

DIN 11853-2

Stainless steel fittings for the food and chemical industry –Part 2: Hygienic flanged pipe connection, short type.

Materials

BeFlow supply components of DIN 11853-2 in grade 1.4301 and 1.4404 in accordance with DIN EN 10088-1 and -3.

Surface Finish

Surface finish in accordance with DIN 11853-2 Standard hygienic class H3.

Inner and external surface finish

Hygienic class according to DIN 11866		Surface finish	
		Inner surface	External surface
H1	HE1 b	no application	
H2	HE2 b	no application	
H3 a	HE3 b	Ra < 0,80 µm	Ra < 1,60 µm
H4	HE4 b	no application	
H5	HE5 b	no application	

a Standard hygienic class
b Electropolished with an ablation of at least 20 µm

The measurement of roughness Ra is carried out according to DIN EN ISO 4288 on the inner and external surface.

Workpiece edges to the end of the pipe according to DIN ISO 13715: 

Undimensioned workpiece edges are designed burr-free.

Size Range

DN 10 to DN 150

Working Pressure

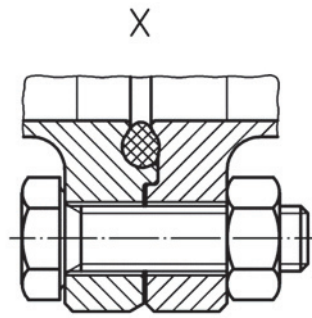
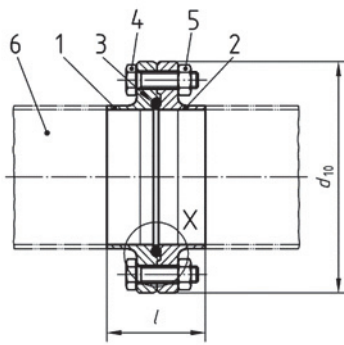
The hygienic flange connections are designed for the following permissible pressures:

Pipe outer diameter	Pressure
12.7mm to 41.0mm	2.5 MPa (25 bar)
42.4mm to 104.0mm	1.6 MPa (16 bar)
114.3mm to 154.0mm	1.0 MPa (10 bar)

These pressures in MPa (bar) can range from -10 °C to +140 °C when using suitable sealing materials.

Pipe Connections

DIN EN 10357; DIN EN ISO 1127; ISO 2037; ASME BPE; DIN 11866



- 1 Nutflansch(NF)
- 2 Bundflansch(BF)
- 3 O-Ring
- 4 Hex head screw
- 5 Hexagon nut
- 6 Tube

Dimensions for hygienic flange connection for associated pipes with dimensions according to DIN 11866, Series A and DIN 11850 Series 2

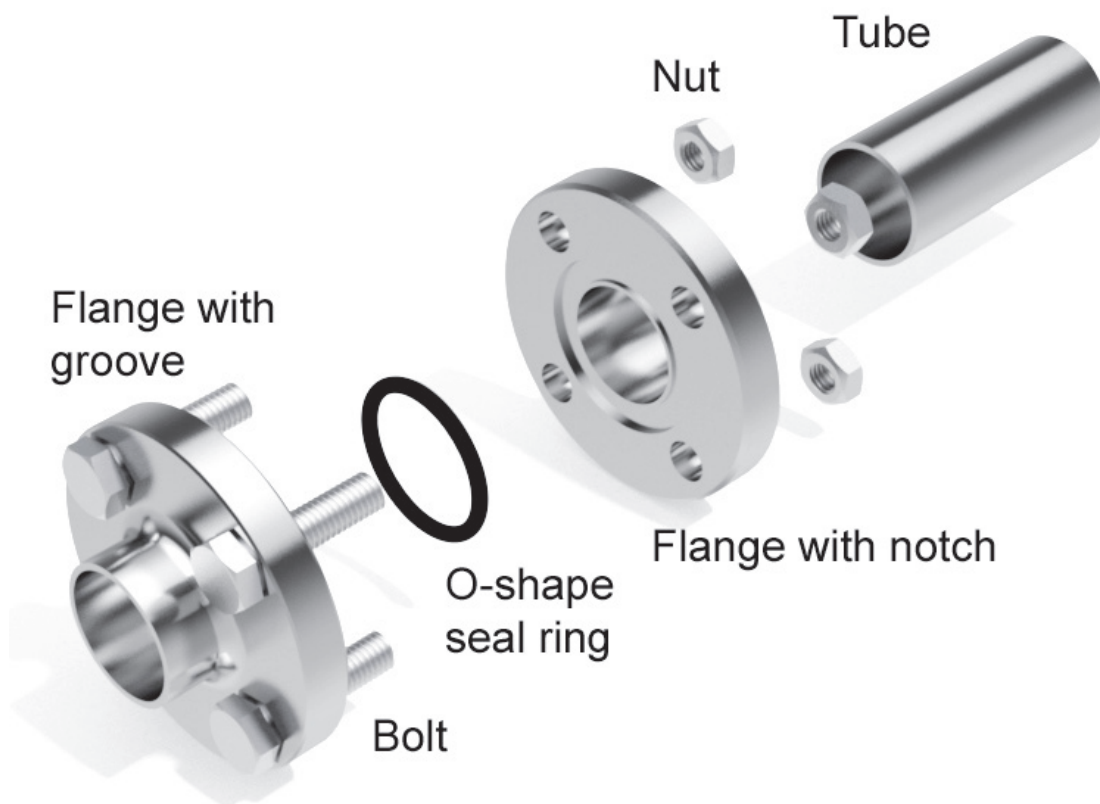
Size DN	<i>d10</i>	<i>l</i>	Hex head screw	Hexagon nut	O-Ring	Related pipe dimensions
10	54	48	4 x M8 x 30	4 x M8	12 x 3.5	13 x 1.5
15	59				18 x 3.5	19 x 1.5
20	64				22 x 3.5	23 x 1.5
25	70				28 x 3.5	29 x 1.5
32	76				34 x 5	35 x 1.5
40	82				40 x 5	41 x 1.5
50	94				52 x 5	53 x 1.5
65	113	52	8 x M8 x 30	8 x M8	68 x 5	70 x 2.0
80	133		8 x M10 x 35	8 x M10	83 x 5	85 x 2.0
100	159		8 x M10 x 40		102 x 5	104 x 2.0
125	183	56	8 x M12 x 50	8 x M12	127 x 5	129 x 2.0
150	213				152 x 5	154 x 2.0

Dimensions for hygienic flange connection for pipes with dimensions according to DIN 11866 series B

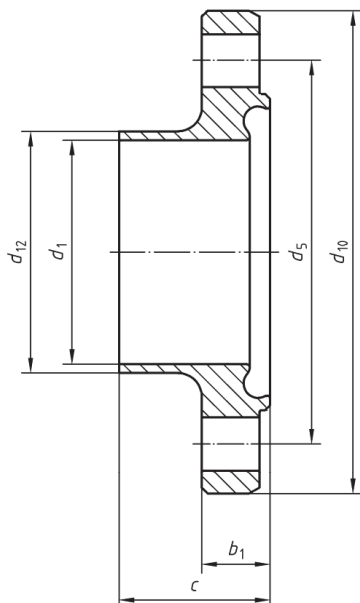
Size DN/ OD	<i>d10</i>	<i>l</i>	Hex head screw	Hexagon nut	O-Ring	Related pipe dimensions
13.5	54	48	4 x M8 x 30	4 x M8	12 x 3.5	13.5 x 1.6
17.2	59				16 x 3.5	17.2 x 1.6
21.3	62				20 x 3.5	21.3 x 1.6
26.9	69				26 x 3.5	26.9 x 1.6
33.7	74				32 x 5	33.7 x 2.0
42.4	82				40.5 x 5	42.4 x 2.0
48.3	88				46.5 x 5	48.3 x 2.0
60.3	103				58.5 x 5	60.3 x 2.0
76.1	125	52	8 x M10 x 30	8 x M10	73.5 x 5	76.1 x 2.0
88.9	137		8 x M10 x 35		86.5 x 5	88.9 x 2.3
114.3	168		111 x 5		114.3 x 2.3	

Dimensions for hygienic flange connection for pipes with dimensions according to DIN 11866 series C

Size DN/ OD	<i>d10</i>	<i>l</i>	Hex head screw	Hexagon nut	O-Ring	Related pipe dimensions
1/2"	54	48	4 x M8 x 30	4 x M8	12 x 3.5	12.7 x 1.65
3/4"	59				18 x 3.5	19.05 x 1.65
1"	66				24 x 3.5	25.4 x 1.65
1 1/2"	79				37 x 5	38.1 x 1.65
2"	92				50 x 5	50.8 x 1.65
2 1/2"	107				8 x M8 x 30	8 x M8
3"	125	52	8 x M10 x 30	8 x M10	75 x 5	76.2 x 1.65
4"	157		8 x M10 x 35		100 x 5	101.6 x 2.11



Dimensions of hygienic **nutflansch(NF)** for pipes with dimensions according to DIN 11866 series A and DIN 11850 series 2



Size DN	Related pipe dimensions	d_{12}	d_1	d_5	d_{10}	c	b_1
10	13 x 1.5	13	10	37	54	25.5	11.5
15	19 x 1.5	19	16	42	59	25.5	11.5
20	23 x 1.5	23	20	47	64	25.5	11.5
25	29 x 1.5	29	26	53	70	25.5	11.5
32	35 x 1.5	35	32	59	76	25.5	11.5
40	41 x 1.5	41	38	65	82	25.5	11.5
50	53 x 1.5	53	50	77	94	25.5	11.5
65	70 x 2.0	70	66	95	113	25.5	11.5
80	85 x 2.0	85	81	112	133	27.5	13.5
100	104 x 2.0	104	100	137	159	27.5	15.5
125	129 x 2.0	129	125	161	183	29.5	15.5
150	154 x 2.0	154	150	188	213	29.5	17.5

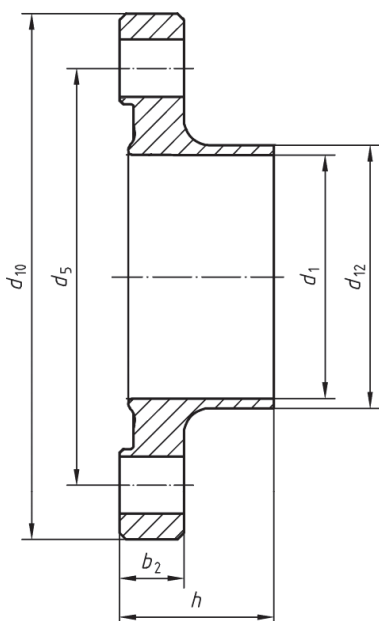
Dimensions of hygienic **nutflansch(NF)** for pipes with dimensions according to DIN 11866 series B

Size DN/OD	Related pipe dimensions	d_{12}	d_1	d_5	d_{10}	c	b_1
13.5	13.5 x 1.6	13.5	10.3	37	54	25.5	11.5
17.2	17.2 x 1.6	17.2	14.0	42	59	25.5	11.5
21.3	21.3 x 1.6	21.3	18.1	45	62	25.5	11.5
26.9	26.9 x 1.6	26.9	23.7	52	69	25.5	11.5
33.7	33.7 x 2.0	33.7	29.7	57	74	25.5	11.5
42.4	42.4 x 2.0	42.4	38.4	65	82	25.5	11.5
48.3	48.3 x 2.0	48.3	44.3	71	88	25.5	11.5
60.3	60.3 x 2.0	60.3	56.3	85	103	25.5	11.5
76.1	76.1 x 2.0	76.1	72.1	104	125	25.5	13.5
88.9	88.9 x 2.3	88.9	84.3	116	137	27.5	13.5
114.3	114.3 x 2.3	114.3	109.7	146	168	27.5	15.5

Dimensions of hygienic **nutflansch(NF)** for pipes with dimensions according to DIN 11866 series C

Size DN/OD	Related pipe dimensions	d_{12}	d_1	d_5	d_{10}	c	b_1
1/2"	12.7 x 1.65	12.7	9.4	37	54	25.5	11.5
3/4"	19.05 x 1.65	19.05	15.75	42	59	25.5	11.5
1"	25.4 x 1.65	25.4	22.1	49	66	25.5	11.5
1 1/2"	38.1 x 1.65	38.1	34.8	62	79	25.5	11.5
2"	50.8 x 1.65	50.8	47.5	75	92	25.5	11.5
2 1/2"	63.5 x 1.65	63.5	60.2	89	107	25.5	11.5
3"	76.2 x 1.65	76.2	72.9	104	125	25.5	13.5
4"	101.6 x 2.11	101.6	97.38	135	157	27.5	15.5

Dimensions of hygienic **bundflansch(BF)** for pipes with dimensions according to DIN 11866 series A and DIN 11850 series 2



Size DN	Related pipe dimensions	d_{12}	d_1	d_5	d_{10}	h	b_2
10	13 x 1.5	13	10	37	54	24	10
15	19 x 1.5	19	16	42	59	24	10
20	23 x 1.5	23	20	47	64	24	10
25	29 x 1.5	29	26	53	70	24	10
32	35 x 1.5	35	32	59	76	24	10
40	41 x 1.5	41	38	65	82	24	10
50	53 x 1.5	53	50	77	94	24	10
65	70 x 2.0	70	66	95	113	24	10
80	85 x 2.0	85	81	112	133	26	12
100	104 x 2.0	104	100	137	159	26	14
125	129 x 2.0	129	125	161	183	28	14
150	154 x 2.0	154	150	188	213	28	16

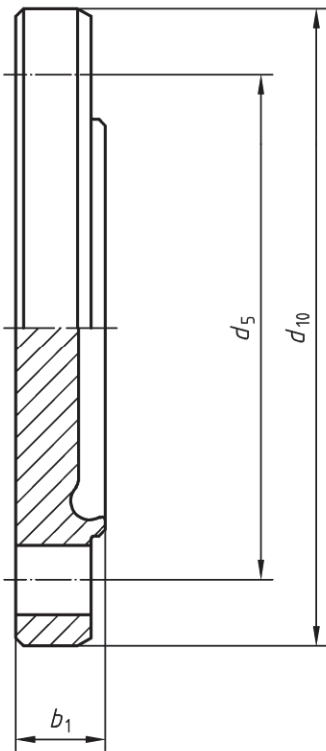
Dimensions of hygienic **bundflansch(BF)** for pipes with dimensions according to DIN 11866 series B

Size DN/OD	Related pipe dimensions	d_{12}	d_1	d_5	d_{10}	h	b_2
13.5	13.5 x 1.6	13.5	10.3	37	54	24	10
17.2	17.2 x 1.6	17.2	14.0	42	59	24	10
21.3	21.3 x 1.6	21.3	18.1	45	62	24	10
26.9	26.9 x 1.6	26.9	23.7	52	69	24	10
33.7	33.7 x 2.0	33.7	29.7	57	74	24	10
42.4	42.4 x 2.0	42.4	38.4	65	82	24	10
48.3	48.3 x 2.0	48.3	44.3	71	88	24	10
60.3	60.3 x 2.0	60.3	56.3	85	103	24	10
76.1	76.1 x 2.0	76.1	72.1	104	125	24	12
88.9	88.9 x 2.3	88.9	84.3	116	137	26	12
114.3	114.3 x 2.3	114.3	109.7	146	168	26	14

Dimensions of hygienic **bundflansch(BF)** for pipes with dimensions according to DIN 11866 series C

Size DN/OD	Related pipe dimensions	d_{12}	d_1	d_5	d_{10}	h	b_2
1/2"	12.7 x 1.65	12.7	9.4	37	54	24	10
3/4"	19.05 x 1.65	19.05	15.75	42	59	24	10
1"	25.4 x 1.65	25.4	22.1	49	66	24	10
1 1/2"	38.1 x 1.65	38.1	34.8	62	79	24	10
2"	50.8 x 1.65	50.8	47.5	75	92	24	10
2 1/2"	63.5 x 1.65	63.5	60.2	89	107	24	10
3"	76.2 x 1.65	76.2	72.9	104	125	24	12
4"	101.6 x 2.11	101.6	97.38	135	157	26	14

Dimensions of hygienic **blindnutflansch(BNF)** for pipes with dimensions according to DIN 11866 series A and DIN 11850 series 2



Size DN	d_5	d_{10}	b_1
10	37	54	11.5
15	42	59	11.5
20	47	64	11.5
25	53	70	11.5
32	59	76	11.5
40	65	82	11.5
50	77	94	11.5
65	95	113	11.5
80	112	133	13.5
100	137	159	15.5
125	161	183	15.5
150	188	213	17.5

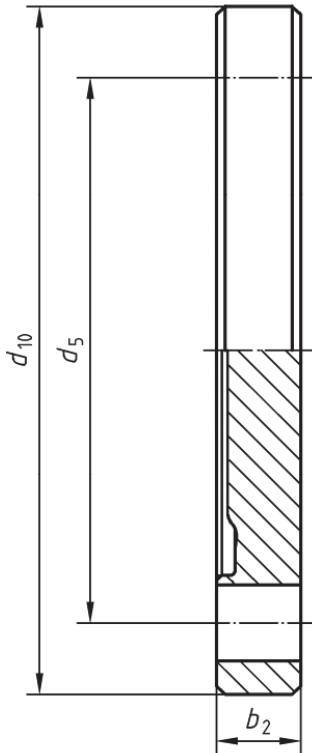
Dimensions of hygienic **blindnutflansch(BNF)** for pipes with dimensions according to DIN 11866 series B

Size DN/OD	d_5	d_{10}	b_1
13.5	37	54	11.5
17.2	42	59	11.5
21.3	45	62	11.5
26.9	52	69	11.5
33.7	57	74	11.5
42.4	65	82	11.5
48.3	71	88	11.5
60.3	85	103	11.5
76.1	104	125	13.5
88.9	116	137	13.5
114.3	146	168	15.5

Dimensions of hygienic **blindnutflansch(BNF)** for pipes with dimensions according to DIN 11866 series C

Size DN/OD	d_5	d_{10}	b_1
1/2"	37	54	11.5
3/4"	42	59	11.5
1"	49	66	11.5
1 1/2"	62	79	11.5
2"	75	92	11.5
2 1/2"	89	107	11.5
3"	104	125	13.5
4"	135	157	15.5

Dimensions of hygienic **blindbundflansch(BBF)** for pipes with dimensions according to DIN 11866 series A and DIN 11850 series 2



Size DN	d_5	d_{10}	b_2
10	37	54	10
15	42	59	10
20	47	64	10
25	53	70	10
32	59	76	10
40	65	82	10
50	77	94	10
65	95	113	10
80	112	133	12
100	137	159	14
125	161	183	14
150	188	213	16

Dimensions of hygienic **blindbundflansch(BBF)** for pipes with dimensions according to DIN 11866 series B

Size DN/OD	d_5	d_{10}	b_2
13.5	37	54	10
17.2	42	59	10
21.3	45	62	10
26.9	52	69	10
33.7	57	74	10
42.4	65	82	10
48.3	71	88	10
60.3	85	103	10
76.1	104	125	12
88.9	116	137	12
114.3	146	168	14

Dimensions of hygienic **blindbundflansch(BBF)** for pipes with dimensions according to DIN 11866 series C

Size DN/OD	d_5	d_{10}	b_2
1/2"	37	54	10
3/4"	42	59	10
1"	49	66	10
1 1/2"	62	79	10
2"	75	92	10
2 1/2"	89	107	10
3"	104	125	12
4"	135	157	14