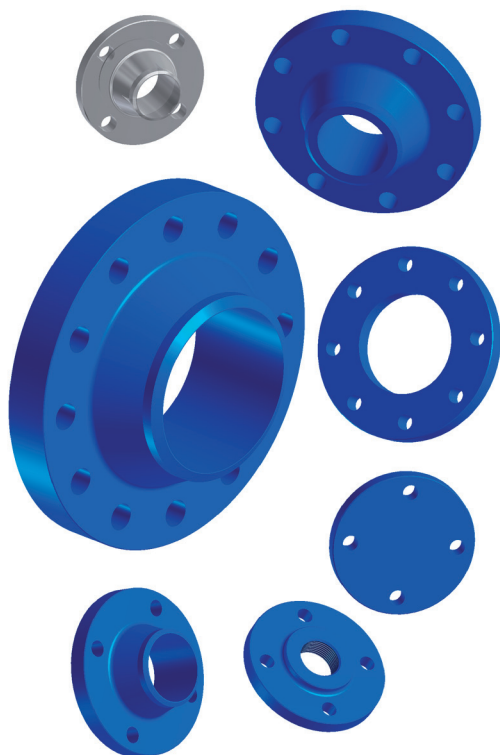




Flanges

Standard: EN 1092-1
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

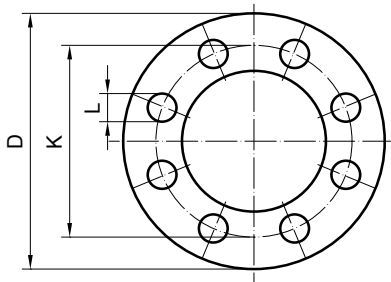
Production and delivery

- 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

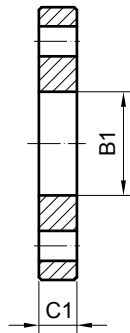
- The flanges made of materials for a high temperature or chemical resistant steel
- Flanges according to other national standards such as DIN, GOST, BS, UNI etc.
- With other type of sealing surfaces in accordance with EN 1092-1 and ASME B16.5

Flanges according to EN 1092-1

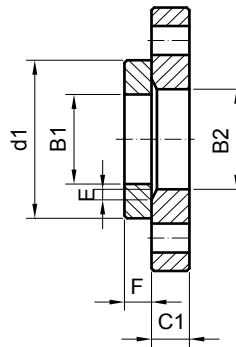


Drawing H.1.1

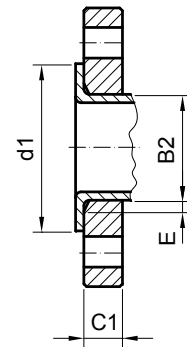
This diagram illustrates the arrangement but not necessarily the correct number of bolt holes. Refer to the column "Bolting number" in table for actual number.



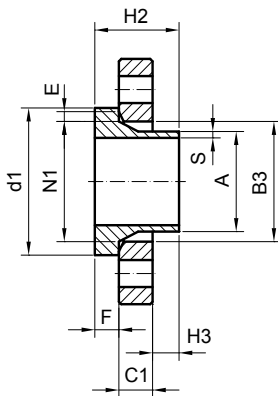
Drawing H.1.2
Type 01



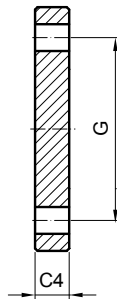
Drawing H.1.3
Type 02 i Type 32



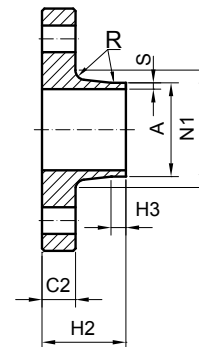
Drawing H.1.4
Type 02 i Type 33



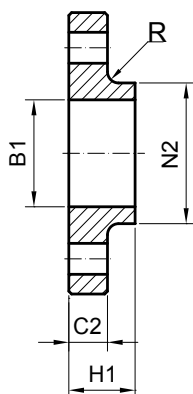
Drawing H.1.5
Type 04 i Type 34



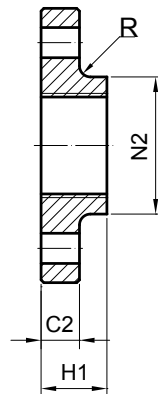
Drawing H.1.6
Type 05



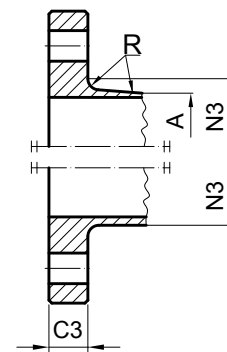
Drawing H.1.7
Type 11



Drawing H.1.8
Type 12



Drawing H.1.9
Type 13



Drawing H.1.10
Type 21

NOTE 1: Dimensions N1, N2 and N3 are measured at the intersection of the hub draft angle and the back face of the flange
NOTE 2: For d1 dimensions see document "Flange facing according to EN 1092-1".

Dimensions (mm)

Table H.1.1

DN	PN	Mating dimensions					Outside diameter of neck	Bore diameters				Flange thickness				Chamfer	Collar thickness	Diameter of shoulders	Lenght			Neck diameters			Corner radius	Neck Thickness (preferred value)	Weight (kg)
		Outside diameter	Diameter of bolt circle	Diameter of bolt hole	Bolts																						
Flange type																											
01,02,04,05,11,12,13,21						11 21 ⁽¹⁾ 35	01 12 32	02	04	01 02 04	11 12 13	21	05	02 04	32 34	05	12 13	11 34	11 34	11 34	11 34	12 13	21	11 12 13 21	11	11	
10	6	75	50	11	1	M10	17,2	18,0	21	---	12	12	12	12	3	10	---	20	28	6	26	25	20	4	2	0,35	
	10	90	60	14	4	M12	17,2	18,0	21	31	14	16	16	16	3	12	---	22	35	6	28	30	28	4	2	0,68	
	16	90	60	14	4	M12	17,2	18,0	21	31	14	16	16	16	3	12	---	22	35	6	28	30	28	4	2	0,68	
	25	90	60	14	4	M12	17,2	18,0	21	31	14	16	16	16	3	12	---	22	35	6	28	30	28	4	2	0,68	
	40	90	60	14	4	M12	17,2	18,0	21	31	14	16	16	16	3	12	---	22	35	6	28	30	28	4	2	0,68	
	63	100	70	14	4	M12	17,2	18,0	---	---	20	20	20	20	---	---	---	28	45	6	32	40	40	4	2	1,09	
	100	100	70	14	4	M12	17,2	18,0	---	---	20	20	20	20	---	---	---	28	45	6	32	40	40	4	2	1,09	
	160	100	70	14	4	M12	17,2	---	---	---	---	20	20	---	---	---	---	45	6	32	40	---	4	2	1,1		
	250	125	85	18	4	M16	---	---	---	---	---	---	24	---	---	---	---	---	---	---	---	46	4	---	2,14		
	320	125	85	18	4	M16	17,2	---	---	---	---	24	24	---	---	---	---	---	58	6	44	---	46	4	2,6	2,14	
400	125	85	18	4	M16	17,2	---	---	---	---	28	28	---	---	---	---	---	65	8	48	---	48	4	3,6	2,55		
15	6	80	55	11	4	M10	21,3	22,0	25	---	12	12	12	12	3	10	---	20	30	6	30	30	26	4	2	0,41	
	10	95	65	14	4	M12	21,3	22,0	25	35	14	16	16	16	3	12	---	22	38	6	32	35	32	4	2	0,77	
	16	95	65	14	4	M12	21,3	22,0	25	35	14	16	16	16	3	12	---	22	38	6	32	35	32	4	2	0,77	
	25	95	65	14	4	M12	21,3	22,0	25	35	14	16	16	16	3	12	---	22	38	6	32	35	32	4	2	0,77	
	40	95	65	14	4	M12	21,3	22,0	25	35	14	16	16	16	3	12	---	22	38	6	32	35	32	4	2	0,77	
	63	105	75	14	4	M12	21,3	22,0	---	---	20	20	20	20	---	---	---	28	45	6	34	43	45	4	2	1,2	
	100	105	75	14	4	M12	21,3	22,0	---	---	20	20	20	20	---	---	---	28	45	6	34	43	45	4	3,2	1,2	
	160	105	75	14	4	M12	21,3	---	---	---	---	20	20	---	---	---	---	45	6	34	---	45	4	2	1,2		
	250	130	90	18	4	M16	21,3	---	---	---	---	26	26	---	---	---	---	60	6	48	---	52	4	2,6	2,51		
	320	130	90	18	4	M16	21,3	---	---	---	---	26	26	---	---	---	---	60	6	48	---	52	4	3,2	2,53		
400	145	100	22	4	M20	26,9	---	---	---	---	30	30	---	---	---	---	68	8	56	---	57	4	5,0	3,62			
20	6	90	65	11	4	M10	26,9	27,5	31	---	14	14	14	14	4	10	---	24	32	6	38	40	34	4	2,3	0,62	
	10	105	75	14	4	M12	26,9	27,5	31	42	16	18	18	18	4	14	---	26	40	6	40	45	40	4	2,3	1,09	
	16	105	75	14	4	M12	26,9	27,5	31	42	16	18	18	18	4	14	---	26	40	6	40	45	40	4	2,3	1,09	
	25	105	75	14	4	M12	26,9	27,5	31	42	16	18	18	18	4	14	---	26	40	6	40	45	40	4	2,3	1,09	
	40	105	75	14	4	M12	26,9	27,5	31	42	16	18	18	18	4	14	---	26	40	6	40	45	40	4	2,3	1,09	
	63	130	90	18	4	M16	26,9	27,5	---	---	22	22	22	22	---	---	---	30	48	8	42	52	50	4	2,6	2,02	
	100	130	90	18	4	M16	26,9	27,5	---	---	22	22	22	22	---	---	---	30	48	8	42	52	50	4	3,2	2,02	
25	6	100	75	11	4	M10	33,7	34,5	38	---	14	14	14	14	4	10	---	24	35	6	42	50	44	4	2,6	0,76	
	10	115	85	14	4	M12	33,7	34,5	38	49	16	18	18	18	4	14	---	28	40	6	46	52	50	4	2,6	1,3	
	16	115	85	14	4	M12	33,7	34,5	38	49	16	18	18	18	4	14	---	28	40	6	46	52	50	4	2,6	1,3	
	25	115	85	14	4	M12	33,7	34,5	38	49	16	18	18	18	4	14	---	28	40	6	46	52	50	4	2,6	1,3	
	40	115	85	14	4	M12	33,7	34,5	38	49	16	18	18	18	4	14	---	28	40	6	46	52	50	4	2,6	1,3	
	63	140	100	18	4	M16	33,7	34,5	---	---	24	24	24	24	---	---	---	32	58	8	52	60	61	4	2,6	2,63	
	100	140	100	18	4	M16	33,7	34,5	---	---	24	24	24	24	---	---	---	32	58	8	52	60	61	4	3,6	2,63	
	160	140	100	18	4	M16	33,7	---	---	---	---	24	24	---	---	---	---	58	8	52	---	61	4	2,9	2,64		
	250	150	105	22	4	M20	33,7	---	---	---	---	28	28	---	---	---	---	65	8	60	---	63	4	3,6	3,58		
	320	160	115	22	4	M20	33,7	---	---	---	---	34	34	---	---	---	---	78	8	68	---	72	4	5,0	5,18		
400	180	130	26	4	M24	42,4	---	---	---	---	38	38	---	---	---	---	90	10	82	---	81	4	7,1	7,45			
32	6	120	90	14	4	M12	42,4	43,5	46	---	16	14	14	14	5	10	---	26	35	6	55	60	56	6	2,6	1,11	
	10	140	100	18	4	M16	42,4	43,5	47	59	18	18	18	18	5	14	---	30	42	6	56	60	60	6	2,6	1,91	
	16	140	100	18	4	M16	42,4	43,5	47	59	18	18	18	18	5	14	---	30	42	6	56	60	60	6	2,6	1,91	
	25	140	100	18	4	M16	42,4	43,5	47	59	18	18	18	18	5	14	---	30	42	6	56	60	60	6	2,6	1,91	
	40	140	100	18	4	M16	42,4	43,5	47	59	18	18	18	18	5	14	---	30	42	6	56	60	60	6	2,6	1,91	
	63	155	110	22	4	M20	42,4	43,5	---	---	24	24	26	24	---	---	---	32	60	8	62	68	68	6	2,6	3,2	
	100	155	110	22	4	M20	42,4	43,5	---	---	24	24	26	24	---	---	---	32	60	8	62	68	68	6	3,6	3,25	
40	6	130	100	14	4	M12	48,3	49,5	53	---	16	14	14	14	5	10	---	26	38	7	62	70	64	6	2,6	1,26	
	10	150	110	18	4	M16	48,3	49,5	53	67	18	18	18	18	5	14	---	32	45	7	64	70	70	6	2,6	2,15	
	16	150	110	18	4	M16	48,3	49,5	53	67	18	18	18	18	5	14	---	32	45	7	64	70	70	6	2,6	2,15	
	25	150	110	18	4	M16	48,3	49,5	53	67	18	18	18	18	5	14	---	32	45	7	64	70	70	6	2,6	2,15	
	40	150	110	18	4	M16	48,3	49,5	53	67	18	18	18	18	5	14	---	32	45	7	64	70	70	6	2,6	2,15	
	63	170	125	22	4	M20	48,3	49,5	---	---	26	26	28	26	---	---	---	34	62	10	70	80	82	6	2,9	4,07	
	100	170	125	22	4	M20	48,3	49,5	---	---	26	26	28	26	---	---	---	34	62	10	70	80	82	6	3,6	4,07	
	160	170	125	22	4	M20	48,3	---	---	---	---	28	28	---	---	---	---	64	10	70	---	82	6	3,6	4,42		
	250	185	135	26	4	M24	48,3	---	---	---	---	34	34	---	---	---	---	80	10	84	---	90	6	5,0	6,72		
	320	195	145	26	4	M24	48,3	---	---	---	---	38	38	---	---	---	---	88	10	92	---	96	6	6,3	8,65		
400	220	165	30	4	M27	60,3	---	---	---	---	48																

Dimensions (mm)
Extension table H.1.1

DN	PN	Mating dimensions					Outside diameter of neck	Bore diameters				Flange thickness				Chamfer	Collar thickness	Diameter of shoulders	Lenght			Neck diameters			Corner radius	Neck Thickness (preferred value)	Weight (kg)
		Outside diameter	Diameter of bolt circle	Diameter of bolt hole	Bolts																						
		D	K	L	Broj	Vel.		A	B1	B2	B3	C1	C2	C3	C4	E	F	G max	H1	H2	H3	N1	N2	N3	R	S	
		Flange type																									
		01,02,04,05,11,12,13,21						11 21 ⁽¹⁾ 35	01 12 32	02	04	01 02 04	11 12 13	21	05	02 04	32 34	05	12 13	11 34	11 34	11 34	12 13	21	11 12 13 21	11	11
65	6	160	130	14	4	M12	76,1	77,5	81	---	16	14	14	14	6	12	55	32	38	9	88	100	94	6	2,9	1,77	
	10	185	145	18	⁽²⁾	M16	76,1	77,5	81	96	20	18	18	18	6	16	55	32	45	10	92	104	104	6	2,9	3,0	
	16	185	145	18	⁽²⁾	M16	76,1	77,5	81	96	20	18	18	18	6	16	55	32	45	10	92	104	104	6	2,9	3,0	
	25	185	145	18	8	M16	76,1	77,5	81	96	22	22	22	22	6	16	55	38	52	10	90	104	104	6	2,9	3,0	
	40	185	145	18	8	M16	76,1	77,5	81	96	22	22	22	22	6	16	55	38	52	10	90	104	104	6	2,9	3,68	
	63	205	160	22	8	M20	76,1	77,5	---	---	26	26	26	26	---	---	45	40	68	12	98	112	105	6	4,0	5,58	
	100	220	170	26	8	M24	76,1	77,5	---	---	30	30	34	30	---	---	45	40	76	12	108	118	118	6	4,0	7,57	
	160	220	170	26	8	M24	76,1	---	---	---	---	34	34	---	---	---	---	82	12	108	---	118	6	5,0	8,75		
	250	230	180	26	8	M24	76,1	---	---	---	---	42	42	---	---	---	---	95	12	124	---	125	6	8,0	12,8		
	320	255	200	30	8	M27	88,9	---	---	---	---	51	51	---	---	---	---	120	12	138	---	137	6	11,0	19,5		
400	290	225	33	8	M30	101,6	---	---	---	---	64	64	---	---	---	---	135	18	158	---	158	6	16,0	31,6			
80	6	190	150	18	4	M16	88,9	90,5	94	---	18	16	16	16	6	12	70	34	42	10	102	110	110	8	3,2	2,88	
	10	200	160	18	8	M16	88,9	90,5	94	108	20	20	20	20	6	16	70	34	50	10	105	118	120	6	3,2	3,92	
	16	200	160	18	8	M16	88,9	90,5	94	108	20	20	20	20	6	16	70	34	50	10	105	118	120	6	3,2	3,92	
	25	200	160	18	8	M16	88,9	90,5	94	114	24	24	24	24	6	18	70	40	58	12	105	118	120	8	3,2	3,92	
	40	200	160	18	8	M16	88,9	90,5	94	114	24	24	24	24	6	18	70	40	58	12	105	118	120	8	3,2	4,78	
	63	215	170	22	8	M20	88,9	90,5	---	---	30	28	28	28	---	---	60	44	72	12	112	125	122	8	4,5	6,68	
	100	230	180	26	8	M24	88,9	90,5	---	---	34	32	36	32	---	---	60	44	78	12	120	130	128	8	5,0	8,82	
	160	230	180	26	8	M24	88,9	---	---	---	---	36	36	---	---	---	---	86	12	120	---	128	8	6,3	10,3		
	250	255	200	30	8	M27	101,6	---	---	---	---	46	46	---	---	---	---	102	12	136	---	142	8	11,0	16,5		
	320	275	220	30	8	M27	101,6	---	---	---	---	55	55	---	---	---	---	130	14	156	---	160	8	12,5	25,2		
400	305	240	33	8	M30	114,3	---	---	---	---	68	68	---	---	---	---	150	20	174	---	174	8	17,5	38,4			
100	6	210	170	18	4	M16	114,3	116,0	120	---	18	16	16	16	6	14	90	40	45	10	130	130	130	8	3,6	3,41	
	10	220	180	18	8	M16	114,3	116,0	120	134	22	20	20	20	6	18	90	40	52	12	131	140	140	8	3,6	4,62	
	16	220	180	18	8	M16	114,3	116,0	120	134	22	20	20	20	6	18	90	40	52	12	131	140	140	8	3,6	4,62	
	25	235	190	22	8	M20	114,3	116,0	120	138	26	24	24	24	6	20	90	44	65	12	134	145	142	8	3,6	4,62	
	40	235	190	22	8	M20	114,3	116,0	120	138	26	24	24	24	6	20	90	44	65	12	134	145	142	8	3,6	6,46	
	63	250	200	26	8	M24	114,3	116,0	---	---	32	30	30	30	---	---	80	52	78	12	138	152	146	8	4,5	9,27	
	100	265	210	30	8	M27	114,3	116,0	---	---	36	36	40	36	---	---	80	52	90	12	150	158	150	8	5,6	13,1	
	160	265	210	30	8	M27	114,3	---	---	---	---	40	40	---	---	---	---	100	12	150	---	150	8	8,0	15,3		
	250	300	235	33	8	M30	127,0	---	---	---	---	54	54	---	---	---	---	120	14	164	---	168	8	14,2	27,2		
	320	335	265	36	8	M33	133,0	---	---	---	---	65	65	---	---	---	---	145	16	186	---	190	8	16,0	42,5		
400	370	295	39	8	M36	139,7	---	---	---	---	80	80	---	---	---	---	175	25	216	---	216	8	22,2	67,3			
125	6	240	200	18	8	M16	139,7	141,5	145	---	20	18	18	18	6	14	115	44	48	10	155	160	160	8	4,0	4,65	
	10	250	210	18	8	M16	139,7	141,5	145	162	22	22	22	22	6	18	115	44	55	12	156	168	170	8	4,0	6,3	
	16	250	210	18	8	M16	139,7	141,5	145	162	22	22	22	22	6	18	115	44	55	12	156	168	170	8	4,0	6,3	
	25	270	220	26	8	M24	139,7	141,5	145	166	28	26	26	26	6	22	115	48	68	12	162	170	162	8	4,0	6,3	
	40	270	220	26	8	M24	139,7	141,5	145	166	28	26	26	26	6	22	115	48	68	12	162	170	162	8	4,0	8,86	
	63	295	240	30	8	M27	139,7	141,5	---	---	34	34	34	34	---	---	105	56	88	12	168	185	177	8	5,6	14,5	
	100	315	250	33	8	M30	139,7	141,5	---	---	42	40	40	40	---	---	105	56	105	12	180	188	185	8	6,3	21,0	
	160	315	250	33	8	M30	139,7	---	---	---	---	44	44	---	---	---	---	115	14	180	---	184	8	10,0	24,4		
	250	340	275	33	12	M30	152,4	---	---	---	---	60	60	---	---	---	---	140	16	200	---	207	8	16,0	39,0		
	320	380	310	36	12	M33	168,3	---	---	---	---	75	75	---	---	---	---	175	20	230	---	235	8	20,0	63,6		
400	415	340	39	12	M36	193,7	---	---	---	---	92	92	---	---	---	---	200	30	258	---	259	8	30,0	94,5			
150	6	265	225	18	8	M16	168,3	170,5	174	---	20	18	18	18	6	14	140	44	48	12	184	185	182	10	4,5	5,50	
	10	285	240	22	8	M20	168,3	170,5	174	188	24	22	22	22	6	20	140	44	55	12	184	195	190	10	4,5	7,81	
	16	285	240	22	8	M20	168,3	170,5	174	188	24	22	22	22	6	20	140	44	55	12	184	195	190	10	4,5	7,81	
	25	300	250	26	8	M24	168,3	170,5	174	194	30	28	28	28	6	24	140	52	75	12	192	200	192	10	4,5	7,81	
	40	300	250	26	8	M24	168,3	170,5	174	194	30	28	28	28	6	24	140	52	75	12	192	200	192	10	4,5	11,7	
	63	345	280	33	8	M30	168,3	170,5	---	---	36	36	36	36	---	---	130	60	95	12	202	215	204	10	6,3	21,4	
	100	355	290	33	12	M30	168,3	170,5	---	---	48	44	44	44	---	---	130	60	115	12	210	225	216	10	8,0	28,3	
	160	355	290	33	12	M30	168,3	---	---	---	---	50	50	---	---	---	---	128	14	210	---	224	10	12,5	34,4		
	250	390	320	36	12	M33	177,8	---	---	---	---	68	68	---	---	---	---	160	18	240	---	246	10	17,5	59,6		
	320	425	350	39	12	M36	193,7	---	---	---	---	84	84	---	---	---	---	195	25	265	---	266	10	25,0	91,5		
400	475	390	42	12	M39	219,1	---	---	---	---	105	105	---	---	---	---	225	35	302	---	302	10	35,0	145			
200	6	320	280	18	8	M16	219,1	221,5	226	---	22	20	20	20	6	16	190	44	55	15	236	240	238	10			

Dimensions (mm)

Extension table H.1.1

DN	PN	Mating dimensions					Outside diameter of neck	Bore diameters				Flange thickness				Chamfer	Collar thickness	Diameter of shoulders	Lenght			Neck diameters			Corner radius	Neck Thickness (preferred value)	Weight (kg)
		Outside diameter	Diameter of bolt circle	Diameter of bolt hole	Bolts																						
Flange type																											
01,02,04,05,11,12,13,21						11 21 ⁽¹⁾ 35	01 12 32	02	04	01 02 04	11 12 13	21	05	02 04	32 34	05	12 13	11 34	11 34	11 34	12 13	21	11 12 13 21	11	11		
250	6	375	335	18	12	M16	273,0	276,5	281	---	24	22	22	22	8	18	235	44	60	15	290	295	284	12	6,3	11,7	
	10	395	350	22	12	M20	273,0	276,5	281	294	26	26	26	26	8	22	235	46	68	16	292	298	298	12	6,3	15,8	
	16	405	355	26	12	M24	273,0	275,6	281	294	29	26	26	26	8	22	235	46	70	16	292	298	296	12	6,3	16,7	
	25	425	370	30	12	M27	273,5	276,5	281	302	35	32	32	32	8	26	235	60	88	18	298	310	304	12	7,1	24,3	
	40	450	385	33	12	M30	273,0	276,5	281	312	42	38	38	38	8	30	235	60	105	18	306	312	312	12	7,1	34,2	
	63	470	400	36	12	M33	273,0	276,5	---	---	54	46	46	46	---	---	220	---	125	18	316	---	320	12	8,8	48,3	
	100	505	430	39	12	M36	273,0	276,5	---	---	72	60	60	60	---	---	210	---	157	18	340	---	340	12	8,8	81,4	
	160	515	430	42	12	M39	273,0	---	---	---	---	68	68	---	---	---	---	---	155	18	340	---	346	12	20,0	97,6	
	250	585	490	48	16	M45	298,5	---	---	---	---	100	100	---	---	---	---	---	215	30	385	---	394	12	32,0	190	
320	640	540	52	16	M48	323,9	---	---	---	---	125	125	---	---	---	---	---	300	40	428	---	432	12	40,0	312		
300	6	440	395	22	12	M20	323,9	327,5	333	---	24	22	22	22	8	18	285	44	62	15	342	355	342	12	7,1	15,3	
	10	445	400	22	12	M20	323,9	327,5	333	348	26	26	26	26	8	22	285	46	68	16	342	350	348	12	7,1	18,3	
	16	460	410	26	12	M24	323,9	327,5	333	348	32	28	28	28	8	24	285	46	78	16	344	350	350	12	7,1	22,1	
	25	485	430	30	16	M27	323,9	327,5	333	356	38	34	34	34	8	28	285	67	92	18	352	364	364	12	8,0	31,8	
	40	515	450	33	16	M30	323,9	327,5	333	368	48	42	42	42	8	34	285	67	115	18	362	380	378	12	8,0	47,6	
	63	530	460	36	16	M33	323,9	327,5	---	---	62	52	52	52	---	---	270	---	140	18	372	---	378	12	11,0	67,5	
	100	585	500	42	16	M39	323,9	327,5	---	---	84	68	68	68	---	---	260	---	170	18	400	---	407	12	12,5	118	
	160	585	500	42	16	M39	323,9	---	---	---	---	78	78	---	---	---	---	---	175	18	400	---	414	12	22,2	140	
	250	690	590	52	16	M48	---	---	---	---	---	---	120	---	---	---	---	---	---	---	---	---	480	10	---	---	
350	6	490	445	22	12	M20	355,6	359,5	365	---	26	22	22	22	8	18	330	---	62	15	385	---	392	12	7,1	20,3	
	10	505	460	22	16	M20	355,6	359,5	365	400	28	26	26	26	8	22	330	53	68	16	385	400	408	12	7,1	25,3	
	16	520	470	26	16	M24	355,6	359,5	365	400	35	30	30	30	8	26	330	57	82	16	390	400	410	12	8,0	32,8	
	25	555	490	33	16	M30	355,6	359,5	365	408	42	38	38	38	8	32	332	72	100	20	398	418	418	12	8,0	48,8	
	40	580	510	36	16	M33	355,6	359,5	365	418	54	46	46	46	8	36	330	72	125	20	408	424	432	12	8,8	69,3	
	63	600	525	39	16	M36	355,6	359,5	---	---	72	56	56	56	---	---	310	---	150	20	420	---	434	12	12,5	97,8	
100	655	560	48	16	M45	355,6	359,5	---	---	95	74	74	74	---	---	300	---	189	20	460	---	460	12	14,2	169		
400	6	540	495	22	16	M20	406,4	411,0	416	---	28	22	22	22	8	20	380	---	65	15	438	---	442	12	7,1	23,1	
	10	565	515	26	16	M24	406,4	411,0	416	450	32	26	26	26	8	24	380	57	72	16	440	456	456	12	7,1	30,6	
	16	580	525	30	16	M27	406,4	411,0	416	454	38	32	32	32	8	28	380	63	85	16	445	456	458	12	8,0	41,1	
	25	620	550	36	16	M33	406,4	411,0	416	462	46	40	40	40	8	34	380	78	110	20	452	472	472	12	8,8	63,3	
	40	660	585	39	16	M36	406,4	411,0	416	472	60	50	50	50	8	42	380	78	135	20	462	478	498	12	11,0	98	
	63	670	585	42	16	M39	406,4	411,0	---	---	78	60	60	60	---	---	360	---	160	20	475	---	490	12	14,2	129	
100	715	620	48	16	M45	406,4	411,0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	16,0	220	
500	6	645	600	22	20	M20	508,0	513,5	519	---	30	24	24	24	8	22	475	---	68	15	538	---	544	12	7,1	30,8	
	10	670	620	26	20	M24	508,0	513,5	519	550	38	28	28	28	8	26	475	67	75	16	542	559	559	12	7,1	40,5	
	16	715	650	33	20	M30	508,0	513,5	519	556	46	36	44	44	8	32	475	73	84	16	548	559	576	12	8,0	66,2	
	25	730	660	36	20	M33	508,0	513,5	519	568	58	48	48	51	8	38	475	90	125	20	558	580	580	12	10,0	97,0	
	40	755	670	42	20	M39	508	513,5	519	572 ⁽³⁾	57	57	57	57	8	50	475	90	140	20	562	576	576	12	14,2	130	
	63	800	705	48	20	M45	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
100	870	760	56	20	M52	508,0	513,5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
600	6	755	705	26	20	M24	610,0	616,5	622	---	32	30	30	30	8	22	575	---	70	16	640	---	642	12	7,1	44,0	
	10	780	725	30	20	M27	610,0	616,5	622	650	42	30	34	34	8	26	575	75	82	18	642	658	658	12	8,0	52,9	
	16	840	770	36	20	M33	610,0	616,5	622	660	55	40	54	54	8	32	575	83	88	18	670	658	690	12	10,0	104,0	
	25	845	770	39	20	M36	610,0	616,5	622	670	68	48	58	66	8	40	575	100	125	20	660	684	684	12	11,0	121,0	
	40	890	795	48	20	M45	610,0	616,5	622	676 ⁽³⁾	72	72	72	72	8	54	575	100	150	20	666	686	686	12	16,0	209	
	63	930	820	46	20	M52	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
700	6	860	810	26	24	M24	711,0 ⁽³⁾	721	---	40	30	30	40	4	---	670	---	76	16	740	---	746	12	8,0	53,7		
	10	895	840	30	24	M27	711,0 ⁽³⁾	721	---	50	35	35 ⁽³⁾	38	8	---	670	---	85	18	746	---	772	12	8,8	75,8		
	16	910	840	36	24	M33	711,0 ⁽³⁾	721	---	63	40	40 ⁽³⁾	58	8	---	670	83	104	18	755	760	760	12	10,0	96,5		
	25	960	875	42	24	M39	711,0 ⁽³⁾	821	---	85	50	50 ⁽³⁾	63 ⁽³⁾	8	---	---	---	129	20	760	---	780	12	14,2	155,0		
	40	995	900	48	24	M45	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
	63	1045	935	56	24	M52	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
800	6	975	920	30	24	M27	813,0 ⁽³⁾	824	---	44	30	30	44	4	---	770	---	76	16	842	---	850	12	8,0	64,4		
	10	1015	950	33	24	M30	813,0 ⁽³⁾	824	---	56	38	38 ⁽³⁾	48	8	---	770	---	96	18	850	---	876	12	8,8	102,0		
	16	1025																									

Dimensions (mm)

Extension table H.1.1

DN	PN	Mating dimensions					Outside diameter of neck	Bore diameters			Flange thickness				Chamfer	Collar thickness	Diameter of shoulders	Lenght			Neck diameters			Corner radius	Neck Thickness (preferred value)	Weight (kg)	
		Outside diameter	Diameter of bolt circle	Diameter of bolt hole	Bolts																						
		D	K	L	Broj	Vel.		A	B1	B2	B3	C1	C2	C3	C4	E	F	G max	H1	H2	H3	N1	N2	N3	R	S	
		Flange type																									
		01,02,04,05,11,12,13,21						11 21 ⁽¹⁾ 35	01 12 32	02	04	01 02 04	11 12 13	21	05	02 04	32 34	05	12 13	11 34	11 34	11 34	12 13	21	11 12 13 21	11	11
1000	6	1175	1120	30	28	M27	1016,0	⁽³⁾	1028	---	52	38	38	52	4	---	960	---	82	16	1045	---	1050	16	8,0	98,6	
	10	1230	1160	36	28	M33	1016,0	⁽³⁾	1028	---	70	44	⁽³⁾	54	8	---	960	---	105	20	1052	---	1080	16	12,5	161,0	
	16	1255	1170	42	28	M39	1016,0	⁽³⁾	1030	---	90	59	⁽³⁾	68	8	---	960	100	137	22	1058	1072	1076	16	12,5	233,0	
	25	1320	1210	56	28	M52	1016,0	---	---	---	⁽³⁾	63	⁽³⁾	⁽³⁾	---	---	---	---	160	24	1070	---	1086	16	20,0	338	
	40	1360	1250	56	28	M52	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
63	1415	1290	70	28	M64	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
1200	6	1405	1340	33	32	M30	1219,0	⁽³⁾	1234	---	60	42	42	60	5	---	1160	---	104	20	1248	---	1264	16	8,8	152,0	
	10	1455	1380	39	32	M36	1219,0	⁽³⁾	1234	---	83	55	⁽³⁾	66	8	---	1160	---	132	25	1256	---	1292	16	12,5	258,0	
	16	1485	1390	48	32	M45	1219,0	⁽³⁾	1219	---	⁽³⁾	78	⁽³⁾	---	---	---	1160	---	160	30	1262	---	1282	16	14,2	390,0	
	25	1530	1420	56	32	M52	1219,0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
	40	1575	1460	62	32	M56	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
	63	1665	1530	78	32	M72	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		

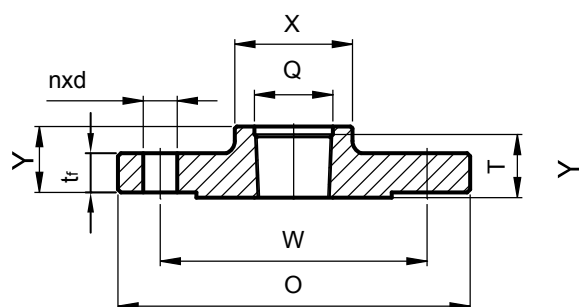
⁽¹⁾ For flanges type 21 the outside hub diameter approximately corresponds to the outside pipe diameter.

⁽²⁾ 8 holes is preferred however 4 holes may be supplied upon special request by the purchaser.

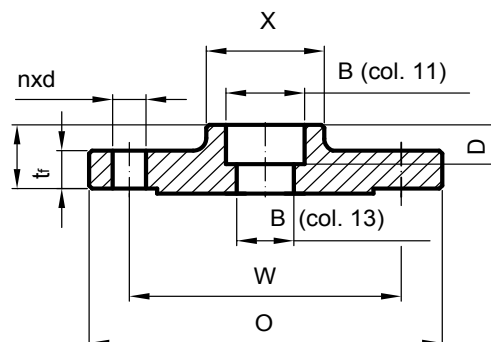
⁽³⁾ Other dimensions upon request by the purchaser.

NOTE: The p/t rating from EN 1092-1 apply only for flange types 05, 11, 12, 13 i 21 having nominal sizes up to and including DN 600. The p/t rating of all other flanges shall be agreed between the manufacturer and purchaser.

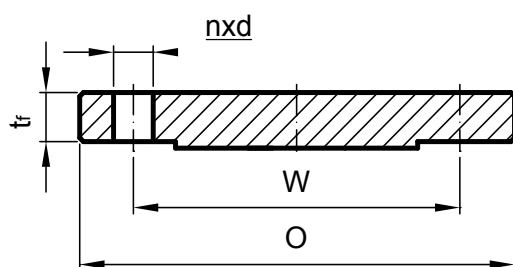
Flanges according to ASME B 16.5



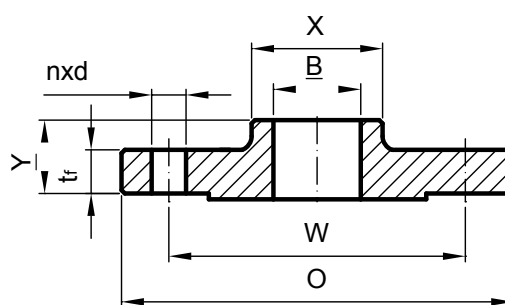
Drawing H.1.11 - Threaded



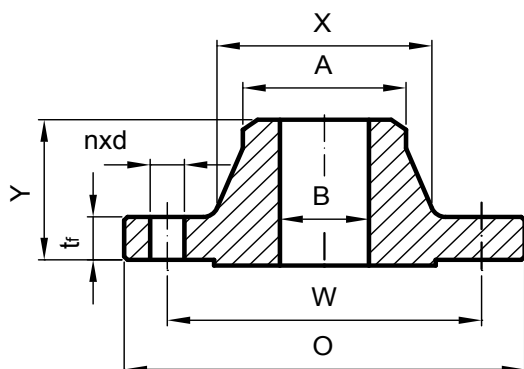
Drawing H.1.12 - Socket welding



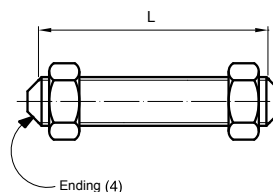
Drawing H.1.13 - Blind



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
20 (3/4)	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
	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
25 (1)	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
	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
32 (1 1/4)	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
	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
40 (1 1/2)	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
	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
50 (2)	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
65 (2 1/2)	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
80 (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
	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
100 (4)	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
	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
125 (5)	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
	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
125 (5)	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
	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
125 (5)	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		-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		
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
200 (8)	2500	485	368,3	115,0	235	168,3	---	152	273	---	---	171,4	*	---	---	54,0	8	345	355	R47	172,0
	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
250 (10)	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
	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
300 (12)	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
	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
350 (14)	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
	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
400 (16)	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
	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
450 (18)	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
	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
500 (20)	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
	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
600 (24)	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
	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
650 (26)	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
	150	870	806,4	66,7	676	660,4	---	---	119	---	---	---	---	---	---	34,9	24	---	---	---	147
700 (28)	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
	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
750 (30)	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

- 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.
- Raised Face for Class 150 and Class 300 is 2 mm, Raised Face for Class 600 to Class 1500 is 7mm.
- Bolt holes are in multiples of four. Bolt holes shall be equally spaced and pairs of bolt holes shall straddle fitting centerlines.
- Length of stud bolts does not include the height of the points.
- ASME B16.47 is reference standard for DN 650 and DN 700 dimensions