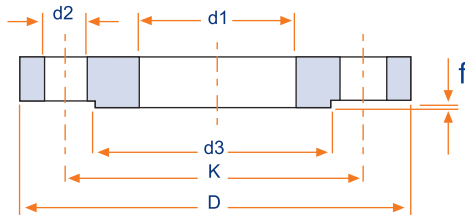
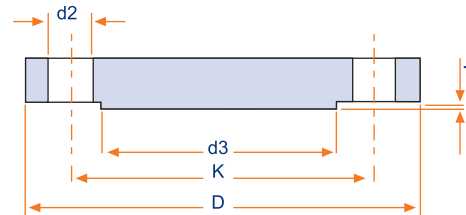


Steel Flanges



Plain Flange



Blind Flange

DN 80-3000

PN 6-10

EN 1092-1(ISO 7005-1, DIN 2501)

unit: mm

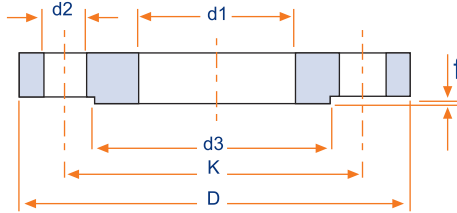
Pipe		PN 6						PN 10					
Size	outside diameter of pipe	Flange diameter	Pitch circle diameter	Holes	Diameter of bolt hole	Raised face diameter	Raised face	Flange diameter	Pitch circle diameter	Holes	Diameter of bolt hole	Raised face diameter	Raised face
DN	d1	D	K	no.	d2	d3	f	D	K	no.	d2	d3	f
80	89	190	150	4	18	128	2	200	160	4/8	18	138	2
100	114.3	210	170	4	18	148	2	220	180	8	18	162	2
125	140	240	200	8	18	178	2	250	210	8	18	188	2
150	168	265	225	8	18	202	2	285	240	8	22	218	2
200	219	320	280	8	18	258	2	340	295	8	22	268	2
250	273	375	335	12	18	312	2	395	350	12	22	320	2
300	324	440	395	12	22	365	2	445	400	12	22	370	2
350	355	490	445	12	22	415	2	505	460	16	22	430	2
400	406	540	495	16	22	465	2	565	515	16	26	482	2
450	457	595	550	20	22	520	2	615	565	20	26	530	2
500	508	645	600	20	22	570	2	670	620	20	26	585	2
550	559								675	20	30	630	2
600	610	755	705	20	26	670	2	780	725	20	30	685	2
650	660			24	26		3	835	780	24	30	740	3
700	711	860	810	24	26	775	3	895	840	24	30	800	3
750	762							965	900	24	33	850	3
800	813	975	920	24	30	880	3	1015	950	24	33	905	3
900	914	1075	1020	24	30	980	4	1115	1050	28	33	1005	4
1000	1016	1175	1120	28	30	1080	4	1230	1160	28	28	1110	4
1100	1118							1340	1270	32	36	1221	4
1200	1220	1405	1340	32	33	1295	4	1455	1380	32	39	1330	4
1400	1422	1630	1560	36	36	1510	4	1675	1590	36	42	1535	4
1600	1626	1830	1760	40	36	1710	5	1915	1820	40	48	1760	5
1800	1829	2045	1970	44	39	1920	5	2115	2020	44	48	1960	5
2000	2032	2265	2180	48	42	2125	5	2325	2230	48	48	2170	5
2200	2235	2475	2390	52	42	2335	5	2550	2440	52	56	2370	5
2400	2438	2685	2600	56	42	2545	5	2760	2650	56	56	2570	5
2600	2641	2905	2810	60	48	2750	5	2960	2850	60	56	2780	5
2800	2845	3115	3020	64	48	2960	5	3180	3070	64	56	3000	5
3000	3048	3315	3220	68	48	3160	5	3405	3290	68	62	3210	5

مشخصات برای سایزهای بالاتر بر حسب درخواست مشتری اعلام می گردد.

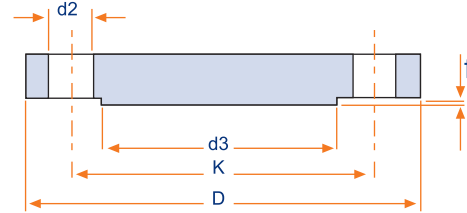
سایر استانداردهای قابل ساخت: ANSI, AWWA, ISO, DIN

شرکت نهرآب گستر اشتهارد ضمن رعایت استانداردهای ذیربط حق هر گونه تغییر در ابعاد و مشخصات را جهت ارتقاء کیفی برای خود محفوظ می دارد.

Steel Flanges



Plain Flange



Blind Flange

DN 80-2200

PN 16-25

EN 1092-1(ISO 7005-1, DIN 2501)

unit: mm

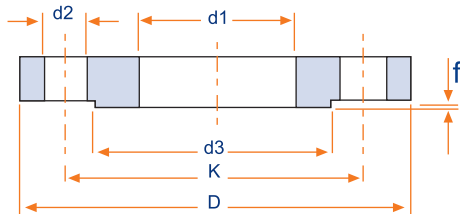
Pipe		PN 16						PN 25					
Size	outside diameter of pipe	Flange diameter	Pitch circle diameter	Holes	Diameter of bolt hole	Raised face diameter	Raised face	Flange diameter	Pitch circle diameter	Holes	Diameter of bolt hole	Raised face diameter	Raised face
DN	d1	D	K	no.	d2	d3	f	D	K	no.	d2	d3	f
80	89	200	160	8	18	138	2	200	160	8	18	138	2
100	114.3	220	180	8	18	158	2	235	190	8	22	162	2
125	140	250	210	8	18	188	2	270	220	8	26	188	2
150	168	285	240	8	22	212	2	300	250	8	26	218	2
200	219	340	295	12	22	268	2	360	310	12	26	278	2
250	273	405	355	12	26	320	2	425	370	12	30	335	2
300	324	460	410	12	26	378	2	485	430	16	30	395	2
350	355	520	470	16	26	438	3	555	490	16	33	450	3
400	406	580	525	16	30	490	3	620	550	16	36	505	3
450	457	640	585	20	30	490	3	670	600	16	36	505	3
500	508	715	650	20	33	610	3	730	660	20	36	615	3
550	559	775	710	20	33	665	3	785	710	20	39	660	3
600	610	840	770	20	36	725	3	845	770	20	39	720	3
650	660	860	790	24	36	740	3	895	820	24	39	770	3
700	711	910	840	24	36	795	3	960	875	24	39	820	3
750	762							1020	935	24	42	880	3
800	813	1025	950	24	39	900	3	1085	990	24	42	930	3
900	914	1125	1050	28	39	1000	4	1185	1090	28	33	1030	4
1000	1016	1255	1170	28	42	1115	4	1320	1210	28	48	1140	4
1100	1118	1355	1270	32	42	1215	4	1420	1310	32	56	1240	4
1200	1220	1485	1390	32	48	1330	4	1530	1420	32	56	1350	4
1400	1422	1685	1590	36	48	1530	4	1755	1640	36	62	1560	4
1600	1626	1930	1820	40	56	1750	5	1975	1860	40	62	1780	5
1800	1829	2130	2020	44	56	1950	5	2195	2070	44	70	1985	5
2000	2032	2345	2230	48	62	2150	5	2425	2300	48	70	2210	5
2200	2235	2555	2440	52	62	2360	5						

مشخصات برای سایزهای بالاتر بر حسب درخواست مشتری اعلام می گردد.

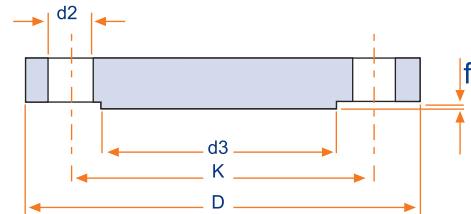
سایر استانداردهای قابل ساخت: ANSI, AWWA, ISO, DIN

شرکت نهرآب گستر اشتهاارد ضمن رعایت استانداردهای زیربط حق هر گونه تغییر در ابعاد و مشخصات را جهت ارتقاء کیفی برای خود محفوظ می دارد.

Steel Flanges



Plain Flange



Blind Flange

DN 80-1600
PN 40-64-100
EN 1092-1(ISO 7005-1, DIN 2501)

unit: mm

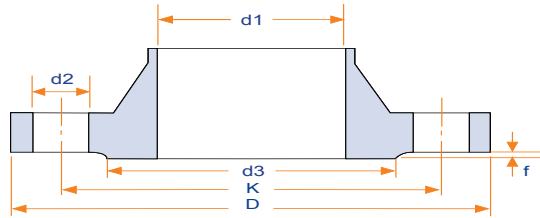
Pipe		PN 40				PN 64				PN 100			
Size	outside diameter of pipe	Flange diameter	Pitch circle diameter	Holes	Diameter of bolt hole	Raised face diameter	Raised face	Holes	Pitch circle diameter	Flange diameter	Pitch circle diameter	Holes	Diameter of bolt hole
DN	d1	D	K	no.	d2	D	K	no.	d2	D	K	no.	d2
80	89	200	160	8	18	215	170	8	22	230	180	8	26
100	114	235	190	8	22	250	200	8	26	265	210	8	30
125	140	270	220	8	26	295	240	8	30	315	250	8	33
150	168	300	250	8	26	345	280	8	33	355	290	12	33
200	219	375	320	12	30	415	345	12	36	430	360	12	36
250	273	450	385	12	33	470	400	12	36	505	430	12	39
300	324	515	450	16	33	530	460	16	36	585	500	16	42
350	355	580	510	16	36	600	525	16	39	655	560	16	48
400	406	660	585	16	39								
450	406	685	610	20	39	670	585	16	42	715	620	16	48
500	508	755	670	20	42	800	705	20	48	870	760	20	56
600	610	890	795	20	48	930	820	20	56	990	875	20	62
700	711	995	900	24	48	1045	935	24	56	1145	1020	24	70
800	812	1140	1030	24	56	1165	1050	24	62				
900	914	1250	1140	28	56	1285	1170	28	62				
1000	1016	1360	1250	28	56	1415	1290	28	70				
1200	1220	1575	1460	32	62	1665	1530	32	78				
1400	1422	1795	1680	36	62								
1600	1626	2025	1900	40	70								

مشخصات برای سایزهای بالاتر بر حسب درخواست مشتری اعلام می گردد.

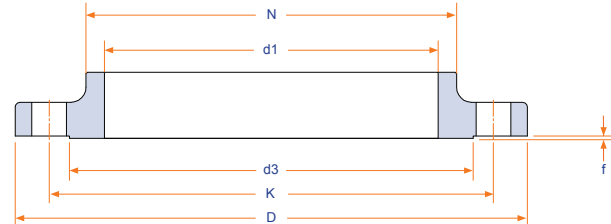
سایر استانداردهای قابل ساخت: ANSI, AWWA, ISO, DIN

شرکت نهرآب گستر اشتهارد ضمن رعایت استانداردهای زیربط حق هر گونه تغییر در ابعاد و مشخصات را جهت ارتقاء کیفی برای خود محفوظ می دارد.

Steel Flanges



Welding Neck



Slip-On

DN 80-3000

PN 10-16

EN 1092-1(ISO 7005-1, DIN 2501)

unit: mm

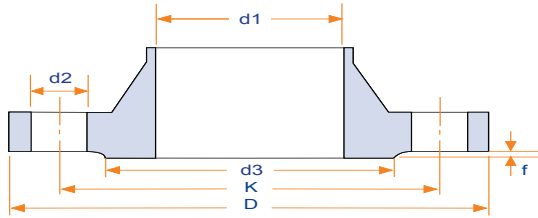
Pipe		PN 10							PN 16						
Size	outside diameter of pipe	Flange diameter	Pitch circle diameter	Holes	Diameter of bolt hole	Raised face diameter	Raised face		Flange diameter	Pitch circle diameter	Holes	Diameter of bolt hole	Raised face diameter	Raised face	
DN	d1	D	K	no.	d2	d3	f	N	D	K	no.	d2	d3	f	N
80	89	200	160	4/8	18	138	2		200	160	8	18	138	2	
100	114.3	220	180	8	18	162	2		220	180	8	18	158	2	
125	140	250	210	8	18	188	2		250	210	8	18	188	2	
150	168	285	240	8	22	218	2		285	240	8	22	212	2	
200	219	340	295	8	22	268	2		340	295	12	22	268	2	
250	273	395	350	12	22	320	2		405	355	12	26	320	2	
300	324	445	400	12	22	370	2		460	410	12	26	378	2	
350	355	505	460	16	22	430	2		520	470	16	26	438	3	
400	406	565	515	16	26	482	2		580	525	16	30	490	3	
450	457	615	565	20	26	530	2		640	585	20	30	490	3	
500	508	670	620	20	26	585	2		715	650	20	33	610	3	
550	559		675	20	30	630	2		775	710	20	33	665	3	
600	610	780	725	20	30	685	2		840	770	20	36	725	3	
650	660	835	780	24	30	740	3		860	790	24	36	740	3	
700	711	895	840	24	30	800	3		910	840	24	36	795	3	
750	762	965	900	24	33	850	3								
800	813	1015	950	24	33	905	3		1025	950	24	39	900	3	
900	914	1115	1050	28	33	1005	4		1125	1050	28	39	1000	4	
1000	1016	1230	1160	28	28	1110	4		1255	1170	28	42	1115	4	
1100	1118	1340	1270	32	36	1221	4		1355	1270	32	42	1215	4	
1200	1220	1455	1380	32	39	1330	4		1485	1390	32	48	1330	4	
1400	1422	1675	1590	36	42	1535	4		1685	1590	36	48	1530	4	
1600	1626	1915	1820	40	48	1760	5		1930	1820	40	56	1750	5	
1800	1829	2115	2020	44	48	1960	5		2130	2020	44	56	1950	5	
2000	2032	2325	2230	48	48	2170	5		2345	2230	48	62	2150	5	
2200	2235	2550	2440	52	56	2370	5		2555	2440	52	62	2360	5	
2400	2438	2760	2650	56	56	2570	5								
2600	2641	2960	2850	60	56	2780	5								
2800	2845	3180	3070	64	56	3000	5								
3000	3048	3405	3290	68	62	3210	5								

مشخصات برای سایزهای بالاتر بر حسب درخواست مشتری اعلام می گردد.

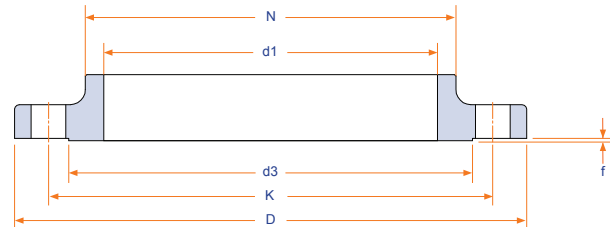
سایر استانداردهای قابل ساخت: ANSI, AWWA, ISO, DIN

شرکت نهرآب گستر اشتهاارد ضمن رعایت استانداردهای زیربط حق هر گونه تغییر در ابعاد و مشخصات را جهت ارتقاء کیفی برای خود محفوظ می دارد.

Steel Flanges



Welding Neck



Slip-On

DN 80-2200
PN 25-25
EN 1092-1(ISO 7005-1, DIN 2501)

unit: mm

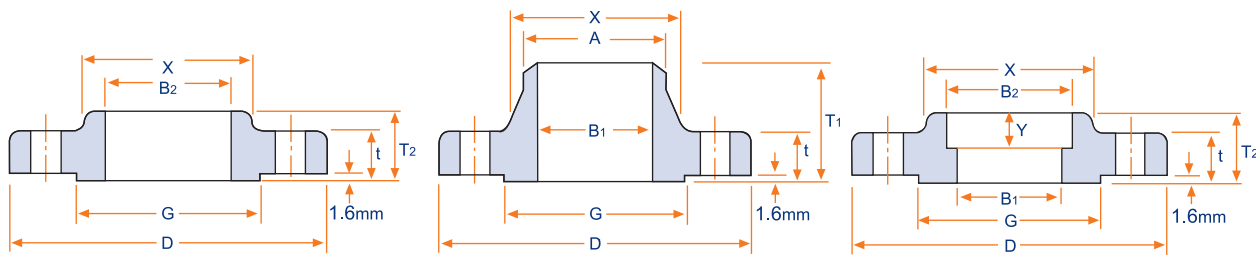
Pipe		PN 25							PN 40						
Size	outside diameter of pipe	Flange diameter	Pitch circle diameter	Holes	Diameter of bolt hole	Raised face diameter	Raised face		Flange diameter	Pitch circle diameter	Holes	Diameter of bolt hole	Raised face diameter	Raised face	
DN	d1	D	K	no.	d2	d3	f	N	D	K	no.	d2	d3	f	N
80	89	200	160	8	18	138	2		200	160	8	18			
100	114.3	235	190	8	22	162	2		235	190	8	22			
125	140	270	220	8	26	188	2		270	220	8	26			
150	168	300	250	8	26	218	2		300	250	8	26			
200	219	360	310	12	26	278	2		375	320	12	30			
250	273	425	370	12	30	335	2		450	385	12	33			
300	324	485	430	16	30	395	2		515	450	16	33			
350	355	555	490	16	33	450	3		580	510	16	36			
400	406	620	550	16	36	505	3		660	585	16	39			
450	457	670	600	16	36	505	3		685	610	20	39			
500	508	730	660	20	36	615	3		755	670	20	42			
550	559	785	710	20	39	660	3								
600	610	845	770	20	39	720	3		890	795	20	48			
650	660	895	820	24	39	770	3								
700	711	960	875	24	39	820	3		995	900	24	48			
750	762	1020	935	24	42	880	3								
800	813	1085	990	24	42	930	3		1140	1030	24	56			
900	914	1185	1090	28	33	1030	4		1250	1140	28	56			
1000	1016	1320	1210	28	48	1140	4		1360	1250	28	56			
1100	1118	1420	1310	32	56	1240	4								
1200	1220	1530	1420	32	56	1350	4		1575	1460	32	62			
1400	1422	1755	1640	36	62	1560	4		1795	1680	36	62			
1600	1626	1975	1860	40	62	1780	5		2025	1900	40	70			
1800	1829	2195	2070	44	70	1985	5								
2000	2032	2425	2300	48	70	2210	5								

مشخصات برای سایزهای بالاتر بر حسب درخواست مشتری اعلام می گردد.

سایر استانداردهای قابل ساخت: ANSI, AWWA, ISO, DIN

شرکت نهرآب گستر اشتهارد ضمن رعایت استانداردهای ذیربط حق هر گونه تغییر در ابعاد و مشخصات را جهت ارتقاء کیفی برای خود محفوظ می دارد.

ANSI B16.5 FORGED FLANGES (CLASS 150)



SLIP-ON

WELDING NECK

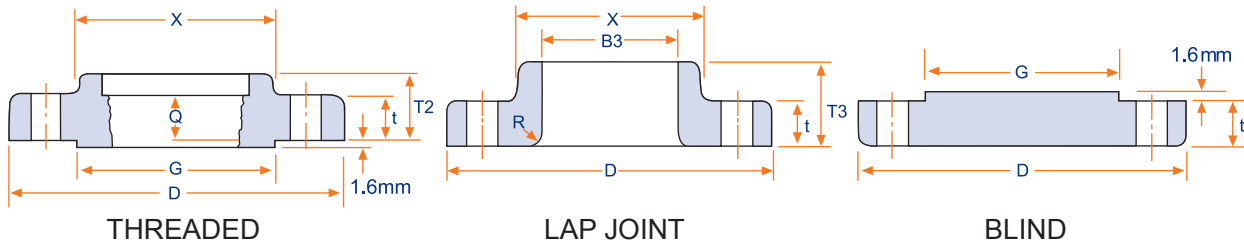
SOCKET WELDING

unit: mm

Nominal Pipe Size	Outside Diam.	O.D. of Raised Face	Diam. at Base of Hub	Thickness	BORE			LENGTH THRU HUB			Diam. of Hub at Bevel	Radius of Fillet	Thread Length
					Welding Neck Socket Welding	Slip-on Socket Welding	Lap Joint	Welding Neck	Slip-on Threaded Socket Welding	Lap Joint			
					B ₁	B ₂	B ₃	T ₁	T ₂	T ₃			
1/2	89	35.1	30.2	11.2	15.7	22.4	22.9	47.8	15.7	15.7	21.3	3.0	15.7
3/4		42.9	38.1	12.7	20.8	27.7	28.2	52.3	15.7	15.7	26.7	3.0	15.7
1	108	50.8	49.3	14.2	52.6	34.5	35.1	55.6	17.5	17.5	33.5	3.0	17.5
1 1/4	117	63.5	58.7	15.7	35.1	43.2	43.7	57.2	20.6	20.6	42.2	4.8	20.6
1 1/2	127	73.2	65.0	17.5	40.9	49.5	50.0	62.0	22.4	22.4	48.3	6.4	22.4
2	152	91.9	77.7	19.1	52.6	62.0	62.5	63.5	25.4	25.4	60.5	7.9	25.4
2 1/2	178	104.6	90.4	22.4	62.7	74.7	75.4	69.9	28.4	28.4	73.2	7.9	23.4
3	194	127.0	108.0	23.9	78.0	90.7	91.4	69.9	30.2	30.2	88.9	9.7	30.2
3 1/2	216	139.7	122.2	23.9	90.2	103.4	104.2	71.4	31.8	31.8	101.6	9.7	31.8
4	229	157.2	134.9	23.9	102.4	116.1	116.8	76.2	33.3	33.3	114.3	11.2	33.3
5	254	185.7	163.6	23.9	128.3	143.8	144.5	88.9	36.6	36.6	141.2	11.2	36.6
6	279	215.9	192.0	25.4	154.2	170.7	171.5	88.9	39.6	39.6	168.4	12.7	39.6
8	343	269.7	246.1	28.4	202.7	221.5	222.3	101.6	44.5	44.5	219.2	12.7	44.5
10	406	323.9	304.8	30.2	254.5	276.4	277.4	101.6	49.3	49.3	273.1	12.7	49.3
12	483	381.0	365.3	31.8	304.8	327.2	328.2	114.3	55.6	55.6	323.9	12.7	55.6
14	533	412.8	400.1	35.1	336.6	359.2	360.2	127.0	57.2	79.2	355.6	12.7	57.2
16	597	469.9	457.2	36.6	387.4	410.5	411.2	127.0	63.5	87.4	406.4	12.7	63.5
18	635	533.4	505.0	39.6	438.2	461.8	462.3	139.4	68.3	96.8	457.2	12.7	68.3
20	699	584.2	558.8	42.9	489.0	513.1	514.4	144.5	73.2	103.1	508.0	12.7	73.2
24	813	692.2	663.4	47.8	590.6	616.0	616.0	152.4	82.6	111.3	609.6	12.7	82.6

Notes: Class 150 flanges except Lap Joint will be furnished with 0.06" (1.6mm) raised face which is included in 'Thickness' (t) and 'Length thru Hub' (T₁), (T₂). For Slip-on, Threaded, Socket Welding and Lap Joint Flanges, the hubs can be shaped either vertical from base to top or tapered within the limits of 7 degrees.

ANSI B16.5 FORGED FLANGES (CLASS 150)

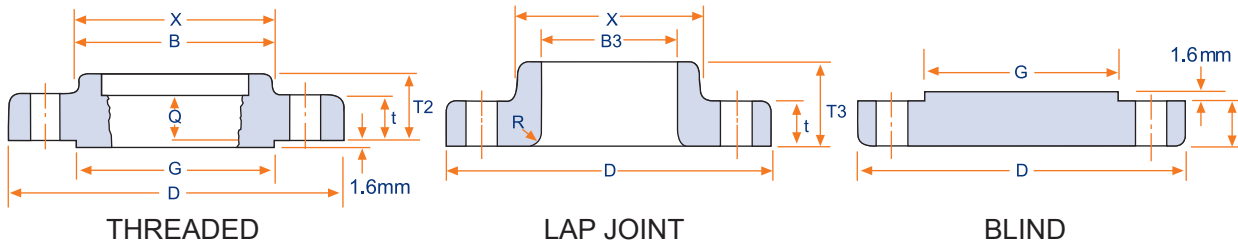
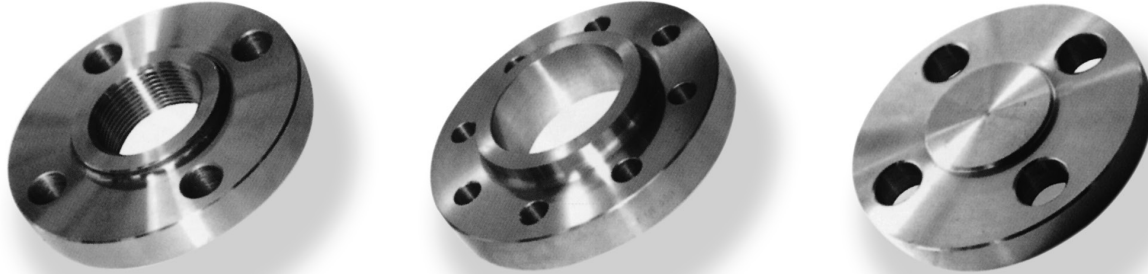


unit: mm

Nominal Pipe Size	Depth of Socket Y	DRILLING			BOLTING				APPROXIMATE WEIGHT									
		Bolt Circle Diam	Number of Holes	Diam. of Holes	Diam. of Bolt (inch)	Machine Bolt Length		Stud Bolt Length	Welding Neck		Slip-on and Threaded		Lap Joint		Blind		Socket Welding	
						Raised Face	Raised Face		Ring Joint	Kg	lb	Kg	lb	Kg	lb	Kg	lb	Kg
1/2	9.7	60.5	4	15.7	1/2	50.8	57.2	-	0.51	1.10	0.47	1.00	0.51	1.00	0.47	1.00	0.47	1.00
3/4	11.2	69.9	4	15.7	1/2	50.8	63.5	-	0.73	1.60	0.58	1.30	0.64	1.40	0.63	1.40	0.59	1.30
1	12.7	79.2	4	15.7	1/2	57.2	63.5	76.2	1.07	2.40	0.86	1.90	0.93	1.80	0.94	2.10	0.87	1.90
1 1/4	14.2	88.9	4	15.7	1/2	57.2	69.9	82.6	1.40	3.10	1.08	2.40	1.16	2.00	1.23	2.70	1.11	2.40
1 1/2	15.7	98.6	4	15.7	1/2	63.5	69.9	82.6	1.81	4.00	1.41	3.10	1.51	3.30	1.62	3.60	1.45	3.20
2	17.5	120.7	4	19.1	5/8	69.9	82.6	95.3	2.59	5.70	2.26	5.00	2.38	5.20	2.64	5.80	2.33	5.00
2 1/2	19.1	139.7	4	19.1	5/8	76.2	88.9	101.6	4.28	9.40	3.43	7.60	3.60	7.90	4.06	9.00	3.55	7.80
3	20.6	152.4	4	19.1	5/8	76.2	88.9	101.6	5.18	1.40	3.87	8.50	4.04	8.90	4.90	10.80	4.02	8.90
3 1/2	22.4	177.8	8	19.1	5/8	76.2	88.9	101.6	5.45	12.00	4.99	11.00	4.99	11.00	5.90	13.00	4.99	11.00
4	23.9	190.5	8	19.1	5/8	76.2	88.9	101.6	7.32	16.10	5.75	12.70	5.96	13.00	7.41	16.30	5.99	13.20
5	23.9	215.9	8	22.4	3/4	82.6	95.3	108.0	8.91	19.60	6.22	13.70	6.44	14.00	8.76	19.30	6.68	14.70
6	26.9	241.3	8	22.4	3/4	82.6	101.6	114.3	11.26	24.80	7.38	16.30	7.59	16.00	11.31	24.90	7.99	17.60
8	31.8	298.5	8	22.4	3/4	88.9	108.0	120.7	17.68	39.00	12.36	27.30	12.66	27.90	19.92	43.90	13.29	29.30
10	33.3	362.0	12	25.4	7/8	101.6	114.3	120.7	24.79	54.70	17.10	37.70	16.78	37.00	29.39	64.80	19.50	43.00
12	39.6	481.8	12	25.4	7/8	101.6	120.7	133.4	38.98	85.90	27.68	61.00	28.30	62.40	43.70	96.30	29.03	64.00
14	41.4	476.3	12	28.4	1	114.3	133.4	146.1	54.71	114.00	35.20	77.60	41.50	91.50	59.42	140.00	38.56	85.00
16	44.5	539.8	16	28.4	1	114.3	133.4	146.1	64.41	142.00	42.18	93.00	52.98	116.80	77.11	170.00	44.49	98.00
18	49.3	577.9	16	31.8	1 1/8	127.0	146.1	158.8	74.84	165.00	49.71	109.60	59.00	130.00	94.80	209.00	54.43	120.00
20	54.1	635.0	20	31.8	1 1/8	139.7	158.8	171.5	89.36	197.00	65.50	140.00	72.12	159.00	123.38	272.00	70.30	155.00
24	63.5	749.3	20	35.1	1 1/4	152.4	171.5	184.2	199.66	263.80	90.50	199.50	99.02	218.30	188.24	415.00	95.25	210.00

The gasket surface and backside (bearing surface for bolting) are made parallel within 1 degree. To accomplish parallelism, spot facing is carried out according to MSS SP-9, without reducing thickness (t)
Depth of Socket (Y) is covered by ANSI B16.5 only in size through 3 inch is at the manufacturer's option.

ANSI B16.5 FORGED FLANGES (CLASS 300)



unit: mm

Nominal Pipe Size	Depth of Socket	DRILLING			BOLTING			APPROXIMATE WEIGHT										
		Bolt Circle Diam.	Number of Holes	Diam. of Holes	Diam. of Bolt (inch)	Machine Bolt Length			Welding Neck		Slip-on and Threaded		Lap Joint		Blind		Socket Welding	
						Raised Face	Raised Face	Ring Joint	Kg	lb	Kg	lb	Kg	lb	Kg	lb	Kg	lb
1/2	9.7	66.5	4	15.7	1/2	57.2	63.5	76.2	0.78	1.70	0.62	1.40	0.61	1.30	0.62	1.40	0.62	1.40
3/4	11.2	82.6	4	19.1	5/8	63.5	76.2	88.9	1.34	3.00	1.15	2.50	1.15	2.50	1.16	2.50	1.19	2.60
1	12.7	88.9	4	19.1	5/8	63.5	76.2	88.9	1.64	3.60	1.39	3.10	1.38	3.00	1.42	3.00	1.44	3.20
1 1/4	14.2	98.6	4	19.1	5/8	69.9	82.6	95.3	2.06	4.50	1.67	3.70	1.66	3.70	1.79	3.90	1.73	3.80
1 1/2	15.7	114.3	4	22.4	3/4	76.2	88.9	101.6	3.06	6.70	2.53	5.60	2.52	5.60	2.68	5.90	2.62	5.80
2	17.5	127.0	8	19.1	5/8	76.2	88.9	101.6	3.40	7.50	2.80	6.20	2.79	6.20	3.09	6.80	2.94	6.50
2 1/2	19.1	149.4	8	22.4	3/4	82.6	101.6	114.3	5.31	11.70	4.25	9.40	4.22	9.30	4.75	10.50	4.49	9.90
3	20.6	168.1	8	22.4	3/4	88.9	108.0	120.7	7.32	16.10	5.81	12.80	5.78	12.70	6.79	14.90	6.20	13.70
3 1/2	22.4	184.2	8	22.4	3/4	95.3	108.0	127.0	8.17	18.00	7.72	17.00	7.72	17.00	9.53	21.00		
4	23.9	200.2	8	22.4	3/4	95.3	114.3	127.0	11.30	24.90	10.13	22.30	10.07	22.20	12.00	26.50		
5	23.9	235.0	8	22.4	3/4	108.0	120.7	133.4	15.12	33.30	12.58	27.70	12.52	27.60	15.96	35.20		
6	26.9	296.7	12	22.4	3/4	108.0	120.7	139.7	19.68	43.40	16.04	35.40	15.95	35.20	21.20	46.70		
8	31.8	330.2	12	25.4	7/8	120.7	139.7	152.4	30.48	67.20	24.50	54.00	24.37	53.70	34.60	76.30		
10	33.3	387.4	16	28.4	1	139.7	158.8	171.5	43.74	96.40	34.16	75.30	39.92	88.00	55.34	122.00		
12	39.6	450.9	16	31.8	1 1/8	146.1	171.5	184.2	64.41	142.00	51.26	113.00	58.70	129.40	78.90	174.00		
14	41.4	514.4	20	31.8	1 1/8	158.8	177.8	190.5	88.30	194.70	72.12	159.00	83.46	184.00	107.05	236.00		
16	44.5	571.5	20	35.1	1 1/4	165.1	190.5	203.2	112.94	249.00	90.40	199.30	106.14	234.00	139.25	307.00		
18	49.3	628.7	24	35.1	1 1/4	171.5	196.9	209.6	138.34	305.00	109.00	240.30	133.95	295.30	176.90	396.00		
20	54.1	685.8	24	35.1	1 1/4	184.2	203.2	222.3	167.37	369.00	136.00	300.00	157.65	347.60	223.17	492.00		
24	63.5	812.8	24	41.1	1 1/2	203.2	228.6	254.0	235.41	519.00	204.00	449.70	240.40	530.00	342.00	754.00		

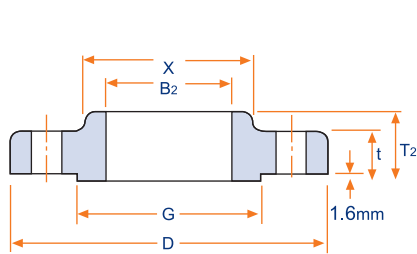
(4) Blind Flanges may be made with the same hub as that used for Slip-on Flanges or without hub.

(5) The gasket surface and backside (bearing surface for bolting) are made parallel within 1 degree. To accomplish parallelism, spot facing is carried out according to MSS SP-9, without reducing thickness (t).

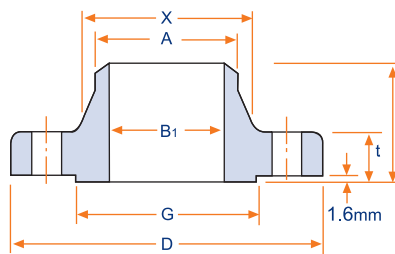
(6) Depth of Socket (Y) is covered by ANSI B16.5 only in sizes through 3 inch is at the manufacturer's option.

شرکت نهرآب گستر اشتهدارد ضمن رعایت استانداردهای زیربسط حق هر گونه تغییر در ابعاد و مشخصات را جهت ارتقاء کیفی برای خود محفوظ می دارد.

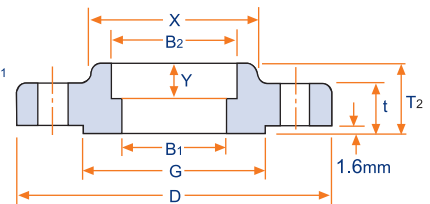
ANSI B16.5 FORGED FLANGES (CLASS 300)



SLIP-ON



WELDING NECK



SOCKET WELDING

unit: mm

Nominal Pipe Size	Outside Diam.	Diam at Base of Hub	O.D. of Raised Face	Thickness	BORE				LENGTH THRU HUB			Diam. of Hub at Bevel	Radius of Fillet	Thread Length
					Welding Neck Socket Welding	Slip-on Socket Welding	Lap Joint	Countor Bore Min. Threaded Min.	Welding Neck	Slip-on Threaded Socket Welding	Lap Joint			
					B ₁	B ₂	B ₃	B	T ₁	T ₂	T ₃			
1/2	95	38.1	35.1	14.2	15.7	22.4	22.9	23.6	52.3	22.4	22.4	21.3	3.0	15.7
3/4	117	47.8	42.9	15.7	20.8	27.7	28.2	29.0	57.2	25.4	25.4	26.7	3.0	15.7
1	124	58.8	50.8	17.5	26.7	34.5	35.1	35.8	62.0	26.9	26.9	33.5	3.0	17.5
1 1/4	138	63.5	63.5	19.1	35.1	43.2	43.7	44.5	65.0	26.9	26.9	42.2	4.8	20.6
1 1/2	155	69.9	73.2	20.6	40.9	49.5	50.0	50.5	68.3	30.2	30.2	48.3	6.4	22.4
2	165	84.1	91.9	22.4	52.6	62.0	62.5	63.5	69.9	33.3	33.3	60.5	7.9	28.4
2 1/2	191	100.1	104.6	25.4	62.7	74.7	75.4	76.2	76.2	38.1	38.1	73.2	7.9	31.8
3	210	117.3	127.0	28.4	78.0	90.7	91.4	92.2	79.2	42.9	42.9	88.9	9.7	31.8
3 1/2	229	133.4	139.7	30.2	90.2	103.4	104.1	104.9	81.0	44.5	44.5	101.6	9.7	36.6
4	254	146.1	157.2	31.8	102.4	116.1	116.8	117.6	85.9	47.8	47.8	114.3	11.2	36.6
5	279	177.8	185.7	35.1	128.3	143.8	144.5	144.5	98.6	50.8	50.8	141.2	11.2	42.9
6	318	206.2	215.9	36.6	154.2	170.7	171.5	171.5	98.6	52.3	52.3	168.4	12.7	46.0
8	381	260.4	269.7	41.1	202.7	221.5	222.3	222.3	111.3	62.0	62.0	219.2	12.7	50.8
10	445	320.5	323.9	47.8	254.5	276.4	277.4	276.4	117.3	66.5	95.3	273.1	12.7	55.6
12	521	374.7	381.0	50.8	304.8	327.2	328.2	328.7	130.0	73.2	101.6	323.9	12.7	60.5
14	584	425.5	412.8	53.8	336.6	359.2	360.2	360.4	142.7	76.2	111.3	355.6	12.7	63.5
16	648	482.6	469.9	57.2	387.4	410.5	411.2	411.2	146.1	82.6	120.7	406.4	12.7	68.3
18	711	533.4	583.4	60.5	438.2	461.8	462.3	462.0	158.8	88.9	130.0	457.2	12.7	69.9
20	775	587.2	584.2	63.5	489.0	513.1	514.4	512.8	162.1	95.3	139.7	508.0	12.7	73.2
24	914	701.5	692.2	69.9	590.6	616.0	616.0	614.4	168.1	106.4	152.4	609.6	12.7	82.6

Notes: (3) For Slip-on, Threaded, Socket Welding and Lap Joint Flanges, the hubs can be shaped either vertical from base to top or tapered within the limits of 7 degrees. مشخصات برای سایزهای بالاتر بر حسب درخواست اعلام می گردد.

شرکت نهرآب گستر اشتهاارد ضمن رعایت استانداردهای ذیربط حق هر گونه تغییر در ابعاد و مشخصات را جهت ارتقاء کیفی برای خود محفوظ می دارد.

Dimensional Tolerances EN 1092-1:2001 (ISO 7005-1)

ANSI B16.5

EN 1092-1:2001(ISO 7005-1)

unit: mm

ANSI B16.5

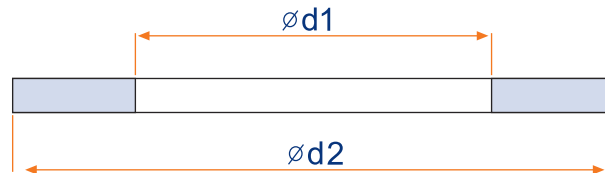
unit: inch

Plain flange and Blind flange		
outside diameter (D)	≤ DN 150	± 2.0
	> DN 150 ≤ DN 500	± 3.0
	> DN 500 ≤ DN 1200	± 5.0
	> DN 1200 ≤ DN 1800	± 7.0
	≥ DN 1800	± 10.0
Facing diameter	≤ DN 250	2 -1.5
	≥ DN 300	3 -1.5
Facing height	For all size 1 minimum	
Diameter of bolt circle(k)	bolt size M10 to M24	± 1
	bolt size M27 to M33	± 1.25
	bolt size M36 to M52	± 1.5
	bolt size M56 to M95	± 2
Diameter of bolt hole	< 20	0.5 0
	> 20	1 0
Flange thickness(t)	± (2+0.05 t)	
center to center of adjacent bolt hole	bolt size ≤ M24	± 1
	bolt size M27 to M24	± 1.5
	bolt size > M45	± 2

Welding Neck and Blank		
outside diameter	When O.D is 24" or Less	+1/16" (1.6mm)
	When O.D is over 24"	+1/8" (3.2mm)
Inside diameter	10" and smaller	+1/32" (0.8mm)
	12" thru 18"	+1/16" (1.6mm)
	20" and Larger	+1/8" (3.2mm)
Diameter of contact face	1/16" Reised face	+1/32" (0.8mm)
	1/4" Reised face Tongue & Groove Male , Female	+1/64" (0.4mm)
Diameter of Haub at bass	when Hub base is 24" or smaller	+1/16" (1.6mm)
	when Hub base is over 24"	+1/8" (3.2mm)
Diameter of Hub at point of welding	5" and smaller	+3/32" (3.4mm) -1/32" (0.8mm)
	6" and larger	+5/32" (4.0mm) -1/32" (0.8mm)
Drilling	Bolt circle	+1/16" (1.6mm)
	Bolt hole spacing	+1/32" (0.8mm)
	Eccentricity of Bolt circle with respect to facing	21/2" & smaller 1/32" (0.8mm)max 3" & Larger 1/16" (1.6mm)max
	Eccentricity of Bolt circle with	1/32" (0.8mm)max
	Eccentricity of facing with respeat to Bore	1/32" (0.8mm)max
	Thickness	18" and smaller
	20" and larger	+3/16" (4.8mm) 0
Length thru hub	10" and smaller	+1/16" (1.6mm)
	12" and larger	+1/8" (3.2mm)

**Sealing for Flanges with
Plain Contact Surface
DN 50-DN 2400
PN 6-PN 40**

واشر لاستیکی منجید دار
مناسب برای فشار کاری ۶ تا ۴۰ بار



EN1514-1 (DIN 2690)

unit: mm

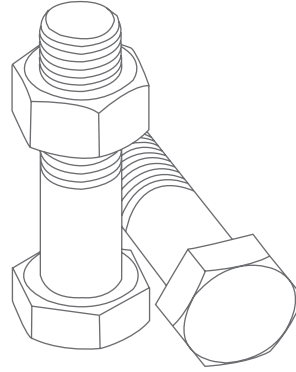
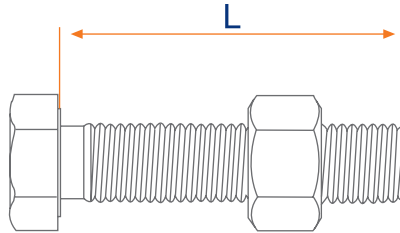
Nominal Width	$\varnothing d1$	$\varnothing d2$				
		Nominal Pressure(PN)				
		6	10	16	25	40
50	61	95	107	107	107	107
65	77	115	127	127	127	127
80	89	132	142	142	142	142
100	115	152	162	162	168	168
125	141	182	192	192	195	195
150	169	207	218	218	225	225
175	195	237	248	248	255	267
200	220	252	273	273	285	292
250	273	318	328	330	342	353
300	324	373	378	385	402	418
350	356	423	438	445	458	475
400	407	473	490	497	515	547
450	458	528	540	557	565	572
500	508	578	595	618	625	628
600	610	680	695	735	730	745
700	712	785	810	805	830	850
800	813	890	915	910	940	970
900	915	990	1015	1010	1040	1080
1000	1016	1090	1120	1125	1150	1190
1200	1220	1305	1340	1340	1360	1395
1400	1420	1520	1545	1540	1575	1615
1600	1620	1720	1770	1760	1795	1830
1800	1820	1930	1970	1960	2000	
2000	2020	2135	2180	2165	2230	
2200	2220	2345	2380	2375		
2400	2420	2555	2590	2585		

Hexagon Head Screws and Nut

DIN-EN 24018

DIN-EN 24016

DIN 933-934



No.	DN		PN6		PN10		PN16		PN25		PN40	
	mm	Inch	Qty.	Size	Qty.	Size	Qty.	Size	Qty.	Size	Qty.	Size
1	50	2"	4	M12×70	4	M16×80	4	M16×80	4	M16×80	4	M16×80
2	65	2 1/2"	4	M12×70	8	M16×80	8	M16×80	8	M16×80	8	M16×80
3	80	3"	4	M16×80	8	M16×80	8	M16×80	8	M16×80	8	M16×80
4	100	4"	4	M16×80	8	M16×80	8	M16×80	8	M20×90	8	M20×90
5	125	5"	8	M16×80	8	M16×80	8	M16×80	8	M24×90	8	M24×110
6	150	6"	8	M16×80	8	M20×90	8	M20×90	8	M24×110	8	M24×110
7	200	8"	8	M16×80	8	M20×90	12	M20×90	12	M24×110	12	M27×120
8	250	10"	12	M16×80	12	M20×90	12	M24×110	12	M27×120	12	M30×140
9	300	12"	12	M20×90	12	M20×90	12	M24×110	16	M27×120	16	M30×140
10	350	14"	12	M20×90	16	M20×90	16	M24×110	16	M30×140	16	M33×140
11	400	16"	16	M20×90	16	M24×110	16	M27×120	16	M33×140	16	M36×160
12	450	18"	16	M20×90	20	M24×110	20	M27×120	20	M33×140	20	M36×160
13	500	20"	20	M20×90	20	M24×110	20	M30×140	20	M33×140	20	M39×160
14	600	24"	20	M24×110	20	M27×120	20	M33×140	20	M36×160	20	M45×190
15	700	28"	24	M24×110	24	M27×120	24	M33×160	24	M39×160	24	M45×190
16	800	32"	24	M27×120	24	M30×140	24	M36×160	24	M45×190	24	M52×230
17	900	36"	24	M27×120	28	M30×140	28	M36×160	28	M45×190	28	M52×230
18	1000	40"	28	M27×120	28	M33×140	28	M39×160	28	M52×230	28	M52×230
19	1100	44"	32	M30×140	32	M33×140	32	M39×160	32	M52×230		
20	1200	48"	32	M30×140	32	M36×160	32	M45×190	32	M52×230	32	M52×270
21	1400	56"	36	M33×140	36	M39×160	36	M45×190	36	M56×270	36	M56×270
22	1600	64"	40	M33×140	40	M45×190	40	M52×230	40	M56×270	40	M64×300
23	1800	72"	44	M36×160	44	M45×190	44	M52×230	44	M64×300		
24	2000	80"	48	M39×160	48	M45×190	48	M56×270	48	M64×300		