



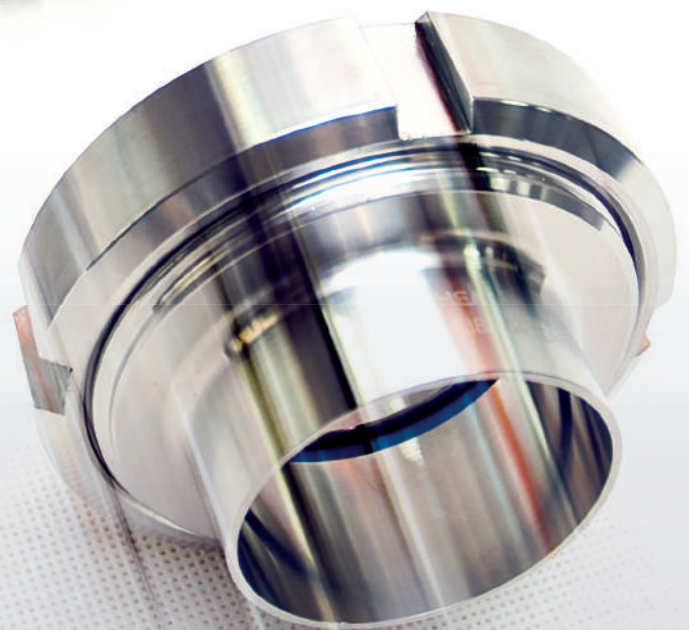
FITTINGS FOR THE FOOD INDUSTRY

THREADED FITTINGS

WELDED FITTINGS

INDUSTRIAL VALVES

TUBES, BARS AND SHEETS



**PRODUCT
CATALOGUE**



BTH Elstar Sp. z o.o.

Export Department

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Stainless steel solutions

Our Company

Elstar is the company, that specializes in delivery of stainless steel fittings, and pipes for various industries. We have been operating on the market for over 20 years.

We are pleased to present this catalogue, that aims to bring closer our company profile, as well as to provide comprehensive offer of our products. Our success is a result of years of experience, and whole team involvement in tasks accomplishment.

Our mission: Stainless steel solutions for the industry are motivation for continuous improvements to optimize our offer and organization for you – all present and future customers of BTH Elstar Sp. z o.o.

Our offer includes more than 2 thousands assortment items available directly from our warehouses



Our business is based on comprehensive products delivery and technical consultancy, including advise on selection of:

Fittings for the food industry

Threaded fittings including

Welded fittings

Industrial valves

Tubes, bars and sheets

We sell our products maintaining full compliance with General Terms of Sale and Delivery (Ogólne Warunki Sprzedaży I Dostaw – OWSiD), that are available on our website www.elstar.com.pl

Quality

Our overriding aim is continuous organisation improvement, product and service development, and technical consultancy in assembling fittings, tubes, bars, sheets, components, technological devices, and facilities that meet technical, as well as environmental protection standards.



Products that we offer are from reputable, and proven suppliers, from all over the world, that guarantee its high quality. Our products meet adequate standards, and hold certificates confirming approval of use in various industries, inter alia:

- Industrial fittings: PED 97/23/EC, DVGW, ATEX 94/9/EG, CE
- Fittings and tubes for the food industry in accordance with EN 10357:EN 10204/3.1
- Square and rectangular profiles: EN 10204/2.2
- Fittings and pipes for the pharmaceutical industry DIN 11864/65/66
- Certificates of the National Institute of Hygiene
- Unions and valves' sealing under the FDA guidelines
- Certificates of inner surface roughness RA
- The endoscopic examination, x-ray radiation examination



Products we offer are in standard stainless steel types: AISI 304L and AISI 316L. On request, we can supply other stainless steel kinds, e.g.: AISI 321, AISI 316Ti.



Consulting

- Actively working, technical and sales team is at your disposal including consulting and technical assistance.
- Our specialised cadre provides professional service, and solid knowledge in field of choosing optimal stainless steel solution for the industry.
- We are to help you choose the right fittings, sealing, steel type, and many more parameters that are adequate for the target installation environment, and depend on used media.



Improvement

We are improving our organisation continuously to meet your expectations. Our assortment is successively increased, together with expanding the offer of provided services: tubes, bars and fittings grinding, bends cutting, minor welding and locksmith works, roughness examination, tees production.

We implement and execute, and implement comprehensive quality policy, constantly striving to advance organisational, and logistical tasks, as well as to increase personnel skills and qualifications.

We constantly monitor customers satisfaction level, and we undertake activities aimed at self-improvement.

Technical Group Elstar

Thanks to the fact, that we operate within the Technical Group together with Zakład Usług Technicznych Elstar Sp. z o.o., we are able to optimise our projects to conform them to modern customers' requirements. Our comprehensive offer, starting from the project, through products delivery and finishing on technological installation application of facilities or equipment, guarantees rapid task completion.



As we hand this catalogue to you, we hope you will be interested in our offer and cooperation with us.



FITTINGS FOR THE FOOD INDUSTRY

Our stainless fittings delivery plan include:

	DIN	SMS	RJT / IDF / Zoll
Steel type: AISI 304/304L/316L	●/●/●	●/●/●	●/○/●
Sealing: NBR/HNBR/MVQ/EPDM/Viton	●/●/●/●/●	●/○/●/●/○	●/○/●/●/○
Surface: Matt/grinded/polished	●/●/●	●/●/●	●/●/●

For inner surface roughness < 0,8 µm and Ra < 1,6 µm on the weld.

In butterfly valves, due to advanced, computer-aided measuring devices and numerous simulations, gasket nest, and gasket itself were optimized in the similar way as O-ring type sealing. In butterfly valves, influence of temperature and media changes on gasket strength and durability were minimalized. Therefore, the valves can be used in significantly higher working pressure, as well as for media with higher flow speed, and under vacuum. The butterfly valves have EHEDG certificate.

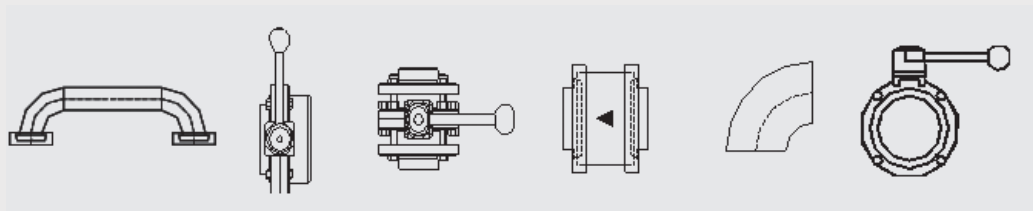


Physical and mechanical features for unions and butterfly valves sealing:

Pressure loss on butterfly valves depending on the flow speed [mbar]

DIN	25	32	40	50	65	80	100	125	150
KVS value	18	40	77	183	388	602	998	1800	2795
2 m/s	48	21	11	6	4	4	3	2	2
2,5 m/s	75	33	18	9	6	6	5	4	3
3 m/s	107	48	25	13	9	9	7	5	5
3,5 m/s	146	65	35	18	12	12	10	7	8

We support our customers from technological installation design stage by facilitate required installation items' drawings in DWG format:



For the food industry fittings we hold following attestation and certificates:

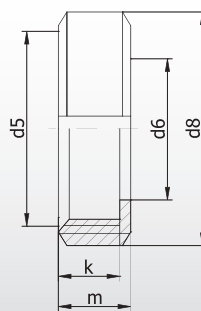
- ▶ certificate of National Institute of Hygiene
- ▶ ATEX certificate for zone I and II
- ▶ Sealing in accordance with FDA
- ▶ Certificate PED 97/23/EG
- ▶ Certificate AD 2000-Merkblatt HP0

		MVQ (Silikone)	EPDM	HNBR	FPM (Viton)
Physical characteristics	general	very good, versatile features	exceptional, versatile features	amazingly durable material for universal use, including for totally desalinated water (in low switch frequency) and fatty products	especially suitable for hydrocarbon, and aromatic compounds, and fatty products
	colour	red or transparent	black	black	brown
Resistance	hot water	110 °C	160 °C	130 °C	80 °C
	edible oil	200 °C	not recommended	140 °C	200 °C
	caustic soda solution	2%, 90 °C (no connection at > 60 °C)	3%, 95 °C	5%, 100 °C	2,5%, 85 °C
	nitric acid	1,5%, 40 °C	2%, 80 °C	not recommended	3%, 60 °C
	phosphoric acid	1,5%, 40 °C	4%, 70 °C	2%, 60 °C	2%, 60 °C
	hydrogen peroxide/ peracetic acid	0,7%, 40 °C	0,7%, 40 °C	0,7%, 40 °C	0,7%, 40 °C
	can be steam sterilized	121 °C (60 min.)	160 °C	130 °C	121 °C (60 min.)
Mechanical characteristics	density	1,37 g/cm3	1,12 g/cm3	1,20 g/cm3	2,16 g/cm3
	toughness	75 Shore A	75 Shore A	75 Shore A	75 Shore A
	stretching resistance	5,5 N/mm2	12 N/mm2	19 N/mm2	10 N/mm2
	elongation at break	220%	268%	202%	232%
	deforming under residual pressure	14%	19%	22%	14%

11001

Nut DIN

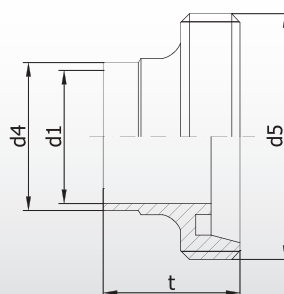
DN	d5	d6	d8	k	m	Weight [kg]
10	28x1/8"	19	38	18	15	0,07
15	34x1/8"	25	44	18	15	0,08
20	44x1/6"	31	54	20	17	0,13
25	52x1/6"	36	63	21	18	0,18
32	58x1/6"	42	70	21	18	0,22
40	65x1/6"	49	78	21	18	0,25
50	78x1/6"	62	92	22	19	0,34
65	95x1/6"	80	112	25	21	0,55
75/3"	104x1/6"	88	119	25	21	0,65
80	110x1/6"	94	127	29	25	0,8
100	130x1/4"	115	148	31	26	1,08
125	160x1/4"	138	178	35	30	1,45
150	190x1/4"	164	210	40	34	1,88



11003

Male part DIN

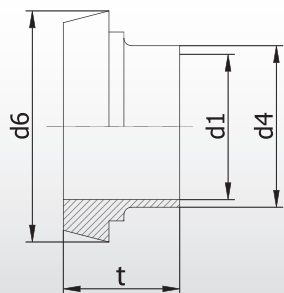
DN	t	d1	d4	d5	Weight [kg]
10	21	10	13	28x1/8"	0,04
15	21	16	19	32x1/8"	0,05
20	24	20	23	44x1/6"	0,09
25	29	26	29	52x1/6"	0,12
32	32	32	35	58x1/6"	0,14
40	33	38	41	65x1/6"	0,16
50	35	50	53	78x1/6"	0,22
65	40	66	70	95x1/6"	0,38
80	45	81	85	110x1/4"	0,52
100	54	100	104	130x1/4"	0,62
125	46	125	129	160x1/4"	0,92
150	50	150	154	190x1/4"	1,55



11005

Liner part DIN

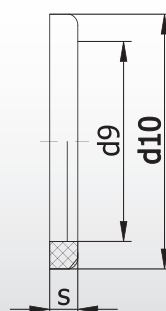
DN	d1	d4	d6	t	Weight [kg]
10	10	13	22,5	17	0,01
15	16	19	28,5	17	0,02
20	20	23	36,5	18	0,04
25	26	29	44	22	0,08
32	32	35	50	25	0,09
40	38	41	56	26	0,12
50	50	53	68,5	28	0,17
65	66	70	86	32	0,28
80	81	85	100	37	0,34
100	100	104	121	44	0,54
125	125	129	150	34	0,7
150	150	154	176	37	0,92



11007

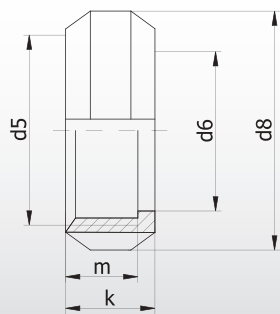
Gasket DIN: EPDM, MVQ, NBR, PTFE, FPM

DN	d9	d10	s	Weight [kg]
10	12	20	4,5	0,01
15	18	26	4,5	0,02
20	23	33	4,5	0,03
25	30	40	5/8	0,03
32	36	46	5/8	0,04
40	42	52	5/8	0,05
50	54	64	5/8	0,06
65	71	81	5/8	0,07
75/3"	78	88	5/8	0,09
80	85	95	5/8	0,09
100	104	114	6/8	0,013
125	130	142	7/8	0,022
150	155	162	7/8	0,027



Nut SMS

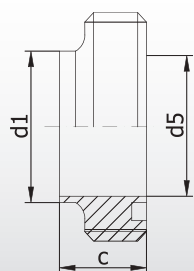
11009



DN	d5	d6	d8	k	m	Weight [kg]
25	40x1/6"	32	51	20	16	0,11
38	60x1/6"	48	74	25	21	0,26
51	44x1/6"	60,5	84	26	21	0,31
63,5	70x1/6"	74	100	30	25	0,41
76	85x1/6"	87	114	32	26	0,57
101,6	98x1/6"	117	154	32	26	1,20

Male part SMS

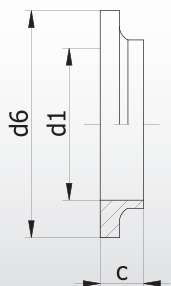
11011



DN	c	d1	d5	Weight [kg]
25	15	22,5	40x1/6"	0,05
38	20	35,5	60x1/6"	0,17
51	20	48,5	70x1/6"	0,18
63,5	24	60,5	85x1/6"	0,35
76	24	73,1	98x1/6"	0,44
101,6	30	97,6	132x1/6"	1,31

Liner part SMS

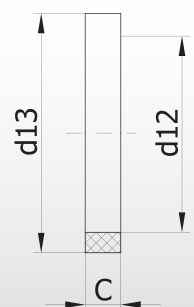
11013



DN	c	d1	d6	Weight [kg]
25	8	22,5	35,5	0,02
38	9	35,5	55	0,04
51	9	48,5	65	0,06
63,5	9	60,5	80	0,07
76	10	73,1	93	0,12
101,6	12	97,6	127	0,284

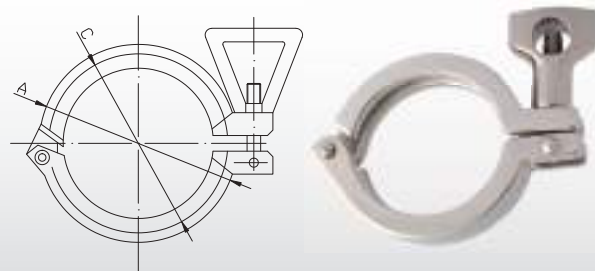
Gasket SMS: EPDM, MVQ, NBR

11015

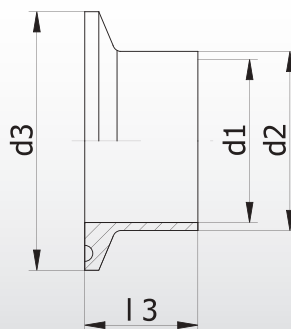


DN	c	d12	d13	Weight [kg]
25	5,5	25	32	0,002
38	5,5	38	48	0,003
51	5,5	51	61	0,006
63,5	5,5	63,5	73,5	0,007
76	5,5	76	86	0,01
101,6	5,5	101,6	113,5	0,02

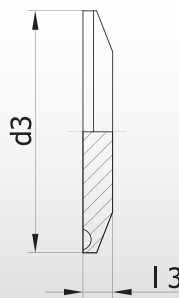
DN	A	C
½" – ¾"	28,0	21,0
10-20	36,5	28,0
1" – 1 ½"	53,5	44,5
25-40	53,5	44,5
2"/50	66,5	57,5
2 ½"	81,0	72,0
3"/65	91,0	85,0
80	112,0	103,0
4"/100	122,0	113,0
125	160,0	144,0
150	190,0	174,0



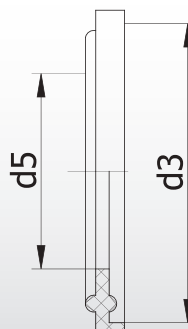
DN	d1	d2	d3	l3	Weight [kg]
10	10	13	34	18	0,03
15	16	19	34	18	0,03
20	20	23	34	18	0,03
25	26	29	50,5	21,5	0,07
32	32	35	50,5	21,5	0,06
40	38	41	50,5	21,5	0,05
50	50	53	64	21,5	0,07
65	66	70	91	28	0,19
80	81	85	106	28	0,20
100	100	104	119	28	0,22
125	125	129	155	28	0,54
150	150	154	183	28	0,65
200	200	204	233,5	28	1,00



DN	d3	l3	Weight [kg]
10 / 20	34	56	0,03
3/8" / 3/4"	25,4	6,5	0,08
1" / 40	50,5	6	0,08
2" / 50	64	6	0,13
2 1/2"	77,5	6	0,20
3" / 65	91	7	0,31
80	106	8	0,47
4" / 100	119	8	0,61
125	155	12	1,48
150	183	12	2,11
200	233,5	15	4,50

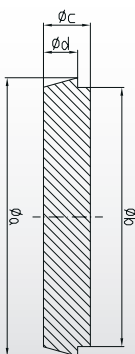


DN	d3	d5	Weight [kg]
10	34	10,2	0,002
15	34	16,2	0,003
20	34	20,2	0,004
25	50,5	26,2	0,005
32	50,5	32,2	0,005
40	50,5	38,2	0,006
50	64	50,2	0,007
65	91	66,2	0,013
80	106	81,2	0,014
100	119	100,2	0,015
125	155	125,2	0,024
150	183	150,2	0,031
200	233,5	200,2	0,059



Blind nut

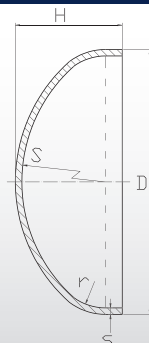
11027



DN	a	b	c	d	Weight [kg]
10	22,5	18	9	6	0,02
15	28,5	24	9	6	0,04
20	36,5	30	11	8	0,07
25	44	36	13	10	0,12
32	50	41	13	10	0,16
40	56	48	13	10	0,22
50	68,5	61	14	11	0,36
65	86	79	16	13	0,66
80	100	93	16	13	0,91
100	121	114	20	15	1,66

End cap

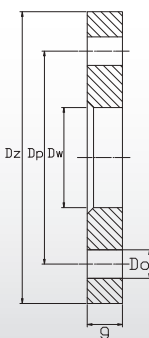
12001



DN	D	H	s	r=D/10	s=D	Weight [kg]
25	28	10	1,5	2,80	28	0,01
32	34	11,5	1,5	3,40	34	0,02
40	40	12,5	1,5	4,00	40	0,02
50	52	15,5	1,5	5,20	52	0,03
65	70	19,5	2	7,00	70	0,08
80	85	22,5	2	8,50	85	0,12
100	104	26,5	2	10,40	104	0,20
125	129	31	2	12,90	129	0,28
150	154	36	2	15,40	154	0,65
200	204	46	2	20,40	204	1,16
250	254	59,5	2	25,40	254	1,60

Aluminium loose flange DIN 2642-PN10

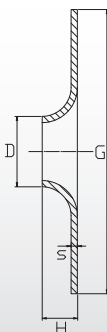
11029



DN	g	Dz	Dw	Dp	Do	Weight [kg]
20	16	105	28	75	14	0,90
25	16	115	36	85	14	1,07
32	18	140	42	100	18	1,27
40	18	150	54	110	18	1,71
50	19	165	65	125	18	2,35
65	20	185	81	145	18	2,85
80	20	200	94	160	18	3,40
100	22	220	113	180	18	4,03
125	22	250	138	210	18	6,35
150	24	285	164	240	22	7,95
200	24	340	225	295	22	10,35

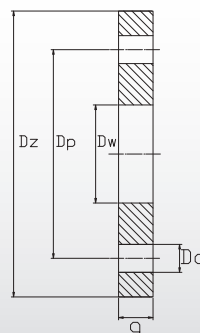
Welding collar DIN 2642-PN10

11031

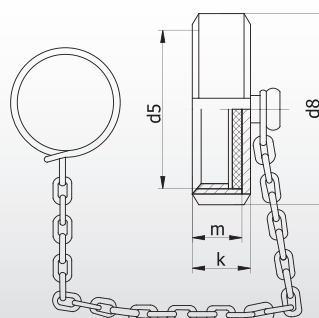


DN	D	G	H	s	Weight [kg]
20	22	58	12	2,0	0,04
25	28	68	15	2,0	0,06
32	34	78	15	2,0	0,07
40	40	88	17	2,0	0,09
50	52	102	20	2,0	0,12
65	70	122	23	2,0	0,21
80	85	138	23	2,0	0,27
100	104	160	28	2,0	0,33
125	129	188	30	2,0	0,45
150	154	212	30	2,0	0,54
200	204	270	30	2,0	0,65
250	254	320	30	2,0	0,80

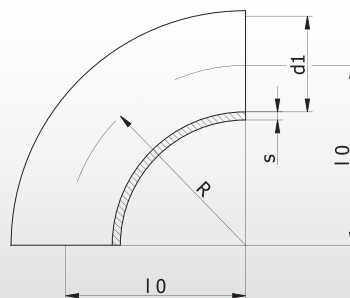
DN	g	Dz	Dw	Dp	Do	Weight [kg]
10	11	90	10	60	14	0,50
15	11	95	16	65	14	0,60
20	13	105	20	75	18	0,85
25	13	115	26	85	18	1,11
32	13	140	32	100	18	1,60
40	13	150	38	110	18	1,80
50	15	165	50	125	18	2,30
65	15	185	66	145	18	2,88
80	15	200	81	160	18	3,20
100	15	220	100	180	18	4,00
125	17	250	125	210	18	5,00
150	17	285	150	240	22	6,70
200	21	340	200	295	22	9,00
250	23	395	250	350	22	11,90



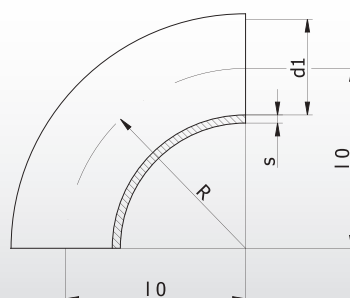
DN	d5	d8	k	m	Weight [kg]
10	28x1/8"	38	18	15	0,12
15	34x1/8"	44	18	15	0,15
20	44x1/6"	54	20	17	0,19
25	52x1/6"	63	21	18	0,25
32	58x1/6"	70	21	18	0,29
40	65x1/6"	78	21	18	0,33
50	78x1/6"	92	22	19	0,46
65	95x1/6"	112	25	21	0,85
75/3"	104x1/6"	119	25	21	0,90
80	110x1/4"	127	30	26	1,11
100	130x1/4"	148	31	26	1,53
125	160x1/4"	178	34	29	2,12
150	190x1/4"	210	39	33	3,05



DN	d1	l0	R	s	Weight [kg]
10	9	26	26	1,5	0,01
15	15	35	35	1,5	0,02
20	19	40	40	1,5	0,04
25	25	50	50	1,5	0,05
32	31	55	55	1,5	0,08
40	37	60	60	1,5	0,10
50	49	70	70	1,5	0,17
65	66	80	80	2	0,4
80	81	90	90	2	0,57
100	100	100	100	2	0,76
125	125	187,5	187,5	2	1,78
150	150	225	225	2	2,75

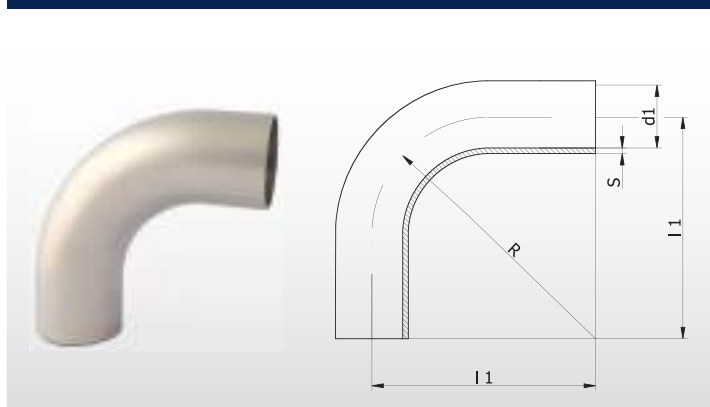


DN	d1	l0	R	s	Weight [kg]
25	22,6	44	37,5	1,2	0,054
38	35,6	64	57	1,2	0,106
51	48,6	89	76,5	1,2	0,205
63,5	60,3	114	95,3	1,6	0,44
76	72,9	134	114,2	1,6	0,62
101,6	97,6	174	152,5	2	1,32



Extended bend DIN

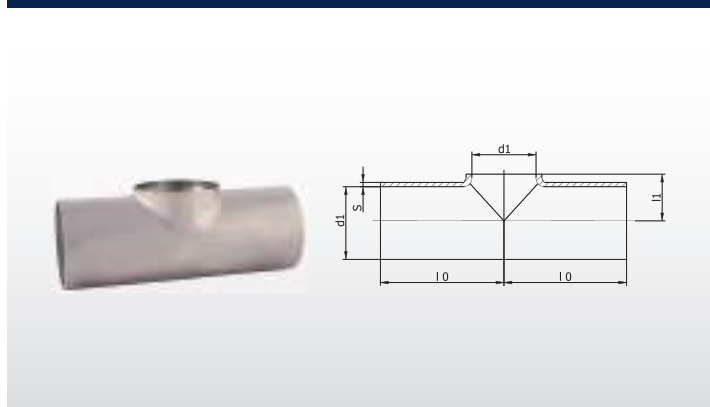
12007



DN	d1	l1	R	s	Weight [kg]
10	9	38	26	1,5	0,025
15	15	47	35	1,5	0,05
20	19	52	40	1,5	0,07
25	25	70	50	1,5	0,11
32	31	78	55	1,5	0,155
40	37	85	60	1,5	0,20
50	49	97	70	1,5	0,33
65	66	110	80	2	0,56
80	81	118	90	2	0,79
100	100	140	100	2	1,2

Welding tee short DIN

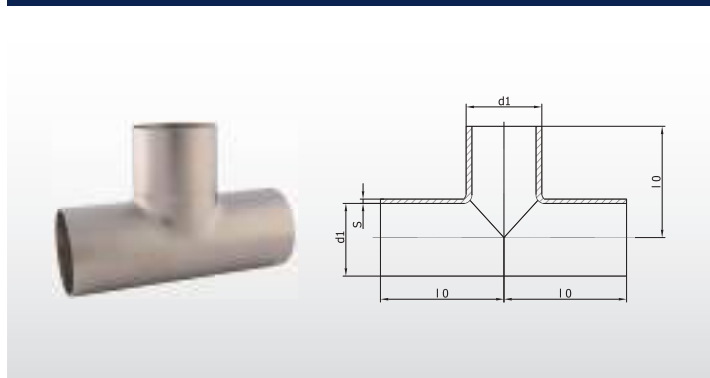
12009



DN	d1	l0	l1	s	Weight [kg]
10	9	35	6,5	1,5	0,02
15	15	35	9,5	1,5	0,04
20	19	40	12	1,5	0,07
25	25	50	15,5	1,5	0,09
32	31	55	19	1,5	0,12
40	37	60	23,5	1,5	0,15
50	49	70	30	1,5	0,24
65	66	80	41,0	2,0	0,46
80	81	90	48,5	2,0	0,68
100	100	100	58,0	2,0	0,92
125	125	187	74,0	2,0	1,97
150	150	225	90,0	2,0	2,98

Welding tee long DIN

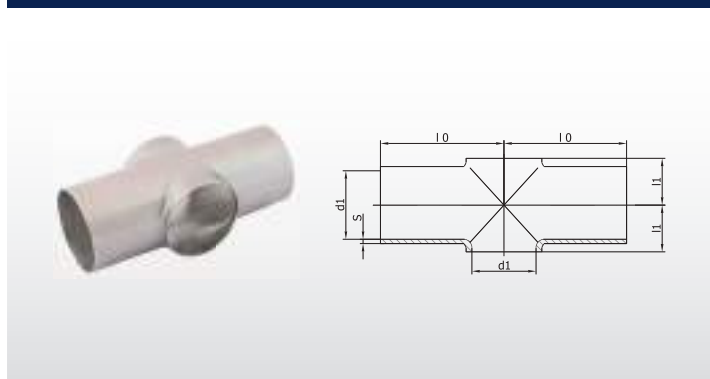
12011



DN	d1	l0	s	Weight [kg]
10	9	35	1,5	0,03
15	15	35	1,5	0,05
20	19	40	1,5	0,08
25	25	50	1,5	0,10
32	31	55	1,5	0,13
40	37	60	1,5	0,21
50	49	70	1,5	0,29
65	66	80	2,0	0,62
80	81	90	2,0	0,85
100	100	100	2,0	1,62
125	125	187	2,0	2,71
150	150	225	2,0	3,88

Welding cross short DIN

12013

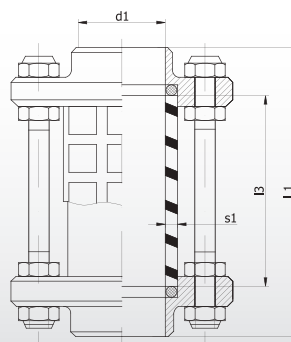


DN	d1	l0	l1	s	Weight [kg]
15	15	35	9,5	1,5	0,04
20	19	40	12	1,5	0,07
25	25	50	15,5	1,5	0,09
32	31	55	19	1,5	0,12
40	37	60	23,5	1,5	0,15
50	49	70	30	1,5	0,24
65	66	80	41	2,0	0,46
80	81	90	48,5	2,0	0,68
100	100	100	58	2,0	0,92
125	125	187	74	2,0	1,97
150	150	225	90	2,0	2,98

15001

Sight glass WW (weld/weld)

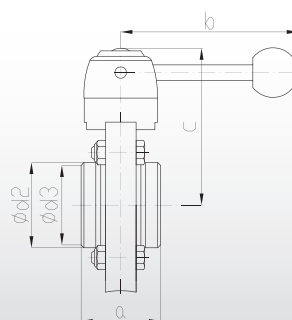
DN	d1	l1	l3	s1	Weight [kg]
10	10	88	60	2,5	0,25
15	16	88	60	2,5	0,30
20	20	88	60	3	0,73
25	26	98	70	3	0,75
32	32	104	70	3	0,76
40	38	112	70	5	1,08
50	50	112	70	5	1,34
65	66	127	85	5	1,90
80	81	135	85	5	2,35
100	100	169	115	5	2,80
125	125	202	160	7	6,35
150	150	216	170	9	7,11



13001

Butterfly valve DIN BC-WW (weld/weld)

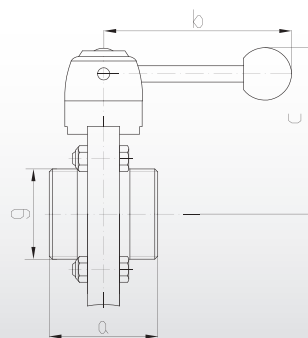
DN	a	b	c	d2	d3	Weight [kg]
25	40	122	89	31	28	1,2
32	42	122	91	37	34	1,4
40	50	122	94	43	40	1,4
50	50	122	100	55	52	1,6
65	50	150	109	72	70	2,0
80	60	150	116	87	85	2,8
100	64	150	127	106	104	3,6



13003

Butterfly valve DIN SV04-WW (weld/weld)

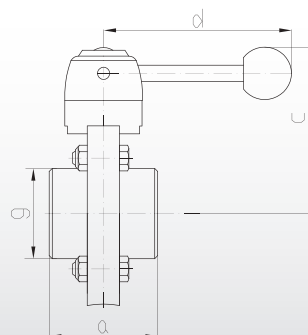
DN	a	b	c	g	Weight [kg]
15	40	122	89	20	1,35
20	40	122	89	24	1,35
25	40	122	89	30	1,31
32	42	122	91	36	1,42
40	50	122	94	42	1,52
50	50	122	100	54	1,80
65	50	150	109	70	2,18
80	60	150	116	85	3,95
100	64	150	127	104	4,80
125	86	216	155	129	8,10
150	90	216	170	154	10,30



13005

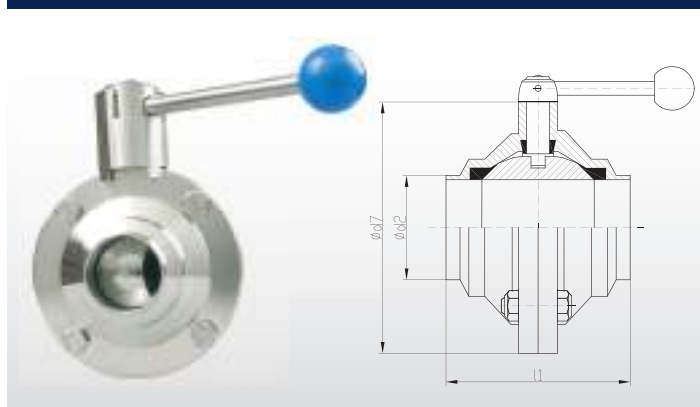
Butterfly valve DIN BC-MM (male/male)

DN	a	b	c	g	Weight [kg]
25	64	122	89	Rd52x1/6	1,6
32	64	122	91	Rd58x1/6	1,6
40	72	122	94	Rd65x1/6	2,0
50	72	122	100	Rd78x1/6	2,1
65	76	150	109	Rd95x1/6	3,0
80	88	150	116	Rd110x1/4	3,8
100	92	150	127	Rd130x1/4	4,8



Ball valve WW DIN (weld/weld)

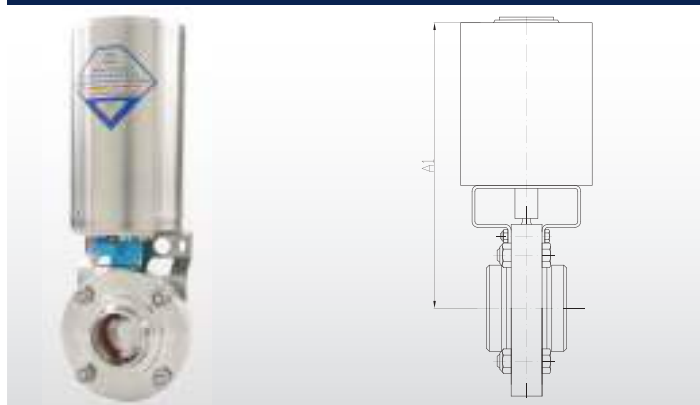
13007



DN	ød2	ød7	L1	Weight [kg]
25	29	94	72	1,2
40	41	114	84	2
50	53	131	98	3,1
65	70	158	120	5
80	85	181	140	8,5
100	104	209	164	13

Butterfly valve with actuator

13009



DN	A1	Weight [kg]
15	220	5,1
20	220	5,1
25	220	5,1
32	223	5,2
40	225	5,3
50	232	5,6
65	245	5,7
80	271	7,4
100	281	8,2
125	372	15,6
150	386	17,8

Pneumatic actuator

13011



DN	a	b	c	d	e	Weight [kg]
15-100/1"-4"	149	85	9,5	24	G1/8"	2,7
125-200	204	114	14	31	G1/8"	6,4
15-50/1"-2"	149	70	9,5	24	G1/8"	1,9

Control unit TOP09

13013

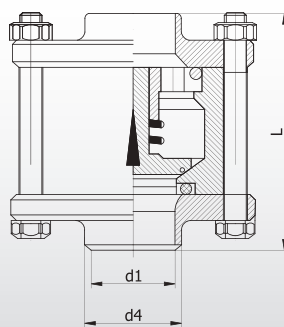


Advantages of TOP09:						
- Suitable for all standard actuators as well as for retrofitting existing one						
- Other manufacturers' adaptors available on request						
- Faster change of control device, down times are reduced considerably						
- Simple assembly						
- User-friendly montage technology						
- No need for proximity sensor adjustment						
- Clearly visible valve flap due to visual, mechanical position indicator						

14001

Non return valve WW DIN (weld/weld)

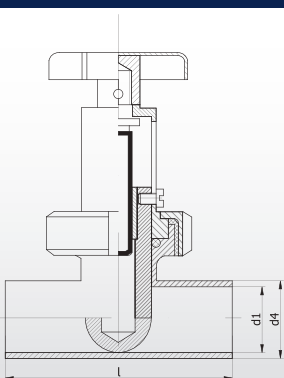
DN	d1	d4	l	Weight [kg]
25	26	31	90	1,65
32	32	37	90	2,02
40	38	43	100	1,99
50	50	55	110	2,53
65	66	72	120	3,27
80	81	87	145	5,90
100	100	106	150	9,80



14003

Throttle valve DIN

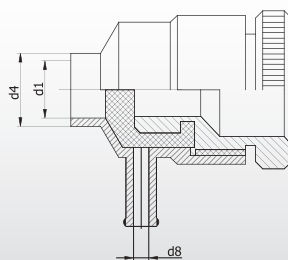
DN	d1	d4	l	Weight [kg]
25	26	29	100	0,81
32	32	35	110	1,13
40	38	41	120	1,75
50	50	53	140	2,73
65	66	70	161	3,96
80	81	85	180	4,27
100	100	104	210	6,35



14005

Sampling device DIN

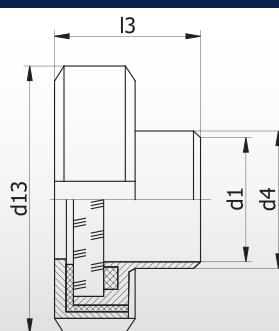
DN	d1	d4	d8	Weight [kg]
15	16	20	6	0,40
40	37	40	6	0,40



15003

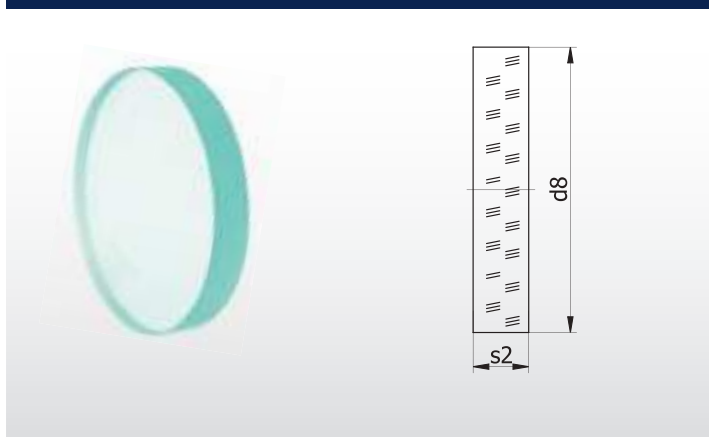
Welded end sight glass DIN

DN	d1	d4	d13	l3	Weight [kg]
25	26	31	63	37	0,31
32	32	37	70	40	0,40
40	38	43	78	41	0,48
50	50	55	92	43	0,69
65	66	72	112	48	1,10
80	81	87	127	58	1,61
100	100	106	148	63	2,27
125	125	132	178	58	3,08
150	150	157	210	63	5,28



Glass for sight glass (spare glass)

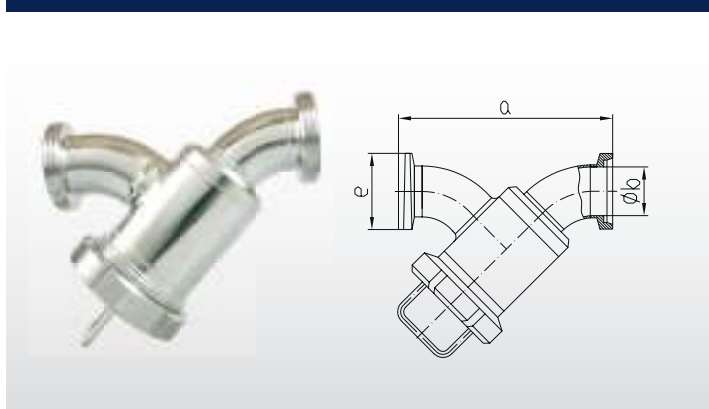
15005



DN	d8	s2	Weight [kg]
25 / 1"	45	8	0,03
32	50	8	0,04
40 / 1½"	55	10	0,06
50 / 2"	65	10	0,08
65 / 2½"	85	10	0,14
3"	90	10	0,29
80	100	15	0,29
100 / 4"	118	12	0,33
125	150	15	0,66
150	175	20	1,18
Borosilicate and toughened versions			

Dirt collecting filter DIN (male/male)

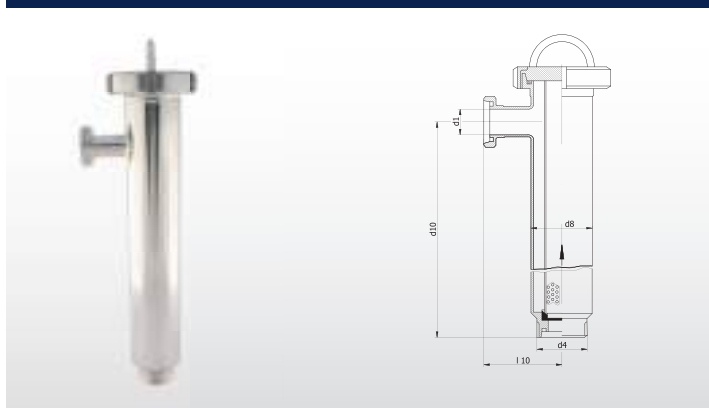
15007



DN	a	b	e	Weight [kg]
25	163	26	Rd52x1/6	1,176
32	180	32	Rd58x1/6	1,35
40	210	38	Rd65x1/6	2,06
50	220	50	Rd78x1/6	3,09
65	280	66	Rd95x1/6	3,10
80	320	81	Rd110x1/4	4,711
100	370	100	Rd130x1/4	6,68

Angular filter DIN (male/male)

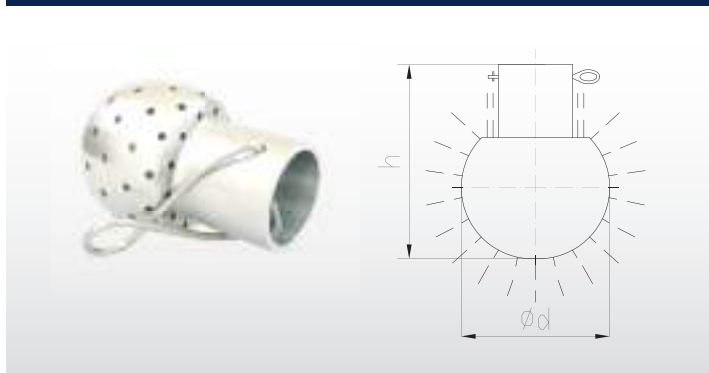
15009



DN	d1	d4	d8	d10	l10	Weight [kg]
25	26	52x1/6"	70	327	90	3,30
32	32	58x1/6"	70	327	90	3,40
40	38	65x1/6"	104	340	115	6,19
50	50	78x1/6"	104	340	115	6,20
65	66	95x1/6"	104	325	115	6,50
80	81	110x1/4"	129	560	160	11,80
100	100	130x1/4"	154	560	160	16,28
125	125	160x1/4"	180	560	200	21,45
150	150	190x1/4"	206	620	240	-
Mesh diameter on request						

Cleaning ball DIN, quick

15011

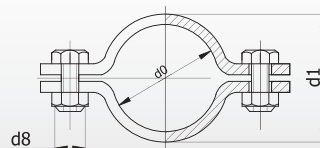


DN	Type	Range (m)	Flow m³/h		Ball diameter d	High h
			1 bar	2,5 bar		
10	XI-I	0,5-1	2,1	-	25	37,5
15	YI-I	1-1,5	4,2	-	30	42
20	A2-I	2-2,5	7,7	12,2	40	53
25	B3-I	2-3	11	17,3	64	90
25	B5-I	3-4	17,5	28,1	64	90
32	F4-I	2,5-3,5	13,5	22	64	90
40	C4-I	2,5-3,5	11,8	19,2	64	90
50	D4-I	4-5	28,6	47,1	90	120

15013

Pipe clamp DIN

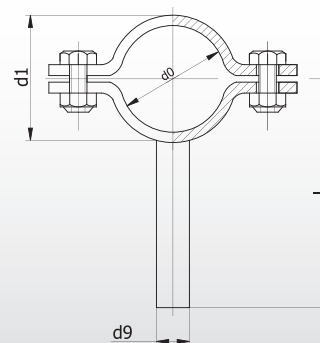
DN	d0	d1	d8	Weight [kg]
10	12	18	M6x20	0,02
15	18	24	M6x20	0,04
20	22	28	M6x20	0,05
25	28	34	M6x20	0,05
32	34	40	M6x20	0,07
40	40	46	M6x20	0,07
50	52	58	M6x20	0,08
65	70	76	M6x20	0,09
80	85	91	M6x20	0,15
100	104	110	M6x20	0,23
125	129	137	M8x30	0,41
150	154	164	M8x30	0,96
200	204	214	M10x30	1,60
250	254	266	M16x30	3,00



15015

Pipe clamp with support DIN

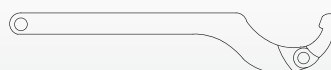
DN	d0	d1	d9	l	Weight [kg]
10	12	18	8	64	0,04
15	18	24	8	67	0,07
20	22	28	8	69	0,08
25	28	34	10	72	0,10
32	34	40	10	75	0,11
40	40	46	10	78	0,12
50	52	58	12	84	0,13
65	70	76	12	93	0,16
80	85	91	12	100,5	0,27
100	104	110	12	110	0,32
125	129	137	16	140	0,48
150	154	164	16	180	1,04
200	204	214	20	240	2,00
250	254	266	22	280	3,40



15017

C- spanner

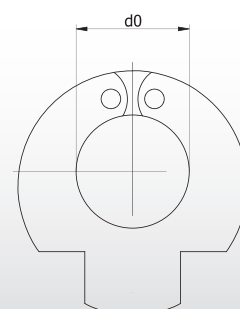
DN	Weight [kg]
10-20	0,09
25-40	0,29
50-80	0,44
100-150	1,15



15019

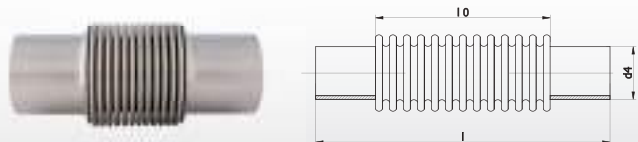
Pipe cutting guide DIN / SMS / Cal

DN	d0 DIN	d0 DIN R2	d0 Cal	d0 ISO	Weight [kg]
10	12	13		17,3	0,60
15	18	19		21,3	0,60
20	22	23		26,9	0,60
25 / 1"	28	29	1"	33,7	0,70
32 / 1 1/4"	34	35	1 1/4"	42,4	0,70
40 / 1 1/2"	40	41	1 1/2"	48,3	0,90
50 / 2"	52	53	2"	60,3	1,00
65 / 2 1/2"		70	2 1/2"	76	1,90
80 / 3"		85	3"	88,9	2,10
100 / 4"		104	4"		2,60



Compensator DIN

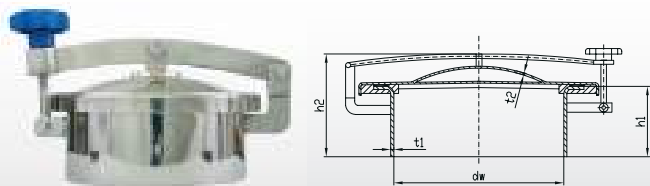
15021



DN	d4	l	L0	Weight [kg]
25	28x1,5	200	±10	0,16
32	34x1,5	200	±15	0,18
40	40x1,5	200	±15	0,26
50	52x1,5	200	±15	0,32
65	70x2	200	±18	0,56
80	85x2	200	±20	0,78
100	104x2	200	±35	0,95

Manhole cover

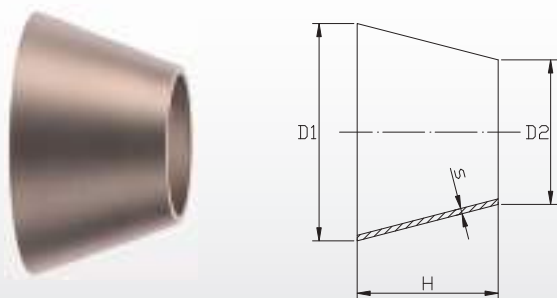
15023



DN	dw	t1	t2	dw	h1	h2	Weight [kg]
DN200	200	3	2	280	80	200	3,20
DN300	300	3	2	340	80	200	4,80
DN430	425	3	2	470	80	200	6,60
DN450	450	3	2	490	80	200	7,40

Concentric reducer

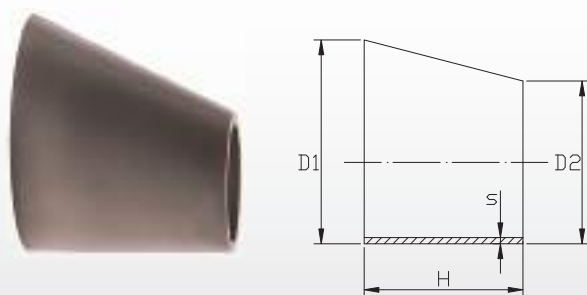
12015



DN	D1	D2	H	s	Weight [kg]
15/10	19	13	11	1,5	0,08
20/15	23	19	12	1,5	0,04
25/15	29	19	22	1,5	0,03
25/20	29	23	12	1,5	0,07
32/20	35	23	22	1,5	0,08
32/25	35	23	12	1,5	0,08
40/25	41	29	22	1,5	0,08
50/25	53	29	45	1,5	0,13
50/32	53	35	33	1,5	0,15
50/40	53	41	22	1,5	1,18
65/32	70	35	59	2,0	0,18
65/40	70	41	52	2,0	0,19
65/50	70	53	29	2,0	0,19
80/50	85	53	56	2,0	0,21
80/65	85	70	27	2,0	0,22
100/50	104	53	88	2,0	0,22
100/65	104	70	61	2,0	0,23
100/80	104	85	34	2,0	0,24

Eccentric reducer

12017



DN	D1	D2	H	s	Weight [kg]
15/10	19	13	22	1,5	0,08
20/15	23	19		1,5	0,04
25/15	29	19	20	1,5	0,03
25/20	29	23	17	1,5	0,07
32/20	35	23	34	1,5	0,08
32/25	35	23	17	1,5	0,08
40/25	41	29	33	1,5	0,08
50/25	53	29	67	1,5	0,13
50/32	53	35		1,5	0,15
50/40	53	41	33	1,5	1,18
65/32	70	35		2,0	0,18
65/40	70	41	53	2,0	0,19
65/50	70	53	45	2,0	0,19
80/50	85	53	86	2,0	0,21
80/65	85	70	42	2,0	0,22
100/50	104	53		2,0	0,22
100/65	104	70	93	2,0	0,23
100/80	104	85		2,0	0,24

HyCom fittings are design for pharmaceutical, food and biotechnology industry and they must meet high quality standards and comply with technical requirements.

Apart from material high quality, fittings shall be produced without dead spaces, and their inner surface must have access for proper cleaning. This type fittings requires relevant sealing elements that need, among others, sterilization process with saturated steam under increased pressure.

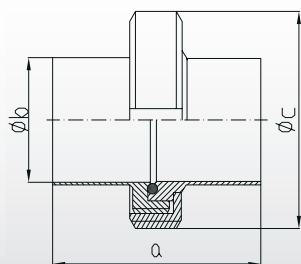
Our company offers HyCom products range in the following connections variants:

- ▶ Clamp connections in accordance with DIN 32676
- ▶ Aseptic connections in accordance with DIN 11864-1
- ▶ Aseptic flange connections in accordance with DIN 11864-2
- ▶ Aseptic clamp connections in accordance with DIN 11864-3
- ▶ Aseptic unions for orbital welding in accordance with DIN 11865
- ▶ Aseptic pipes for orbital welding in accordance with DIN 11866

HyCom specification	
Starting material	welded or seamless pipe, forged steel bar δ ferrite content in material (including weld) <3%
Material	1.4404/316L (1.4301/1.4307 - 304/304L)
Dimensions	according to DIN 11866 – range A: 13,5x1,5mm to 154x2mm analogously to DIN 11850 – range 2 according to DIN 11866 – range B: 133,5x1,6mm to 114,3x2,3mm analogously to DIN EN ISO 1127 according to DIN 11866 – range C: 12,7x1,65mm to 101,6x2,11mm analogously to ASME-BPE 2009 according to DIN 11850 – range 2: 13x1,5mm to 154x2mm other sizes available on request
Technical terms of delivery	fittings made from pipes: according to DIN 11850/11852; EN 10216-5; EN 10217-7 forged fittings or/and steel bars according to EN10088
Tolerance	according to DIN 11850, DIN 11852, DIN 11853, DIN 11864, DIN 11865, DIN 11866, ISO 2768
Pipes finishing	orbital weld according to DIN 11864 or weld according to DIN 11853
Unions finishing	according to DIN 11864 – range A; DIN 11853; DIN 32676
Inner surface	elements made from pipe: $Ra \leq 1,6 \mu m$ / deformation range $Ra \leq 3,2 \mu m$ (=H1) unions: HyCom1: $Ra \leq 0,8 \mu m$ (=H3o) HyCom1: $Ra \leq 1,6 \mu m$ (=H4o) optional: Ra on customer request
Outer surface	elements made from pipe: Ra unspecified (=H1) unions: HyCom1: $Ra \leq 1,6 \mu m$ (=H3o) HyCom2: $Ra \leq 0,8 \mu m$ (=H4o) optional: Ra on customer request
Inner surface processing	cutting optional electrochemical polishing
Sealing material	according to DIN 11864: EPDM, HNBR, FKM, FFKM in accordance with FDA §177.2600
Examination methods	checking of starting material attestation dimensions checking visual examination material analysis using XRF spectrometer roughness inspection
Marking	every element is marked as outline below: supplier's logo – steel type Dimensions – melt number
Documentation	optinal: Certificate 3.1 according to EN 10204 – for starting material Certificate 3.1/AD2000-W2 according to E 10204 and AD-Merkblatt W2 or/and AD 2000-Merkblatt W2 for starting material manufacturer certificate in accordance with EN 10204 manufacturer certificate confirming roughness
Packing and dispatch	unions connections are protected by plastic caps every element is shrink-wrapped individually in foil

Pipe union DIN 11864-V

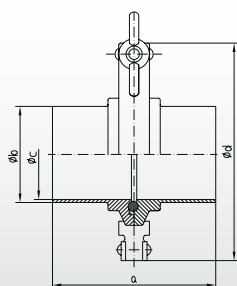
16001



DN	a	b	c	Weight [kg]
10	76	13	38	0,10
15	76	19	44	0,16
20	76	23	54	0,25
25	77	29	63	0,40
32	88	35	70	0,49
40	88	41	78	0,60
50	89	53	92	0,78
65	113	70	112	1,39
80	117	85	127	1,84
100	120	104	148	2,47

Pipe TC union DIN 11864-K

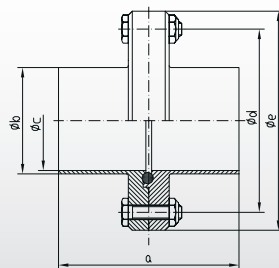
16003



DN	a	b	c	d	Weight [kg]
10	76	13	10	43	0,29
15	76	19	16	43	0,29
20	76	23	20	57	0,47
25	77	29	26	57	0,46
32	88	35	32	57	0,46
40	88	41	38	73	0,62
50	89	53	50	89	0,78
65	113	70	66	99	1,08
80	117	85	81	118	1,41
100	120	104	100	145	2,04

Flange union DIN 11864-F

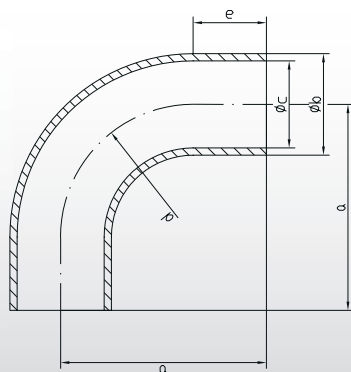
16005



DN	a	b	c	d	e	Weight [kg]
10	80	13	10	37	54	0,40
15	80	19	16	42	59	0,48
20	80	23	20	47	64	0,56
25	80	29	26	53	70	0,62
32	90	35	32	59	76	0,74
40	90	41	38	65	82	0,80
50	90	53	50	77	94	0,96
65	108	70	66	95	113	1,44
80	116	85	81	112	133	2,22
100	116	104	100	137	159	3,30
125	120	129	125	161	183	4,50
150	120	154	150	188	213	7,35

Bend 90° DIN 11865

16007



DN	a	b	c	d	e	Weight [kg]
10	51	13	10	26	25	0,04
15	60	19	16	35	25	0,06
20	65	23	20	40	25	0,08
25	90	29	26	50	40	0,16
32	95	35	32	55	40	0,20
40	100	41	38	60	40	0,26
50	110	53	50	70	40	0,40
65	120	70	66	80	40	0,76
80	145	85	81	90	55	1,08
100	155	104	100	100	55	1,56

16009

Tee long DIN 11865

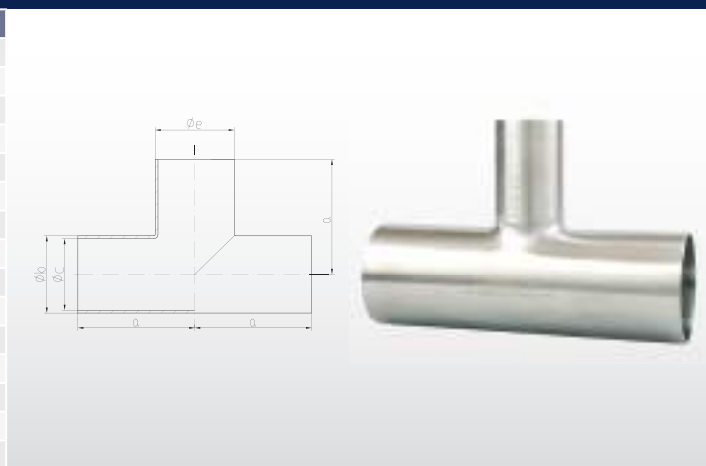
DN	a=d	b	c	Weight [kg]
10	35	13	10	0,04
15	35	19	16	0,06
20	40	23	20	0,10
25	50	29	26	0,14
32	55	35	32	0,18
40	60	41	38	0,24
50	80	53	50	0,38
65	105	70	66	0,80
80	130	85	81	1,02
100	155	104	100	1,35



16011

Reduction tee DIN 11865

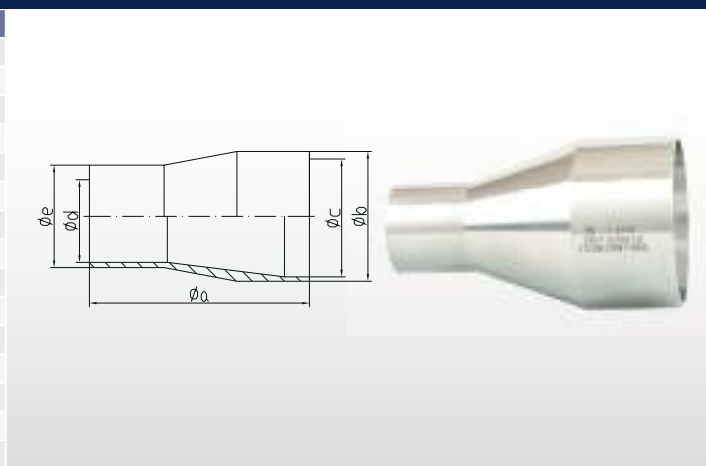
DN	a=d	b	c	e	Weight [kg]
15-10	35	19	16	13	0,06
20-15	40	23	20	19	0,10
25-10	50	29	26	13	0,12
32-20	55	35	32	23	0,18
32-25	55	35	32	29	0,18
40-25	60	41	38	29	0,22
40-32	60	41	38	35	0,24
50-20	80	53	50	23	0,38
50-25	80	53	50	29	0,40
50-40	80	53	50	41	0,42
65-40	105	70	66	41	0,82
65-50	105	70	66	53	0,84
80-50	130	85	81	53	0,90
80-65	130	85	81	70	1,38
100-65	155	104	100	70	2,00



16013

Concentric reducer DIN 11863

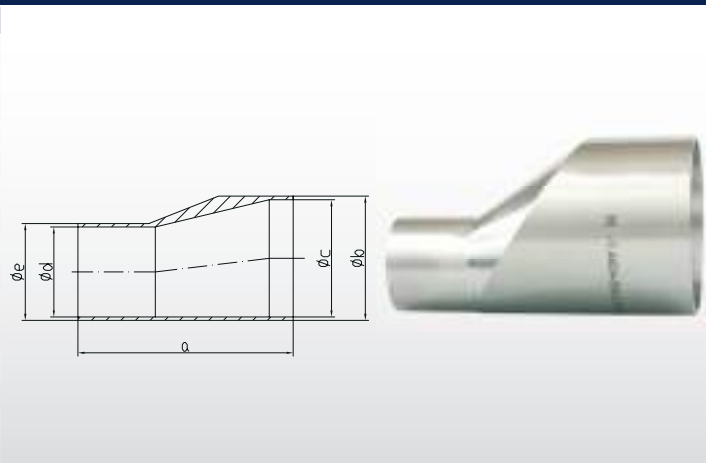
DN	a	b	c	d	e	Weight [kg]
15-10	60	19	16	10	13	0,06
20-15	60	23	20	16	19	0,06
25-20	70	29	26	20	23	0,10
32-20	80	35	32	20	23	0,14
32-25	80	35	32	26	29	0,14
40-25	90	41	38	26	29	0,20
40-32	90	41	38	32	35	0,16
50-20	90	53	50	20	23	0,50
50-25	90	53	50	26	29	0,36
50-40	90	53	50	38	41	0,28
65-40	110	70	66	38	41	0,58
65-50	110	70	66	50	53	0,50
80-50	110	85	81	50	53	0,84
80-65	110	85	81	66	70	0,78
100-65	135	104	100	66	70	1,28



16015

Eccentric reducer DIN 11865

DN	a	b	c	d	e	Weight [kg]
15-10	60	19	16	10	13	0,06
20-15	60	23	20	16	19	0,06
25-20	70	29	26	20	23	0,12
32-20	80	35	32	20	23	0,18
32-25	80	35	32	26	29	0,14
40-25	90	41	38	26	29	0,26
40-32	90	41	38	32	35	0,20
50-20	90	53	50	20	23	0,48
50-25	90	53	50	26	29	0,44
50-40	90	53	50	38	41	0,38
65-40	110	70	66	38	41	0,78
65-50	110	70	66	50	53	0,70
80-50	110	85	81	50	53	1,18
80-65	110	85	81	66	70	0,82
100-65	135	104	100	66	70	1,52



The image displays a variety of industrial metal fittings. In the upper left, there is a complex valve assembly with multiple ports and a handle. To its right is another valve with a similar handle. The lower half of the image features several individual fittings: three long, cylindrical threaded pipe fittings of different sizes, one of which is angled; a large, hexagonal flange fitting with a prominent internal thread; and two smaller, more intricate fittings at the bottom, one of which has a hexagonal body and a tapered end. The background is a clean, white surface, and the lighting highlights the metallic textures and precise threading of the components.

2

THREADED FITTINGS

We are pleased to offer valves and threaded fittings, including:

- ▶ Ball valves: threaded, welded, flanged
- ▶ Globe valves
- ▶ Non return valves
- ▶ Pipe unions with flat and conical sealing
- ▶ Connection elements: nipples, couplings, hose nipples, plugs, caps and others.
- ▶ Bends, tees, threaded reducers

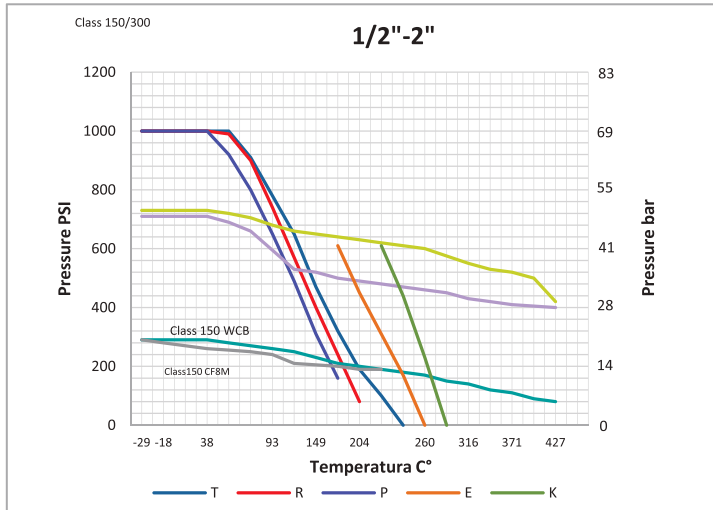
Offered products are typical applications for industries:

- ▶ Chemical Industry
- ▶ Petrochemical Industry
- ▶ Pulp and Paper Industry
- ▶ Heating Industry
- ▶ Electric Power Industry
- ▶ Industrial Water Treatments (Sewage Farms)

Product type	Pressure		Thread type	Material	
Threaded Fittings	150 PSI (PN10)		BSP	AISI316	AISI304
Threaded Ball Valves	1000 PSI (PN64)		BSP	AISI316	
Welded Ball Valves	1000 PSI (PN64)		ISO	AISI316	
Flanged Ball Valves	PN16	PN40	DIN Standard	AISI316	
Dirt collecting/Angular Filters	300 PSI		BSP	AISI316	
Non-Return Valves	800 PSI (PN40)		BSP	AISI316	
Globe Valves	200 PSI		BSP	AISI316	

Our company cooperates with reputed suppliers from Far East and European Union, who hold ISO9001 and PED 97/23/EG certificates. Threaded and welded fittings that we offer are high quality approved by material certificate EN 10204/3.1.

SELECTION REFERENCE FOR VALVE



Seat material:

P = PTFE

R = RTFE

T = TFM1600

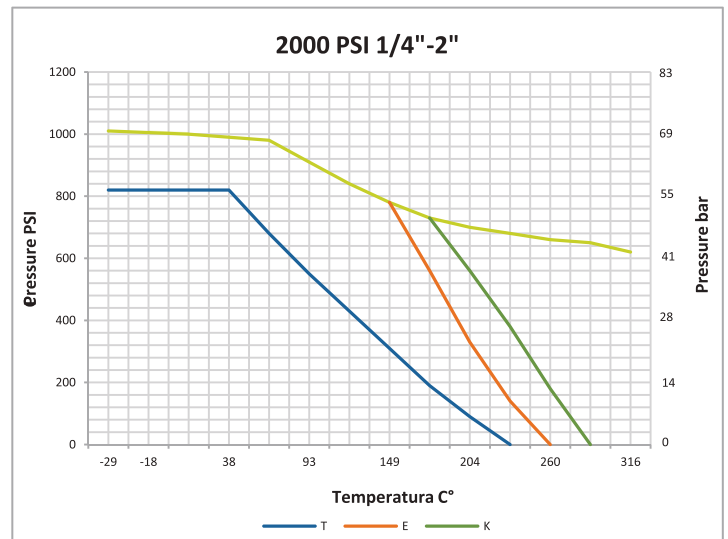
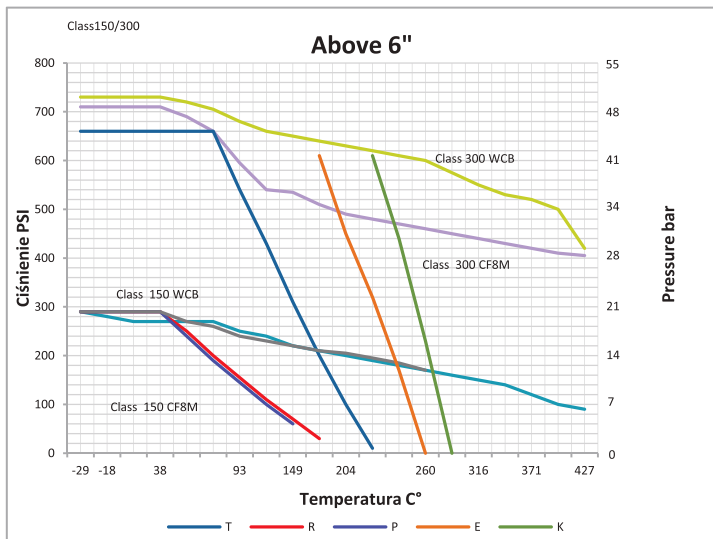
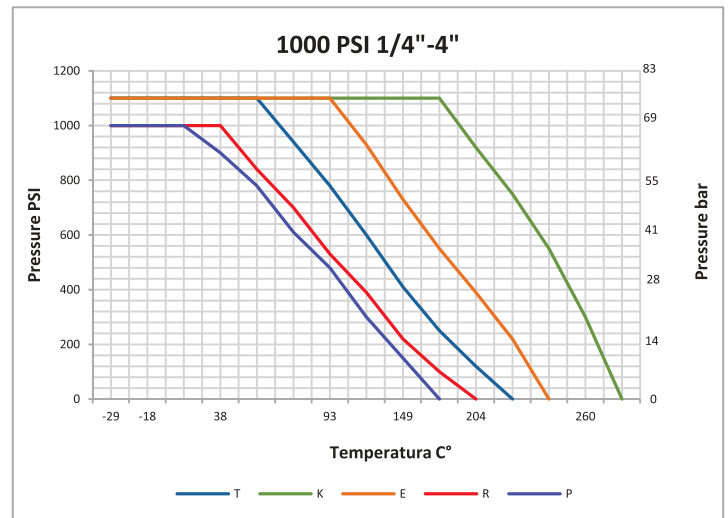
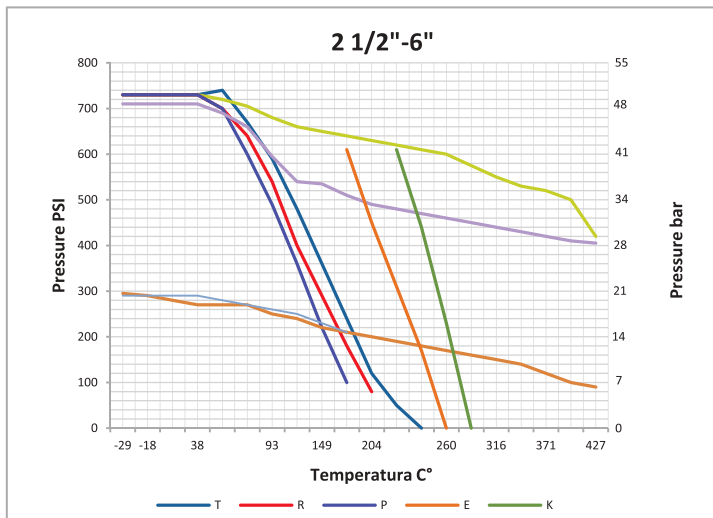
E = EK+PTFE

K = PEEK

Seat temperature: the temperature if the PTFE oraz RTFE, refers to API608.

Body temperature: body materials ASTM A351-CF8M, A351-CF8 refers to ASME B 16.3

PSI	150	200	600	800	1000
BAR	10	16	25	40	64



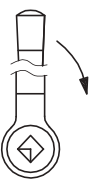
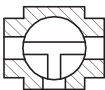
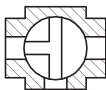
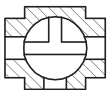
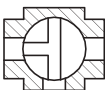
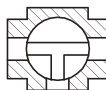
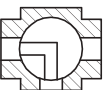
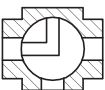
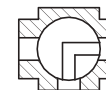
The choice of sealing must take account of following criteria:

1. Chemical resistance
2. Temperature resistance
3. Mechanical resistance, including:
 - ▶ breakaway strength
 - ▶ elongation at break
 - ▶ hardness
 - ▶ permanent deformation under compression
 - ▶ wear resistance
 - ▶ multiple bend resistant

Sealing				
No.	Material	Chemical composition	Temperature range	Application
1	NBR	acrylic-butadiene-caoutchouc	-25°C... +100°C	oils, gases, air, water, hydrocarbons
2	EPDM	ethane-propylene-diene- caoutchouc	-35°C... +130°C	water, seawater, steam, diluted acid
3	EPDM HT	ethane-propylene-diene- caoutchouc	-30°C... +135°C	water, seawater, steam, diluted acid
4	FKM	fluorine-caoutchouc	-20°C... +200°C	oils, acids, hydrocarbons
5	PTFE	polytetrafluoroethylene	-60°C... +190°C	acids, food, solvent
6	CR	chloroprene-caoutchouc	-20°C... +100°C	water, alkalis, alkaline chemical compounds
7	NR	natural rubber	-40°C... +80°C	glycol, abrasive media
8	MVQ	silicone rubber	-60°C... +190°C	water, food, beverages
Warning: The above values do not apply to all valves and applications. Restrictions are possible.				

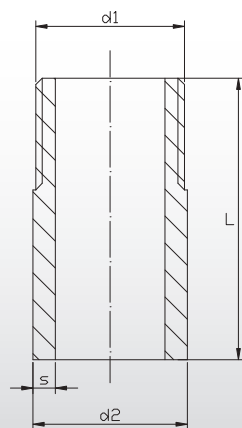
Three way ball valves intended for piping branch with media are used in industry and construction.

Three way valves classification can be made together with drive components according to their functions, like switching or regulation. When three way valve is equipped with manual, pneumatic or electric drive type open/close, than is for switch, but if it has manual or continuous electric drive, than it is for regulation. Three way valves may differ due to the closing component construction. With regards to closing component construction type vents – drilled hole (type T or type L) the drive makes rotary movement.

	Ball type T				Ball type L		
Valve handle or actuator position	1 	2 	3 	4 	5 	6 	7 
Position 0°							
Position 90°							

Welding nipple

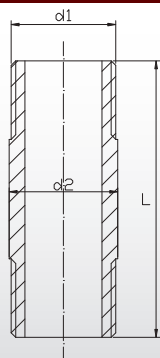
21001



NW	d1	s	d2	L
6	1/8"	2,0	10,2 mm	20 mm
8	1/4"	2,3	13,5 mm	30 mm
10	3/8"	2,3	17,2 mm	30 mm
15	1/2"	2,6	21,3 mm	35 mm
20	3/4"	2,6	26,9 mm	40 mm
25	1"	3,2	33,7 mm	40 mm
32	1 1/4"	3,2	42,4 mm	50 mm
40	1 1/2"	3,2	48,3 mm	50 mm
50	2"	3,6	60,3 mm	50 mm
65	2 1/2"	3,6	76,1 mm	60 mm
80	3"	4,0	88,9 mm	70 mm
100	4"	4,5	114,3 mm	80 mm

Barrel nipple

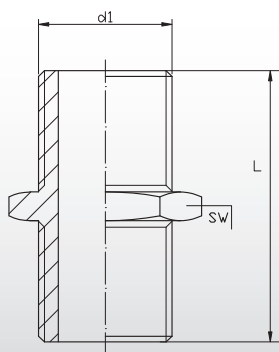
21003



NW	d1	d2	L
6	1/8"	10,2 mm	20 mm
8	1/4"	13,5 mm	30 mm
10	3/8"	17,2 mm	40 mm
15	1/2"	21,3 mm	60 mm
20	3/4"	26,9 mm	60 mm
25	1"	33,7 mm	60 mm
32	1 1/4"	42,4 mm	80 mm
40	1 1/2"	48,3 mm	80 mm
50	2"	60,3 mm	100 mm
65	2 1/2"	76,1 mm	100 mm
80	3"	88,9 mm	120 mm
100	4"	114,3 mm	120 mm

Hexagonal nipple

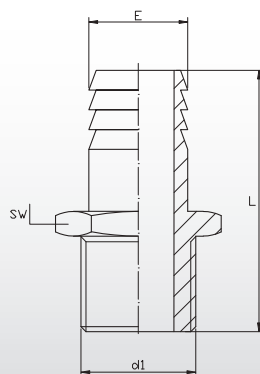
21005



NW	d1	L	SW
6	1/8"	21 mm	12 mm
8	1/4"	33 mm	15 mm
10	3/8"	35 mm	20 mm
15	1/2"	42 mm	26 mm
20	3/4"	49 mm	31 mm
25	1"	50 mm	36 mm
32	1 1/4"	57 mm	45 mm
40	1 1/2"	58 mm	51 mm
50	2"	64 mm	63 mm
65	2 1/2"	75 mm	81 mm
80	3"	81 mm	95 mm
100	4"	92 mm	120 mm

Hexagonal hose nipple

21007

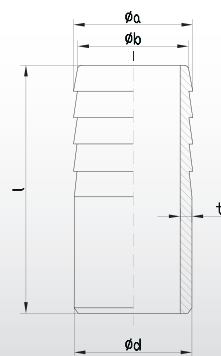


NW	d1	E	L	SW
8	1/4"	9 mm	48 mm	15 mm
10	3/8"	11 mm	53 mm	19 mm
15	1/2"	14 mm	65 mm	23 mm
20	3/4"	20 mm	70 mm	29 mm
25	1"	26 mm	75 mm	38 mm
32	1 1/4"	33 mm	80 mm	46 mm
40	1 1/2"	39 mm	95 mm	50 mm
50	2"	51 mm	105 mm	60 mm
65	2 1/2"	63 mm	110 mm	80 mm
80	3"	76 mm	120 mm	95 mm

21009

Hose nipple WLD

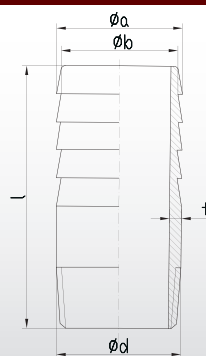
NW	ød	øa	øb	l	t
6	13,7	12,8	11,3	48	2,24±0,3
8	17,1	16,3	14,8	53	2,31±0,3
15	21,3	21	19,5	65	2,77±0,3
20	26,7	26,1	21,1	70	2,87±0,3
25	33,4	33	31	75	3,38±0,3
32	42,2	41,6	39,1	80	3,56±0,3
40	48,3	47,5	45	95	3,68±0,3
50	60,3	59,5	57	105	3,91±0,3
65	76,1	74	71,5	110	5,16±0,5
80	88,9	88	85	120	5,49±0,5



21011

Barrel hose nipple THD

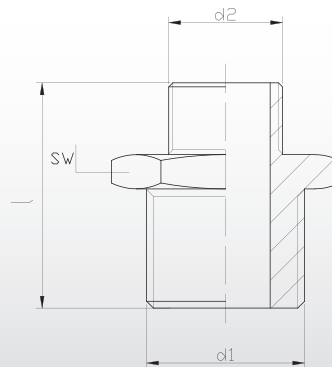
NW	ød	øa	øb	l	t
6	13,7	12,8	11,3	70	2,24±0,3
8	17,1	16,3	14,8	70	2,31±0,3
15	21,3	21	19,5	70	2,77±0,3
20	26,7	26,1	21,1	70	2,87±0,3
25	33,4	33	31	70	3,38±0,3
32	42,2	41,6	39,1	70	3,56±0,3
40	48,3	47,5	45	100	3,68±0,3
50	60,3	59,5	57	100	3,91±0,3
65	76,1	74	71,5	120	5,16±0,5
80	88,9	88	85	120	5,49±0,5



21013

Reducing hexagonal nipple

b1-d2	L	d1-d2	L
1/4" -1/8"	30 mm	1 1/4" -1"	53 mm
3/8" -1/8"	30 mm	1 1/2" -3/4"	55 mm
3/8" -1/4"	30 mm	1 1/2" -1"	55 mm
1/2" -1/8"	34 mm	1 1/2" -1 1/4"	55 mm
1/2" -1/4"	34 mm	2" -1"	65 mm
1/2" -3/8"	34 mm	2" -1 1/4"	65 mm
3/4" -1/4"	40 mm	2" -1 1/2"	65 mm
3/4" -3/8"	40 mm	2 1/2" -1 1/4"	70 mm
3/4" -1/2"	40 mm	2 1/2" -1 1/2"	70 mm
1" -3/8"	43 mm	2 1/2" -2"	70 mm
1" -1/2"	43 mm	3" -1 1/2"	85 mm
1" -3/4"	43 mm	3" -2"	85 mm
1 1/4" -1/2"	53 mm	3" -2 1/2"	85 mm
1 1/4" -3/4"	53 mm		



21015

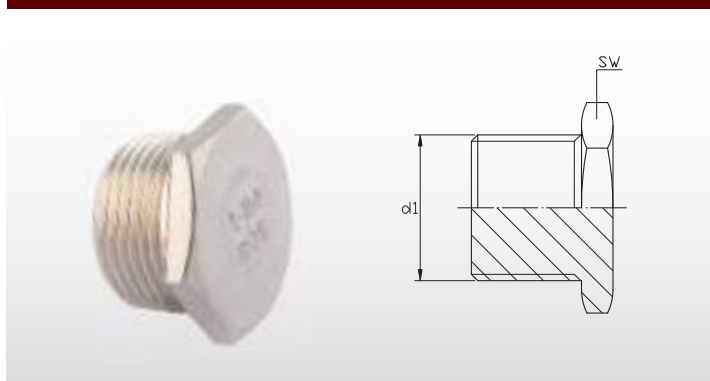
Coupling

NW	d1	d2	L
6	1/8"	14,0 mm	17 mm
8	1/4"	17,0 mm	25 mm
10	3/8"	21,3 mm	26 mm
15	1/2"	26,4 mm	34 mm
20	3/4"	31,8 mm	36 mm
25	1"	39,5 mm	43 mm
32	1 1/4"	48,3 mm	48 mm
40	1 1/2"	54,5 mm	48 mm
50	2"	66,3 mm	56 mm
65	2 1/2"	82,0 mm	66 mm
80	3"	95,0 mm	71 mm
100	4"	122,0 mm	83 mm



Hexagonal head plug

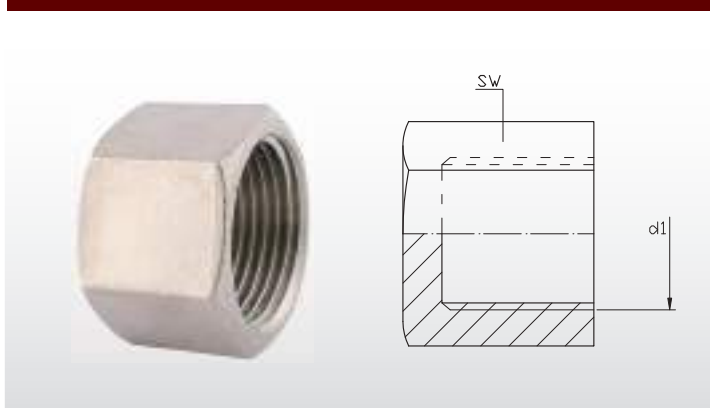
21017



NW	d1	SW
6	1/8"	12 mm
8	1/4"	17 mm
10	3/8"	19 mm
15	1/2"	23 mm
20	3/4"	29 mm
25	1"	36 mm
32	1 1/4"	49 mm
40	1 1/2"	51 mm
50	2"	63 mm
65	2 1/2"	83 mm
80	3"	95 mm
100	4"	120 mm

Hexagonal cap

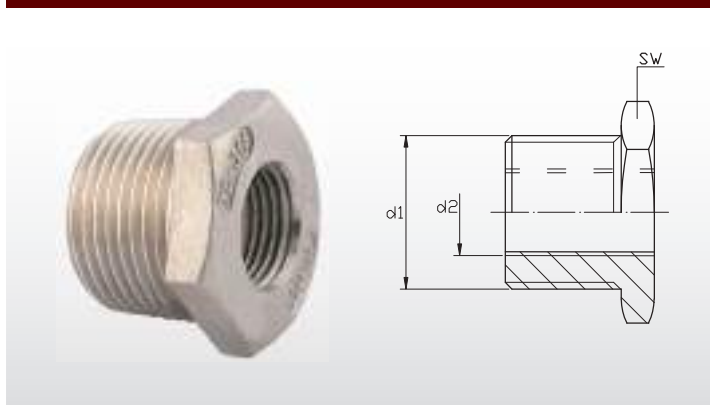
21019



NW	d1	SW
6	1/8"	14 mm
8	1/4"	18 mm
10	3/8"	21 mm
15	1/2"	27 mm
20	3/4"	32 mm
25	1"	39 mm
32	1 1/4"	49 mm
40	1 1/2"	55 mm
50	2"	68 mm
65	2 1/2"	84 mm
80	3"	98 mm
100	4"	125 mm

Hexagonal bushing (female/male)

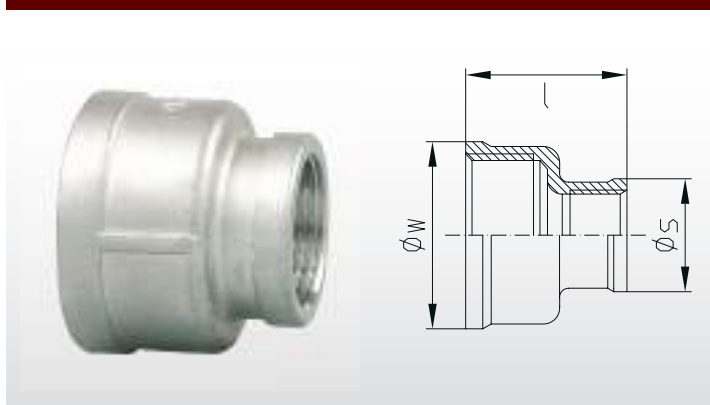
22001



d1-d2	SW	d1-d2	SW
1/4" - 1/8"	21 mm	1 1/4" - 1"	47 mm
3/8" - 1/8"	24 mm	1 1/2" - 3/4"	54 mm
3/8" - 1/4"	24 mm	1 1/2" - 1"	54 mm
1/2" - 1/4"	26 mm	1 1/2" - 1 1/4"	54 mm
1/2" - 3/8"	26 mm	2" - 1"	63 mm
3/4" - 1/4"	32 mm	2" - 1 1/4"	63 mm
3/4" - 3/8"	32 mm	2" - 1 1/2"	63 mm
3/4" - 1/2"	37 mm	2 1/2" - 1 1/4"	87 mm
1" - 3/8"	37 mm	2 1/2" - 1 1/2"	87 mm
1" - 1/2"	37 mm	2 1/2" - 2"	87 mm
1" - 3/4"	37 mm	3" - 1 1/2"	95 mm
1 1/4" - 1/2"	47 mm	3" - 2"	95 mm
1 1/4" - 3/4"	47 mm	2 - 1 1/2"	95 mm

Reducing coupling

22003

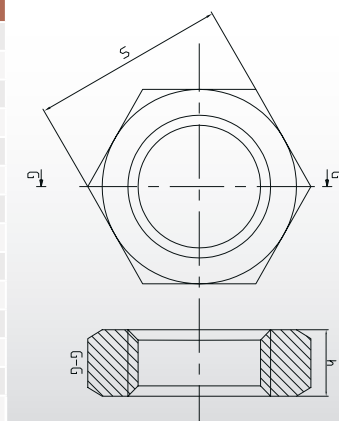


NW	l	w	s
3/8x1/4	30	20	16,5
32,51/2x1/4	32,5	27	17
1/2x3/8	33,5	27	20,5
3/4x1/4	34	32,5	17
3/4x3/8	35,5	32,5	20,5
3/4x1/2	37	32,5	27
1x1/4	37	40,5	17
1x1/2	41	40	26,5
1x3/4	42	40	32,5
1 1/4x1/2	43	50	27
1 1/4x3/4	44	49	32,5
1 1/4x1	45,5	50	40,5

21021

Hexagonal nut DIN 431

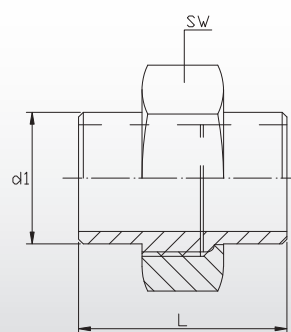
NW	h	s
1/4	6	18
3/8	6	24
1/2	7	30
3/4	7	34
1	9	42,5
1-1/4	11	52
1-1/2	11	58
2	13	72



21023

Flat union (weld/weld)

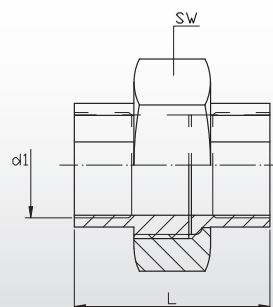
NW	d1	L	SW
6	10,2 mm	39 mm	35 mm
8	13,5 mm	39 mm	35 mm
10	17,2 mm	40 mm	38 mm
15	21,3 mm	41 mm	38 mm
20	26,9 mm	46 mm	49 mm
25	33,7 mm	49 mm	49 mm
32	42,4 mm	53 mm	60 mm
40	48,3 mm	71 mm	70 mm
50	60,3 mm	74 mm	75 mm
65	76,1 mm	85 mm	109 mm
80	88,9 mm	96 mm	125 mm



21025

Flat union (female/female)

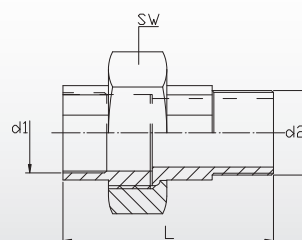
NW	d1	L	SW
6	1/8"	33 mm	31 mm
8	1/4"	45 mm	35 mm
10	3/8"	45 mm	38 mm
15	1/2"	43 mm	42 mm
20	3/4"	46 mm	49 mm
25	1"	51 mm	60 mm
32	1 1/4"	56 mm	70 mm
40	1 1/2"	59 mm	77 mm
50	2"	67 mm	91 mm
65	2 1/2"	83 mm	110 mm
80	3"	97 mm	126 mm



21027

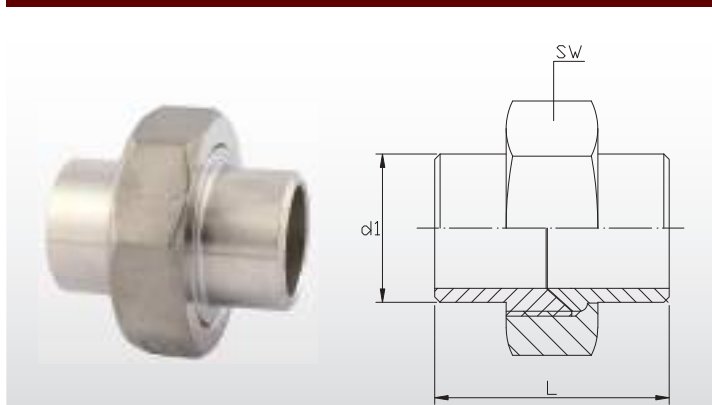
Flat union (female/male)

NW	d1/d2	L	SW
8	1/4"	54 mm	35 mm
10	3/8"	57 mm	40 mm
15	1/2"	55 mm	42 mm
20	3/4"	62 mm	49 mm
25	1"	69 mm	60 mm
32	1 1/4"	78 mm	70 mm
40	1 1/2"	84 mm	76 mm
50	2"	89 mm	91 mm
65	2 1/2"	110 mm	110 mm
80	3"	125 mm	125 mm



Conical union (weld/weld)

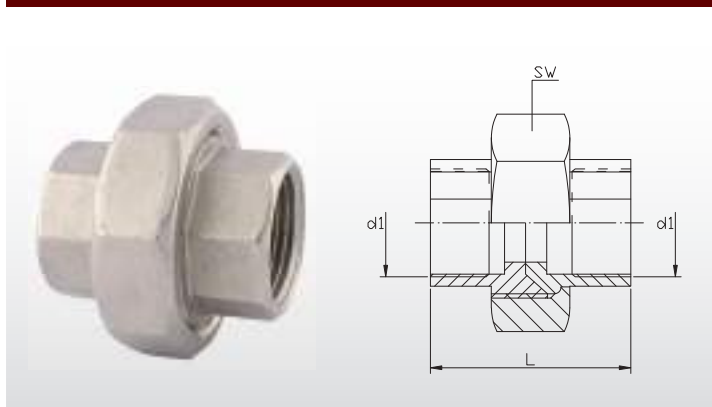
21029



NW	d1	L	SW
6	10,2 mm	39 mm	35 mm
8	13,5 mm	39 mm	35 mm
10	17,2 mm	40 mm	38 mm
15	21,3 mm	41 mm	38 mm
20	26,9 mm	46 mm	49 mm
25	33,7 mm	49 mm	49 mm
32	42,4 mm	53 mm	60 mm
40	48,3 mm	71 mm	70 mm
50	60,3 mm	74 mm	75 mm
65	76,1 mm	85 mm	109 mm
80	88,9 mm	96 mm	125 mm

Conical union (female/female)

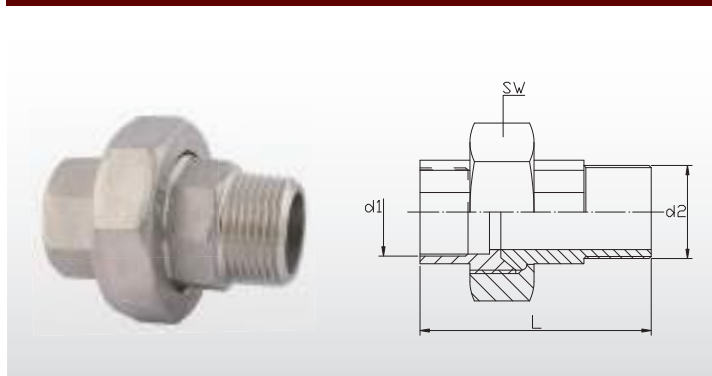
21031



NW	d1	L	SW
6	1/8"	33 mm	31 mm
8	1/4"	45 mm	35 mm
10	3/8"	45 mm	38 mm
15	1/2"	43 mm	42 mm
20	3/4"	46 mm	49 mm
25	1"	51 mm	60 mm
32	1 1/4"	56 mm	70 mm
40	1 1/2"	59 mm	77 mm
50	2"	67 mm	91 mm
65	2 1/2"	83 mm	110 mm
80	3"	97 mm	126 mm

Conical union (female/male)

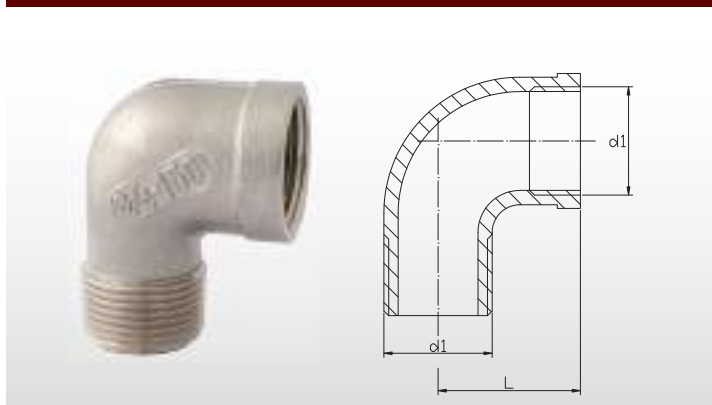
21033



NW	d1/d2	L	SW
8	1/4"	54 mm	35 mm
10	3/8"	57 mm	40 mm
15	1/2"	55 mm	42 mm
20	3/4"	62 mm	49 mm
25	1"	69 mm	60 mm
32	1 1/4"	78 mm	70 mm
40	1 1/2"	84 mm	76 mm
50	2"	89 mm	91 mm
65	2 1/2"	110 mm	110 mm
80	3"	125 mm	125 mm

Street elbow (female/male)

22005

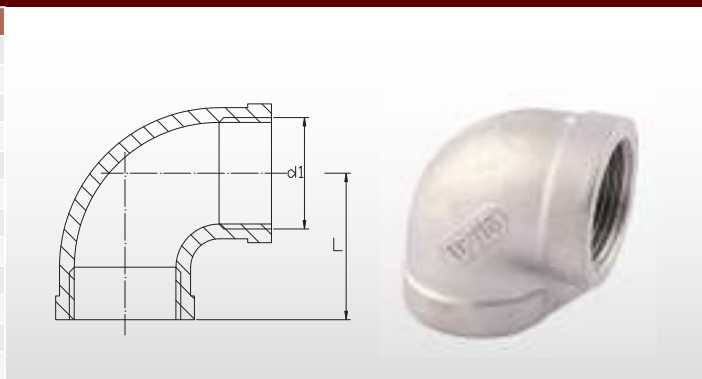


NW	d1	L
6	1/8"	18 mm
8	1/4"	21 mm
10	3/8"	24 mm
15	1/2"	28 mm
20	3/4"	33 mm
25	1"	38 mm
32	1 1/4"	45 mm
40	1 1/2"	49 mm
50	2"	57 mm
65	2 1/2"	68 mm
80	3"	80 mm
100	4"	130 mm

22007

Elbow (female/female)

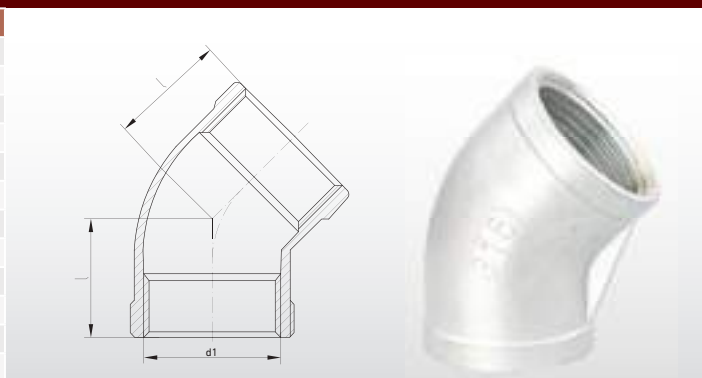
NW	d1	L
6	1/8"	18 mm
8	1/4"	21 mm
10	3/8"	25 mm
15	1/2"	28 mm
20	3/4"	33 mm
25	1"	38 mm
32	1 1/4"	45 mm
40	1 1/2"	50 mm
50	2"	58 mm
65	2 1/2"	70 mm
80	3"	80 mm
100	4"	105 mm



22009

Elbow 45° (female/female)

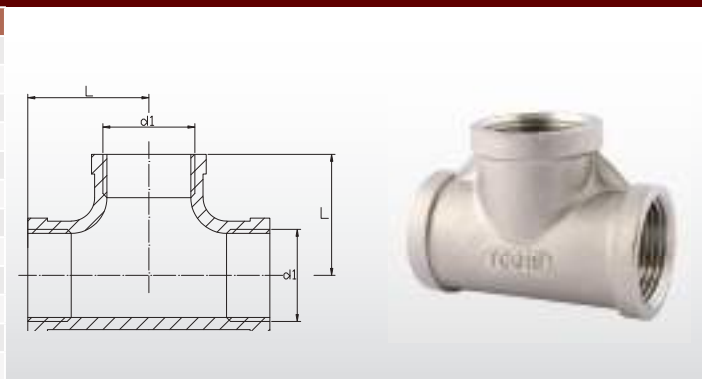
NW	d1	L
6	1/8"	18 mm
8	1/4"	21 mm
10	3/8"	25 mm
15	1/2"	28 mm
20	3/4"	33 mm
25	1"	38 mm
32	1 1/4"	45 mm
40	1 1/2"	50 mm
50	2"	58 mm
65	2 1/2"	70 mm
80	3"	78 mm
100	4"	96 mm



22011

Equal tee

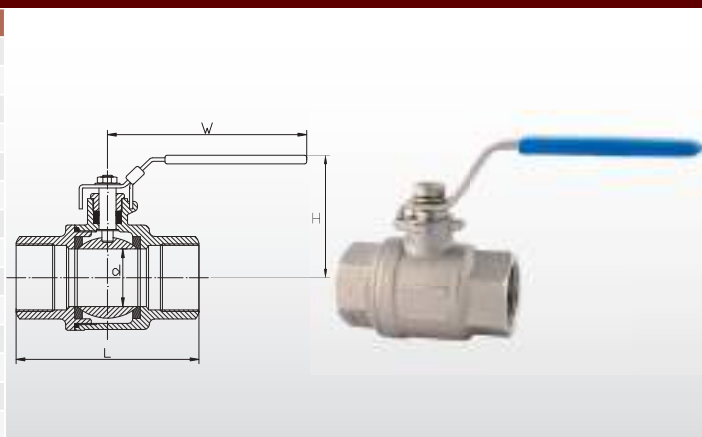
NW	d1	L
6	1/8"	18 mm
8	1/4"	21 mm
10	3/8"	25 mm
15	1/2"	28 mm
20	3/4"	33 mm
25	1"	38 mm
32	1 1/4"	45 mm
40	1 1/2"	50 mm
50	2"	58 mm
65	2 1/2"	70 mm
80	3"	78 mm
100	4"	96 mm



23001

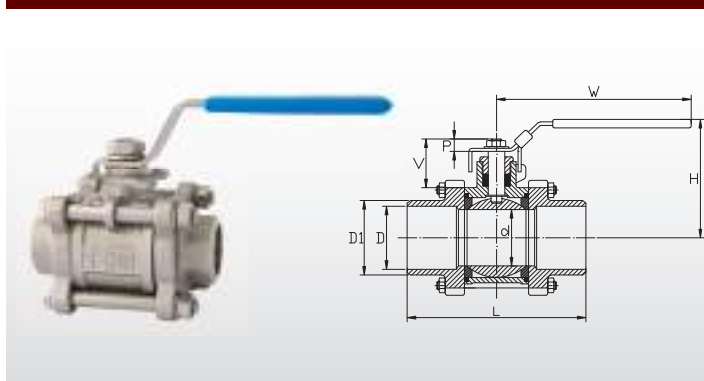
2pcs ball valve

Diameter	d	L	H	W	Weight [kg]
1/4"	10	50,8	64	98	0,21
3/8"	12	50,8	64	98	0,21
1/2"	15	58	66	98	0,32
3/4"	20	65,6	66	125	0,51
1"	25	78,7	80	143	0,91
1 1/4"	32	90	86	143	1,33
1 1/2"	38	105	97	200	2,20
2"	50	124	105	200	3,50
2 1/2"	63	146,2	146	250	6,60
3"	76	163,7	155	250	11,8



3pcs ball valve WLD

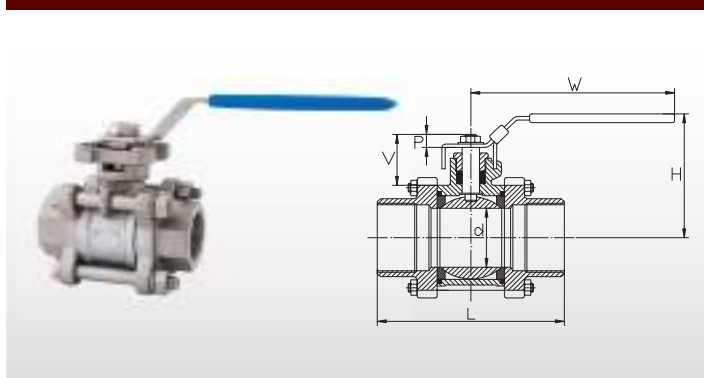
23003



Diameter	d	D	D1	L	H	W	V	P	Weight [kg]
1/4"	11,6	8	12,5	64,5	54	102	29,7	10,5	0,41
3/8"	12,7	12,7	17,5	64,5	54	102	29,7	10,5	0,41
1/2"	15	15	22	66	57	102	30,1	10,5	0,52
3/4"	20	20	27	82,6	66	120,5	36,5	13,5	0,71
1"	25	25	34	95	76	158,5	40,6	15,5	1,08
1 1/4"	32	32	42,5	111,2	81	158,5	41,8	15,5	1,71
1 1/2"	38	38	48,5	130,6	98	188	48,5	17,5	2,35
2"	50	50	61	151	106	188	49,4	17,5	3,55
2 1/2"	65	65	73	185	138	245	72,1	33	8,9
3"	80	80	90	212	154	245	65,6	33	14,3
4"	100	100	115	235	178	320	76,2	42	23,4

3pcs ball valve THD

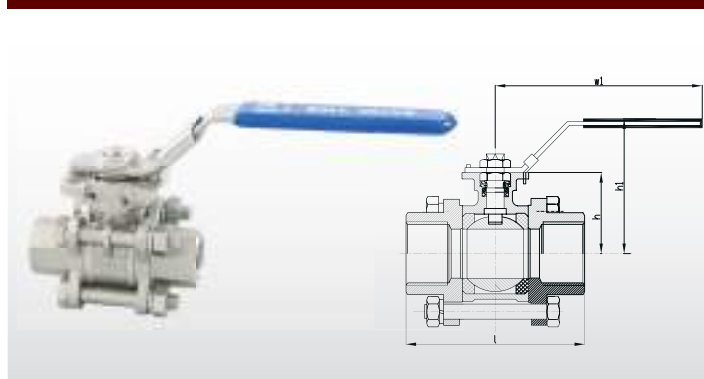
23005



Diameter	d	L	H	W	V	P	Weight [kg]
1/4"	11,6	64,5	54	102	29,7	10,5	0,41
3/8"	12,7	64,5	54	102	29,7	10,5	0,41
1/2"	15	66	57	102	31	10,5	0,52
3/4"	20	83,5	66	120,5	36,5	13,5	0,71
1"	25	95	76	158,5	46	15,5	1,08
1 1/4"	32	111,2	81	158,5	41,8	15,5	1,71
1 1/2"	38	129,8	98	188	48,5	17,5	2,35
2"	50	151	106	188	49,4	17,5	3,55
2 1/2"	65	184	138	245	72,1	33	8,9
3"	80	209	154	245	65,6	33	14,3
4"	100	234,4	178	320	76,2	42	23,4

3pcs ball valve ISO 5211

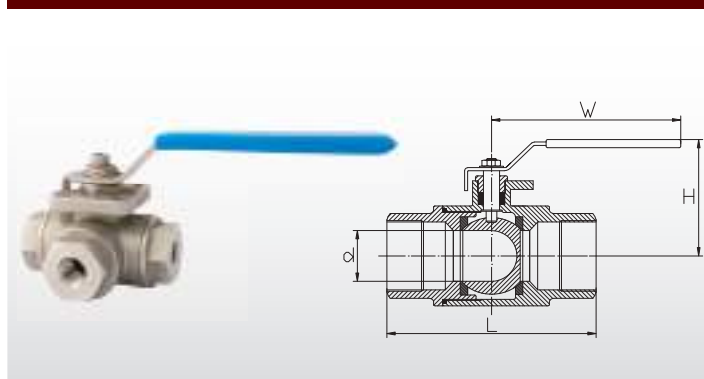
23007



Diameter	l	h	W1	h1	Weight [kg]
1/4"	55	38	146	65	
3/8"	60	38	146	65	
1/2"	75	38	146	65	
3/4"	80	47	146	76	
1"	90	60	168	95	
1 1/4"	110	62,7	168	95	
1 1/2"	120	79	190	115	
2"	140	88	190	124	
2 1/2"	162	109,1	350	140	
3"	184	116,2	350	150	
4"	228	142	350	175	

3-way ball valve

23009

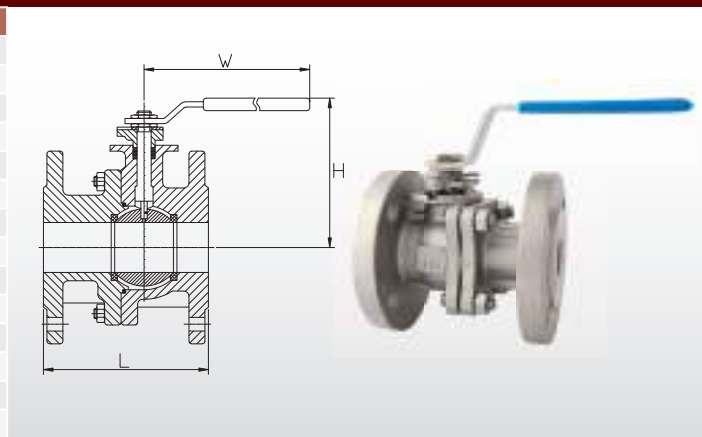


Diameter	d	L	H	W	Weight [kg]
3/8"	12,7	60	56	95	0,4
1/2"	12,7	60	56	95	0,4
3/4"	16	6	64	125	0,7
1"	20	82	66	125	0,9
1 1/4"	25	97	70	145	1,5
1 1/2"	32	114	83	145	2,2
2"	38,1	142	88	205	3,3
Ball type "T" or "L"					

23011

2pcs flanged ball valve

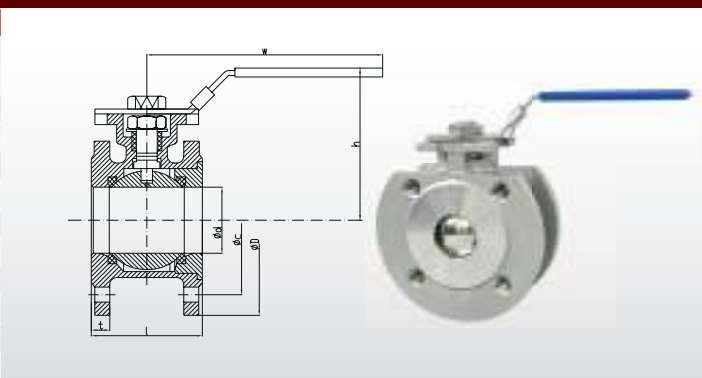
Diameter	L	H	W	Weight [kg]
1/2"	125	74	170	2,70
3/4"	120	77	170	3,10
1"	125	83	170	4,30
1 1/4"	130	88	170	6,20
1 1/2"	140	123	250	8,10
2"	150	132	250	10
2 1/2"	170	154	320	14
3"	180	166	365	18,5
4"	190	182	365	26,6
5"	325	225	500	54
6"	350	240	600	71,3
8"	400	310	700	155
10"	450	325	800	233
12"	500	365	900	b.d.



23013

1pc wafer flanged ball valve

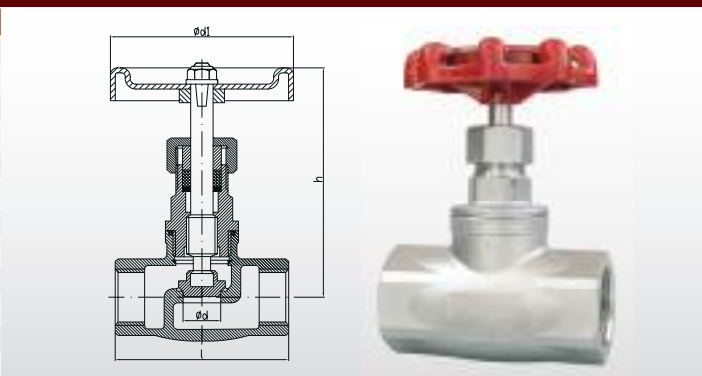
DN	l	ød	øc	øD	t	h	w
15	42	15	65	95	9	81	140
20	44	20	75	105	9	86	140
25	50	25	85	115	9	99	160
32	60	32	100	140	12	109	160
40	65	38	110	150	13	116	185
50	80	50	125	165	20	124	185
65	110	65	145	185	18	148	230
80	120	76	160	200	20	157	230
100	150	94	180	220	20	190	310



24001

Globe valve

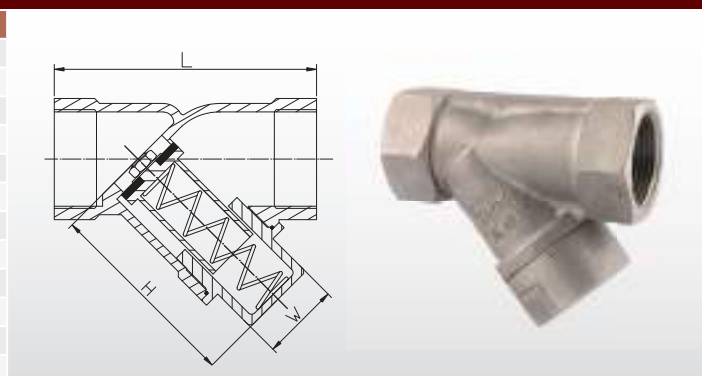
Diameter	d	l	h	d1
1/4"	15	67,5	95	70
3/4"	20	82,5	104	70
1"	25	90	119	80
1 1/4"	32	104	144	100
1 1/2"	38,5	120	152	100
2"	50	140	172	100



24003

Check valve

Diameter	W	H	L	Weight [kg]
1/4"	24	40	65	0,23
3/8"	24	40	65	0,25
1/2"	24	40	65	0,28
3/4"	24	50	75	0,38
1"	34	62	90	0,75
1 1/4"	41	70	110	1,33
1 1/2"	57	85	120	1,75
2"	89	100	150	2,75





13

WELDED FITTINGS



Production

Apart from offering our customers wide-range stainless steel solutions for various industries, we also produce tees according to standards EN 10253-3, crosses and collectors from stainless and acid resistant steel within the size range DN15-DN400 with thickness 1,5 – 3mm. Our leading product is the tee of the EN 10253-3 standard. We have recently improved our production and introduced a passivation process. At our factory in Elbląg in the north of Poland we are able to produce stainless steel tees and crosses, as well as non-typical pipeline elements such as collectors according to individual needs and designs.

EN 10253 Standard - Butt-Welding Fittings

EN 10253-3 and EN 10253-4 standards apply to all kind of stainless and austenitic steel referred to standard EN 10217-7 for welded tubes. There are two fittings types described in EN 10253-3 and EN 10253-4 standards. Type A fittings is characterised by having the same thickness of body wall as well as weld ends. Pressure resistance of these fittings is generally lower, than of section of tubes with the same dimension. Type B fittings is designed with the same pressure as in straight section of tube in the same nominal dimensions. In this type of fittings the thickness of body wall is higher than nominal thickness. Fittings are marked in following way:

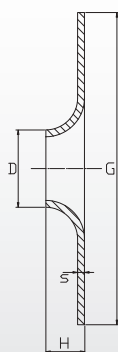
- EN-Standard standard (EN 10253-2/4) and type A or B specification,
- Abbreviated name of the material or its number,
- Type of fittings (bend, tee, reduction, end caps),
- Outer diameter D/D1,
- Wall thickness T/T1,
- Bending radius

PED Directive

Application of Pressure Equipment Directive 97/23/EC (PED) is legally required for all pressure equipment including tubes. PED regulates the way of equipment marking with CE sign, and directive is divided into four categories that depend on pressure, volume, the level of media risk (physical state, combustibility). These categories define which part of PED directive must be taken into the account to cover documentation that confirms equipment compatibility with PED directive. In addition, directive defines basic safety requirements, whereas technical details are governed by harmonised European Standards. In accordance with the European Pressure Equipment Directive (97/23/ EC), as well as other guidelines (e.g., guideline 7/19), seamless fittings are treated as material, whereas welded fittings, including products made out of tubes as components.

Welding collar DIN 2642-PN10

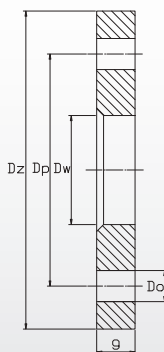
31001



DN	D	G	H	s	Weight [kg]
10	17,2	42,0	6,0	2,0	0,01
15	21,3	47,0	6,0	2,0	0,01
20	26,9	58,0	7,0	2,0	0,04
25	33,7	68,0	9,0	2,0	0,05
32	42,4	78,0	15,0	2,0	0,12
40	48,3	88,0	10,0	2,0	0,08
50	60,3	102,0	12,0	2,0	0,11
65	76,1	122,0	12,0	2,0	0,15
80	88,9	133,0	13,0	2,0	0,19
100	114,3	158,0	13,0	2,0	0,21
125	139,7	184,0	14,0	2,0	0,26
150	168,3	212,0	18,0	2,0	0,34
200	219,1	268,0	22,0	2,0	0,53
250	273,0	320,0	23,0	3,0	0,55
300	323,9	370	24,0	3,0	1,06
350	355,6	430	25,0	3,0	1,55
400	406,4	482	24,0	3,0	1,74
450	457,2	532	32,0	3,0	2,25
500	508	582	45,0	3,0	2,90
600	609,4	685	45,0	3,0	3,50

Aluminium loose flange DIN 2642-PN10

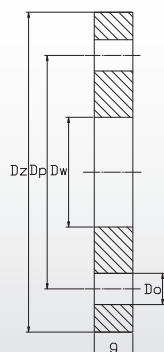
31003



DN	pipe	g	Dz	Dw	Dp	Do	Weight [kg]
10	17,2	12,0	90,0	19,0	60,0	14	0,18
15	21,3	12,0	95,0	24,0	65,0	14	0,19
20	26,9	12,0	105,0	30,0	75,0	14	0,25
25	33,7	12,0	115,0	36,0	85,0	14	0,27
32	42,4	16,0	140,0	46,0	100,0	18	0,56
40	48,3	16,0	150,0	54,0	110,0	18	0,62
50	60,3	16,0	165,0	65,0	125,0	18	0,75
65	76,1	16,0	185,0	81,0	145,0	18	0,90
80	88,9	18,0	200,0	94,0	160,0	18	1,10
100	114,3	18,0	220,0	119,0	180,0	18	1,25
125	139,7	18,0	250,0	144,0	210,0	18	1,60
150	168,3	18,0	285,0	173,0	240,0	22	2,00
200	219,1	20,0	340,0	225,0	295,0	22	2,80
250	273,0	22,0	395,0	279,0	350,0	22	3,80
300	32,9	22,0	445	329	400	22	3,9
350	355,6	22,0	505	362	460	22	5,25
400	406,4	25,0	565	419	515	25	7,2
450	457,2	25,30	615	465	565	25	7,81
500	508	28,0	670	517	620	28	9,6
600	609,6	30,0	780	618	725	30	12,9

Flat flange EN1092-1/01

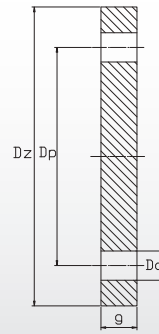
31005



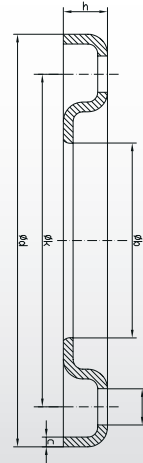
AISI316Ti available from the stock

DN	PN	pipe	g	Dz	Dw	Dp	Do	Weight [kg]
10	10-40	17,2	14,0	90,0	18	60,0	14	0,60
15		21,3	14,0	95,0	22	65,0	14	0,67
20		26,9	16,0	105,0	27,5	75,0	14	0,86
25		33,7	16,0	115,0	34,5	85,0	14	1,10
32		42,4	18,0	140,0	43,5	100,0	18	1,65
40	10-16	48,3	18,0	150,0	49,5	110,0	18	1,86
50		60,3	19,0	165,0	61,5	125,0	18	2,50
65		76,1	20,0	185,0	77,5	145,0	18	3,00
80		88,9	20,0	200,0	90,5	160,0	18	3,79
100		114,3	22,0	220,0	116,0	180,0	18	4,20
125	10	139,7	22,0	250,0	141,5	210,0	18	5,60
150		168,3	24,0	285,0	170,5	240,0	22	6,70
200		219,1	24,0	340,0	221,8	295,0	22	9,30
250		273,0	24,0	395,0	276,5	350,0	22	12,30
300		324,9	26,0	445	327,5	400	22	13,76
350		355,6	28,0	505	359,5	460	22	22,06

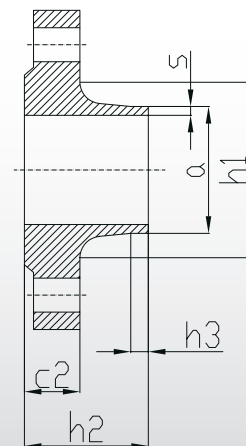
DN	PN	g	Dz	Dp	Do	Weight [kg]
15	10-40	16,0	95	65	14	0,77
20		18,0	105	75	14	1,08
25		18,0	115	85	14	1,3
32		18,0	140	100	18	1,93
40		18,0	150	110	18	2,21
50	10-16	18,0	165	125	18	3,02
65		18,0	185	145	18	4,83
80		20,0	200	160	18	6,28
100		20,0	220	180	18	7,59
125		22,0	250	210	18	8,47
150	10	22,0	285	240	22	11,01
200		24,0	340	295	22	16,7
250		26,0	395	350	22	24,33
300		26,0	445	400	22	31,13
350		26,0	505	460	22	40,04



DN	øb	ød	øk	l	c	h	Weight [kg]
15	21,3	95	65	13,5	3	12	0,30
20	26,9	105	75	13,5	3	14	0,40
25	33,7	115	85	13,5	3	16	0,50
32	42,4	140	100	17,5	3	16	0,50
40	48,3	150	110	18	4	17,5	0,60
50	60,3	135	125	18	4	19,5	0,60
65	76,1	185	145	18	4	21	0,60
80	88,9	200	160	18	4	21	1,00
100	114,3	200	180	18	4	22	1,20
125	139,7	250	210	18	5	22	1,60
150	168,3	285	240	22	5	26	2,20
200	219,1	340	295	22	6	28	3,40
250	273,0	395	350	22	6	31	4,00
300	323,9	445	400	22	6	34	5,00
350	355,6	505	460	22	8	36	6,10
400	406,4	565	515	26	8	38	7,40
450	457,2	615	565	26	8	40	9,70
500	508,0	670	620	26	8	40	12,10

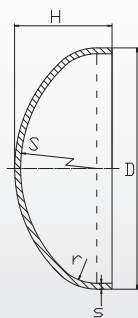


DN	a	c2	h1	h2	h3	s	Weight [kg]
10	17,2	16	22	38	6	1,8	0,70
15	21,3	16	22	38	6	2	0,80
20	26,9	18	26	40	6	2,3	1,00
25	33,7	18	28	40	6	2,6	1,30
32	42,4	18	30	42	6	2,6	1,80
40	48,3	18	32	45	7	2,6	2,20
50	60,3	18	28	45	8	2,9	2,40
65	76,1	18	32	45	10	2,9	3,00
80	88,9	20	34	50	10	3,2	3,80
100	114,3	20	40	52	12	3,6	4,40
125	139,7	22	44	55	12	4,0	5,90
150	168,3	22	44	55	12	4,5	7,40
200	219,1	24	44	62	16	5,9	10,90
250	273	26	46	68	16	6,3	15,00
300	323,9	26	48	68	16	7,1	22,20



End cap

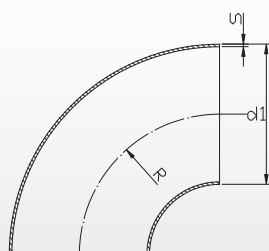
32001



DN	D	H	S	Weight [kg]
15	21,3	14,5	2,0/3,0	0,02/0,02
20	26,9	10,5	2,0/3,0	0,02/0,02
25	33,7	12,5	2,0/3,0	0,03/0,03
32	42,4	17	2,0/3,0	0,04/0,06
40	48,3	17	2,0/3,0	0,05/0,08
50	60,3	20	2,0/3,0	0,07/0,11
65	76,1	27	2,0/3,0	0,13/0,19
80	88,9	29	2,0/3,0	0,16/0,24
90	101,6	26	2,0/3,0	0,18/0,28
100	114,3	32	2,0/3,0	0,24/0,36
125	139,7	35	2,0/3,0	0,37/0,53
150	168,3	40	2,0/3,0	0,51/0,77
250	219,1	50	2,0/3,0	0,84/1,27
300	323,9	99	2,0/3,0	1,8/2,70
350	355,6	106	3,0	3,80
400	406,4	120	3,0	5,00
450	457,2	125	3,0	6,10
500	508	130	3,0	7,60
600	609,6	140	3,0	10,60

Bend

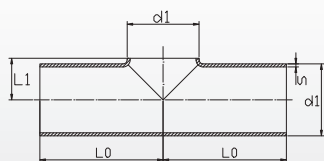
32003



DN	d1	R	s	Weight [kg]
10	17,2	28,5	2,0	0,03
15	21,3	28	2,0/3,0	0,04/0,06
20	26,9	29	2,0/3,0	0,05/0,08
25	33,7	38	2,0/3,0	0,09/0,13
32	42,4	48	2,0/3,0	0,15/0,22
40	48,3	57	2,0/3,0	0,20/0,30
50	60,3	76	2,0/3,0	0,34/0,51
65	76,1	95	2,0/3,0	0,55/0,82
80	88,9	114	2,0/3,0	0,78/1,16
100	114,3	152	2,0/3,0	1,34/2,00
125	139,7	190	2,0/3,0	2,06/3,07
150	168,3	229	2,0/3,0	2,99/4,46
200	219,1	305	2,0/3,0	5,20/7,77
250	273,0	381	2,0/3,0	8,11/12,13
300	323,8	457	3,0	17,3
350	355,6	533	3,0	22,2
400	406,4	610	3,0	36,8

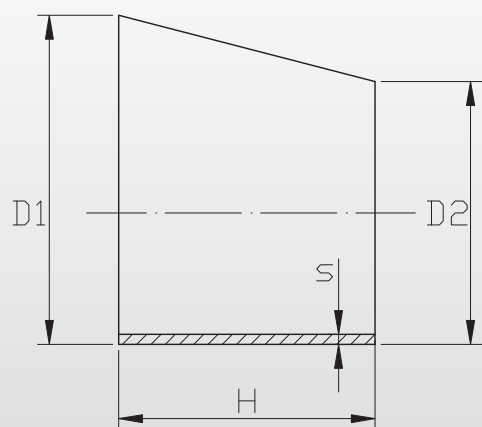
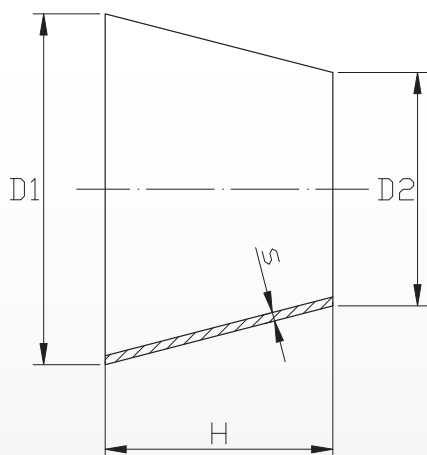
Welding tee short

32005



DN	d1	L1	L0	S	Weight [kg]
15	21,3	12	25,5	2,0	0,04
20	26,9	15	28,5	2,0	0,06
25	33,7	19	38	2,0/3,0	0,10/0,15
32	42,4	24	47,5	2,0/3,0	0,17/0,26
40	48,3	26	57	2,0/3,0	0,24/0,35
50	60,3	34	63,5	2,0/3,0	0,34/0,50
65	76,1	42	76	2,0/3,0	0,53/0,75
80	88,9	48,5	85,5	2,0/3,0	0,67/0,97
100	114,3	63	105	2,0/3,0	1,09/1,64
125	139,7	76	124	2,0/3,0	1,51/2,25
150	168,3	92	142	2,0/3,0	2,12/3,13
200	219,1	122	179	2,0/3,0	3,37/4,90
250	273,0	151	216,5	3,0	7,51
300	323,9	177	254	3,0	10,40
350	355,6	195	279	3,0	12,80
400	406,4	223	305	3,0	16,30

AISI321/AISI316Ti available from stock



DN	D1	D2	H	s	Weight [kg]
10/6	17,2	13,7	26	2,0	0,02
15/8	21,3	13,7	28	2,0	0,02
15/10	21,3	17,2	28	2,0	0,02
20/15	26,9	21,3	38	2,0	0,04
25/15	33,7	21,3	51	2,0/3,0	0,07/0,10
25/20	33,7	26,9	51	2,0/3,0	0,07/0,11
32/20	42,4	26,9	51	2,0/3,0	0,08/0,13
32/25	42,4	33,7	51	2,0/3,0	0,09/0,14
40/20	48,3	26,9	64	2,0/3,0	0,12/0,18
40/25	48,3	33,7	64	2,0/3,0	0,13/0,19
40/32	48,3	42,4	64	2,0/3,0	0,14/0,21
50/25	60,3	33,7	76	2,0/3,0	0,17/0,26
50/32	60,3	42,4	76	2,0/3,0	0,19/0,29
50/40	60,3	48,3	76	2,0/3,0	0,20/0,31
65/40	76,1	48,3	89	2,0/3,0	0,27/0,41
65/50	76,1	60,3	89	2,0/3,0	0,30/0,45
80/50	88,9	60,3	89	2,0/3,0	0,33/0,50
80/65	88,9	76,1	89	2,0/3,0	0,36/0,55
100/65	114,3	76,1	102	2,0/3,0	0,48/0,73
100/80	114,3	88,9	102	2,0/3,0	0,52/0,78
125/80	139,7	88,9	127	2,0/3,0	0,72/1,09
125/100	139,7	114,3	127	2,0/3,0	0,81/1,21
150/100	168,3	114,3	140	2,0/3,0	0,99/1,49
150/125	168,3	139,7	140	2,0/3,0	1,08/1,62
200/125	219,1	139,7	152	2,0/3,0	1,37/2,05
200/150	219,1	168,3	152	2,0/3,0	1,47/2,21
250/150	273,0	168,3	178	2,0/3,0	1,97/2,96
250/200	273,0	219,1	178	2,0/3,0	2,20/3,30
250/150	273,0	168,3	178	3,0	3,00
300/200	323,9	219,1	203	3,0	3,30
300/250	323,9	273,3	203	3,0	4,60
350/200	355,6	219,1	330	3,0	7,00
350/250	355,6	273,3	330	3,0	7,70

4

INDUSTRIAL VALVES



We are authorized distributor of:

- ▶ End Armaturen GmbH
- ▶ End Automation GmbH
- ▶ Watergates GmbH



Brands we represent are European industry leaders who are well known from high German reliability, outstanding quality and competitive price.

A management systems are established by our suppliers, including DIN EN ISO and 14001.

All offered products have hygienic certificates issued by the National Institute of Hygiene and meet pressure and controlling explosive atmosphere requirements (PED 97/23/EG, ATEX 94/9/EG) and are marked with CE sign.

We supply products to applications within numerous industries:

- ▶ Chemical Industry

▶ Petrochemical Industry

▶ Pulp and Paper Industry

▶ Car Industry

▶ Pharmaceutical Industry

▶ Food Industry
- ▶ Shipbuilding Industry

▶ Mining Industry

▶ Steel Mill / Metallurgy Industry

▶ Heating Industry

▶ Industrial Water Treatments (Sewage Farms)

Type	Media					Recognition criteria				
	without foreign bodies	with crystallizing particulate matter	viscous liquid	gas	Flow-rate coefficient (Kv)	Adjustment possibility	Position indicator	cleaning possibility	vacuum-tight	pressure-shock resistant
Ball valve	+	0	+/-	+	++	0	+	+	+	+
Diaphragm valve	+	+	+	0	0	+	+	-	0	0
Butterfly valve	+	+/0	+	+	+	+/0	+	-	0	-
Solenoid valve	+	-/0	-/0	+/0	-	-	0	-	-/0	-
Globe valve	+	0	+	0	-	+	+	-	-	-
Knife gate valve	+	0	+	+/0	+	+/0	+	0	+/0	0

“+”

recommended

“-”

not recommended

“0”

conditionally suitable

Butterfly valves

DIAMETER RANGE	from DN 40 to DN 600
DESIGN	between flanges with threaded holes
BODY	one-piece, stainless steel, cast iron, aluminium
DISC	stainless steel, cast iron
GASKET	EPDM, NBR, FKM, neoprene, silicon, natural rubber
DRIVE	hand lever, worm gear, pneumatic, electric

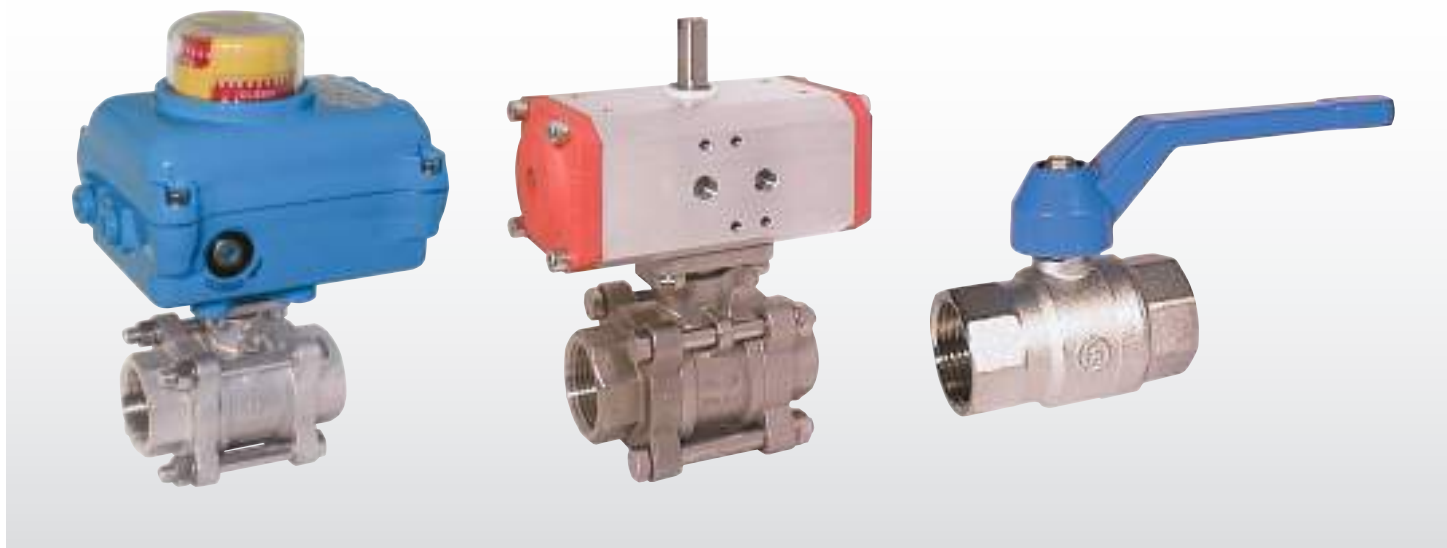


Butterfly valves

DIAMETER RANGE	from DN 50 to DN 400
DESIGN	between flanges
BODY	two-piece, stainless steel, cast iron
DISC	stainless steel or PTFE lined stainless steel
GASKET	PTFE
DRIVE	hand lever, worm gear, pneumatic, electric



DIAMETER RANGE	from DN 10 to DN 100
CONNECTIONS	female thread, welded
BODY	one-, two-, three-piece, stainless steel, cast steel, cast iron
BALL	stainless steel
GASKET	PTFE or PTFE/fibreglass
DRIVE	hand lever, pneumatic, electric
SPECIAL DESIGN	without dead spaces, compensation vent, high pressure, antistatic, manual self-closing, Female/male thread, NPT thread, orbital weld, oils and fats free, ATEX



Flanged ball valves

DIAMETER RANGE	from DN 15 to DN 200
BODY	two-piece or compact, stainless steel, cast iron, carbon steel
BALL	stainless steel, brass-chrome
GASKET	PTFE or PTFE/fibreglass, PTFE/graphite
DRIVE	hand lever, worm gear, pneumatic, electric
SPECIAL DESIGN	fire safe, without dead spaces, antistatic, ATEX, oils and fats free, with heating jacket, approved in accordance with DVGW



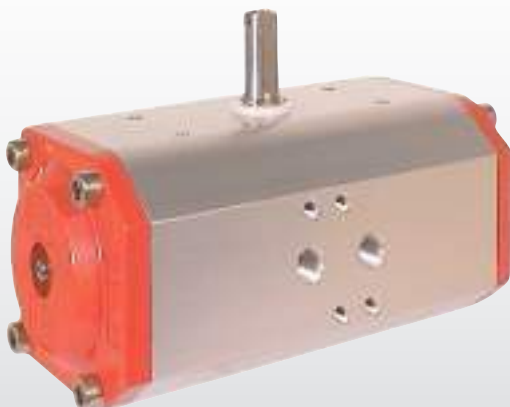
Three-way ball valve

DIAMETER RANGE	from DN 15 to DN 100
CONNECTIONS	female thread, welded, flanged
BODY	stainless steel, cast iron, carbon steel
BALL	stainless steel, "T" or "L" flow
GASKET	PTFE, PTFE/fibreglass
DRIVE	hand lever, pneumatic, electric
SPECIAL DESIGN	antistatic ATEX



Pneumatic actuators

TORQUE RANGE	from 1,7 Nm to 580 Nm
OPERATION	90°, double acting or single acting (spring to close)
REGULATING PRESSURE	from 2 to 10 bar
BODY	anodised aluminium alloy
ADDITIONAL EQUIPMENT	5/2 or 3/2 way steering electrovalves, optical position indicator, electropneumatic position indicator 4...20mA, limit-switches



Electric actuators

TORQUE RANGE	from 20 Nm to 2500 Nm
OPERATION	90°, (180° on order)
ELECTRICAL POWER	230V, 400V AC three phase or 240 DC/AC
PROTECTION DEGREE	IP 67 or IP 68
BODY	aluminium alloy
STANDARD EQUIPMENT	Manual emergency mode, 2 torque switches (not applicable for NE05....NE09) 2 limit switches, thermal protection, anti-condensation heating, optical position indicator (NE05 with 4 additional LED diodes)
ADDITIONAL EQUIPMENT	position indicator 4...20mA, position transmitter 4...20mA, 2 limit switches, 2 torque switches, potentiometer 1kΩ



Knife gate valves

DIAMETER RANGE	from DN 50 to DN 1200
DESIGN	between flanges
BODY	one-piece, stainless steel, cast iron
BLADE	stainless steel
GASKET	EPDM, NBR, FKM, PTFE, metal/metal
GLAND	two PTFE coated natural fibre layers, one NBR layer
DRIVE	hand wheel, hand lever, pneumatic, electric
FLOW DIRECTION	one-way, two-way on request



Wafer non-return valves

DIAMETER RANGE	from DN 32 to DN 400
DESIGN	between flanges
BODY	acid-resistant stainless steel, galvanized carbon steel
DISC	acid-resistant stainless steel, galvanized carbon steel (with spring on order)
GASKET	EPDM, FKM, PTFE

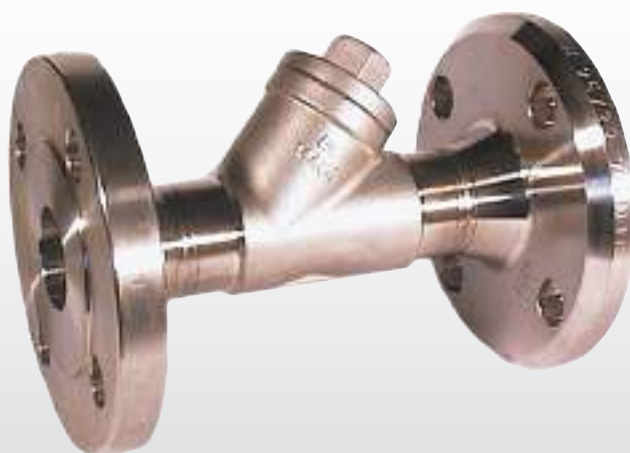


Wafer non-return valves

DIAMETER RANGE	from DN 15 to DN 200
DESIGN	between flanges
BODY	stainless steel, bronze, PP or PTFE
DISC	stainless steel
GASKET	EPDM, NBR, FKM, PTFE, metal/metal



DIAMETER RANGE	from DN 15 to DN 80
CONNECTIONS	female thread, welded, flanged
BODY	stainless steel 1.4408
INTERNAL PARTS	stainless steel 1.4571
GASKET	PTFE, EPDM, FKM



DIAMETER RANGE	from DN 8 to DN 200
DESIGN	straight, skew
CONNECTIONS	female thread, welded, flanged
BODY	stainless steel, cast iron, brass, bronze
DRIVE	hand lever, pneumatic, electric



Electromagnetic valves

DIAMETER RANGE	from DN 8 to DN 250
DESIGN	2/2 way or 3/2 way
CONNECTIONS	female thread, welded, flanged
BODY	stainless steel, cast iron, brass
POWER SUPPLY	AC-24, 42, 110, 230V 50Hz, DC-24, 110, 207V
PROTECTION DEGREE	IP65



Spill valves

DIAMETER RANGE	½" – 3"
CONNECTIONS	female thread, welded, flanged
BODY	stainless steel 1.4408
INTERNAL PARTS	stainless steel 1.4404, 1.4571, 1.4301
GASKET	PTFE, FKM
DESIGN	Overflow valves with opening pressure, exceeding of pressure opens the valve



DIAMETER RANGE	from DN 40 to DN 200
CONNECTIONS	female thread, flanged
BODY	Aluminium alloy
STEERING	air or water (1,5-2 bar above operating pressure of the media)
GASKET	natural rubber



Additionally, we offer:

- Wafer type double flap check valve
- Diaphragm valves
- Coaxial valves
- Needle valves
- Wedge valves
- Strainers
- Sight glasses
- Pressure regulators
- Safety valves
- Pressure gauges (analog and digital)
- Thermometers and thermostats
- Flow meters



5

**TUBES,
BARS AND SHEETS**

Chemical composition of stainless steel

AISI	DIN	PN	C	Si	Mn	Cr	Ni	Mo
304	1.4301	0H18N9	0,04	1	2	18,5	9	-
304L	1.4306	00H18N10	0,02	1	2	18,5	10,5	-
321	1.4541	1H18N9T	0,1	1	2	19	10	-
316	1.4401	-	0,04	1	2	17	11	2,2
316L	1.4404	00H17N14M2	0,02	1	2	17	11,5	2,2
316Ti	1.4571	H17N13M2T	0,04	1	2	17	11	-



Tubes' nominal size:

DN	EN 10357	SMS	CAL	ISO
6			1/8"	10 mm
8			1/4"	13,50 mm
10	12 mm		3/8"	17,20 mm
15	18 mm		1/2"	21,30 mm
20	22 mm		3/4"	26,90 mm
25	28 (29) mm	25 mm	1"	33,70 mm
32	34 (35) mm	32 mm	1 1/4"	42,40 mm
40	40 (41) mm	38 mm	1 1/2"	48,30 mm
50	52 (53) mm	51 mm	2"	60,30 mm
65	70 mm	63,50 mm	2 1/2"	76,10 mm
80	85 mm	76,10 mm	3"	88,90 mm
100	104 mm	101,60 mm	4"	114,30 mm
125	129 mm		5"	139,70 mm
150	154 mm		6"	168,30 mm
200	204 mm		8"	219,10 mm
250	254 mm		10"	273,00 mm

Tubes for the food industry

Welded tubes made according to EN 10357. Tolerance with accordance with EN 1127, certificate according to EN 10204/3.1

Heat treatment	Surface quality		Version
	inside	outside	
annealed	Ra < 0,8 µm Ra < 1,6 µm – for the weld	blank	BC
unannealed			CC
annealed		grinded K400	BD
unannealed			CD





Square and rectangular profiles

High Frequency (HF) welding with certification according to EN 10204/3.1 standard

Square profiles

dimensions	weight kg/m	dimensions	weight kg/m	dimensions	weight kg/m
10x10x1,0	0,294	35x35x1,5	1,618	80x80x2,0	5,003
15x15x1,0	0,453	35x35x2,0	2,132	80x80x3,0	7,430
15x15x1,5	0,661	40x40x1,5	1,857	100x100x2,0	6,279
20x20x1,0	0,613	40x40x2,0	2,451	100x100x3,0	9,343
20x20x1,5	0,900	40x40x3,0	3,602	100x100x4,0	12,416
20x20x2,0	1,175	50x50x1,5	2,336	120x120x2,0	7,556
25x25x1,5	1,140	50x50x2,0	3,089	120x120x3,0	11,259
25x25x2,0	1,494	50x50x3,0	4,559	150x150x3,0	14,128
30x30x1,5	1,397	60x60x2,0	3,737	150x150x4,0	18,728
30x30x2,0	1,813	60x60x3,0	5,516		

Rectangular profiles

dimensions	weight kg/m	dimensions	weight kg/m	dimensions	weight kg/m
20x10x1,5	0,661	50x40x2,0	2,770	80x60x3,0	6,473
25x15x1,5	0,900	60x30x1,5	2,097	100x50x2,0	4,657
35x15x1,5	1,048	60x30x2,0	2,770	100x50x3,0	6,952
30x20x1,5	1,140	60x40x2,0	3,089	100x60x2,0	5,000
40x20x2,0	1,813	60x40x3,0	4,559	100x60x3,0	7,430
40x20x3,0	2,646	80x40x1,5	2,814	120x60x3,0	8,387
50x20x1,5	1,618	80x40x2,0	3,727	120x80x3,0	9,343
55x25x2,0	2,292	80x40x3,0	5,516	150x100x4,0	15,520
50x30x2,0	2,451	80x60x2,0	4,365	200x100x4,0	18,620

Round Bars

Cold drawn bars with smooth and matt surface.
Made in accordance with EN 10278 with tolerance h9.

Rolled bars according EN 10060.
Certificate according to EN 10204/3.1.
Trade lengths 4-6 m.



diameter	weight kg/m	diameter	weight kg/m	diameter	weight kg/m
3	0,06	14	1,21	32	6,31
4	0,10	16	1,58	35	7,55
5	0,15	18	2,00	40	9,86
6	0,22	20	2,47	45	12,48
7	0,30	22	2,98	50	15,41
8	0,39	24	3,55	55	18,65
9	0,50	25	3,85	60	22,20
10	0,62	28	4,83	70	30,21
12	0,89	30	5,55	80	39,46

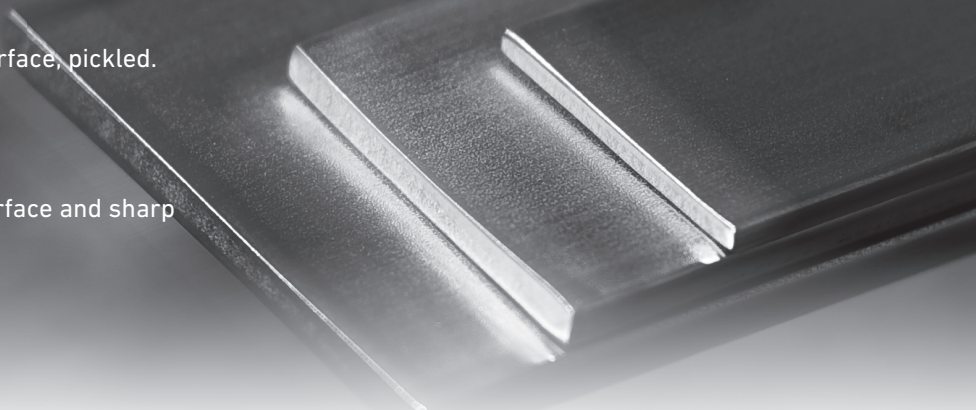
Flat bars

Flat bars cut from the sheet metal coil with smooth, matt surface.
Certificate according to EN 10204/3.1.

Hot-rolled flat bars with slightly rough surface, pickled.
Made in accordance with EN 10058.
Certificate according to EN 10204/3.1.

Cold drawn flat bars with very smooth surface and sharp edges, pickled.

Made in accordance with EN 10278.
Certificate according to EN 10204/3.1.



dimensions	weight kg/m	dimensions	weight kg/m	dimensions	weight kg/m
15x4,0	0,35	30x3,0	0,70	50x4,0	1,57
15x5,0	0,59	30x4,0	0,95	50x5,0	1,96
20x3,0	0,47	30x5,0	1,18	50x8,0	3,14
20x4,0	0,63	30x6,0	1,41	60x4,0	1,88
20x6,0	0,94	35x4,0	1,10	60x6,0	2,83
25x4,0	0,79	35x5,0	1,37	80x5,0	3,14
25x5,0	0,98	35x8,0	2,20	100x5,0	3,92
25x6,0	1,18	40x3,0	0,94	100x8,0	6,28
25x8,0	1,57	40x4,0	1,26	120x10,0	7,85

Angle bars

Hot rolled angle bars with slightly rough surface, pickled, annealed.

Made in accordance with the EN 10056,
Certificate according to EN 10204/3.1.



dimensions	weight kg/m	dimensions	weight kg/m
20x20x3,0	0,88	50x50x5,0	3,77
25x25,3,0	1,12	50x50x6,0	4,47
30x30x3,0	1,36	50x50x8,0	5,82
35x35x4,0	1,78	80x80x8,0	9,66
40x40x3,0	1,82	100x100x8,0	12,40
40x40x4,0	2,42	100x100x10	15,20
40x40x5,0	2,97	120x120x10	18,10

Metal sheets

Cold-rolled sheets made in accordance with EN 10259, annealed, pickled, with thickness from 0,4mm to 5,0mm and smooth, sheen surface.

Certificate according to EN 10204/3.1.

Hot rolled metal sheets, made in accordance with EN 10029 annealed, pickled with matt, slightly rough surface and thickness from 3 mm to 60 mm.

Certificate according to EN 10204/3.1.



Marking		description	roughness [μm]
DIN	ASTM		
III (n)	2B	cold-rolled, annealed, pickled, smooth, matt	0,1 – 0,9
III d (m)	BA	cold-rolled, annealed, pickled, smooth with mirror shine	0,05 – 0,1
IV (p0)	4N	cold-rolled, annealed, pickled, ground K320	0,2 – 1,5
	3N	cold-rolled, ground K320	0,2 – 1,5
IIa	DB	cold-rolled, brushed	0,15 – 0,6
	1	hot-rolled, annealed, pickled with matt, rough surface	4,0 – 7,0

Products available for individual order:

Tee bars, double tee bars, channel bars.

Notes

Notes

Notes

