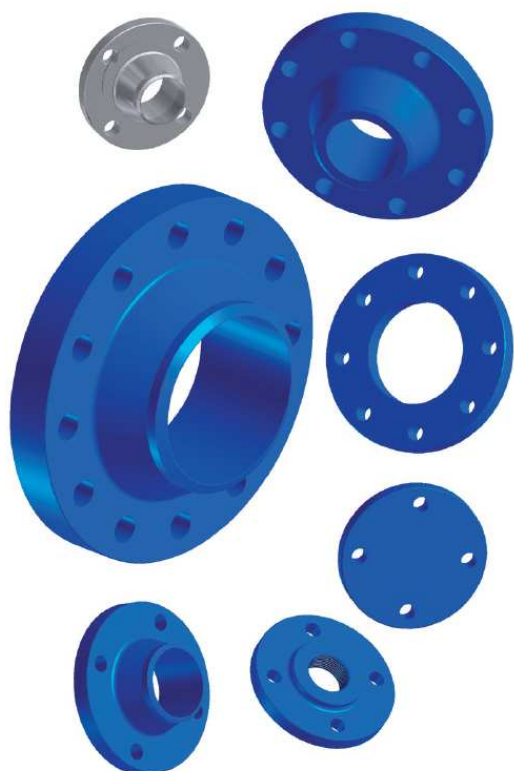




Flanges

ASME B16.5

Application

- For general use in water, steam and other non-aggressive fluid

Materials

- Forged or cast steel, which are listed in the standards productions

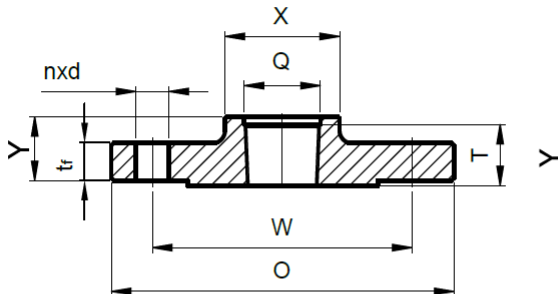
Production and delivery

- In the basic form according to appropriate standard or customer request, with raised sealing surface and the quality of treatment sealing surfaces as recommended by the standards

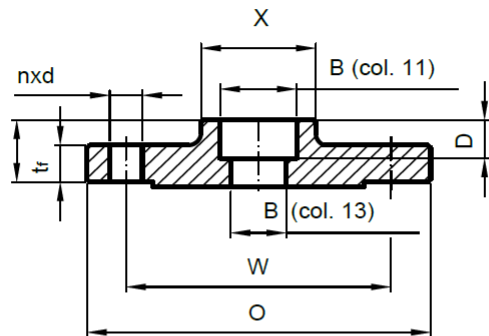
Optional features

- The flanges made of materials for a high temperature or chemical resistant steel
- Flanges according to other national standards such as DIN, GOST, BS, UNI etc.
- With other type of sealing surfaces in accordance with EN 1092-1 and ASME B16.5

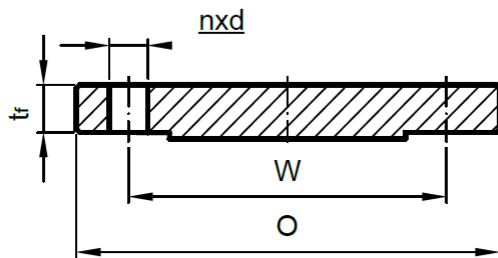
Flanges according to ASME B 16.5



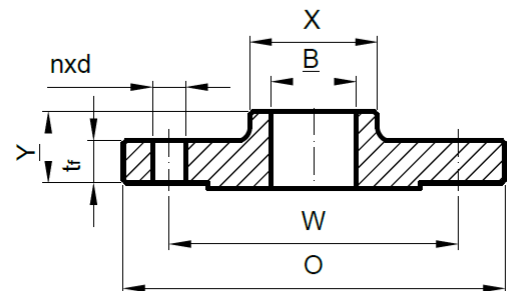
Drawing H.1.11 - Threaded



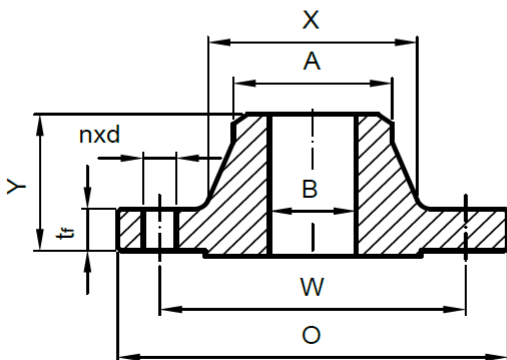
Drawing H.1.12 - Socket welding



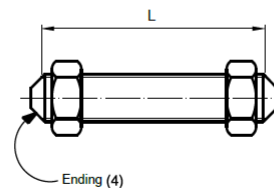
Drawing H.1.13 - Blind



Drawing H.1.14 - Lapped



Drawing H.1.15 - Welding Neck



Drawing H.1.16 - Stud bolt with nuts

Dimensions (mm)

Table H.1.2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
DN (NPS)	Class	Outside diameter of Flange	Diameter of bolt circle	Thickness of Flange (2)	Diameter of hub	Hub diameter beginning of chamfer Welding Neck	Length			Thread length Threaded Flange	Bore			Depth of socket	Counter bore Threaded Flange	Diameter of bolt holes	Number of bolts (3)	Length of bolts (4)		RTJ	Weight (kg)	
							-Threaded -Socket Welding	-Lapped	-Welding Neck		-Socket Welding	-Lapped	-Welding neck -Socket Welding (1)					2 mm Raised Face	Ring joint (RTJ)			
		O	W	Min. tf	X	A	Y	Y	Y	Min. T	Min. B	Min. B	B	D	Min. Q	d	n	L	L			
15 (1/2)	150	90	60,3	9,6	30	21,3	14	46	46	16	22,2	22,9	15,8	10	---	15,9	4	55	---	---	0,8	
	300	95	66,7	12,7	38	21,3	21	51	51	16	22,2	22,9	15,8	10	23,6	15,9	4	65	75	R11	1,0	
	600	95	66,7	14,3	38	21,3	22	52	52	16	22,2	22,9	*	10	23,6	15,9	4	75	70	R11	1,4	
	900	120	82,6	22,3	38	21,3	32	60	60	23	22,2	22,9	*	10	23,6	22,2	4	110	100	R12	2,2	
	1500	120	82,6	22,3	38	21,3	32	60	60	23	22,2	22,9	*	10	23,6	22,2	4	110	100	R12	2,2	
2500	135	88,9	37,2	43	21,3	40	40	73	29	---	22,9	*	---	23,6	22,2	4	120	120	R13	3,6		
20 (3/4)	150	100	69,9	11,2	38	26,7	14	51	51	16	27,7	28,2	20,9	11	---	15,9	4	65	---	---	1,0	
	300	115	82,6	14,3	48	26,7	24	56	56	16	27,7	28,2	20,9	11	29,0	19,0	4	75	90	R13	1,4	
	600	115	82,6	15,9	48	26,7	25	57	57	16	27,7	28,2	*	11	29,0	19,0	4	90	85	R13	1,8	
	900	130	88,9	25,4	44	26,7	35	70	70	26	27,7	28,2	*	11	29,0	22,2	4	115	110	R14	3,2	
	1500	130	88,9	25,4	44	26,7	35	70	70	26	27,7	28,2	*	11	29,0	22,2	4	115	110	R14	3,2	
2500	140	95,2	38,8	51	26,7	43	43	79	32	---	28,2	*	---	29,0	22,2	4	125	125	R16	4,0		
25 (1)	150	110	79,4	12,7	49	33,4	16	54	54	17	34,5	34,9	26,6	13	---	15,9	4	65	75	R15	1,1	
	300	125	88,9	15,9	54	33,4	25	60	60	18	34,5	34,9	26,6	13	35,8	19,0	4	75	90	R16	1,8	
	600	125	88,9	17,5	54	33,4	27	62	62	18	34,5	34,9	*	13	35,8	19,0	4	90	85	R16	2,3	
	900	150	101,6	28,6	52	33,4	41	73	73	29	34,5	34,9	*	13	35,8	25,4	4	125	120	R16	4,1	
	1500	150	101,6	28,6	52	33,4	41	73	73	29	34,5	34,9	*	13	35,8	25,4	4	125	120	R16	4,1	
2500	160	108,0	42,0	57	33,4	48	48	89	35	---	34,9	*	---	35,8	25,4	4	140	140	R18	6,0		
32 (1 1/4)	150	115	88,9	14,3	59	42,2	19	56	56	21	43,2	43,7	35,1	14	---	15,9	4	70	85	R17	1,4	
	300	135	98,4	17,5	64	42,2	25	64	64	21	43,2	43,7	35,1	14	44,4	19,0	4	85	95	R18	2,7	
	600	135	98,4	20,7	64	42,2	29	67	67	21	43,2	43,7	*	14	44,4	19,0	4	95	90	R18	3,2	
	900	160	111,1	28,6	64	42,2	41	73	73	31	43,2	43,7	*	14	44,4	25,4	4	125	120	R18	4,5	
	1500	160	111,1	28,6	64	42,2	41	73	73	31	43,2	43,7	*	14	44,4	25,4	4	125	120	R18	4,5	
2500	185	130,2	45,1	73	42,2	52	52	95	39	---	43,7	*	---	44,4	28,6	4	150	150	R21	9,0		
40 (1 1/2)	150	125	98,4	15,9	65	48,3	21	60	60	22	49,5	50,0	40,9	16	---	15,9	4	70	85	R19	1,8	
	300	155	114,3	19,1	70	48,3	29	67	67	23	49,5	50,0	40,9	16	50,3	22,2	4	90	100	R20	3,6	
	600	155	114,3	22,3	70	48,3	32	70	70	23	49,5	50,0	*	16	50,6	22,2	4	110	100	R20	4,5	
	900	180	123,8	31,8	70	48,3	44	83	83	32	49,5	50,0	*	16	50,6	28,6	4	140	135	R20	6,4	
	1500	180	123,8	31,8	70	48,3	44	83	83	32	49,5	50,0	*	16	50,6	28,6	4	140	135	R20	6,4	
2500	205	146,0	51,5	79	48,3	60	60	111	45	---	50,0	*	---	50,6	31,8	4	170	170	R23	13,0		
50 (2)	150	150	120,7	17,5	78	60,3	24	62	62	25	61,9	62,5	52,5	17	---	19,0	4	85	95	R22	2,7	
	300	165	127,0	20,7	84	60,3	32	68	68	29	61,9	62,5	52,5	17	63,5	19,0	8	90	100	R23	4,1	
	600	165	127,0	25,4	84	60,3	37	73	73	29	61,9	62,5	*	17	63,5	19,0	8	110	100	R23	5,4	
	900	215	165,1	38,1	105	60,3	57	102	102	39	61,9	62,5	*	17	63,5	25,4	8	145	140	R24	11,3	
	1500	215	165,1	38,1	105	60,3	57	102	102	39	61,9	62,5	*	17	63,5	25,4	8	145	140	R24	11,3	
2500	235	171,4	57,9	95	60,3	70	70	127	51	---	62,5	*	---	63,5	28,6	8	180	180	R26	19,0		
65 (2 1/2)	150	180	139,7	20,7	90	73,0	27	68	68	29	74,6	75,4	62,7	19	---	19,0	4	90	100	R25	3,6	
	300	190	149,2	23,9	100	73,0	37	75	75	32	74,6	75,4	62,7	19	76,2	22,2	8	100	115	R26	5,4	
	600	190	149,2	28,6	100	73,0	41	79	79	32	74,6	75,4	*	19	76,2	22,2	8	120	115	R26	8,2	
	900	245	190,5	41,3	124	73,0	64	105	105	48	74,6	75,4	*	19	76,2	28,6	8	160	150	R27	16,3	
	1500	245	190,5	41,3	124	73,0	64	105	105	48	74,6	75,4	*	19	76,2	28,6	8	160	150	R27	16,3	
2500	265	196,8	64,2	114	73,0	79	79	143	58	---	75,4	*	---	---	31,8	8	180	180	R28	24,0		
80 (3)	150	190	152,4	22,3	108	88,9	29	68	68	30	90,7	91,4	77,9	21	---	19,0	4	90	100	R29	4,5	
	300	210	168,3	27,0	117	88,9	41	78	78	32	90,7	91,4	77,9	21	92,2	22,2	8	110	120	R31	6,8	
	600	210	168,3	31,8	117	88,9	46	83	83	35	90,7	91,4	*	21	92,2	22,2	8	125	120	R31	10,4	
	900	240	190,5	38,1	127	88,9	54	102	102	42	90,7	91,4	*	---	92,2	25,4	8	145	140	R31	14,5	
	1500	265	103,2	47,7	133	88,9	---	117	117	---	---	91,4	*	---	---	31,7	8	180	170	R35	22,0	
2500	305	228,6	73,7	133	88,9	---	92	168	---	---	91,4	*	---	---	34,9	8	220	220	R32	43,0		
100 (4)	150	230	190,5	22,3	135	114,3	32	32	70	33	116,1	104,1	*	---	---	19,0	8	90	100	R36	6,8	
	300	255	200,0	30,2	146	114,3	46	44	79	37	116,1	104,1	*	---	117,6	22,2	8	115	125	R37	11,3	
	600	275	215,9	38,1	152	114,3	54	49	86	42	116,1	104,1	*	---	117,6	25,4	8	145	140	R37	19,1	
	900	290	235,0	44,5	159	114,3	70	33	75	48	116,1	116,8	*	---	117,6	31,7	8	170	165	R37	23,2	
	1500	310	241,3	54,0	162	114,3	---	48	84	---	---	116,8	*	---	---	34,9	8	195	190	R39	30,0	
2500	355	273,0	83,2	165	114,3	---	108	190	---	---	116,8	---	---	---	41,3	8	255	260	R38	66,0		
125 (5)	150	255	215,9	22,3	164	141,3	35	54	102	36	143,8	116,8	128,2	---	---	22,2	8	95	110	R40	8,6	
	300	280	235,0	33,4	178	141,3	49	70	114	43	143,8	116,8	128,2	---	144,4	22,2	8	120	135	R41	14,5	
	600	330	266,7	44,5	189	141,3	60	90	124	48	143,8	116,8	*	---	144,4	28,6	8	165	160	R41	30,9	
	900	350	279,4	50,8	190	141,3	79	36	87	54	143,8	144,4	*	---	144,4	34,9	8	190	185	R41	39,0	
	1500	375	292,1	73,1	197	141,3	---	51	97	---	---	144,4	*	---	---	41,3	8	250	240	R44	58,0	
2500	420	323,8	99,1	203	141,3	---	130	229	---	---	144,4	*	---	---	47,1	8	300	310	R42	111,0		

Dimensions (mm)

Extension table H.1.2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
DN (NPS)	Class	Outside diameter of Flange	Diameter of bolt circle	Thickness of Flange (2)	Diameter of hub	Hub diameter beginning of chamfer Welding Neck	Length			Thread length Threaded Flange	Bore			Depth of socket	Counter bore Threaded Flange	Diameter of bolt holes	Number of bolts (3)	Lenght of bolts (4)		RTJ	Weight (kg)	
							-Threaded -Socket Welding	-Lapped	-Welding Neck		Min. T	Min. B	Min. B					B				
							Y	Y	Y													
		O	W	Min. tf	X	A	Y	Y	Y		Min. T	Min. B	Min. B	B	D	Min. Q	d	n	L	L		
150 (6)	150	280	241.3	23.9	192	168.3	38	60	114	40	170.7	144.4	154.1	---	---	22.2	8	100	115	R43	10.9	
	300	320	269.9	35.0	206	168.3	51	79	127	47	170.7	144.4	154.1	---	171.4	22.2	12	120	140	R45	19.0	
	600	355	292.1	47.7	222	168.3	67	105	156	51	170.7	144.4	*	---	171.4	28.6	12	170	165	R45	37.0	
	900	380	317.5	55.6	235	168.3	86	40	87	58	170.7	171.4	*	---	171.4	31.7	12	190	185	R45	50.0	
	1500	395	317.5	82.6	229	168.3	---	52	97	---	---	171.4	*	---	---	38.1	12	260	255	R46	70.0	
	2500	485	368.3	115.0	235	168.3	---	152	273	---	---	---	171.4	*	---	---	54.0	8	345	355	R47	172.0
200 (8)	150	345	298.5	27.0	246	219.1	43	67	117	44	221.5	171.4	202.7	---	---	22.2	8	110	120	R48	17.7	
	300	380	330.2	39.7	260	219.1	60	86	140	51	221.5	171.4	202.7	---	222.2	25.4	12	140	150	R49	30.5	
	600	420	349.2	55.6	273	219.1	76	119	456	58	221.5	171.4	*	---	222.2	31.7	12	190	185	R49	53.0	
	900	470	393.7	63.5	298	219.1	102	44	100	64	221.5	222.2	*	---	222.2	38.1	12	220	215	R49	85.0	
	1500	485	393.7	99.1	292	219.1	---	143	213	---	---	222.2	*	---	---	44.5	12	290	325	R50	119.0	
	2500	550	438.2	134.0	305	217.1	---	178	318	---	---	222.2	*	---	---	54.0	12	380	395	R51	261.0	
250 (10)	150	405	362.0	28.6	305	273.0	48	62	110	49	276.2	222.2	254.6	---	---	25.4	12	115	125	R52	23.6	
	300	445	387.4	46.1	321	273.0	65	76	133	56	276.2	222.2	254.6	---	276.2	28.6	16	160	170	R53	41.5	
	600	510	431.8	63.5	343	273.0	86	114	162	66	276.2	222.2	*	---	276.2	34.9	16	215	210	R53	86.0	
	900	545	469.9	69.9	368	273.0	108	49	100	72	276.2	222.2	*	---	276.2	38.1	16	235	230	R53	122.0	
	1500	585	482.6	115.0	368	273.0	---	178	254	---	---	277.4	*	---	---	50.8	12	335	345	R54	204.0	
	2500	675	539.8	172.1	375	273.0	---	229	419	---	---	277.4	*	---	---	66.7	12	490	510	R55	485.0	
300 (12)	150	485	431.8	30.2	365	323.8	54	95	116	56	327.0	277.4	304.8	---	---	25.4	12	120	135	R56	36.3	
	300	520	450.8	49.3	375	323.8	71	111	152	61	327.0	277.4	304.8	---	328.6	31.7	16	170	185	R57	62.5	
	600	560	489.0	66.7	400	323.8	92	127	184	70	327.0	277.4	*	---	328.6	34.9	20	220	215	R57	103.0	
	900	610	533.4	79.4	419	323.8	117	56	113	77	327.0	328.2	*	---	328.6	38.1	20	255	250	R57	269.0	
	1500	675	571.5	130.9	451	323.8	---	219	283	---	---	328.2	*	---	---	54.0	16	375	385	R58	303.0	
	2500	760	619.1	191.2	441	323.8	---	254	464	---	---	328.2	*	---	---	73.0	12	540	560	R60	730.0	
350 (14)	150	535	476.3	33.4	400	355.6	56	79	125	57	359.2	360.2	*	---	---	28.6	12	135	145	R59	46.3	
	300	585	514.4	52.4	425	355.6	75	111	141	64	359.2	360.2	*	---	360.4	31.7	20	180	190	R61	84.5	
	600	605	527.0	69.9	432	355.6	94	127	165	74	359.2	360.2	*	---	360.4	38.1	20	235	230	R61	158.0	
	900	640	558.8	85.8	451	355.6	30	156	213	83	359.2	360.2	*	---	360.4	41.3	20	275	265	R62	255.0	
	1500	750	635.0	140.4	495	355.6	---	241	298	---	---	360.2	*	---	---	60.3	16	375	385	R63	426.0	
400 (16)	150	595	539.8	35.0	457	406.4	62	87	125	64	410.5	411.2	*	---	---	28.6	16	135	145	R64	57.7	
	300	650	571.5	55.6	483	406.4	81	121	144	69	410.5	411.2	*	---	411.2	34.9	20	190	205	R65	111.5	
	600	685	603.2	76.2	495	406.4	106	140	178	78	410.5	411.2	*	---	411.2	41.3	20	255	250	R65	218.0	
	900	705	616.0	88.9	508	406.4	133	165	216	86	410.5	411.2	*	---	411.2	44.4	20	285	280	R66	311.0	
	1500	825	704.8	153.1	552	406.4	---	260	311	---	---	411.2	*	---	---	66.7	16	445	470	R67	567.0	
450 (18)	150	635	577.9	38.1	505	457.0	67	97	138	68	461.8	462.3	*	---	---	31.7	16	145	160	R68	63.6	
	300	710	628.6	58.8	533	457.0	87	130	157	70	461.8	462.3	*	---	462.0	34.9	24	195	210	R69	138.0	
	600	745	654.0	82.6	546	457.0	117	152	184	80	461.8	462.3	*	---	462.0	44.4	20	275	265	R69	252.0	
	900	785	685.8	101.6	565	457.0	152	190	229	89	461.8	462.3	*	---	462.0	50.8	20	325	320	R70	419.0	
	1500	915	774.7	169.0	597	457.0	---	276	327	---	---	462.3	*	---	---	73.0	16	495	490	R71	737.0	
500 (20)	150	700	635.0	41.3	559	508.0	81	111	151	73	513.1	514.4	*	---	---	31.7	20	160	170	R72	91.0	
	300	775	685.8	62.0	587	508.0	105	152	167	74	513.1	514.4	*	---	512.8	34.9	24	205	220	R73	172.0	
	600	815	723.9	88.9	610	508.0	140	184	203	83	513.1	514.4	*	---	512.8	44.4	24	285	280	R73	313.0	
	900	855	749.3	108.0	622	508.0	203	267	292	93	513.1	514.4	*	---	512.8	54.0	20	350	345	R74	528.0	
	1500	985	831.8	184.8	762	610.0	---	330	406	---	---	616.0	*	---	---	79.4	16	615	650	R75	930.0	
600 (24)	150	815	749.3	46.1	663	610.0	81	111	151	83	616.0	616.0	*	---	---	34.9	20	170	185	R76	118.0	
	300	915	812.8	68.3	702	610.0	105	152	167	83	616.0	616.0	*	---	614.4	41.3	24	230	255	R77	247.0	
	600	940	838.2	101.6	718	610.0	140	184	203	93	616.0	616.0	*	---	614.4	50.8	24	330	325	R77	444.0	
	900	1040	901.7	139.7	749	610.0	203	267	292	102	616.0	616.0	*	---	614.4	66.7	20	440	430	R78	957.0	
	1500	1170	990.6	210.2	762	610.0	---	330	406	---	---	616.0	*	---	---	92.1	16	615	650	R79	1510	
650 (26)	150	870	806.4	66.7	676	660.4	---	---	119	---	---	---	---	---	---	34.9	24	---	---	---	147	
	300	970	876.3	77.8	721	660.4	---	---	183	---	---	---	---	---	---	44.4	28	---	---	---	275	
	600	1015	914.4	108.0	748	660.4	---	---	222	---	---	---	---	---	---	50.8	28	---	---	---	427	
	900	1085	952.5	139.7	775	660.4	---	---	286	---	---	---	---	---	---	73.0	28	---	---	---	692	
700 (28)	150	925	863.6	69.9	727	711.2	---	---	124	---	---	---	---	---	---	34.9	28	---	---	---	163	
	300	1035	939.8	84.2	775	711.2	---	---	195	---	---	---	---	---	---	44.4	28	---	---	---	340	
	600	1075	965.2	111.2	803	711.2	---	---	235	---	---	---	---	---	---	54.0	28	---	---	---	479	
	900	1170	1022.4	142.9	832	711.2	---	---	298	---	---	---	---	---	---	79.4	20	---	---	---	822	

NOTE

- (1) Dimensions in column 14 correspond to the inside diameters of pipe as given in ASME/ANSI B36.10M for standard wall pipe. Thickness of standard wall is the same as Schedule 40 in sizes NPS 10 and smaller. These bore sizes are furnished unless otherwise specified by the customer. Dimensions in column 14 which are marked with (*) determined customer.
- (2) Raised Face for Class 150 and Class 300 is 2 mm, Raised Face for Class 600 to Class 1500 is 7mm.
- (3) Bolt holes are in multiples of four. Bolt holes shall be equally spaced and pairs of bolt holes shall straddle fitting centerlines.
- (4) Length of stud bolts does not include the height of the points.
- (5) ASME B16.47 is reference standard for DN 650 and DN 700 dimensions