143	143	4.07
8	219.1	4	178	178	17
10	267	4.5	216	216	24.9
12	323.9	5.5	254	254	43.3
14	368	6.5	279	279	64.05
16	419.1	7	305	305	96.4
18	457.2	8	343	343	135.3
20	508	8.5	381	381	175.3
24	610	10.5	432	432	265.9
28	711	12.0	521	521	427
32	813	13.5	597	597	546.1
36	914	15.5	673	673	794.1



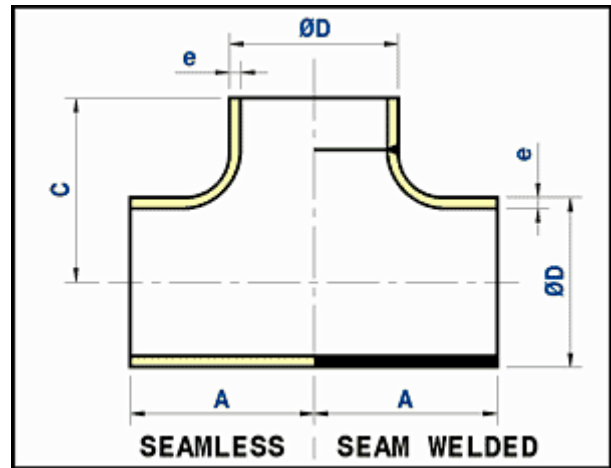
## COPPER NICKEL BUTT WELD FITTINGS

equal tees - DIN 86088 / EEMUA 146 in copper nickel

20 bar - EEMUA 146

**STANDARD : EEMUA Pub. N° 146**

Printable version  
PDF version



Outside diameter of pipe ØD		Wall thickness e mm	A mm	C mm	Theoretical weight Kg/piece
nominal inch	actual mm				
1	30	2.5	38	38	0.18
1.25	38	2.5	48	48	0.29
1.5	44.5	2.5	57	57	0.43
2	57	2.5	64	64	0.57
2.5	76	2.5	76	76	0.88
3	89	2.5	86	86	1.16
4	108	3	105	105	2.09
6	159	3.5	143	143	4.74
8	219	4.5	178	178	19.1
10	267	5.5	216	216	30.4
12	324	7	254	254	55.1
14	368	8	279	279	78.8
16	419	9	305	305	124
18	457	9.5	343	343	160.65
20	508	11	381	381	226.9
24	610	13	432	432	329.2
28	711	15	521	521	533.75
32	813	17	597	597	687.7
36	914	19	673	673	973.4



## COPPER NICKEL BUTT WELD FITTINGS

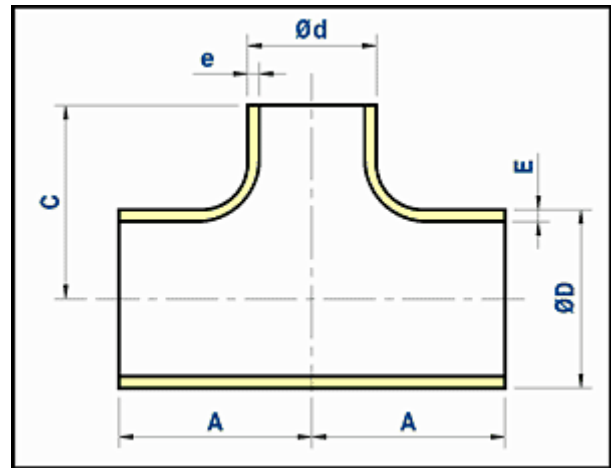
reducing tees - Ext. from DIN 86088 / EEMUA 146  
in copper nickel

10 bar - Ext. from DIN 86088

**STANDARD : DIN 86088**

Printable version

PDF version



Outside diameter of pipe				Wall thickness		Centre to face		Theoretical weight Kg/piece		
ØD x Ød		ØD x Ød		E	e	A	C			
nominal inch		actual mm		mm	mm	mm	mm			
1.25	x	1	38	x	30	1.5	1.5	48	42	0.10
1.5	x	1	44.5	x	30	1.5	1.5	57	45	0.21
1.5	x	1.25	44.5	x	38	1.5	1.5	57	51	0.21
2	x	1	57	x	30	1.5	1.5	64	51	0.32
2	x	1.25	57	x	38	1.5	1.5	64	57	0.32
2	x	1.5	57	x	44.5	1.5	1.5	64	63	0.32
2.5	x	1	76.1	x	30	2	1.5	76	56	0.65
2.5	x	1.25	76.1	x	38	2	1.5	76	62	0.65
2.5	x	1.5	76.1	x	44.5	2	1.5	76	71	0.67
2.5	x	2	76.1	x	57	2	1.5	76	73	0.67
3	x	1.25	88.9	x	38	2	1.5	86	73	0.87
3	x	1.5	88.9	x	44.5	2	1.5	86	76	0.87
3	x	2	88.9	x	57	2	1.5	86	80	0.89
3	x	2.5	88.9	x	76.1	2	2	86	83	0.92
4	x	1.5	108	x	44.5	2.5	1.5	105	89	1.60
4	x	2	108	x	57	2.5	1.5	105	90	1.60
4	x	2.5	108	x	76.1	2.5	2	105	92	1.65
4	x	3	108	x	88.9	2.5	2	105	96	1.65
5	x	2	133	x	57	2.5	1.5	124	98	3.00
5	x	2.5	133	x	76.1	2.5	2	124	105	3.10
5	x	3	133	x	88.9	2.5	2	124	108	3.25
5	x	4	133	x	108	2.5	2.5	124	117	3.30
5	x	2	133	x	57	3	1.5	124	98	3.60
5	x	2.5	133	x	76.1	3	2	124	105	3.70
5	x	4	133	x	108	3	2.5	124	117	3.95
6	x	2.5	159	x	76.1	2.5	2	143	118	4.40
6	x	3	159	x	88.9	2.5	2	143	121	4.50
6	x	4	159	x	108	2.5	2.5	143	130	4.60
6	x	5	159	x	133	2.5	2.5	143	136	4.60
6	x	2.5	159	x	76.1	3	2	143	118	5.25
6	x	4	159	x	108	3	2.5	143	130	5.50
8	x	4	219.1	x	108	3	2.5	178	156	12.6
8	x	5	219.1	x	133	3	2.5	178	162	12.7
8	x	6	219.1	x	159	3	2.5	178	168	12.8
8	x	4	219.1	x	108	3.5	2.5	178	156	14.75

10	x	4	267	x	108	3	2.5	194	209	12.5
10	x	5	267	x	133	3	2.5	217	219	13.5
10	x	6	267	x	159	3	2.5	240	229	14.8
10	x	7	267	x	193.7	3	2.5	267	243	15.2
10	x	8	267	x	219.1	3	3	290	259	16.6
10	x	4	267	x	108	4	2.5	194	209	16.7
12	x	5	323.9	x	133	4	2.5	217	247	28.6
12	x	6	323.9	x	159	4	2.5	240	257	30.45
12	x	7	323.9	x	193.7	4	2.5	267	272	32.6
12	x	8	323.9	x	219.1	4	3	290	287	34.6
12	x	10	323.9	x	267	4	3	324	317	37.8
14	x	6	368	x	159	4	2.5	240	279	37.4
14	x	7	368	x	193.7	4	2.5	267	294	39.85
14	x	8	368	x	219.1	4	3	290	309	42.1
14	x	10	368	x	267	4	3	324	339	45.55
14	x	12	368	x	323.9	4	4	380	369	52
16	x	7	419.1	x	193.7	4	2.5	267	319	49.1
16	x	8	419.1	x	219.1	4	3	290	335	52.1
16	x	10	419.1	x	267	4	3	324	365	56.4
16	x	12	419.1	x	323.9	4	4	380	395	64.8
16	x	14	419.1	x	368	4	4	407	410	68.9
18	x	10	457.2	x	267	4	3	324	383	55.7
18	x	12	457.2	x	323.9	4	4	380	413	64.6
18	x	14	457.2	x	368	4	4	407	428	68.9
18	x	16	457.2	x	419.1	4	4	440	453	74.6
20	x	12	508	x	323.9	4.5	4	380	439	72.5
20	x	14	508	x	368	4.5	4	407	454	77.4
20	x	16	508	x	419.1	4.5	4	440	479	83.9
20	x	18	508	x	457.2	4.5	4	500	509	94.1
24	x	14	610	x	368	5	4	407	505	109.95
24	x	16	610	x	419.1	5	4	440	530	117.85
24	x	18	610	x	457.2	5	4	500	555	130.35
24	x	20	610	x	508	5	4.5	540	580	141.85



## COPPER NICKEL BUTT WELD FITTINGS

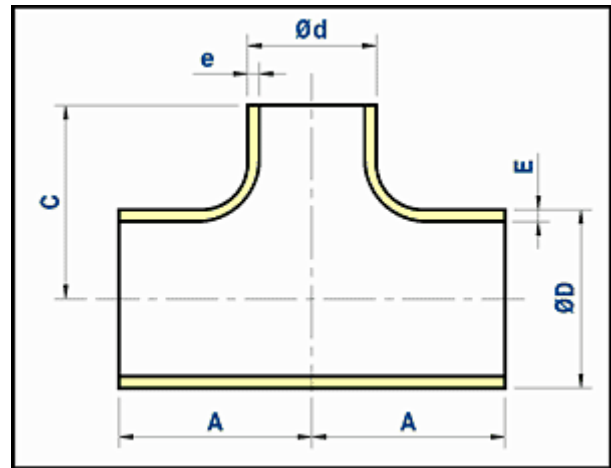
reducing tees - Ext. from DIN 86088 / EEMUA 146  
in copper nickel

14 bar - Ext. from DIN 86088

**STANDARD : DIN 86088**

Printable version

PDF version



Outside diameter of pipe				Wall thickness		Centre to face		Theoretical weight Kg/piece		
ØD x Ød		ØD x Ød		E	e	A	C			
nominal inch		actual mm		mm	mm	mm	mm			
3	x	1.25	88.9	x	38	2.5	1.5	86	73	1.08
3	x	1.5	88.9	x	44.5	2.5	1.5	86	76	1.08
3	x	2	88.9	x	57	2.5	1.5	86	80	1.10
3	x	2.5	88.9	x	76.1	2.5	2	86	83	1.15
4	x	3	108	x	88.9	2.5	2.5	105	96	1.65
5	x	3	133	x	88.9	3	2.5	124	108	3.90
6	x	3	159	x	88.9	3	2.5	143	121	5.40
6	x	5	159	x	133	3	3	143	136	5.50
8	x	5	219.1	x	133	3.5	3	178	162	14.85
8	x	6	219.1	x	159	3.5	3	178	168	14.95
10	x	5	267	x	133	4	3	217	219	18
10	x	6	267	x	159	4	3	240	229	19.75
10	x	7	267	x	193.7	4	3.5	267	243	20.25
10	x	8	267	x	219.1	4	3.5	290	259	22.1
12	x	5	323.9	x	133	5	3	217	247	35.75
12	x	6	323.9	x	159	5	3	240	257	38
12	x	7	323.9	x	193.7	5	3.5	267	272	40.75
12	x	8	323.9	x	219.1	5	3.5	290	287	43.25
12	x	10	323.9	x	267	5	4	324	317	47.25
14	x	6	368	x	159	5.5	3	240	279	51.4
14	x	7	368	x	193.7	5.5	3.5	267	294	54.8
14	x	8	368	x	219.1	5.5	3.5	290	309	57.9
14	x	10	368	x	267	5.5	4	324	339	62.65
14	x	12	368	x	323.9	5.5	5	380	369	71.5
16	x	7	419.1	x	193.7	6	3.5	267	319	73.65
16	x	8	419.1	x	219.1	6	3.5	290	335	78.15
16	x	10	419.1	x	267	6	4	324	365	84.6
16	x	12	419.1	x	323.9	6	5	380	395	97.2
16	x	14	419.1	x	368	6	5.5	407	410	103.35
18	x	10	457.2	x	267	6	4	324	383	83.55
18	x	12	457.2	x	323.9	6	5	380	413	96.9
18	x	14	457.2	x	368	6	5.5	407	428	103.35
18	x	16	457.2	x	419.1	6	6	440	453	111.9
20	x	12	508	x	323.9	6.5	5	380	439	104.7
20	x	14	508	x	368	6.5	5.5	407	454	111.8

20	x	16	508	x	419.1	6.5	6	440	479	121.2
20	x	18	508	x	457.2	6.5	6	500	509	135.9
24	x	14	610	x	368	8	5.5	407	505	175.9
24	x	16	610	x	419.1	8	6	440	530	188.55
24	x	18	610	x	457.2	8	6	500	555	208.6
24	x	20	610	x	508	8	6.5	540	580	226.95

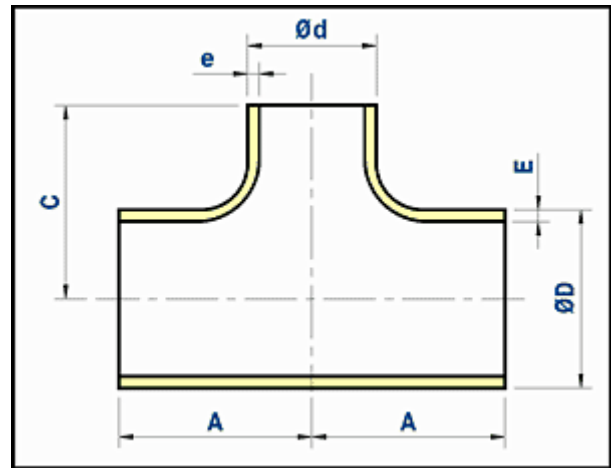


## COPPER NICKEL BUTT WELD FITTINGS

reducing tees - Ext. from DIN 86088 / EEMUA 146  
in copper nickel  
16 bar - EEMUA 146

**STANDARD : EEMUA Pub. N° 146**

Printable version  
PDF version



Outside diameter of pipe				Wall thickness		Centre to face		Theoretical weight Kg/piece		
ØD x Ød		ØD x Ød		E	e	A	C			
nominal inch		actual mm		mm	mm	mm	mm			
1	x	0.75	30	x	25	2.5	2	38	38	0.17
1.25	x	0.75	38	x	25	2.5	2	48	48	0.28
1.25	x	1	38	x	30	2.5	2.5	48	48	0.28
1.5	x	0.75	44.5	x	25	2.5	2	57	57	0.37
1.5	x	1	44.5	x	30	2.5	2.5	57	57	0.40
1.5	x	1.25	44.5	x	38	2.5	2.5	57	57	0.41
2	x	1	57	x	30	2.5	2.5	64	51	0.51
2	x	1.25	57	x	38	2.5	2.5	64	57	0.54
2	x	1.5	57	x	44.5	2.5	2.5	64	60	0.55
2.5	x	1.25	76.1	x	38	2.5	2.5	76	64	0.83
2.5	x	1.5	76.1	x	44.5	2.5	2.5	76	67	0.84
2.5	x	2	76.1	x	57	2.5	2.5	76	70	0.85
3	x	1.5	88.9	x	44.5	2.5	2.5	86	73	1.1
3	x	2	88.9	x	57	2.5	2.5	86	76	1.12
3	x	2.5	88.9	x	76.1	2.5	2.5	86	83	1.15
4	x	2	108	x	57	3	2.5	105	89	1.9
4	x	2.5	108	x	76.1	3	2.5	105	95	1.92
4	x	3	108	x	88.9	3	2.5	105	98	1.95
6	x	2.5	159	x	76.1	3	2.5	143	121	3.95
6	x	3	159	x	88.9	3	2.5	143	124	4
6	x	4	159	x	108	3	3	143	130	4.05
8	x	3	219.1	x	88.9	4	2.5	178	152	16.6
8	x	4	219.1	x	108	4	3	178	156	16.9
8	x	6	219.1	x	159	4	3	178	168	17
10	x	4	267	x	108	4.5	3	216	184	21.6
10	x	6	267	x	159	4.5	3	216	194	21.75
10	x	8	267	x	219.1	4.5	4	216	203	21.9
12	x	6	323.9	x	159	5.5	3	254	219	38.5
12	x	8	323.9	x	219.1	5.5	4	254	229	39.6
12	x	10	323.9	x	267	5.5	4.5	254	241	40.7
14	x	8	368	x	219.1	6.5	4	279	248	58.8
14	x	10	368	x	267	6.5	4.5	279	257	59.7
14	x	12	368	x	323.9	6.5	5.5	279	270	61.5
16	x	10	419.1	x	267	7	4.5	305	283	89.6
16	x	12	419.1	x	323.9	7	5.5	305	295	91.4

16	x	14	419.1	x	368	7	6.5	305	305	93.5
18	x	12	457.2	x	323.9	8	5.5	343	321	126.3
18	x	14	457.2	x	368	8	6.5	343	330	128.3
18	x	16	457.2	x	419.1	8	7	343	330	129.9
20	x	14	508	x	368	8.5	6.5	381	356	162
20	x	16	508	x	419.1	8.5	7	381	356	164.2
20	x	18	508	x	457.2	8.5	8	381	368	168.3
24	x	8	610	x	419.1	10.5	7	432	406	248.3
24	x	10	610	x	457.2	10.5	8	432	419	251.7
24	x	12	610	x	508	10.5	8.5	432	432	255.3
28	x	10	711	x	457.2	12	8	521	470	394.6
28	x	12	711	x	508	12	8.5	521	483	398.2
28	x	14	711	x	610	12	10.5	521	508	409.9
32	x	8	813	x	508	13.5	8.5	597	533	495
32	x	10	813	x	610	13.5	10.5	597	559	506.8
32	x	12	813	x	711	13.5	12	597	572	518.8
36	x	10	914	x	610	15.5	10.5	673	610	723.6
36	x	12	914	x	711	15.5	12	673	622	735.4
36	x	14	914	x	813	15.5	13.5	673	648	754.4

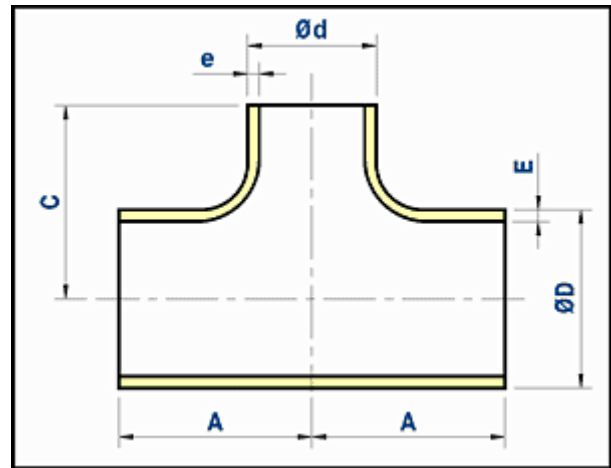


## COPPER NICKEL BUTT WELD FITTINGS

reducing tees - Ext. from DIN 86088 / EEMUA 146  
in copper nickel  
20 bar - EEMUA 146

**STANDARD : EEMUA Pub. N° 146**

Printable version  
PDF version



Outside diameter of pipe				Wall thickness		Centre to face		Theoretical weight Kg/piece		
ØD x Ød		ØD x Ød		E	e	A	C			
nominal inch		actual mm		mm	mm	mm	mm			
1	x	0.75	30	x	25	2.5	2	38	38	0.17
1.25	x	0.75	38	x	25	2.5	2	48	48	0.28
1.25	x	1	38	x	30	2.5	2.5	48	48	0.28
1.5	x	0.75	44.5	x	25	2.5	2	57	57	0.37
1.5	x	1	44.5	x	30	2.5	2.5	57	57	0.4
1.5	x	1.25	44.5	x	38	2.5	2.5	57	57	0.41
2	x	1	57	x	30	2.5	2.5	64	51	0.51
2	x	1.25	57	x	38	2.5	2.5	64	57	0.54
2	x	1.5	57	x	44.5	2.5	2.5	64	60	0.55
2.5	x	1.25	76.1	x	38	2.5	2.5	76	64	0.83
2.5	x	1.5	76.1	x	44.5	2.5	2.5	76	67	0.84
2.5	x	2	76.1	x	57	2.5	2.5	76	70	0.85
3	x	1.5	88.9	x	44.5	2.5	2.5	86	73	1.10
3	x	2	88.9	x	57	2.5	2.5	86	76	1.12
3	x	2.5	88.9	x	76.1	2.5	2.5	86	83	1.15
4	x	2	108	x	57	3	2.5	105	89	1.9
4	x	2.5	108	x	76.1	3	2.5	105	95	1.92
4	x	3	108	x	88.9	3	2.5	105	98	1.95
6	x	2.5	159	x	76.1	3.5	2.5	143	121	4.6
6	x	3	159	x	88.9	3.5	2.5	143	124	4.65
6	x	4	159	x	108	3.5	3	143	130	4.72
8	x	3	219.1	x	88.9	4.5	2.5	178	152	18.7
8	x	4	219.1	x	108	4.5	3	178	156	19
8	x	6	219.1	x	159	4.5	3.5	178	168	19.1
10	x	4	267	x	108	5.5	3	216	184	26.4
10	x	6	267	x	159	5.5	3.5	216	194	26.6
10	x	8	267	x	219.1	5.5	4.5	216	203	26.75
12	x	6	323.9	x	159	7	3.5	254	219	49
12	x	8	323.9	x	219.1	7	4.5	254	229	50.4
12	x	10	323.9	x	267	7	5.5	254	241	51.8
14	x	8	368	x	219.1	8	4.5	279	248	72.35
14	x	10	368	x	267	8	5.5	279	257	73.5
14	x	12	368	x	323.9	8	7	279	270	75.7
16	x	10	419.1	x	267	9	5.5	305	283	115.2
16	x	12	419.1	x	323.9	9	7	305	295	117.5

16	x	14	419.1	x	368	9	8	305	305	120.2
18	x	12	457.2	x	323.9	9.5	7	343	321	150
18	x	14	457.2	x	368	9.5	8	343	330	152.35
18	x	16	457.2	x	419.1	9.5	9	343	330	154.25
20	x	14	508	x	368	11	8	381	356	209.65
20	x	16	508	x	419.1	11	9	381	356	212.5
20	x	18	508	x	457.2	11	9.5	381	368	217.8
24	x	8	610	x	419.1	13	9	432	406	307.4
24	x	10	610	x	457.2	13	9.5	432	419	311.6
24	x	12	610	x	508	13	11	432	432	316.1
28	x	10	711	x	457.2	15	9.5	521	470	493.25
28	x	12	711	x	508	15	11	521	483	497.75
28	x	14	711	x	610	15	13	521	508	512.4
32	x	8	813	x	508	17	11	597	533	623.3
32	x	10	813	x	610	17	13	597	559	638.2
32	x	12	813	x	711	17	15	597	572	653.3
36	x	10	914	x	610	19	13	673	610	887
36	x	12	914	x	711	19	15	673	622	901.45
36	x	14	914	x	813	19	17	673	648	924.75



## COPPER NICKEL BUTT WELD FITTINGS

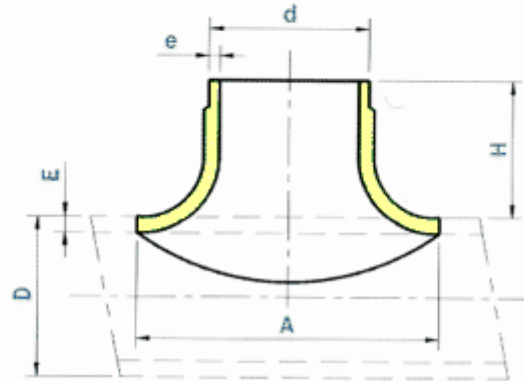
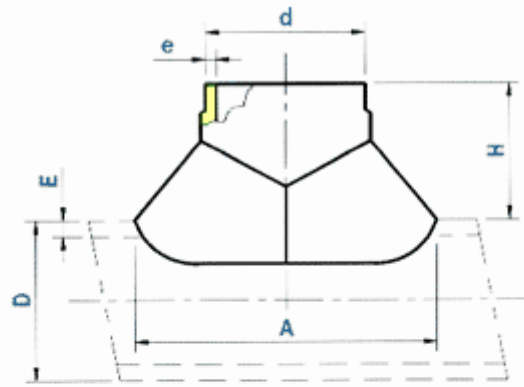
saddles - DIN 86087 / EEMUA 146 in copper nickel

10 bar - DIN 86087

**STANDARD : DIN 86087**

Printable version

PDF version



Outside diameter of pipe				Wall thickness		Centre to face		Theoretical weight Kg/piece		
ØD x Ød		ØD x Ød		E	e	H	A			
nominal inch		actual mm		mm	mm	mm	mm			
0.5	x	0.5	20	x	20	1	1	20	32	0.05
0.75	x	0.5	25	x	20	1.5	1	20	40	0.05
0.75	x	0.75	25	x	25	1.5	1.5	22	40	0.06
1	x	0.75	30	x	25	1.5	1.5	22	40	0.06
1	x	1	30	x	30	1.5	1.5	30	50	0.1
1.25	x	1	38	x	30	1.5	1.5	30	50	0.1
1.25	x	1.25	38	x	38	1.5	1.5	35	64	0.11
1.5	x	1.25	44.5	x	38	1.5	1.5	35	64	0.14
1.5	x	1.5	44.5	x	44.5	1.5	1.5	35	74	0.15
2	x	1.25	57	x	38	1.5	1.5	35	64	0.15
2	x	1.5	57	x	44.5	1.5	1.5	35	74	0.17
2	x	2	57	x	57	1.5	1.5	40	97	0.25
2.5	x	1.25	76.1	x	38	2	1.5	35	64	0.3
2.5	x	1.5	76.1	x	44.5	2	1.5	35	74	0.34
2.5	x	2	76.1	x	57	2	1.5	40	97	0.48
2.5	x	2.5	76.1	x	76.1	2	2	50	126	0.52
3	x	1.25	88.9	x	38	2	1.5	35	64	0.36
3	x	1.5	88.9	x	44.5	2	1.5	35	74	0.44
3	x	2	88.9	x	57	2	1.5	40	97	0.5
3	x	2.5	88.9	x	76.1	2	2	50	126	0.56
3	x	3	88.9	x	88.9	2	2	55	149	0.76
3	x	1.25	88.9	x	38	2.5	1.5	35	64	0.45
3	x	1.5	88.9	x	44.5	2.5	1.5	35	74	0.55
3	x	2	88.9	x	57	2.5	1.5	40	97	0.62

3	x	2.5	88.9	x	76.1	2.5	2	50	126	0.7
4	x	1.5	108	x	44.5	2.5	1.5	35	74	0.32
4	x	2	108	x	57	2.5	1.5	40	97	0.4
4	x	2.5	108	x	76.1	2.5	2	50	126	0.65
4	x	3	108	x	88.9	2.5	2	55	149	0.79
4	x	4	108	x	108	2.5	2.5	75	188	1.3
5	x	2	133	x	57	2.5	1.5	40	97	0.4
5	x	2.5	133	x	76.1	2.5	2	50	126	0.8
5	x	3	133	x	88.9	2.5	2	55	149	1
5	x	4	133	x	108	2.5	2.5	75	188	1.2
5	x	5	133	x	133	2.5	2.5	85	233	1.7
5	x	2	133	x	57	3	1.5	40	97	0.48
5	x	2.5	133	x	76.1	3	2	50	126	0.96
5	x	4	133	x	108	3	2.5	75	188	1.44
6	x	2.5	159	x	76.1	2.5	2	50	126	0.65
6	x	3	159	x	88.9	2.5	2	55	149	1
6	x	4	159	x	108	2.5	2.5	75	188	1.2
6	x	5	159	x	133	2.5	2.5	85	233	2
6	x	6	159	x	159	2.5	2.5	95	279	2.6
6	x	2.5	159	x	76.1	3	2	50	126	0.78
6	x	4	159	x	108	3	2.5	75	188	1.44
7	x	2.5	193.7	x	76.1	2.5	2	50	126	0.95
7	x	3	193.7	x	88.9	2.5	2	55	149	1.3
7	x	4	193.7	x	108	2.5	2.5	75	188	1.4
7	x	5	193.7	x	133	2.5	2.5	85	233	1.9
7	x	6	193.7	x	159	2.5	2.5	95	279	2.5
7	x	7	193.7	x	193.7	2.5	2.5	110	334	3.2
7	x	2.5	193.7	x	76.1	3.5	2.5	50	126	1.33
7	x	4	193.7	x	108	3.5	2.5	75	188	1.96
8	x	3	219.1	x	88.9	3	2	55	149	1.3
8	x	4	219.1	x	108	3	2.5	75	188	1.8
8	x	5	219.1	x	133	3	2.5	85	233	2.7
8	x	6	219.1	x	159	3	2.5	95	279	3.8
8	x	7	219.1	x	193.7	3	2.5	110	334	4.5
8	x	8	219.1	x	219.1	3	3	125	379	5.7
8	x	4	219.1	x	108	3.5	2.5	75	188	2.1
10	x	4	267	x	108	3	2.5	75	188	1.8
10	x	5	267	x	133	3	2.5	85	233	2.3
10	x	6	267	x	159	3	2.5	95	279	3.7
10	x	7	267	x	193.7	3	2.5	110	334	4.7
10	x	8	267	x	219.1	3	3	125	379	6.1
10	x	10	267	x	267	3	3	155	447	8.7
10	x	4	267	x	108	4	2.5	75	188	2.4
12	x	5	323.9	x	133	4	2.5	85	233	2.6
12	x	6	323.9	x	159	4	2.5	95	279	3.8
12	x	7	323.9	x	193.7	4	2.5	110	334	4.9
12	x	8	323.9	x	219.1	4	3	125	379	7.7
12	x	10	323.9	x	267	4	3	155	447	10
12	x	12	323.9	x	323.9	4	4	185	560	13
14	x	6	368	x	159	4	2.5	95	279	3.85
14	x	7	368	x	193.7	4	2.5	110	334	4.2
14	x	8	368	x	219.1	4	3	125	379	4.35
14	x	10	368	x	267	4	3	155	447	7.3
14	x	12	368	x	323.9	4	4	185	560	9.45
14	x	14	368	x	368	4	4	200	613	12.35
16	x	8	419.1	x	219.1	4	3	125	379	4.35

16	x	10	419.1	x	267	4	3	155	447	6.65
16	x	12	419.1	x	323.9	4	4	185	560	9.35
16	x	14	419.1	x	368	4	4	200	613	12
16	x	16	419.1	x	419.1	4	4	225	680	17.35
18	x	10	457.2	x	267	4	3	155	447	6.3
18	x	12	457.2	x	323.9	4	4	185	560	8
18	x	14	457.2	x	368	4	4	200	613	9.7
18	x	16	457.2	x	419.1	4	4	225	680	14.85
18	x	18	457.2	x	457.2	4	4	250	800	21.7
20	x	12	508	x	323.9	4.5	4	185	560	9
20	x	14	508	x	368	4.5	4	200	613	10.8
20	x	16	508	x	419.1	4.5	4	225	680	16.8
20	x	18	508	x	457.2	4.5	4	250	800	22.8
20	x	20	508	x	508	4.5	4.5	275	880	28.8
24	x	14	610	x	368	5	4	200	613	11.1
24	x	16	610	x	419.1	5	4	225	680	17.25
24	x	18	610	x	457.2	5	4	250	800	22.8
24	x	20	610	x	508	5	4.5	275	880	26.7
24	x	24	610	x	610	5	5	300	1020	47.2



## COPPER NICKEL BUTT WELD FITTINGS

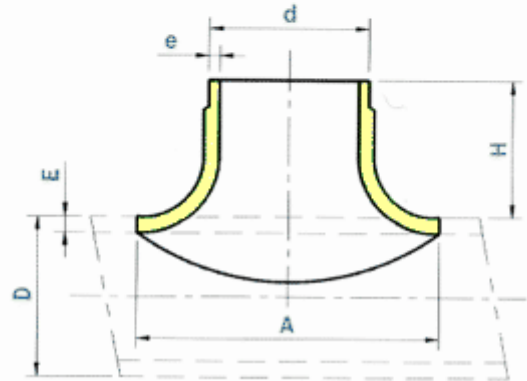
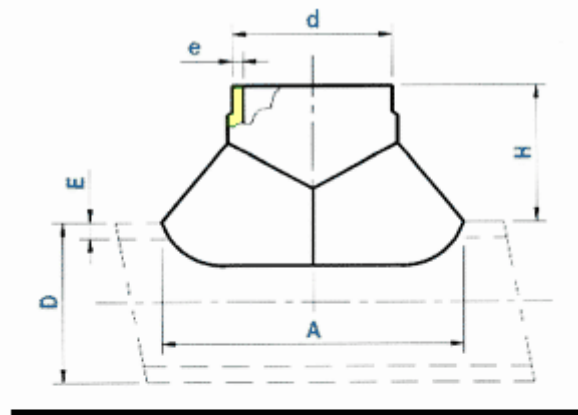
saddles - DIN 86087 / EEMUA 146 in copper nickel

14 bar - DIN 86087

**STANDARD : DIN 86087**

Printable version

PDF version



Outside diameter of pipe						Wall thickness		Centre to face		Theoretical weight Kg/piece
ØD x Ød		ØD x Ød				E	e	H	A	
nominal inch		actual mm				E mm	e mm	H mm	A mm	
3	x	3	88.9	x	88.9	2.5	2.5	55	149	0.95
5	x	3	133	x	88.9	3	2.5	55	149	1.2
5	x	5	133	x	133	3	3	85	233	2.04
6	x	3	159	x	88.9	3	2.5	55	149	1.2
6	x	5	159	x	133	3	3	85	233	2.4
6	x	6	159	x	159	3	3	95	279	3.12
7	x	3	193.7	x	88.9	3.5	2.5	55	149	1.82
7	x	5	193.7	x	133	3.5	3	85	233	2.66
7	x	6	193.7	x	159	3.5	3	95	279	3.5
7	x	7	193.7	x	193.7	3.5	3.5	110	334	4.48
8	x	3	219.1	x	88.9	3.5	2.5	55	149	1.52
8	x	5	219.1	x	133	3.5	3	85	233	3.15
8	x	6	219.1	x	159	3.5	3	95	279	4.43
8	x	7	219.1	x	193.7	3.5	3.5	110	334	5.25
8	x	8	219.1	x	219.1	3.5	3.5	125	379	6.65
10	x	5	267	x	133	4	3	85	233	3.06
10	x	6	267	x	159	4	3	95	279	4.93
10	x	7	267	x	193.7	4	3.5	110	334	6.27
10	x	8	267	x	219.1	4	3.5	125	379	8.13
10	x	10	267	x	267	4	4	155	447	11.6
12	x	5	323.9	x	133	5	3	85	233	3.25
12	x	6	323.9	x	159	5	3	95	279	4.75
12	x	7	323.9	x	193.7	5	3.5	110	334	6.2
12	x	8	323.9	x	219.1	5	3.5	125	379	9.6

12	x	10	323.9	x	267	5	4	155	447	12.5
12	x	12	323.9	x	323.9	5	5	185	560	16.25
14	x	6	368	x	159	5.5	3	95	279	5.3
14	x	7	368	x	193.7	5.5	3.5	110	334	5.8
14	x	8	368	x	219.1	5.5	3.5	125	379	6
14	x	10	368	x	267	5.5	4	155	447	10
14	x	12	368	x	323.9	5.5	5	185	560	13
14	x	14	368	x	368	5.5	5.5	200	613	17
16	x	8	419.1	x	219.1	6	3.5	125	379	6.5
16	x	10	419.1	x	267	6	4	155	447	10
16	x	12	419.1	x	323.9	6	5	185	560	14
16	x	14	419.1	x	368	6	5.5	200	613	18
16	x	16	419.1	x	419.1	6	6	225	680	26
18	x	10	457.2	x	267	6	4	155	447	9.45
18	x	12	457.2	x	323.9	6	5	185	560	12
18	x	14	457.2	x	368	6	5.5	200	613	14.6
18	x	16	457.2	x	419.1	6	6	225	680	22.3
18	x	18	457.2	x	457.2	6	6	250	800	32.6
20	x	12	508	x	323.9	6.5	5	185	560	13
20	x	14	508	x	368	6.5	5.5	200	613	15.6
20	x	16	508	x	419.1	6.5	6	225	680	24.3
20	x	18	508	x	457.2	6.5	6	250	800	32.95
20	x	20	508	x	508	6.5	6.5	275	880	41.6
24	x	14	610	x	368	8	5.5	200	613	17.77
24	x	16	610	x	419.1	8	6	225	680	27.55
24	x	18	610	x	457.2	8	6	250	800	36.45
24	x	20	610	x	508	8	6.5	275	880	42.65
24	x	24	610	x	610	8	8	300	1020	75.5



## COPPER NICKEL BUTT WELD FITTINGS

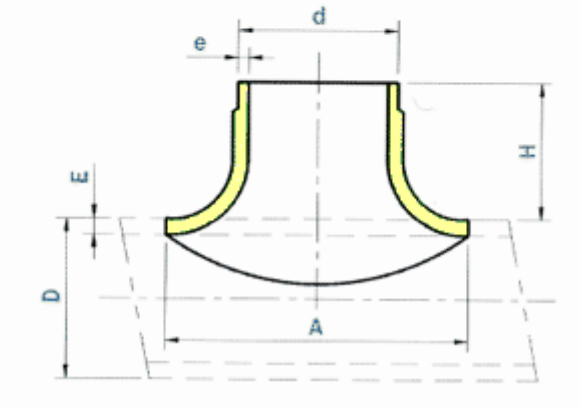
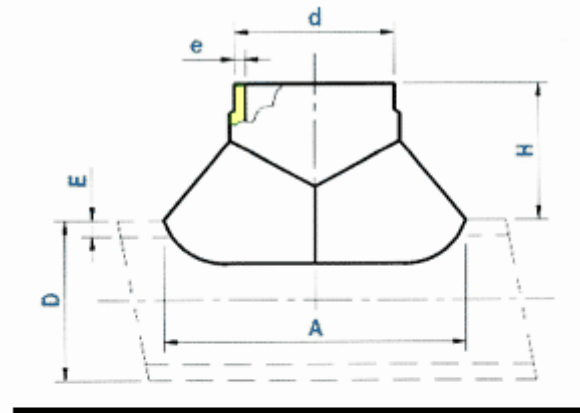
saddles - DIN 86087 / EEMUA 146 in copper nickel

16 bar - EEMUA 146

STANDARD : EEMUA Pub. N° 146

Printable version

PDF version



Outside diameter of pipe						Wall thickness		Centre to face		Theoretical weight Kg/piece
ØD x Ød			ØD x Ød			E	e	H	A	
nominal inch			actual mm			mm	mm	mm	mm	
1.25	x	1.25	38	x	38	2.5	2.5	35	64	0.18
1.5	x	1.25	44.5	x	38	2.5	2.5	35	64	0.23
1.5	x	1.5	44.5	x	44.5	2.5	2.5	35	74	0.25
2	x	1.25	57	x	38	2.5	2.5	35	64	0.25
2	x	1.5	57	x	44.5	2.5	2.5	35	74	0.28
2	x	2	57	x	57	2.5	2.5	40	97	0.40
2.5	x	1.25	76.1	x	38	2.5	2.5	35	64	0.37
2.5	x	1.5	76.1	x	44.5	2.5	2.5	35	74	0.42
2.5	x	2	76.1	x	57	2.5	2.5	40	97	0.60
2.5	x	2.5	76.1	x	76.1	2.5	2.5	50	126	0.65
3	x	1.25	88.9	x	38	2.5	2.5	35	64	0.45
3	x	1.5	88.9	x	44.5	2.5	2.5	35	74	0.55
3	x	2	88.9	x	57	2.5	2.5	40	97	0.62
3	x	2.5	88.9	x	76.1	2.5	2.5	50	126	0.70
3	x	3	88.9	x	88.9	2.5	2.5	55	149	0.95
4	x	1.5	108	x	44.5	3	2.5	35	74	0.38
4	x	2	108	x	57	3	2.5	40	97	0.48
4	x	2.5	108	x	76.1	3	2.5	50	126	0.78
4	x	3	108	x	88.9	3	2.5	55	149	0.94
4	x	4	108	x	108	3	3	75	188	1.56
6	x	2.5	159	x	76.1	3	2.5	50	126	0.78
6	x	3	159	x	88.9	3	2.5	55	149	1.20
6	x	4	159	x	108	3	3	75	188	1.44
6	x	6	159	x	159	3	3	95	279	3.12

8	x	3	219.1	x	88.9	4	2.5	55	149	1.73
8	x	4	219.1	x	108	4	3	75	188	2.40
8	x	6	219.1	x	159	4	3	95	279	5.06
8	x	8	219.1	x	219.1	4	4	125	379	5.70
8	x	8	219.1	x	219.1	4	4	125	379	7.60
10	x	4	267	x	108	4.5	3	75	188	2.70
10	x	6	267	x	159	4.5	3	95	279	5.54
10	x	8	267	x	219.1	4.5	4	125	379	6.75
10	x	8	267	x	219.1	4.5	4	125	379	9.14
10	x	10	267	x	267	4.5	4.5	155	447	12.40
10	x	10	267	x	267	4.5	4.5	155	447	13.05
12	x	6	323.9	x	159	5.5	3	95	279	5.22
12	x	8	323.9	x	219.1	5.5	4	125	379	6.60
12	x	8	323.9	x	219.1	5.5	4	125	379	10.58
12	x	10	323.9	x	267	5.5	4.5	155	447	12.10
12	x	10	323.9	x	267	5.5	4.5	155	447	13.75
12	x	12	323.9	x	323.9	5.5	5.5	185	560	15.40
12	x	12	323.9	x	323.9	5.5	5.5	185	560	17.87
14	x	8	368	x	219.1	6.5	4	125	379	7.10
14	x	10	368	x	267	6.5	4.5	155	447	11.80
14	x	12	368	x	323.9	6.5	5.5	185	560	15.40
14	x	14	368	x	368	6.5	6.5	200	613	20.10
16	x	10	419.1	x	267	7	4.5	155	447	11.65
16	x	12	419.1	x	323.9	7	5.5	185	560	16.35
16	x	14	419.1	x	368	7	6.5	200	613	19.50
16	x	16	419.1	x	419.1	7	7	225	680	28.20
18	x	12	457.2	x	323.9	8	5.5	185	560	16.00
18	x	14	457.2	x	368	8	6.5	200	613	19.45
18	x	16	457.2	x	419.1	8	7	225	680	29.70
18	x	18	457.2	x	457.2	8	8	250	800	43.40
20	x	14	508	x	368	8.5	6.5	200	613	20.40
20	x	16	508	x	419.1	8.5	7	225	680	31.75
20	x	18	508	x	457.2	8.5	8	250	800	43.10
20	x	20	508	x	508	8.5	8.5	275	880	54.40
24	x	16	610	x	419.1	10.5	7	225	680	36.15
24	x	18	610	x	457.2	10.5	8	250	800	47.85
24	x	20	610	x	508	10.5	8.5	275	880	56.00
24	x	24	610	x	610	10.5	10.5	300	1020	99.20
28	x	18	711	x	457.2	12	8	250	800	77.70
28	x	20	711	x	508	12	8.5	275	880	105.10
28	x	24	711	x	610	12	10.5	300	1020	137.15
28	x	28	711	x	711	12	12	360	1225	182.85
32	x	20	813	x	508	13.5	8.5	275	880	118.10
32	x	24	813	x	610	13.5	10.5	300	1020	163.15
32	x	28	813	x	711	13.5	12.5	360	1225	208.15
32	x	32	813	x	813	13.5	13.5	410	1400	225.00
36	x	24	914	x	610	15.5	10.5	300	1020	206.70
36	x	28	914	x	711	15.5	12.5	360	1225	246.85
36	x	32	914	x	813	15.5	13.5	410	1400	294.45
36	x	36	914	x	914	15.5	15.5	460	1550	357.00



## COPPER NICKEL BUTT WELD FITTINGS

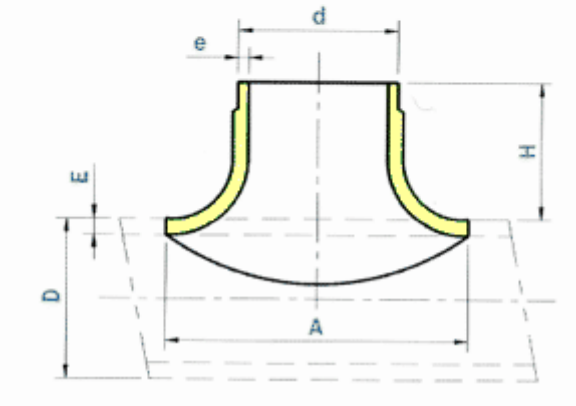
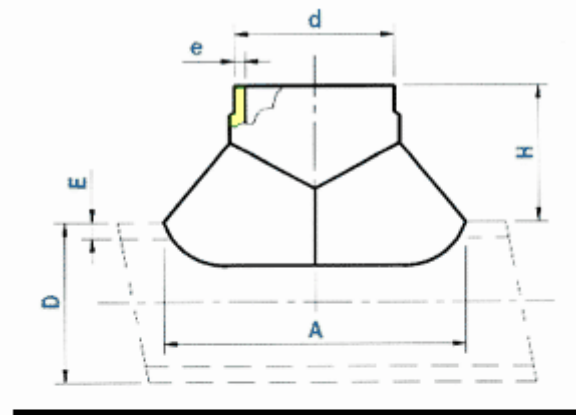
saddles - DIN 86087 / EEMUA 146 in copper nickel

20 bar - EEMUA 146

STANDARD : EEMUA Pub. N° 146

Printable version

PDF version



Outside diameter of pipe				Wall thickness		Centre to face		Theoretical weight Kg/piece		
ØD x Ød		ØD x Ød		E	e	H	A			
nominal inch		actual mm		mm	mm	mm	mm			
1.25	x	1.25	38	x	38	2.5	2.5	35	64	0.18
1.5	x	1.25	44.5	x	38	2.5	2.5	35	64	0.23
1.5	x	1.5	44.5	x	44.5	2.5	2.5	35	74	0.25
2	x	1.25	57	x	38	2.5	2.5	35	64	0.25
2	x	1.5	57	x	44.5	2.5	2.5	35	74	0.28
2	x	2	57	x	57	2.5	2.5	40	97	0.4
2.5	x	1.25	76.1	x	38	2.5	2.5	35	64	0.37
2.5	x	1.5	76.1	x	44.5	2.5	2.5	35	74	0.42
2.5	x	2	76.1	x	57	2.5	2.5	40	97	0.6
2.5	x	2.5	76.1	x	76.1	2.5	2.5	50	126	0.65
3	x	1.25	88.9	x	38	2.5	2.5	35	64	0.45
3	x	1.5	88.9	x	44.5	2.5	2.5	35	74	0.55
3	x	2	88.9	x	57	2.5	2.5	40	97	0.62
3	x	2.5	88.9	x	76.1	2.5	2.5	50	126	0.7
3	x	3	88.9	x	88.9	2.5	2.5	55	149	0.95
4	x	1.5	108	x	44.5	3	2.5	35	74	0.38
4	x	2	108	x	57	3	2.5	40	97	0.48
4	x	2.5	108	x	76.1	3	2.5	50	126	0.78
4	x	3	108	x	88.9	3	2.5	55	149	0.94
4	x	4	108	x	108	3	3	75	188	1.56
6	x	2.5	159	x	76.1	3.5	2.5	50	126	0.91
6	x	3	159	x	88.9	3.5	2.5	55	149	1.4
6	x	4	159	x	108	3.5	3	75	188	1.68
6	x	6	159	x	159	3.5	3.5	95	279	3.64

8	x	3	219.1	x	88.9	4.5	2.5	55	149	1.94
8	x	4	219.1	x	108	4.5	3	75	188	2.7
8	x	6	219.1	x	159	4.5	3.5	95	279	5.69
8	x	8	219.1	x	219.1	4.5	4.5	125	379	6.4
8	x	8	219.1	x	219.1	4.5	4.5	125	379	8.55
10	x	4	267	x	108	5.5	3	75	188	3.3
10	x	6	267	x	159	5.5	3.5	95	279	6.77
10	x	8	267	x	219.1	5.5	4.5	125	379	8.25
10	x	8	267	x	219.1	5.5	4.5	125	379	11.17
10	x	10	267	x	267	5.5	5.5	155	447	15.15
10	x	10	267	x	267	5.5	5.5	155	447	15.95
12	x	6	323.9	x	159	7	3.5	95	279	6.64
12	x	8	323.9	x	219.1	7	4.5	125	379	8.4
12	x	8	323.9	x	219.1	7	4.5	125	379	13.46
12	x	10	323.9	x	267	7	5.5	155	447	15.4
12	x	10	323.9	x	267	7	5.5	155	447	17.5
12	x	12	323.9	x	323.9	7	7	185	560	19.6
12	x	12	323.9	x	323.9	7	7	185	560	22.74
14	x	8	368	x	219.1	8	4.5	125	379	8.75
14	x	10	368	x	267	8	5.5	155	447	14.55
14	x	12	368	x	323.9	8	7	185	560	18.95
14	x	14	368	x	368	8	8	200	613	24.75
16	x	10	419.1	x	267	9	5.5	155	447	15
16	x	12	419.1	x	323.9	9	7	185	560	21
16	x	14	419.1	x	368	9	8	200	613	25.1
16	x	16	419.1	x	419.1	9	9	225	680	36.25
18	x	12	457.2	x	323.9	9.5	7	185	560	19
18	x	14	457.2	x	368	9.5	8	200	613	23.1
18	x	16	457.2	x	419.1	9.5	9	225	680	35.25
18	x	18	457.2	x	457.2	9.5	9.5	250	800	51.55
20	x	14	508	x	368	11	8	200	613	26.4
20	x	16	508	x	419.1	11	9	225	680	41.1
20	x	18	508	x	457.2	11	9.5	250	800	55.8
20	x	20	508	x	508	11	11	275	880	70.4
24	x	16	610	x	419.1	13	9	225	680	44.75
24	x	18	610	x	457.2	13	9.5	250	800	59.25
24	x	20	610	x	508	13	11	275	880	69.3
24	x	24	610	x	610	13	13	300	1020	122.8