

SIN-HUENG

STEEL & STAINLESS

Authorized to display the Korean
Industrial Standards  mark.



 **SIN-HUENG FLANGE CO.,LTD.**

회 사 연 혁

1. 1987. 06 : 신흥기계공업사 설립
사하구 장림1동 717-2번지
2. 1990. 04 : 자동화 기계 전문제작
3. 1992. 12 : 후렌지 가공용 전용기 자체 제작
4. 1994. 01 : 소형 후렌지 전문 생산
5. 1998. 12 : 공장 확장 이전
6. 1999. 01 : 신흥후렌지로 상호 변경
7. 2000. 01 : 한국산업규격 표시인증서 획득
KS B 1503(한국표준협회)
8. 2000. 01 : 600톤 파워프레스 설치
9. 2001. 10 : 주식회사 신흥플랜지로 법인전환
10. 2001. 12 : 공장 신축 확장이전
11. 2001. 12 : CNC절단기 증설
12. 2002. 01 : 한국 무역 협회 가입
13. 2002. 10 : CLEAN 사업장 인정(한국산업 안전공단)
14. 2002. 10 : 한국무역협회 가입
15. 2003. 05 : KS A 9001:2001 / ISO 9001:2000 인증획득
(한국표준협회)
16. 2004. 10 : 유망중소기업 지정(부산은행)
17. 2005. 01 : 한국산업규격 표시인증서 추가 획득
KS B 1503:16K,20K,30K(한국표준협회)
18. 2005. 05 : 한국산업규격 표시인증서 획득
KS B 1506:스테인리스(한국표준협회)

사업자등록증 (법인사업자)

등록번호 : 603-81-46973

법인명(단체명) : (주) 신흥플랜지

대표자 : 차영조

개업년월일 : 2001년 10월 01일 법인등록번호 : 180111-0375964

사업장소재지 : 부산광역시 강서구 송정동 1660-10

본점소재지 : 부산광역시 강서구 송정동 1660-10

사업의종류 : **열대** 제조 **중대** 플랜지 **중대** 신장구형부분품
제조

교부사유 : 정정

2006년 06월 28일

북부산세무서장



Korean Standards Association

품질경영시스템인증서

(주)신흥플랜지

부산광역시 강서구 송정동 1660-10

한국표준협회는 위 조직의 품질경영시스템이 아래의
품질규격과 인증범위에 적합함을 인증함

인증번호

QMS-1449

품질규격

KS A 9001:2001/ISO 9001:2000

인증범위

경제용직식판플랜지 및 스테인리스강제 용접식 플랜지의 생산 및 판매

유효기간

2006년 05월 21일부터 2009년 05월 20일까지

재인증일 : 2003년 05월 21일

2006년 05월 10일

한국표준협회



서울특별시 강남구 역삼동 21-1

대한민국 표준 KSA 설립 인정기관에 의한 인증 한국표준협회(KSA) 2009년부터
품질경영시스템 인증기관으로 인정(등록번호 2-3024) QMS 30342(용접식 판플랜지)는 인증(2003.05)

KSA

KAB

IAF

이 인증서(인증서)는 KSA의 인증 범위 내에서만 유효하며, 인증 범위를 초과하여 사용될 수 없습니다.



한국산업규격 표시인증서

인증번호: 제 00-1126 호

제조업체명: (주)신흥플랜지

대표자성명: 차영조

공장(사업장)소재지: 부산광역시 강서구 송정동 1660-10

규격표시품:

- 규격명: 경제용접식판 플랜지

- 규격번호: KS B 1503

- 종류·등급 또는 호칭

산업용접식·5K,10K,16K,20K,30K,급.

산업표준화법 제18조의 규정에 의한 인증심사를 실시한 결과 한국산업규격과
인증심사기준에 적합하므로 산업표준화법 제11조(제12조·제13조)의 규정에 의하여
위와 같이 한국산업규격표시를 인증합니다.

2005년 01월 27일

한국표준협회장



1. 최초인증일 2000.01.29
2. 최종변경일 2005.01.27 (총류등급추가)



한국산업규격 표시인증서

인증번호: 제 05-0225 호

제조업체명: (주)신흥플랜지

대표자성명: 차영조

공장(사업장)소재지: 부산광역시 강서구 송정동 1660-10

규격표시품:

- 규격명: 스테인리스강제 용접식 플랜지

- 규격번호: KS B 1506

- 종류·등급 또는 호칭

강판재를 사용하는 경우, 급.

산업표준화법 제18조의 규정에 의한 인증심사를 실시한 결과 한국산업규격과
인증심사기준에 적합하므로 산업표준화법 제11조(제12조·제13조)의 규정에 의하여
위와 같이 한국산업규격표시를 인증합니다.

2005년 05월 12일

한국표준협회장



1. 최초인증일 2005.05.12

제 2004039 호

유망중소기업지정서

업체명 : 주식회사 신흥플랜지
대표자 : 차 명 조
사업자등록번호 : 603-81-46973
선정일자 : 2004. 10. 15

귀사를 정부의 중소기업 육성시책에 의거 우리은행의 유망중소기업으로 지정합니다

2004년 10월 15일



부산은행



은행장 沈 勳

인정번호 : 제 2370 호

CLEAN 사업장 인정서

사업장명 : (주)신흥플랜지
대표자 : 차명조
소재지 : 부산시 강서구 송정동 1660-10

귀 사업장을 안전하고 쾌적한 「CLEAN 사업장」으로 인정합니다.

2002년 10월 4일

노동부장관 대한매일신보사 사장
한국산업안전공단 이사장 (주)YTN 대표이사



회원증 Certificate of Membership

회원번호 : 12159976 (최초 가입일 : 2002/10/24)
Register No.

회사명 : (주)신흥플랜지
Name of firm SIN HUENG FLANGE CO., LTD.

대표자 : 차명조
Representative CHA, MYANG-JO

주소 : 부산 강서구 송정동 1660-10
Address 1660-10, Songjeong-dong, Gangseo-gu, Busan, KOREA

귀사는 본 협회 정관 제6조에 의한 일반회원임을 증명합니다.

We hereby certify that the above-mentioned firm is a member of the Korea International Trade Association(KITA) in accordance with Section 6 of the KITA Articles of Incorporation.

2002년 10월 24일
Year Month Day

사단법인 한국무역협회 회장
Chairman
Korea International Trade Association

Membership

KS & JIS FLANGE

● 5Kgf/Cm ² (KS B 1503. JIS B 2220)	8
● 10Kgf/Cm ² (KS B 1503. JIS B 2220)	9
● 16Kgf/Cm ² (KS B 1503. JIS B 2220)	10
● 20Kgf/Cm ² (KS B 1503. JIS B 2220)	11
● 30Kgf/Cm ² (KS B 1503. JIS B 2220)	12
● 40Kgf/Cm ² (KS B 1503. JIS B 2216)	13
● 30Kgf/Cm ² (JIS B 2220-1984)	14
● 40Kgf/Cm ² (JIS B 2219-1984)	15
● 63Kgf/Cm ² (JIS B 2220-1984)	16
● 210Kgf/Cm ² (KS B 1521. JIS B 2291)	17~18
● 280Kgf/Cm ² (JIS F 7806)	19
● 350Kgf/Cm ² (JIS F 7806)	19
● 제수변(KS D 4308-1993)	20
● KS D 3578 Fittings of Coated Steel Pipes for Water Serves (수도용 도복장 강관 이형관용 플랜지) F20(20Kgf/Cm ²)	21
● 1Kg/Cm ² (KS V 7815. JIS F 7805)	22
● 2Kg/Cm ² (KS B 1511. JIS B 2220)	23
● 5Kg/Cm ² (KS B 1511. JIS B 2220)	24
● 10Kg/Cm ² (KS B 1511. JIS B 2220)	25

DIN FLANGE

● 6-BAR(DIN 2573, 2527, 2631)	26
● 10-BAR(DIN 2576, 2527, 2632)	27
● 16-BAR(DIN 2543, 2527, 2633)	28
● 25-BAR(DIN 2544, 2527, 2634)	29
● 40-BAR(DIN 2545, 2527, 2635)	30

ANSI FLANGE

- Class 150 Flanges 32
- Class 300 Flanges 33
- Class 400 Flanges 34
- Class 600 Flanges 35
- Class 900 Flanges 36~37
- Class 1500-2500 Flanges 38~39

MSS FLANGE

- 150 Lbs Flanges 40~41
- 300 Lbs Flanges 42~43
- 400 Lbs Flanges 44~45
- 600 Lbs Flanges 46~47
- 900 Lbs Flanges 48~49

API FLANGE

- 75 Lbs API 50
- 150 Lbs API 51
- 300 Lbs API 52
- AWWA TABLE 1 53
- AWWA TABLE 2 54
- AWWA TABLE 3 55

LONG WELDING NECKS

- Class 150 ,300 Flanges 56
- Class 400,600 Flanges 57
- Class 900 ,1500 Flanges 58
- Class 2500 Flanges 59

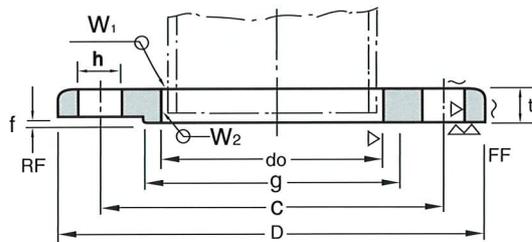
5Kg/Cm²

JIS B2220-1984(KSB 1503-1985)

5Kg/Cm² SLIP-ON WELDING STEEL PIPE FLANGES

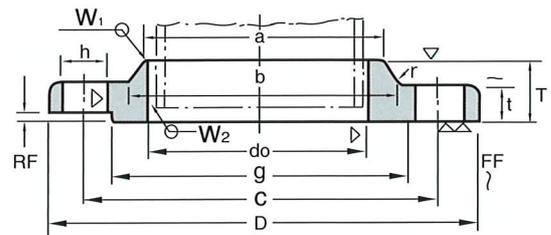
SOP TYPE

NOMINAL SIZE 10-1000mm



SOH TYPE

NOMINAL SIZE 450-1000mm



Unit:mm

Nominal Bore of Flange	Outside Diam. of Appli-Cable Pipe	Inside Diam. of Flange do	Outside Diam. of Flange D	Sectional Dimensions of Flange							Dia. of Bolt			Nominal Bolt Size	Weight(kg)		
				t	T	Diam. of Hub		Rad-ius r	Raised Face f	Diam. of Raised face g	Diam. of Bolt Circle C	Number of Bolt Holes	Hole Diam. h		SOP	BL	SOH
						a	b										
(10)	17.3	17.8	75	9	-	-	-	-	1	39	55	4	12	M10	0.27	0.3	-
15	21.7	22.2	80	9	-	-	-	-	1	44	60	4	12	M10	0.30	0.4	-
(20)	27.2	27.7	85	10	-	-	-	-	1	49	65	4	12	M10	0.37	0.5	-
25	34.0	34.5	95	10	-	-	-	-	1	59	75	4	12	M10	0.45	0.6	-
(32)	42.7	43.2	115	12	-	-	-	-	2	70	90	4	15	M12	0.78	0.9	-
40	48.6	49.1	120	12	-	-	-	-	2	75	95	4	15	M12	0.83	1.0	-
50	60.5	61.1	130	14	-	-	-	-	2	85	105	4	15	M12	1.07	1.4	-
65	76.3	77.1	155	14	-	-	-	-	2	110	130	4	15	M12	1.49	2.0	-
80	89.1	90.0	180	14	-	-	-	-	2	121	145	4	19	M16	1.99	2.7	-
(90)	101.6	102.6	190	14	-	-	-	-	2	131	155	4	19	M16	2.09	3.0	-
100	114.3	115.4	200	16	-	-	-	-	2	141	165	8	19	M16	2.39	3.7	-
125	139.8	141.2	235	16	-	-	-	-	2	176	200	8	19	M16	3.23	5.2	-
150	165.2	166.6	265	18	-	-	-	-	2	206	230	8	19	M16	4.41	7.5	-
(175)	190.7	192.1	300	18	-	-	-	-	2	232	260	8	23	M20	5.51	9.5	-
200	216.3	218.0	320	20	-	-	-	-	2	252	280	8	23	M20	6.33	12.2	-
(225)	241.8	243.7	345	20	-	-	-	-	2	277	305	12	23	M20	6.64	14.0	-
250	267.4	269.5	385	22	-	-	-	-	2	317	345	12	23	M20	9.45	19.3	-
300	318.5	321.0	430	22	-	-	-	-	3	360	390	12	23	M20	10.3	24.3	-
350	355.6	358.1	480	24	-	-	-	-	3	403	435	12	25	M22	14.0	33.2	-
400	406.4	409.0	540	24	-	-	-	-	3	463	495	16	25	M22	16.9	41.9	-
450	457.2	460.0	605	24	40	495	500	5	3	523	555	16	25	M22	21.6	53.0	24.8
500	508.0	511.0	655	24	40	546	552	5	3	573	605	20	25	M22	23.1	61.9	26.9
550	558.8	562.0	720	26	42	597	603	5	3	630	665	20	27	M24	30.3	81.2	34.1
600	609.6	613.0	770	26	44	648	654	5	3	680	715	20	27	M24	32.7	93.2	37.5
650	660.4	664.0	825	26	48	702	708	5	3	735	770	24	27	M24	35.9	106.9	42.8
700	711.2	715.0	875	26	48	751	758	5	3	785	820	24	27	M24	38.2	120.6	45.4
750	762.0	766.0	945	28	52	802	810	5	3	840	880	24	33	M30	48.7	150.5	57.4
800	812.8	817.0	995	28	52	854	862	5	3	890	930	24	33	M30	51.2	167.4	60.8
(850)	863.6	868.0	1045	28	54	904	912	5	3	940	980	24	33	M30	54.4	185.1	63.5
900	914.4	919.0	1095	30	56	956	964	5	3	990	1030	24	33	M30	61.1	218.1	75.3
1000	1016.0	1021.0	1195	32	60	1058	1066	5	3	1090	1130	28	33	M30	70.5	277.3	88.5
*(1100)	1117.6	1123	1305	32	-	-	-	-	3	1200	1240	28	33	M30	81.7	331.9	-
*1200	1219.2	1225	1420	34	-	-	-	-	3	1305	1350	32	33	M30	102.0	417.8	-
*1350	1371.6	-	1575	34	-	-	-	-	3	1460	1505	32	33	M30	115.9	515.6	-
*1500	1524.0	-	1730	36	-	-	-	-	3	1615	1660	36	33	M30	157.4	659.2	-

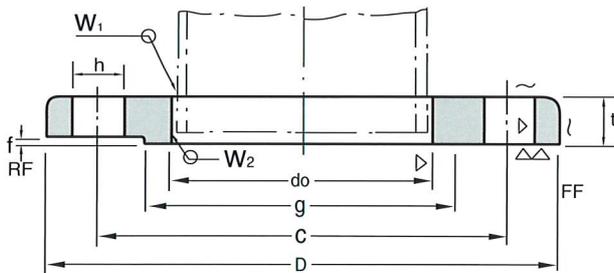
- Flanges of parenthesized nominal diameter had letter not be used.
- The facing of flanges shall conform to KS B1509 (JIS B2202)1984.
- Nominal diameter over 1000 is manufacturer's standard(*)

10Kg/Cm²

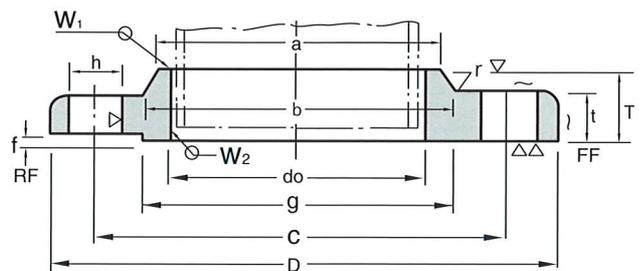
JIS B2220-1984(KSB 1503-1985)

10Kg/Cm² SLIP-ON WELDING STEEL PIPE FLANGES

SOP TYPE
NOMINAL SIZE 10-800mm



SOH TYPE
NOMINAL SIZE 250-1000mm



NORMAL THICKNESS FLANGE

Unit: mm

Nominal Diam. of Flange	Outside Diam. of Steel Pipe	Inside Diam. of Flange do	Outside Diam. of Flange D	Sectional Dimensions of Flange							Dia. of Bolt			Nominal Bolt Size	Weight(Kg)		
				t	T	Diam. of Hub		Rad- ius r	Raised Face f	Diam. of Raised face g	Bolt Circle Diam. C	Num- ber of Bolt Holes	Hole Dia. h		SOP	BL	SOH
						a	b										
10	17.3	17.8	90	12	-	-	-	-	1	46	65	4	15	M12	0.52	0.54	
15	21.7	22.2	95	12	-	-	-	-	1	51	70	4	15	M12	0.57	0.61	
20	27.2	27.7	100	14	-	-	-	-	1	56	75	4	15	M12	0.73	0.79	
25	34.0	34.5	125	14	-	-	-	-	1	67	90	4	19	M16	1.13	1.24	
32	42.7	43.2	135	16	-	-	-	-	2	76	100	4	19	M16	1.48	1.66	
40	48.6	49.1	140	16	-	-	-	-	2	81	105	4	19	M16	1.56	1.81	
50	60.5	61.1	155	16	-	-	-	-	2	96	120	4	19	M16	1.88	2.23	
65	76.3	77.1	175	18	-	-	-	-	2	116	140	4	19	M16	2.60	3.3	
80	89.1	90	185	18	-	-	-	-	2	126	150	8	19	M16	2.61	3.5	
(90)	101.6	102.6	195	18	-	-	-	-	2	136	160	8	19	M16	2.76	4.0	
100	114.3	115.4	210	18	-	-	-	-	2	151	175	8	19	M16	3.14	4.6	
125	139.8	141.2	250	20	-	-	-	-	2	182	210	8	23	M20	4.77	7.3	
150	165.2	166.6	280	22	-	-	-	-	2	212	240	8	23	M20	6.34	10.1	
(175)	190.7	192.1	305	22	-	-	-	-	2	237	265	12	23	M20	6.82	11.8	
200	216.3	218	330	22	-	-	-	-	2	262	290	12	23	M20	7.53	14.0	
(225)	241.8	243.7	350	22	-	-	-	-	2	282	310	12	23	M20	7.74	15.8	-
250	267.4	269.5	400	24	36	288	292	6	2	324	355	12	25	M22	11.8	22.7	12.7
300	318.5	321	445	24	38	340	346	6	3	368	400	16	25	M22	12.7	27.8	13.8
350	355.6	358.1	490	26	42	380	386	6	3	413	445	16	25	M22	16.4	37.1	18.2
400	406.4	409	560	28	44	436	442	6	3	475	510	16	27	M24	23.0	52.5	25.2
450	457.2	460	620	30	48	496	502	6	3	530	565	20	27	M24	29.5	68.8	33.0
500	508	511	675	30	48	548	554	6	3	585	620	20	27	M24	33.5	82.1	37.6
(550)	558.8	562	745	32	52	604	610	6	3	640	680	20	33	M30	43.1	105.8	49.7
600	609.6	613	795	32	52	656	662	6	3	690	730	24	33	M30	45.7	120.2	52.6
(650)	660.4	664	845	34	56	706	712	6	3	740	780	24	33	M30	52.1	145.0	60.6
700	711.2	715	905	34	58	762	770	6	3	800	840	24	33	M30	59.5	167.2	70.6
(750)	762	766	970	36	62	816	824	6	3	855	900	24	33	M30	73.2	204.2	85.8
800	812.8	817	1020	36	64	868	876	6	3	905	950	28	33	M30	76.4	225.4	91.2
(850)	863.6	868	1070	36	66	920	928	6	3	955	1000	28	33	M30	80.7	248.8	98.6
900	914.4	919	1120	38	70	971	979	6	3	1005	1050	28	33	M30	89.4	288.4	109.0
1000	1016	1021	1235	40	74	1073	1081	6	3	1110	1160	28	39	M36	109.2	367.7	133.0
*(1100)	1117.6	1123	1345	42	76	-	-	-	3	1220	1270	28	39	M36	131.6	460.0	-
*1200	1219.2	1225	1465	44	78	-	-	-	3	1325	1380	32	39	M36	163.5	572.2	-
*1350	1371.6	-	1630	48	82	-	-	-	3	1480	1540	36	45	M42	204.7	769.0	-
*1500	1524.0	-	1795	50	90	-	-	-	3	1635	1700	40	45	M42	250.2	974.9	-

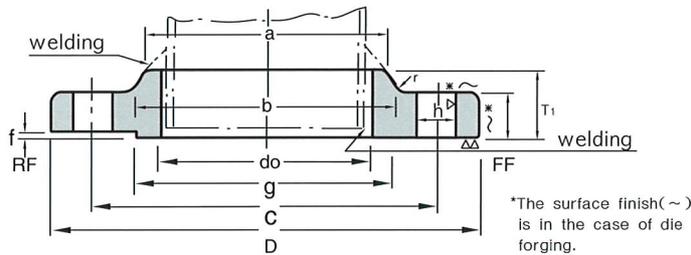
- Flanges of parenthesized nominal diameter had letter not be used.
- The facing of flanges shall conform to KS B1509 (JIS B2202)1984.
- Nominal diameter over 1000 is manufacturer's standard(*)

16Kg/Cm²

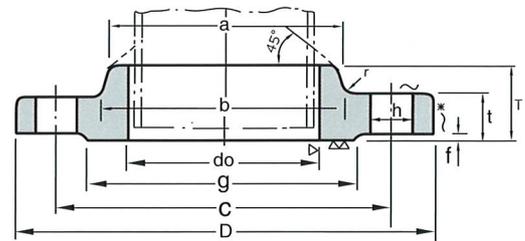
JIS B2220-1984(KSB 1503-1985)

16Kg/Cm² SLIP-ON WELDING STEEL PIPE FLANGES

NOMINAL SIZE 10-600mm



NOMINAL SIZE 650-1200mm



Unit:mm

Nominal Diameter of Flange	Outside Diameter of Steel Pipe	Inside Diameter of Flange do	Sectional Dimensions of Flange								Bolt Hole			Nominal Bolt Size	Weight(Kg)		
			Outside Diameter of Flange D	t	T	Diam. of Hub		Radius r	f	g	Bolt Circle Diameter C	Number of Bolt Holes	Hole Diameter h		SOP	BL	SOH
						a	b										
10	17.3	17.8	90	12	16	26	28	4	1	46	65	4	15	M12	0.52	0.54	0.52
15	21.7	22.2	95	12	16	30	32	4	1	51	70	4	15	M12	0.57	0.61	0.58
20	27.2	27.7	100	14	20	38	42	4	1	56	75	4	15	M12	0.73	0.79	0.75
25	34.0	34.5	125	14	20	46	50	4	1	67	90	4	19	M16	1.13	1.24	1.16
32	42.7	43.2	135	16	22	56	60	5	2	76	100	4	19	M16	1.48	1.66	1.53
40	48.6	49.1	140	16	24	62	66	5	2	81	105	4	19	M16	1.56	1.81	1.64
50	60.5	61.1	155	16	24	76	80	5	2	96	120	8	19	M16	1.8	2.3	1.83
65	76.3	77.1	175	18	26	94	98	5	2	116	140	8	19	M16	2.5	3.1	2.58
80	89.1	90.0	200	20	28	108	112	6	2	132	160	8	23	M20	3.5	4.5	3.66
(90)	101.6	102.6	210	20	30	120	124	6	2	145	170	8	23	M20	3.7	5.0	3.95
100	114.3	115.4	225	22	34	134	138	6	2	160	185	8	23	M20	4.5	6.3	4.94
125	139.8	141.2	270	22	34	164	170	6	2	195	225	8	25	M22	6.5	9.2	7.0
150	165.2	166.6	305	24	38	196	202	6	2	230	260	12	25	M22	8.7	12.8	9.62
200	216.3	218.0	350	26	40	244	252	6	2	275	305	12	25	M22	10.9	18.6	12.1
250	267.4	269.5	430	28	44	304	312	6	2	345	380	12	27	M24	18.0	30.6	20.0
300	318.5	321.0	480	30	48	354	364	8	3	395	430	16	27	M24	21.5	40.7	24.4
350	355.6	358.1	540	34	52	398	408	8	3	440	480	16	33	M30×3	30.8	57.8	35.0
400	406.4	409.0	605	38	60	446	456	10	3	495	540	16	33	M30×3	42.8	82.2	46.2
450	457.2	460.0	675	40	64	504	514	10	3	560	605	20	33	M30×3	55.1	107.6	61.9
500	508.0	511.0	730	42	68	558	568	10	3	615	660	20	33	M30×3	65.1	133.1	73.25
(550)	558.8	562.0	795	44	70	612	622	10	3	670	720	20	39	M36×3	77.9	164.1	88.1
600	609.6	613.0	845	46	74	666	676	10	3	720	770	24	39	M36×3	86.0	193.2	98.8
(650)	660.4	664	895	48	77	704	726	10	5	770	820	24	39	M36×3	96.3	227.5	101.0
700	711.2	715	960	50	80	754	776	10	5	820	875	24	42	M39×3	114.1	272.6	120.0
(750)	762.0	766	1020	52	83	806	832	10	5	880	935	24	42	M39×3	132.7	321.9	141.0
800	812.8	817	1085	54	86	865	885	10	5	930	990	24	48	M45×3	152.1	375.6	161.0
(850)	863.6	868	1135	56	89	916	936	10	5	980	1040	24	48	M45×3	166.5	428.1	177.0
900	914.4	919	1185	58	93	968	986	10	5	1030	1090	28	48	M45×3	178.1	481.8	191.0
1000	1016.0	1021	1320	62	99	1070	1098	12	5	1140	1210	28	56	M52×3	235.3	636.0	230.0
1100	1117.6	1123	1420	66	105	1180	1200	12	5	1240	1310	32	56	M52×3	267.9	784.0	289.0
1200	1219.2	1225	1530	70	112	1282	1302	12	5	1350	1420	32	56	M52×3	321.1	972.4	348.0
1300	1320.8	1326.0	1645	74	-	-	-	-	5	1450	1530	32	62		378.6	1185.2	-
1350	1371.6	1377.0	1700	76	-	-	-	-	5	1510	1590	32	62		410.0	1303.8	-
1400	1422.4	1428.0	1755	78	-	-	-	-	5	1560	1640	36	62		436.0	1422.5	-
1500	1524.0	1529.0	1865	80	-	-	-	-	5	1670	1750	36	62		496.4	1656.6	-

REMARKS:1. Flanges of parenthesized nominal diameter had better not be used.

2. For dimensional tolerance, refer to JIS B2203.

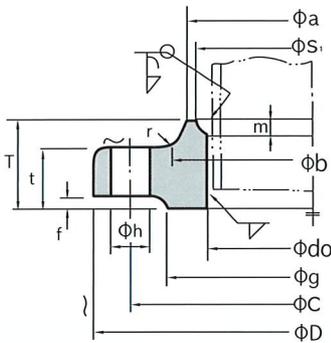
3. In principle material shall be SS400 specified in JIS G3101, SF390A(or SF440A) specified in JIS G3201, or S20C(or S25C) specified in JIS G4051, and shall be fit for welding.

20Kg/Cm²

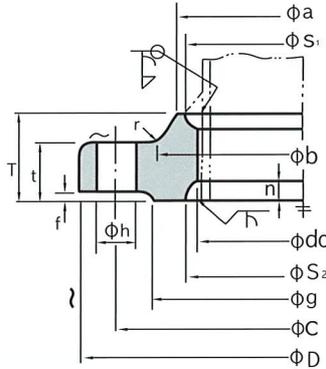
JIS B2220-1984(KSB 1503-1985)

20Kg/Cm² SLIP-ON WELDING STEEL PIPE FLANGES

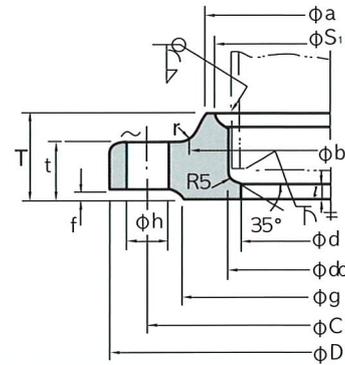
A-TYPE
NOMINAL SIZE 10~600mm



B-TYPE
NOMINAL SIZE 10~50mm



C-TYPE
NOMINAL SIZE 65~600mm



*The surface finish (~) is in the case of die forging.

Unit:mm

Nominal Diameter of Flange	Outside Diameter of Steel Pipe	Inside Diameter of Flange do	Outside Diameter of Flange D	Sectional Dimensions of Flange								Bolt Hole				Reference					Weight(Kg)		
				t	T	Diameter of Hub		Radius r	f	g	d	Bolt Circle Diameter C	Number of Bolt Holes	Hole Diameter h	Nominal Bolt Size	S1	m	S2	n	l	SOP	BL	SOH
						a	b																
10	17.3	17.8	90	14	20	30	32	4	1	46	-	65	4	15	M12	27	4	27	4	-	0.6	0.6	0.59
15	21.7	22.2	95	14	20	34	36	4	1	51	-	70	4	15	M12	31	4	31	4	-	0.7	0.7	0.65
20	27.2	27.7	100	16	22	40	42	4	1	56	-	75	4	15	M12	37	4	37	4	-	0.8	0.9	0.81
25	34.0	34.5	125	16	24	48	50	4	1	67	-	90	4	19	M16	44	4	44	4.5	-	1.3	1.5	1.29
32	42.7	43.2	135	18	26	56	60	5	2	76	-	100	4	19	M16	52	4	53	5	-	1.6	1.8	1.6
40	48.6	49.1	140	18	26	62	66	5	2	81	-	105	4	19	M16	58	4	59	5.5	-	1.7	2.0	1.69
50	60.5	61.1	155	18	26	76	80	5	2	96	-	120	8	19	M16	70	4	72	5.5	-	1.9	2.4	1.89
65	76.3	77.1	175	20	30	100	104	5	2	116	65.9	140	8	19	M16	94	6	85	6	6	2.6	3.4	2.6
80	89.1	90.0	200	22	34	113	117	6	2	132	78.1	160	8	23	M20	107	6	-	-	6	3.8	4.9	3.93
(90)	101.6	102.6	210	24	36	126	130	6	2	145	90.2	170	8	23	M20	120	6	-	-	6	4.4	6.0	4.56
100	114.3	115.4	225	24	36	138	142	6	2	160	102.3	185	8	23	M20	132	6	-	-	6	4.9	6.9	5.13
125	139.8	141.2	270	26	40	166	172	6	2	195	126.6	225	8	25	M22	160	7	-	-	6	7.8	11.0	8.3
150	165.2	166.6	305	28	42	196	202	6	2	230	151.0	260	12	25	M22	186	8	-	-	6	10.1	14.9	10.6
200	216.3	218.0	350	30	46	244	252	6	2	275	199.9	305	12	25	M22	237	9	-	-	6	12.6	21.4	13.3
250	267.4	269.5	430	34	52	304	312	6	2	345	248.8	380	12	27	M24	290	10	-	-	6	21.9	37.2	23.4
300	318.5	321.0	480	36	56	354	364	8	3	395	297.9	430	16	27	M24	345	11	-	-	6	25.8	48.8	27.7
350	355.6	358.1	540	40	62	398	408	8	3	440	333.4	480	16	33	M30×3	384	12	-	-	6	36.2	68.0	39.2
400	406.4	409.0	605	46	70	446	456	10	3	495	381.0	540	16	33	M30×3	437	13	-	-	7	51.7	99.4	54.2
450	457.2	460.0	675	48	78	504	514	10	3	560	431.8	605	20	33	M30×3	490	15	-	-	7	66.1	129.1	71.7
500	508.0	511.0	730	50	84	558	568	10	3	615	482.6	660	20	33	M30×3	544	16	-	-	7	77.4	158.4	86.2
(550)	558.8	562.0	795	52	90	612	622	10	3	670	533.4	720	20	39	M36×3	595	16	-	-	7	92.2	194.0	105
600	609.6	613.0	845	54	96	666	676	10	3	720	584.2	770	24	39	M36×3	646	18	-	-	7	101.1	226.9	119
(650)	660.4	664.0	945	60	-	-	-	-	5	790	-	850	24	48	M45×3						147.6	311.6	-
700	711.2	715.0	995	64	-	-	-	-	5	840	-										168.0	370.9	-
(750)	762.0	766.0	1080	68	-	-	-	-	5	900	-	970	24	56	M52×3						212.7	460.1	-
800	812.8	817.0	1140	72	-	-	-	-	5	960	-	1030	24	56	M52×3						248.5	546.5	-
(850)	863.6	868.0	1200	74	-	-	-	-	5	1020	-	1090	24	56	M52×3						280.5	626.2	-
900	914.6	919.0	1250	76	-	-	-	-	5	1070	-	1140	28	56	M52×3						296.9	694.9	-

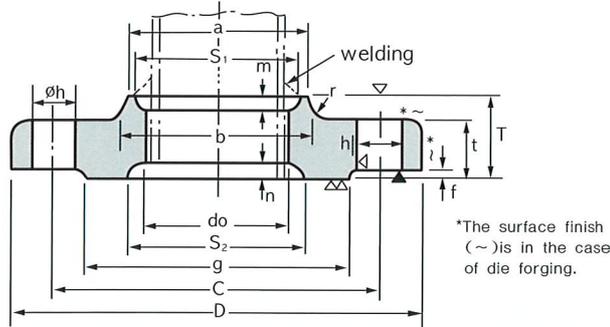
- REMARKS: 1. Flanges of parenthesized nominal diameters had better not be used.
 2. The Flange gasket surface is based on large raised facing specified in JIS B2202.
 3. Size d is an example of pipe thickness for schedule 40 of JIS G3454, and JIS G3456. But customers can order for other size as occasion demand.
 4. For dimensional tolerance, refer to JIS B2203.
 5. In principle, material shall be SS400 specified in JIS G3101, SF390A(or SF440A) specified in JIS G3201, or S20C(or S25C) specified in JIS G4051. Material shall be fit for welding.
 *The surface finish is the case of forging(▽:in other cases)

30Kg/Cm²

JIS B2220-1984(KSB 1503-1985)

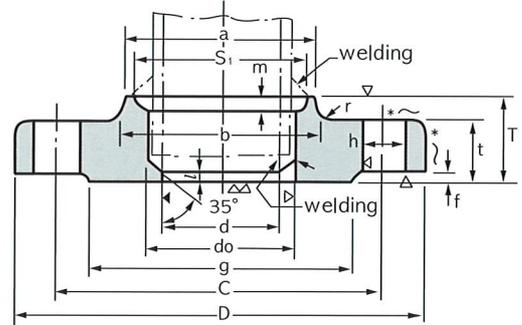
30Kg/Cm² SLIP-ON WELDING STEEL PIPE FLANGES

A-TYPE NOMINAL SIZE 10-400mm
B-TYPE NOMINAL SIZE 10-50mm



*The surface finish (~) is in the case of die forging.

C-TYPE NOMINAL SIZE 65-400mm



Unit:mm

Nominal Diameter of Flange	Outside Diameter of Steel Pipe	Inside Diameter of Flange do	Outside Diameter of Flange D	Sectional Dimensions of Flange							Bolt Hole				Reference					Approx Weight (kg)		
				t	T	Diameter of Hub		Radius r	f	g	d	Bolt Circle Diameter C	Number of Bolt Holes	Hole Diameter h	Nominal Bolt Size	s1	m	s2	n	l	SOH	BL
						a	b															
10	17.3	17.8	110	16	24	30	34	4	1	52	-	75	4	19	M16	-	-	-	-	-	0.99	1.00
15	21.7	22.2	115	18	26	36	40	5	1	55	-	80	4	19	M16	31	4	40	5	-	1.23	1.25
20	27.2	27.7	120	18	28	42	46	5	1	60	-	85	4	19	M16	37	5	44	5	-	1.34	1.38
25	34.0	34.5	130	20	30	50	54	5	1	70	-	95	4	19	M16	44	6	52	5	-	1.76	1.84
32	42.7	43.2	140	22	32	60	64	6	2	80	-	105	4	19	M16	52	6	60	5	-	2.15	2.32
40	48.6	49.1	160	22	34	66	70	6	2	90	-	120	4	23	M20	58	6	66	5	-	2.82	3.00
50	60.5	61.1	165	22	36	82	86	6	2	105	-	130	8	19	M16	70	6.5	78	5	-	2.89	3.14
65	76.3	77.1	200	26	40	102	106	8	2	130	65.9	160	8	23	M20	96	9.5	94	5	6	4.70	5.50
80	89.1	90.0	210	28	44	115	121	8	2	140	78.1	170	8	23	M20	109	9.5	-	-	6	5.36	6.63
(90)	101.6	102.6	230	30	46	128	134	8	2	150	90.2	185	8	25	M22	122	9.5	-	-	6	6.85	8.55
100	114.3	115.4	240	32	48	141	147	8	2	160	102.3	195	8	25	M22	135	9.5	-	-	6	7.89	10.0
125	139.8	141.2	275	36	54	166	172	8	2	195	126.6	230	8	25	M22	160	9.5	-	-	6	11.4	15.3
150	165.2	166.6	325	38	58	196	204	8	2	235	151.0	275	12	27	M24	186	9.5	-	-	6	16.7	22.2
200	216.3	218.0	370	42	64	248	256	8	2	280	199.9	320	12	27	M24	237	9.5	-	-	6	20.6	32.6
250	267.4	269.5	450	48	72	306	314	10	2	345	248.8	390	12	33	M30×3	290	10	-	-	6	36.1	55.2
300	318.5	321.0	515	52	78	360	370	10	3	405	297.9	450	16	33	M30×3	345	12	-	-	6	49.9	77.9
350	355.6	358.1	560	54	84	402	412	12	3	450	333.4	495	16	33	M30×3	383	13	-	-	6	61.2	96.9
400	406.4	409.0	630	60	92	456	468	15	3	510	381.0	560	16	39	M36×3	435	14	-	-	7	85.2	136

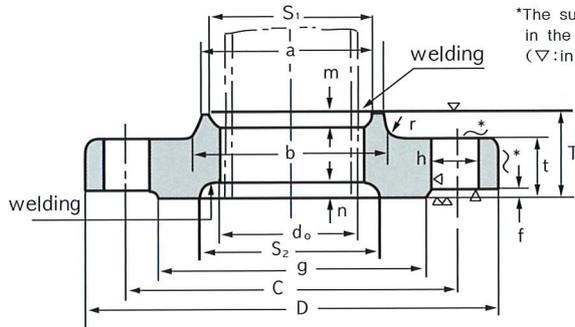
- REMARKS: 1. As far as possible, nominal diameter in parenthesis should be avoid from use.
 2. The dimensional tolerance shall conform to JIS B2203.
 3. The flange gasket surface is based on large raised facing specified in JIS B2202. But, if necessary, facings other than the large raised facing specified in JIS B2201 can be designated by customers.
 4. Size d is an example of pipe thickness for schedule 40 of JIS G3454 and JIS B3456. When other size is necessary, customers can order it at will.
 5. Material
 Carbon Steel: S25C specified in JIS G4051, or SF440A specified in JIS G3201.
 Molybdeum Steel: 1/2Mo Steel specified in tables 1 and 2 of JIS B2215.
 Chromium-Molybdenum Steel: 1/4 Cr 1/2 Mo Steel specified in tables 1 and 2 of JIS B2215.
 *The surface finish is in the case of forging (Δ: in other cases)

40Kg/Cm²

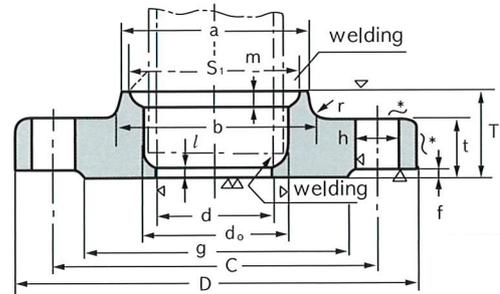
JIS B2216

40Kg/Cm² SLIP-ON WELDING STEEL PIPE FLANGES

NOMINAL SIZE 10-65mm



NOMINAL SIZE 65-400mm



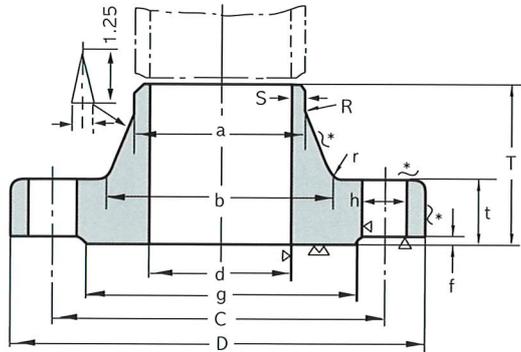
Unit:mm

Nominal Diameter of Flange	Outside Diameter of Steel Pipe	Inside Diameter of Flange do	Outside Diameter of Flange D	Sectional Dimensions of Flange								Bolt Hole				Reference					Approx Weight (kg)	
				t	T	Diameter of Hub		Radius r	f	g	d	Bolt Circle Diameter C	Number of Bolt Holes	Hole Diameter h	Nominal Bolt Size	S1	m	S2	n	l		
						a	b															
10	17.3	17.8	110	18	26	34	38	5	1	52	-	75	4	19	M16	28.0	6	28	5			1.11
15	21.7	22.2	115	20	30	39	43	5	1	55	-	80	4	19	M16	32.5	6	32.5	5			1.39
20	27.2	27.7	120	20	30	45	49	5	1	60	-	85	4	19	M16	38.0	6	38.0	5			1.51
25	34.0	34.5	130	22	32	55	59	5	1	70	-	95	4	19	M16	47.8	6	47.8	5			1.97
32	42.7	43.2	140	24	35	64	68	6	2	80	-	105	4	19	M16	56.5	6	56.5	5			2.50
40	48.6	49.1	160	24	35	70	74	6	2	90	-	120	4	23	M20	62.5	6	62.5	5			3.26
50	60.5	61.1	165	26	38	86	90	6	2	105	-	130	8	19	M16	74.5	6	74.5	5.5			3.47
65	76.3	77.1	200	30	44	106	110	8	2	130	62.3	160	8	23	M20	91.5	7	91.5	7			5.97
80	89.1	90.3	210	32	46	118	124	8	2	140	73.9	170	8	23	M20	105.5	7.5	105.5	7			6.76
100	114.3	115.4	250	36	52	145	151	8	2	165	97.1	205	8	25	M22	133.0	8.5	133.0	7			10.78
125	139.8	141.4	300	40	58	182	188	8	2	200	120.8	250	8	27	M24	160.5	9.5	160.5	7			16.97
150	165.2	167.0	355	44	64	200	208	8	2	240	143.2	295	12	33	M30	188.0	11	188.0	7			22.6
200	216.3	218.2	405	50	72	255	263	8	2	290	190.9	345	12	33	M30	243.0	13	243.0	7			34.9
250	267.4	269.5	475	56	80	310	318	10	2	355	237.2	410	12	33	M30	298.0	15	298.0	7			41.1

- REMARKY: 1. As far as possible, nominal diameter in parenthesis should be avoid from use.
 2. The dimensional tolerance shall confirm to JIS B2203.
 3. The flange gasket surface is based on large raised facing specified in JIS B2202. But, if necessary, facings other than the large raised facing specified in JIS B2201 can be designated by customers.
 4. Size d is an example of pipe thickness for schedule 40 of JIS G3454 and JIS B3456. When other size is necessary, customers can order it at will.
 5. Refer to JIS B2216.

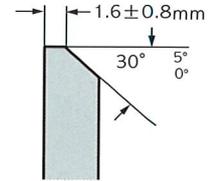
30Kg/Cm²

JIS B2220-1984(KSB 1503-1999) WELDING NECK STEEL PIPE FLANGES



*The surface finish shown above is in the case of forging (▽marks:in other cases)

Reference:Beveling



When particularly necessary, customers can order another beveling form the above.

Unit:mm

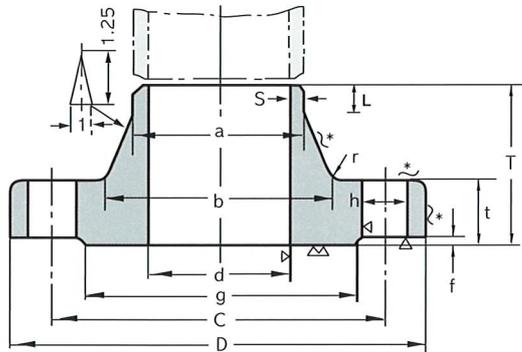
Nominal Diameter of Flange	Outside Diameter of Steel Pipe	Outside Diameter of Flange D	Sectional Dimensions of Flange										Bolt Hole			Nominal Bolt Size	Approx Weight (kg)
			t	d	a	b	s	T	R	Rad-ius r	f	g	Bolt Dia-meter Circle C	Number of Bolt Holes	Hole Dia-meter h		
15	21.7	115	18	15.8	22.0	40	3.1	45	20	6	1	55	80	4	19	M16	1.33
20	27.2	120	18	21.1	27.5	44	3.2	45	20	6	1	60	85	4	19	M16	1.47
25	34.0	130	20	26.8	34.4	52	3.8	48	20	6	1	70	95	4	19	M16	1.95
32	42.7	140	22	35.1	43.1	62	4.0	52	30	6	2	80	105	4	19	M16	2.43
40	48.6	160	22	40.7	49.1	70	4.2	54	30	6	2	90	120	4	23	M20	3.16
50	60.5	165	22	52.2	61.0	84	4.4	57	30	8	2	105	130	8	19	M16	3.33
65	76.3	200	26	65.3	76.9	104	5.8	69	30	8	2	130	160	8	23	M20	5.91
80	89.1	210	28	77.5	89.7	118	6.1	73	30	8	2	140	170	8	23	M20	7.05
(90)	101.6	230	30	89.5	102.3	130	6.4	74	30	8	2	150	185	8	25	M22	8.54
100	114.3	240	32	101.5	115.1	142	6.8	76	30	8	2	160	195	8	25	M22	9.72
125	139.8	275	36	125.7	140.7	172	7.5	86	50	10	2	195	230	8	25	M22	14.4
150	165.2	325	38	150.0	166.2	202	8.1	95	50	10	2	235	275	12	27	M24	20.6
200	216.3	370	42	198.7	217.5	254	9.4	102	50	10	2	280	320	12	27	M24	28.7
250	267.4	450	48	247.5	268.7	312	10.6	118	50	12	2	345	390	12	33	M30×3	47.3
300	318.5	515	52	296.4	320.0	366	11.8	127	50	15	3	405	450	16	33	M30×3	62.8
350	355.6	560	54	331.8	357.2	406	12.7	134	80	15	3	450	495	16	33	M30×3	77.0
400	406.4	630	60	379.1	408.3	462	14.6	149	80	20	3	510	560	16	39	M36×3	108.0

- REMARKS: 1. Flange of parenthesized nominal diameter had better not be used.
 2. The Flange gasket surface is based on "large raised facing" specified in JIS B2202. If necessary, customers can order for other types of facing.
 3. Size d and Size S are example for schedule 40 of JIS G3454 and JIS G3456. Customers can also order for other sizes.
 4. For dimensional tolerance, refer to JIS B2203.
 5. Material
 Carbon Steel: S25C specified in JIS G4051, or SF45 specified in JIS G3201.
 Molybdenum Steel: ½Mo Steel specified in tables 1 and 2 of JIS B2215.
 Chromium-Molybdenum Steel: 1¼ Cr ½ Mo Steel specified in tables 1 and 2 of JIS B2215.

40Kg/Cm²

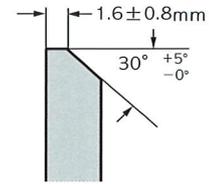
JIS B2219-1984

WELDING NECK STEEL PIPE FLANGES



*The surface finish shown above is in the case of forging (▽marks: in other cases)

Reference: Beveling



When particularly necessary, customers can order another beveling form the above.

Unit:mm

Nominal Diameter of Flange	Outside Diameter of Steel Pipe	Outside Diameter of Flange D	Sectional Dimensions of Flange										Bolt Hole			Nominal Bolt Size	Approx Weight(kg)	
			t	d	a	b	s	T	L	Radius r	f	g	Bolt Diameter Circle C	Number of Bolt Holes	Diameter of Hole h		#40	#80
15	21.7	115	20	15.8	21.7	40	3.1	50	10	6	1	55	80	4	19	M16	1.53	1.55
20	27.2	120	20	21.1	27.2	44	3.2	50	10	6	1	60	85	4	19	M16	1.72	1.74
25	34.0	130	22	26.8	34.0	52	3.8	52	12	6	1	70	95	4	19	M16	2.24	2.28
32	42.7	140	24	35.1	42.7	62	4.0	56	14	6	2	80	105	4	19	M16	2.24	2.86
40	48.6	160	24	40.7	48.6	70	4.2	60	14	6	2	90	120	4	23	M20	2.93	3.01
50	60.5	165	26	52.2	60.5	84	4.4	64	16	8	2	105	130	8	19	M16	4.2	4.41
65	76.3	200	30	65.3	76.3	104	5.8	75	18	8	2	130	160	8	23	M20	7.32	7.52
80	89.1	210	32	77.5	89.1	118	6.1	80	18	8	2	140	170	8	23	M20	8.47	8.80
(90)	104.6	230	34	89.5	104.6	130	6.4	88	18	8	2	150	185	8	25	M22	9.4	-
100	114.3	250	36	101.5	114.3	148	6.8	90	24	8	2	165	205	8	25	M22	13.25	13.82
125	139.8	300	40	125.7	139.8	186	7.5	108	26	10	2	200	250	8	27	M24	21.64	22.5
150	165.2	355	44	150.0	165.2	218	8.1	122	30	10	2	240	295	12	33	M30	32.45	35.1
200	216.3	405	50	198.7	216.3	272	9.4	132	38	10	2	290	345	12	33	M30	45.5	47.2
250	267.4	475	56	247.5	267.4	338	10.6	138	44	12	2	355	410	12	33	M30	69.6	-
300	318.5	540	60	296.4	318.5	400	11.8	159	48	15	3	410	470	16	39	M36	96.0	-
350	355.6	585	64	331.8	355.6	432	12.7	168	50	15	3	455	515	16	39	M36	115.0	-
400	406.4	645	70	379.1	406.4	466	14.6	181	50	20	3	515	570	16	39	M36	143.0	-

REMARKS:1. Flange of parenthesized nominal diameter had better not be used.

2. The Flange gasket surface is based on "large raised facing" specified in JIS B2202. If necessary, customers can order for other types of facing.

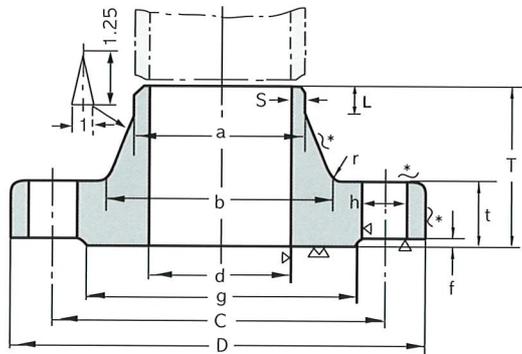
3. Size d and Size S are example for schedule 40 of JIS G3456. Customers can also order for other sizes.

4. For dimensional tolerance, refer to JIS B2203.

5. T of 125 nominal Diameter is maker's standard.

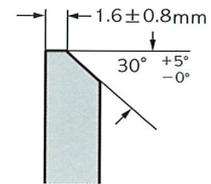
63Kg/Cm²

JIS B2220-1984(KSB 1503-1999) WELDING NECK STEEL PIPE FLANGES



*The surface finish shown above is in the case of forging (▽marks:in other cases)

Reference:Beveling



When particularly necessary, customers can order another beveling form the above.

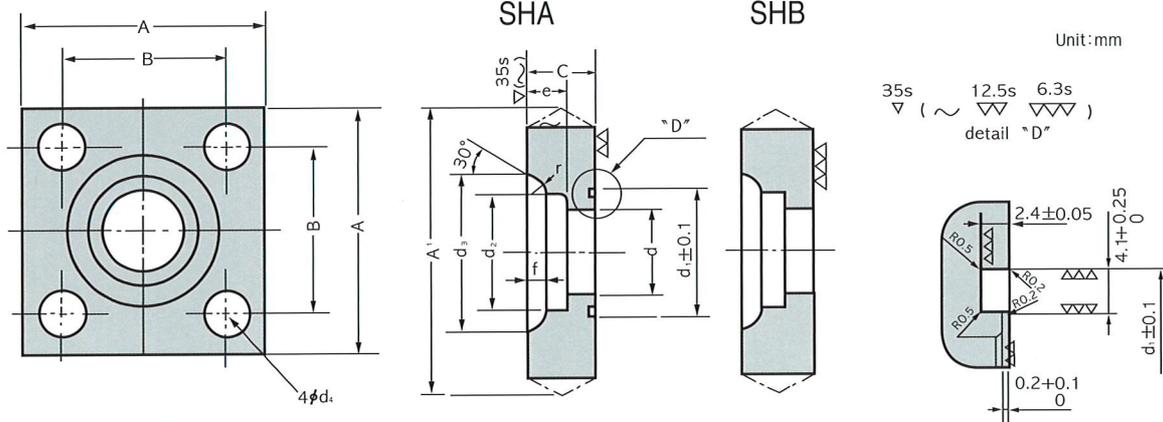
Unit:mm

Nominal Diameter of Flange	Outside Diameter of Steel Pipe	Outside Diameter of Flange D	Sectional Dimensions of Flange										Bolt Hole			Nominal Bolt Size	Approx Weight(kg)	
			t	d	a	b	s	T	L	Radius r	f	g	Bolt Diameter Circle C	Number of Bolt Holes	Diameter of Hole h		#80	#160
15	21.7	120	23	To be specified by purchaser.	21.7	45	3.1	60	10	6	1	55	85	4	19	M16	2.07	2.09
20	27.2	135	25		27.2	50	3.2	62	12	6	1	60	95	4	23	M20	2.80	2.85
25	34.0	140	27		34.0	54	3.8	62	13	6	1	70	100	4	23	M20	3.29	3.33
32	42.7	150	31		42.7	64	4.0	66	13	6	2	80	110	4	23	M20	4.12	4.2
40	48.6	175	33		48.6	78	4.2	78	14	6	2	90	130	4	25	M22	6.17	6.31
50	60.5	185	35		60.5	92	4.4	84	16	8	2	105	145	8	23	M20	7.35	7.85
65	76.3	220	39		76.3	114	5.8	96	18	10	2	130	175	8	25	M22	11.85	12.22
80	89.1	230	41		89.1	126	6.1	98	18	10	2	140	185	8	25	M22	13.23	13.82
(90)	101.6	255	42		101.6	140	6.4	126	18	10	2	150	205	8	27	M24	15.2	15.8
100	114.3	270	45		114.3	154	6.8	107	20	10	2	165	220	8	27	M24	19.45	20.65
125	139.8	325	51		(139.8)	(190)	7.5	(128)	24	12	2	200	265	8	33	M30	31.40	34.0
150	165.2	365	55		165.2	224	8.1	142	26	15	2	240	305	12	33	M30	45.0	48.5
200	216.3	425	61		216.3	274	9.4	151	30	15	2	290	360	12	33	M30	63.60	70.7
250	267.4	500	69		267.4	340	10.6	175	38	20	2	355	430	12	39	M36	144.0	-
300	318.5	560	78		318.5	402	11.8	286	44	23	3	410	485	16	39	M36	154.0	-
350	355.6	615	82		355.6	438	12.7	301	48	25	3	455	530	16	46	M43	191	-
400	406.4	680	81	406.4	490	14.6	314	48	25	3	515	590	16	46	M43	247	-	

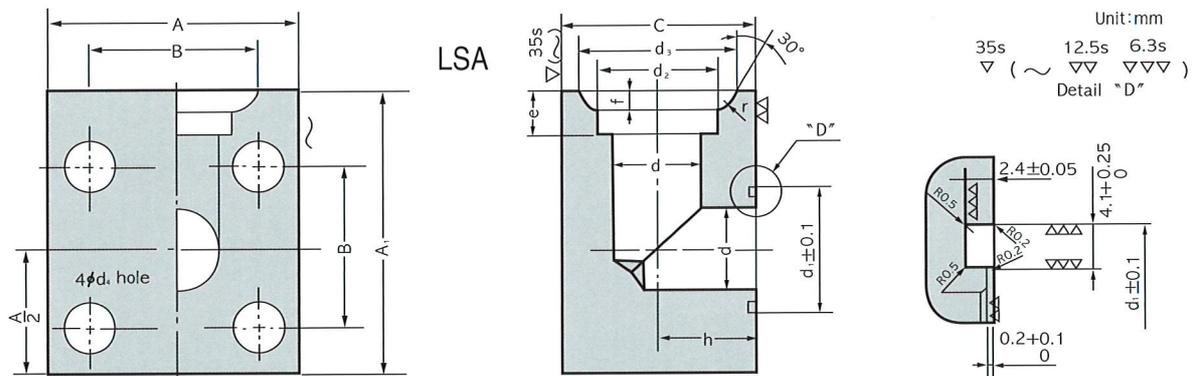
- REMARKS: 1. Flange of parenthesized nominal diameter had better not be used.
 2. The Flange gasket surface is based on "large raised facing" specified in JIS B2202. If necessary, customers can order for other types of facing.
 3. Size d and Size are example for schedule 40 of JIS G3454 and JIS G3456. Customers can also order for oterh sizes.
 4. For dimensional tolerance, refer to JIS B2203.
 5. The dimensime of () are maker's standard.

210Kg/Cm²

(JIS B2291-1970)
FLANGE FOR OIL PRESSURE



Nominal Bore	A		A' (MAX)	B		C		d	d1	d2		e	d3	d4	f	r	Weight (kg)	REMARK		
		±																O RING	BOLT	
15	63	±1	67	40	±0.2	22	0	16	30	±0.1	22.2	+0.2	11	32	11	3.5	5	0.6	G25	JM10
20	68		72	45		22	-1	20	35		27.7	0	12	38	11	4.0	5	0.7	G30	M10
25	80	±1.2	85	53	±0.4	28	0	25	40	±0.1	34.5	+0.3	14	45	13	4.0	5	1.2	G35	M12
32	90		95	63		28	-1.5	31.5	45		43.2		0	16	56	13	6.0	5	1.5	G40
40	100	±1.5	106	70	±0.4	36	0	37.5	55	±0.1	49.1	+0.3	18	63	18	7.0	5	2.4	G50	M16
50	112		118	80		36	0	47.5	65		61.1		0	20	75	18	7.0	5	2.8	G60
65	140	±2	148	100	±0.4	45	-2	60	80	±0.1	77.1	+0.4	22	95	22	9.5	6	5.3	G75	M20
80	155		163	112		45	-2	71	90		90.0		0	25	108	24	11.0	6	6.2	G85



Nominal Bore	A		A1	B		C		h	d	d1	d2	e	d3	d4	f	r	Weight (kg)	REMARK		
		±																BOLT	O-RING	
15	54	±1	63	36	±0.2	40	0	20	16	30	22.2	+0.2	11	32	11	3.5	5	1.0	M10	G25
20	58		70	40		45		22.5	20	35	27.7	0	12	38	11	4.0	5	1.3	M10	G30
25	68	±1.2	82	48	±0.4	50	-2	25	25	40	34.5	+0.3	14	45	13	4.0	5	1.9	M12	G35
32	76		92	56		63		31.5	31.5	45	43.2		0	16	56	13	6.0	5	2.9	M12
40	92	±1.5	110	65	±0.4	71	0	35.5	37.5	55	49.1	+0.4	18	63	18	7.0	5	4.7	M16	G50
50	100		125	73		85		42.5	47.5	65	61.1		0	20	75	18	7.0	5	6.8	M16
65	128	±2	150	92	±0.4	106	0	53	60	80	77.1	+0.4	22	95	22	9.0	6	12.8	M20	G75
80	140		170	103		118		59	71	90	90.0		0	25	108	24	11.0	6	17.0	M22

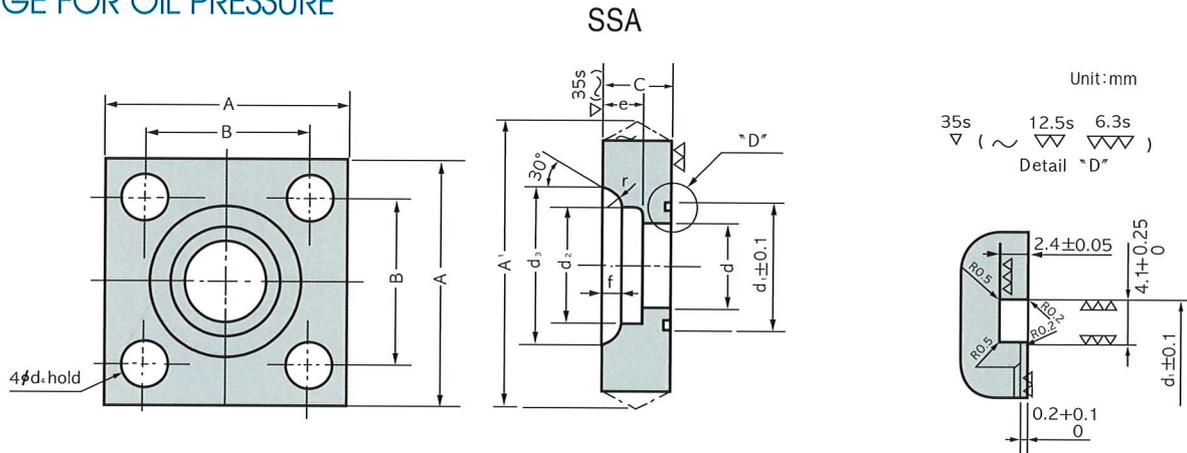
• SS41, S20C, S22C, S25C
• BOLT: 인장강도 80Kg/cm² MIN, 신율 15% MIN

• NUT: 60Kg/cm² MIN, 신율 10% MIN
• ORING: JIS B2401의 고정용

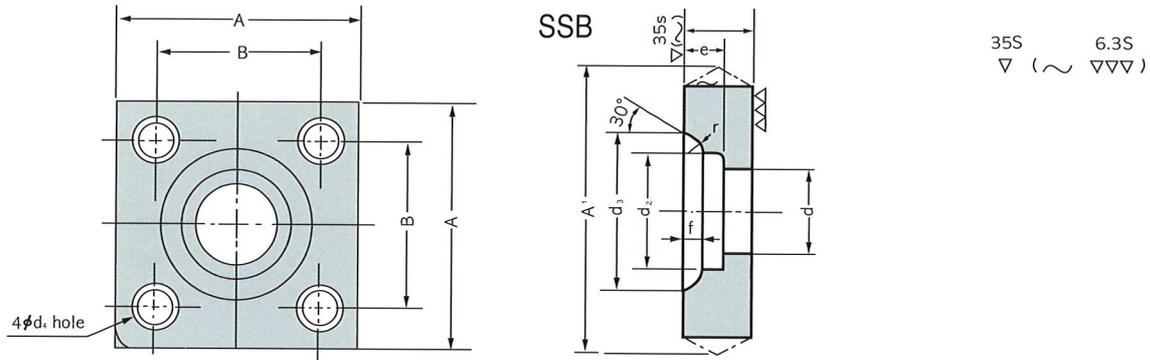
210Kgf/Cm²

(JIS B2291-1970)

FLANGE FOR OIL PRESSURE



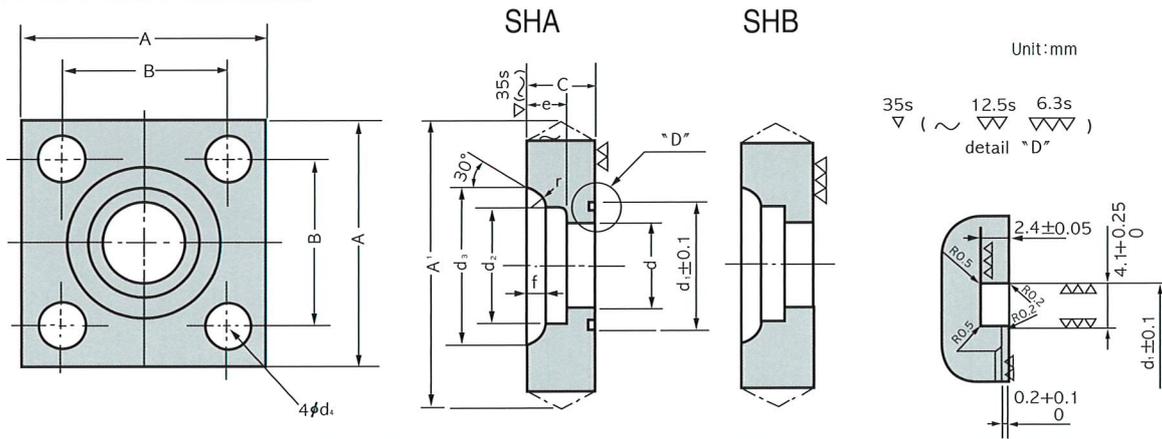
Nominal Bore	A		A' (MAX)	B		C		d	d1	d2		e	d3	d4	f	r	Weight (kg)	REMARK	
																		BOLT	O-RING
15	54	±1	58	36	±0.2	22	0	16	30	22.2	+0.2	11	32	11	3.5	5	0.5	M10	G25
20	58		62	40		22	-1	20	35	27.7	0	12	38	11	4.0	5	0.6	M10	G30
25	68		73	48		28	0	25	40	34.5	±0.3	14	45	13	4.0	5	0.8	M12	G35
32	76	±1.2	81	56	28	-1.5	31.5	45	43.2	16		56	13	6.0	5	1.0	M12	G40	
40	92		98	65	36	0	37.5	55	49.1	18		63	18	7.0	5	1.9	M16	G50	
50	100	±1.5	106	73	±0.4	36	0	47.5	65	61.1	±0.4	20	75	18	7.0	5	2.0	M16	G60
65	128		136	92		45	60	80	77.1	22		95	22	9.5	6	4.1	M20	G75	
80	140	±2	148	103		45	71	90	90.0	25		108	24	11.0	6	4.7	M22	G85	



Nominal Bore	A		A' (MAX)	B		C		d	d2	e	d3	d4	f	r	Weight (kg)	
15	54	±1	58	36	±0.2	22	0	16	22.2	+0.2	11	32	M10	3.5	5	0.5
20	58		62	40		22	-1	20	27.7	0	12	38	M10	4.0	5	0.6
25	68		73	48		28	0	25	34.5	±0.3	14	45	M12	4.0	5	0.8
32	76	±1.2	81	56	28	-1.5	31.5	43.2	16		56	M12	6.0	5	1.0	
40	92		98	65	36	0	37.5	49.1	18		63	M16	7.0	5	1.9	
50	100	±1.5	106	73	±0.4	36	0	47.5	61.1	±0.4	20	75	M16	7.0	5	2.0
65	128		136	92		45	-20	60	77.1		22	95	M20	9.5	6	4.1
80	140	±2	148	103		45	0	71	90.0		25	108	M22	11.0	6	4.7

280Kgf/Cm²

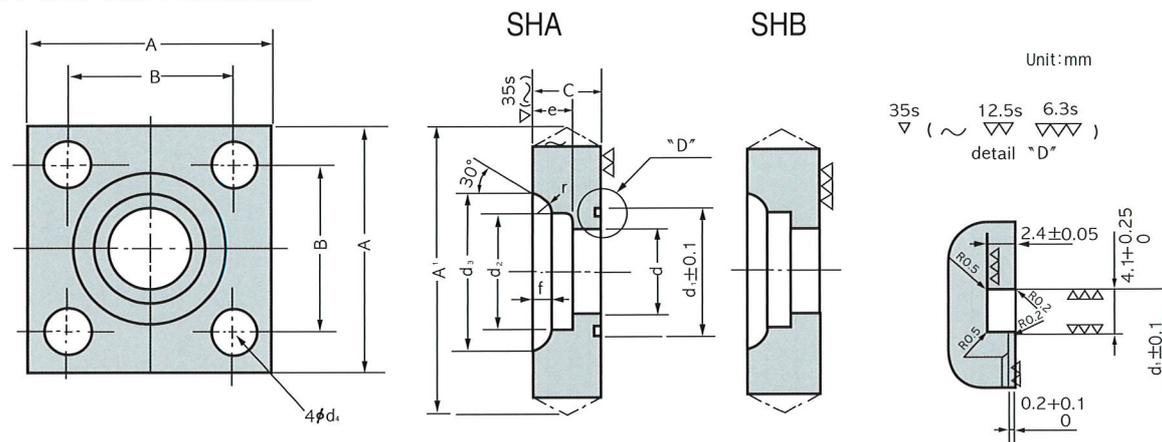
FLANGE FOR OIL PRESSURE



Nominal Bore	A	A' (MAX)	B	C	d	d1	d2	e	d3	d4	f	r	Weight (kg)					
15	66	±1	70	43	±0.2	22	0	12.3	24	±0.1	22.2	+0.2	12	34	11	4.0	5	0.63
20	72		76	48		25	-1	16.2	30		27.7	0	12	40	11	4.5	5	0.85
25	85	±1.2	91	58	±0.4	35	0	21.2	35	±0.1	34.5	+0.3	14	48	13.5	5.0	5	1.64
32	98		104	68		35	-1.5	29.9	45		43.2		0	18	60	17.5	6.5	5
40	105	±1.5	112	74	±0.4	40	0	34.4	50	±0.1	49.1	+0.4	20	66	17.5	7.5	5	2.66
50	130		139	90		50	0	43.1	60		61.1		0	20	79	22	8.0	5
65	150	±2	161	108	±0.4	60	-2	57.3	75	±0.1	77.1	+0.4	25	100	24	10.0	6	7.95
80	170		181	120		65	-2	66.9	85		90.0		0	25	114	26	12.0	6

350Kgf/Cm²

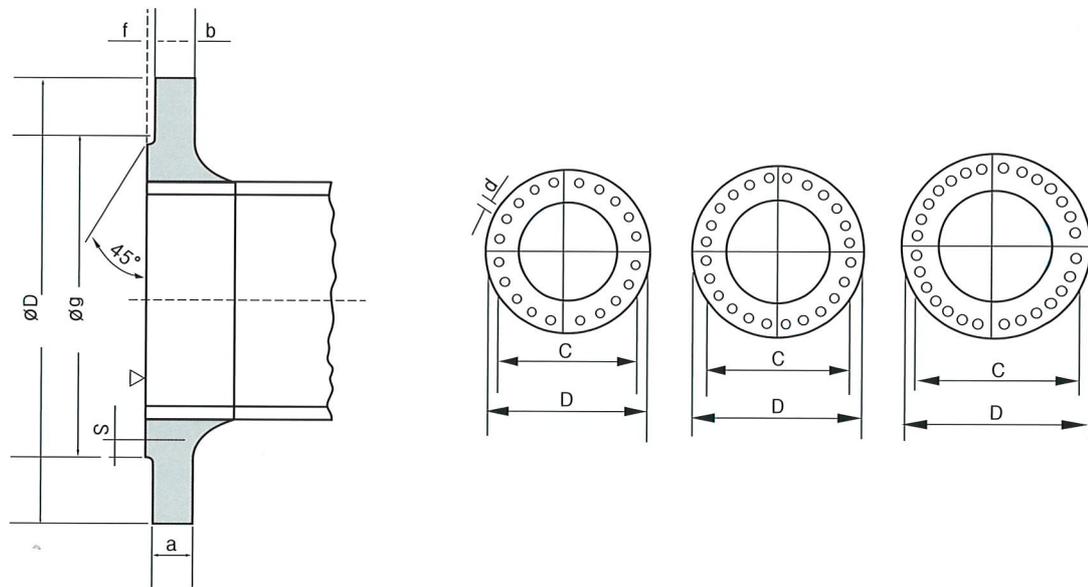
FLANGE FOR OIL PRESSURE



Nominal Bore	A	A' (MAX)	B	C	d	d1	d2	e	d3	d4	f	r	Weight (kg)					
15	68	±1.2	73	45	±0.2	28	0	12.3	24	±0.1	22.2	+0.2	12	37.5	11	4	5	0.88
20	82		87	55		30	0	16.2	30		27.7	0	12	43.5	13.5	5	5	1.34
25	95	±1.5	101	65	±0.4	35	-1.5	21.2	35	±0.1	34.5	+0.3	14	53	17.5	5.5	6	2.02
32	100		106	70		35	-1.5	23.3	40		43.2		0	18	63	17.5	7	6
40	105	±2	112	75	±0.4	42	0	28.2	45	±0.1	49.1	+0.4	20	70	17.5	8	6	2.84
50	132		140	92		50	0	38.3	55		61.1		0	25	84	22	9	6
65	160	±2	170	112	±0.4	60	-2	48.3	65	±0.1	77.1	+0.4	30	105	26	12	7	9.92
80	190		202	130		68	-2	58.7	75		90.0		0	30	120	33	13.5	7

(KS D 4308 - 1993)제수변

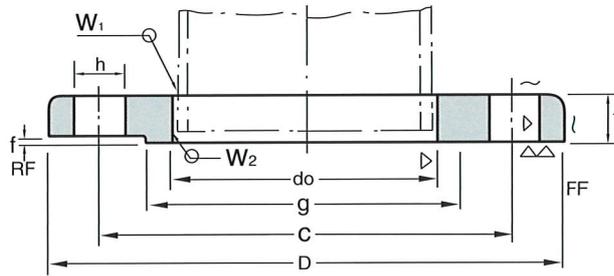
Fittings of Coated Steel Pipes for Water Service



호칭지름 (DN)	D	G	a	b	f	S	C	수	d	Bolt Hole	Weight (kg)
80	200	133	19.0	16.0	3	15.0	160	4	19	16	3.0
100	220	153	19.0	16.0	3	15.0	180	8	19	16	3.3
125	250	183	19.0	16.0	3	15.0	210	8	19	16	4.0
150	285	209	19.0	16.0	3	15.0	240	8	23	20	4.9
200	340	264	20.0	17.0	3	16.0	295	8	23	20	6.8
250	400	319	22.0	19.0	3	17.5	350	12	23	20	9.6
300	455	367	24.5	20.5	4	19.5	400	12	23	20	12.8
350	505	427	24.5	20.5	4	19.5	460	16	23	20	14.1
400	565	477	24.5	20.5	4	19.5	515	16	28	24	16.3
450	615	527	25.5	21.5	4	20.5	565	20	28	24	18.1
500	670	582	26.5	22.5	4	21.0	620	20	28	24	21.8
600	780	682	30.0	25.0	5	23.0	725	20	31	27	30.8
700	895	797	32.5	27.5	5	24.0	840	24	31	27	40.5
800	1015	904	35.0	30.0	5	24.5	950	24	34	30	54.8
900	1115	1004	37.5	32.5	5	26.5	1050	28	34	30	64.3
1000	1230	1111	40.0	35.0	5	28.0	1160	28	37	33	81.4
1100	1340	1218	42.5	37.5	5	30.0	1270	32	37	33	105.0
1200	1455	1328	45.0	40.0	5	31.5	1380	32	40	36	120.9

수도용 도복장 강관 이형관용(KS D 3578 - 1997) 플랜지

Fittings of Coated Steel Pipes for Water Service



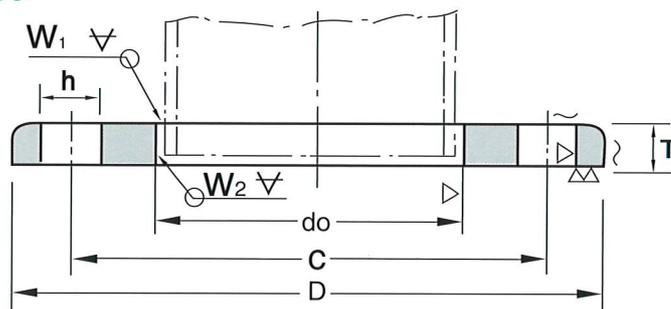
Unit:mm

Nominal Bore of Flange	Inside Diam, of Flange do	F20 KS D 3578 20kgf/cm ² Sectional Dimensions of RF Flange								F20 KS D 3578 20kgf/cm ² Sectional Dimensions of Blind Flange							
		T	D	C	g	f	Bolt Hole		Weight (kg)	T	D	C	g	f	Bolt Hole		Weight (kg)
							h	N							h	N	
80A	90.0	22	200	160	135	2	23	8	3.56	12	211	160	60	2	19	4	2.80
100A	115.4	22	225	185	160	2	23	8	4.26	12	238	180	85	2	19	8	3.50
125A	141.2	23	270	225	195	2	25	8	6.49	12	263	210	110	2	19	8	4.33
150A	166.6	27	305	260	230	2	25	12	9.27	12	290	240	135	2	23	8	5.25
200A	218.0	27	350	305	275	2	25	12	10.9	14	342	295	185	2	23	8	9.00
250A	269.5	28	430	380	345	2	27	12	17.7	16	410	350	235	2	23	12	15.0
300A	321.0	30	480	430	395	3	27	16	20.5	19	464	400	285	3	23	12	22.8
350A	358.1	34	540	480	440	3	33	16	29.5	21	530	460	325	3	23	16	32.9
400A	409.0	38	605	540	495	3	33	16	41.1	23	582	515	375	3	27	16	43.8
450A	460.0	40	675	605	560	3	33	20	53.2	26	652	565	425	3	27	20	62.8
500A	511.0	42	730	660	615	3	33	20	63.1	28	706	620	475	3	27	20	80.0
600A	613.0	46	845	770	720	3	39	24	83.8	33	810	725	580	3	30	20	126
700A	715.0	50	960	875	820	5	42	24	109	37	928	840	680	3	30	24	186
800A	817.0	54	1085	990	930	5	48	24	146	42	1034	950	780	3	33	24	264
900A	919.0	58	1185	1090	1030	5	48	28	171	47	1156	1050	880	3	33	28	370
1000A	1021.0	64	1320	1210	1140	5	56	28	235	51	1262	1160	980	3	36	28	480
1100A	1122.0	67	1420	1310	1240	5	56	32	264								
1200A	1224.0	70	1530	1420	1350	5	56	32	313								
1350A	1376.0	76	1700	1590	1510	5	62	32	400								
1500A	1529.0	80	1865	1750	1670	5	62	36	485								

Nominal Bore of Flange	Inside Diam, of Flange do	F12 KS D 3578 10kgf/cm ² Sectional Dimensions of Blind Flange								F15 KS D 3578 16kgf/cm ² Sectional Dimensions of Blind Flange							
		T	D	C	g	f	Bolt Hole		Weight (kg)	T	D	C	g	f	Bolt Hole		Weight (kg)
							h	N							h	N	
80A	90.0	13	185	160	60	2	19	4	2.51	18	200	160	60	2	23	8	3.81
100A	115.4	13	210	180	85	2	19	8	3.12	18	225	185	85	2	23	8	4.77
125A	141.2	14	250	210	110	2	19	8	4.80	18	270	225	110	2	25	8	6.95
150A	166.6	14	280	240	135	2	23	8	5.95	22	305	260	135	2	25	12	10.9
200A	218.0	16	330	295	185	2	23	8	9.75	22	350	305	185	2	25	12	14.8
250A	269.5	17	400	350	235	2	23	12	15.2	23	430	380	235	2	27	12	23.8
300A	321.0	19	445	400	285	3	23	12	21.3	26	480	430	285	3	27	16	33.4
350A	358.1	22	490	460	325	3	23	16	30.0	28	540	480	325	3	33	16	45.1
400A	409.0	25	560	515	375	3	27	16	44.5	32	605	540	375	3	33	16	65.8
450A	460.0	27	620	565	425	3	27	20	59.4	36	675	605	425	3	33	20	92.9
500A	511.0	30	675	620	475	3	27	20	78.9	39	730	660	475	3	33	20	119
600A	613.0	35	795	725	580	3	30	20	129	45	845	770	580	3	39	24	183
700A	715.0	40	905	840	680	3	30	24	192								
800A	817.0	45	1020	950	780	3	33	24	276								
900A	919.0	50	1120	1032	880	3	33	28	371								
1000A	1021.0	62	1235	1160	980	3	36	28	561								

1Kg/Cm² FLANGE FOR EXH. GAS PIPE(F-TYPE)

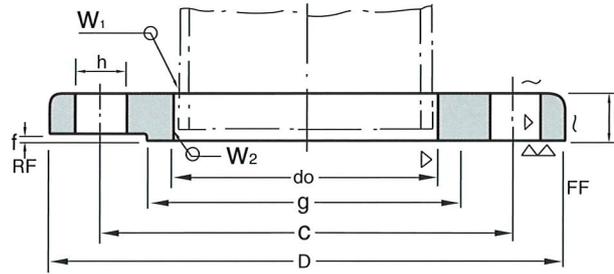
KS V 7815 JIS F 7805
SLIP-ON FLANGES



N/D	PIPE	FLANGE			BOLT HOLE			BOLT (M)	W' T (KG)
	O/D(d)	D	I/D(do)	T	C	N	H		
25	34.0	95	34.5	10	75	4	12	M10	0.45
(32)	42.7	115	43.2	12	90	4	15	M12	0.73
40	48.6	120	49.1	12	95	4	15	M12	0.83
50	60.5	130	61.1	14	105	4	15	M12	1.06
65	76.3	155	77.1	14	130	4	15	M12	1.48
80	89.1	180	90.0	14	145	4	19	M16	1.97
100	114.3	200	115.4	16	165	8	19	M16	2.35
125	139.8	235	141.2	16	200	8	19	M16	3.20
150	165.2	265	166.6	16	230	8	19	M16	3.90
200	216.3	320	218.0	16	280	8	23	M20	5.00
250	267.4	385	269.5	16	345	12	23	M20	6.83
300	318.5	430	321.0	16	390	12	23	M20	7.45
350	355.6	480	358.1	16	435	12	25	M22	9.45
400	406.4	540	409.0	16	495	16	25	M22	11.43
450	457.2	605	460.0	16	555	16	25	M22	14.40
500	508.0	655	511.0	16	605	16	25	M22	15.73
(550)	555.8	660	562.0	16	620	16	23	M20	12.00
600	609.6	710	613.0	16	670	16	23	M20	12.12
(650)	660.4	760	664.0	16	720	16	23	M20	12.15
700	711.2	815	715.0	16	775	16	23	M20	14.26
750	762.0	865	766.0	16	825	20	23	M20	14.88
800	812.8	915	817.0	16	875	20	23	M20	15.70
(850)	863.6	965	868.0	16	925	20	23	M20	16.50
900	914.4	1025	919.0	18	980	20	25	M22	21.48
(950)	962.0	1075	967.0	18	1030	20	25	M22	21.97
1000	1016.0	1125	1021.0	18	1080	20	25	M22	23.38
1050	1062.0	1175	1067.0	18	1130	24	25	M22	25.21
1100	1117.6	1225	1122.0	18	1180	24	25	M22	25.16
1150	1162.0	1275	1167.0	18	1230	24	25	M22	26.64
1200	1219.0	1325	1224.0	18	1280	24	25	M22	27.60
1250	1262.0	1375	1267.0	18	1330	28	25	M22	29.72
1300	1312.0	1425	1317.0	18	1380	28	25	M22	30.92
1350	1371.6	1475	1376.0	18	1430	28	25	M22	32.38
1400	1412.0	1525	1417.0	20	1480	28	25	M22	37.02
1450	1462.0	1595	1467.0	20	1540	28	27	M24	45.81
1500	1524.0	1645	1529.0	20	1590	28	27	M24	46.88
1600	1612.0	1745	1617.0	20	1690	28	27	M24	50.54
1700	1712.0	1845	1717.0	20	1790	28	27	M24	53.70
1800	1812.0	1950	1817.0	20	1895	32	27	M24	58.90
1900	1912.0	2050	1917.0	20	1995	32	27	M24	62.18
2000	2012.0	2150	2017.0	20	2095	36	27	M24	65.10
2100	2116.0	2250	2121.0	24	2195	36	27	M24	79.55
2200	2216.0	2350	2221.0	24	2295	40	27	M24	82.94
2300	2316.0	2450	2321.0	24	2395	40	27	M24	86.75
2400	2416.0	2550	2421.0	24	2495	40	27	M24	89.71
2500	2516.0	2650	2521.0	24	2595	48	27	M24	93.52
2600	2616.0	2750	2621.0	24	2695	48	27	M24	97.34

2Kg/Cm²

KS B 1511 - 1982. JIS B 2220 - 1977
SLIP - ON FLANGE



Unit: mm

Nominal Bore of Flange	Outside Diam, of Applicable Pipe	Inside Diam, of Flange do	Sectional Dimensions		Bolt Hole			Nominal Bolt Size
			t	D	C	h	N	
450A	457.2	460	22	605	555	23	16	M20
500A	508.0	511	22	655	605	23	20	M20
550A	558.8	562	24	720	665	25	20	M22
600A	609.6	613	24	770	715	25	20	M22
650A	660.4	664	24	825	770	25	24	M22
700A	711.2	715	24	875	820	25	24	M22
750A	762.0	766	24	945	880	27	24	M24
800A	812.8	817	24	995	930	27	24	M24
(850A)	863.6	868	24	1,045	980	27	24	M24
900A	914.4	919	24	1,095	1,030	27	24	M24
1000A	1016.0	1,021	26	1,195	1,130	27	28	M24
(1100A)	1117.6	1,123	26	1,305	1,240	27	28	M24
1200A	1219.2	1,224	26	1,420	1,350	27	32	M24
1350A	1371.6	1,377	26	1,575	1,505	27	32	M24
1500A	1524.0	1,529	28	1,730	1,660	27	36	M24

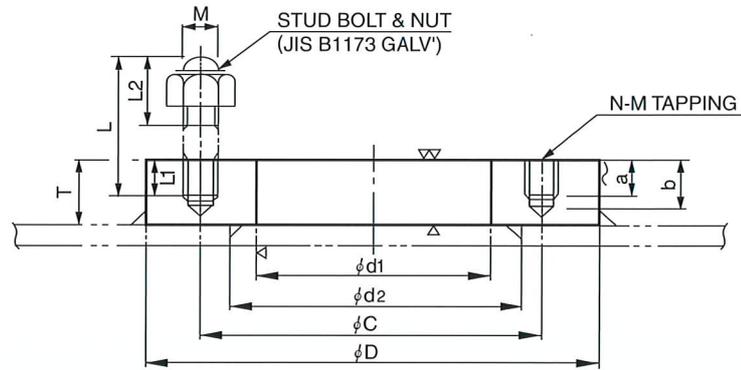
비고: 1. ()를 붙인 크기의 호칭인 것은 되도록 사용하지 않는 것이 좋다.

2. 최고 사용압력은 JIS B 2201의 규정에 의한다.

3. 크기의 호칭 400이하의 기본치수는 JIS B 2211 5kg/cm² 철강제 관 플랜지의 기본치수를 적용한다.

5Kg/Cm² SET-ON FLANGE

JIS B 2220 - 1984

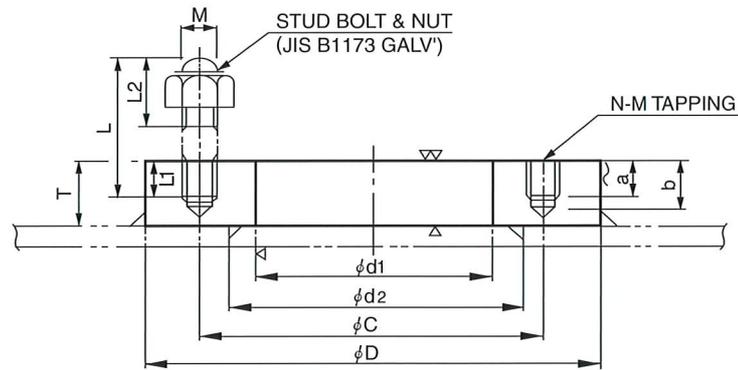


Unit: mm

Nominal Bore of Flange	Sectional Dimensions						STUD BOLT					Weight (kg)
	D	C	d1	T	a	b	N	M	L	L2	L1	
10A	75	55	17.8	16	10	12	4	M10	32	CONTINUOUS THREAD		0.47
15A	80	60	22.2	16	10	12	4	M10	32			0.53
20A	85	65	27.7	16	10	12	4	M10	32			0.60
25A	95	75	34.5	16	10	12	4	M10	32			0.72
32A	115	90	43.2	22	12	16	4	M12	40	22	12	1.45
40A	120	95	49.1	22	12	16	4	M12	40	22	12	1.54
50A	130	105	61.1	22	12	16	4	M12	45	22	12	1.70
65A	155	130	77.1	22	12	16	4	M12	45	22	12	2.36
80A	180	145	90.0	26	16	19	4	M16	50	28	16	3.74
100A	200	165	115.4	26	16	19	8	M16	55	28	16	4.01
125A	235	200	141.2	26	16	19	8	M16	55	28	16	5.38
150A	265	230	166.6	26	16	19	8	M16	55	28	16	6.52
200A	320	280	218.0	30	20	23	8	M20	65	36	20	9.66
250A	385	345	269.5	30	20	23	12	M20	65	36	20	13.25
300A	430	390	321.0	30	20	23	12	M20	65	36	20	14.41
350A	480	435	358.1	34	22	25	12	M22	75	40	22	20.55
400A	540	495	409.0	34	22	25	16	M22	75	40	22	24.85
450A	605	555	460.0	34	22	25	16	M22	75	40	22	31.15

10Kg/Cm² SET-ON FLANGE

JIS B 2220 - 1984



Unit:mm

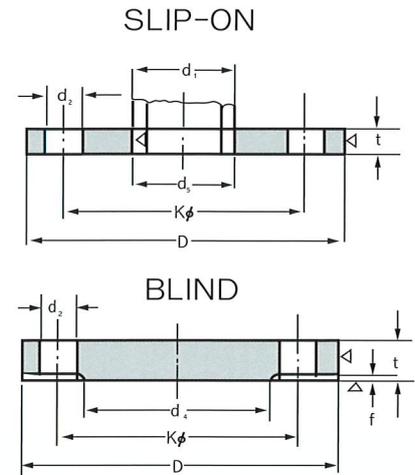
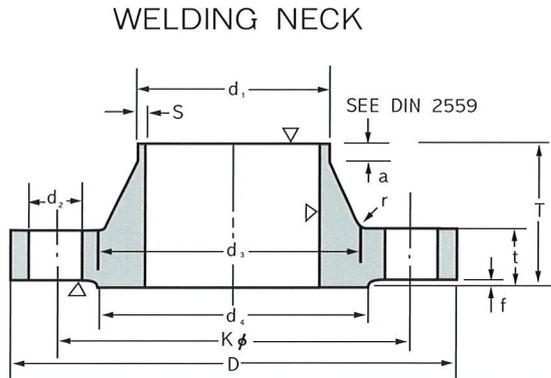
Nominal Bore of Flange	Sectional Dimensions						STUD BOLT					Weight (kg)
	D	C	d1	T	a	b	N	M	L	L2	L1	
10A	90	65	17.8	22	12	16	4	M12	40	22	12	0.97
15A	95	70	22.2	22	12	16	4	M12	40	22	12	1.07
20A	100	75	27.7	22	12	16	4	M12	40	22	12	1.17
25A	125	90	34.5	26	16	19	4	M16	50	28	16	2.27
32A	135	100	43.2	26	16	19	4	M16	50	28	16	2.57
40A	140	105	49.1	26	16	19	4	M16	50	28	16	2.67
50A	155	120	61.1	26	16	19	4	M16	50	28	16	3.07
65A	175	140	77.1	26	16	19	4	M16	55	28	16	3.11
80A	185	150	90.0	26	16	19	8	M16	55	28	16	3.87
100A	210	175	115.4	26	16	19	8	M16	55	28	16	4.67
125A	250	210	141.2	30	20	23	8	M20	65	36	20	7.36
150A	280	240	166.6	30	20	23	8	M20	70	36	20	8.84
200A	330	290	218.0	30	20	23	12	M20	70	36	20	10.64
250A	400	355	269.5	34	22	25	12	M22	75	40	22	17.51
300A	445	400	321.0	34	22	25	16	M22	75	40	22	18.63

6BAR

DIN 2573 SLIP-ON FLANGES

DIN 2527 BLIND FLANGES

DIN 2631 WELDING NECK FLANGES



Unit:mm

Bore		Common Dimension					Hub				Raised Face		Drilling			Approx. Weight (kg)			
Nominal Bore	d ₁	D	t			k	T	d ₃	s	r	a ≈	d ₄	f	Number of Bolt	Dia. of Bolt	d ₂	DIN 2573	DIN 2631	
			Welding Neck	Slip-on	Blind														
10	14 17.2*	75	12	12	12	50	28	22 26	1.8	4	6	35	2	4	M10	-	11.5	0.036	0.335
15	20 21.3*	80	12	12	12	55	30	28 30	2.0	4	6	40	2	4	M10	-	11.5	0.410	0.392
20	25 26.9*	90	14	14	14	65	32	35 38	2.3	4	6	50	2	4	M10	-	11.5	0.600	0.592
25	30 33.7*	100	14	14	14	75	35	40 42	2.6	4	6	60	2	4	M10	-	11.5	0.740	0.747
32	38 42.4*	120	14	16	14	90	35	50 55	2.6	6	6	70	2	4	M12 (½")	14	1.19	1.05	
40	44.5 48.3*	130	14	16	14	100	38	58 62	2.6	6	7	80	3	4	M12 (½")	14	1.39	1.18	
50	57 60.3*	140	14	16	14	110	38	70 74	2.9	6	8	90	3	4	M12 (½")	14	1.35	1.34	
65	76.1*	160	14	16	14	130	38	88	2.9	6	9	110	3	4	M12 (½")	14	1.89	1.67	
80	88.9*	190	16	18	16	150	42	102	3.2	8	10	128	3	4	M16 (⅝")	18	2.98	2.71	
100	108 114.3*	210	16	18	16	170	45	122 130	3.6	8	10	148	3	4	M16 (⅝")	18	3.46	3.24	
125	133 139.7*	240	18	20	18	200	48	148 155	4.0	8	10	178	3	8	M16 (⅝")	18	4.60	4.49	
150	159 168.3*	265	18	20	18	225	48	172 184	4.5	10	12	202	3	8	M16 (⅝")	18	5.22	5.15	
200	216 219.1*	320	20	22	20	280	55	230 236	5.9	10	15	258	3	8	M16 (⅝")	18	7.15	7.78	
250	267 273*	375	22	24	22	335	60	282 290	6.2	12	15	312	3	12	M16 (⅝")	18	9.61	10.8	
300	318 323.9*	440	22	24	22	395	62	335 342	7.1	12	15	365	4	12	M20 (¾")	23	12.6	14.0	
350	355.6* 368	490	22	26	22	445	62	385	7.1	12	15	415	4	12	M20 (¾")	23	15.6	16.1	
400	406.4* 419	540	22	28	22	495	65	438	7.1	12	15	455	4	16	M20 (¾")	23	18.4	18.3	
500	508* 521	645	24	30	24	600	68	538	7.1	12	15	570	4	20	M20 (¾")	23	24.5	24.6	
600	609.6* 622	755	24			705	70	640	7.1	12	16	670	5	20	M24 (⅞")	27			
700	711.2* 720	860	24			810	70	740	7.1	12	16	775	5	24	M24 (⅞")	27			
800	812.8* 820	975	24			920	70	842	7.1	12	16	880	5	24	M27 (1")	30			
900	914.4* 920	1075	26			1020	70	942	7.1	12	16	980	5	24	M27 (1")	30			
1000	1016* 1020	1175	26			1120	70	1045	7.1	16	16	1080	5	28	M27 (1")	30			

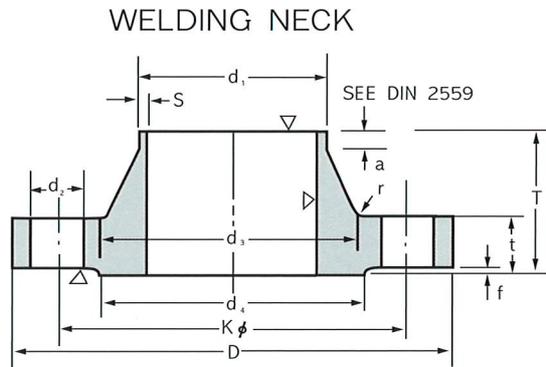
NOTE *Out side diameter of pipe complies with ISO recommendation R64

10BAR

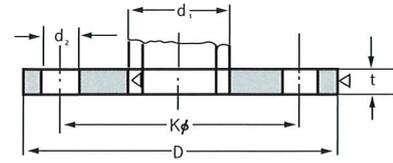
DIN 2576 SLIP-ON FLANGES

DIN 2527 BLIND FLANGES

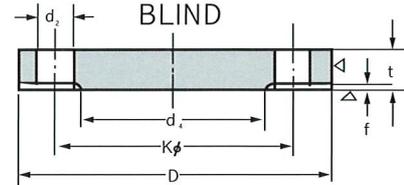
DIN 2632 WELDING NECK FLANGES



SLIP-ON



BLIND



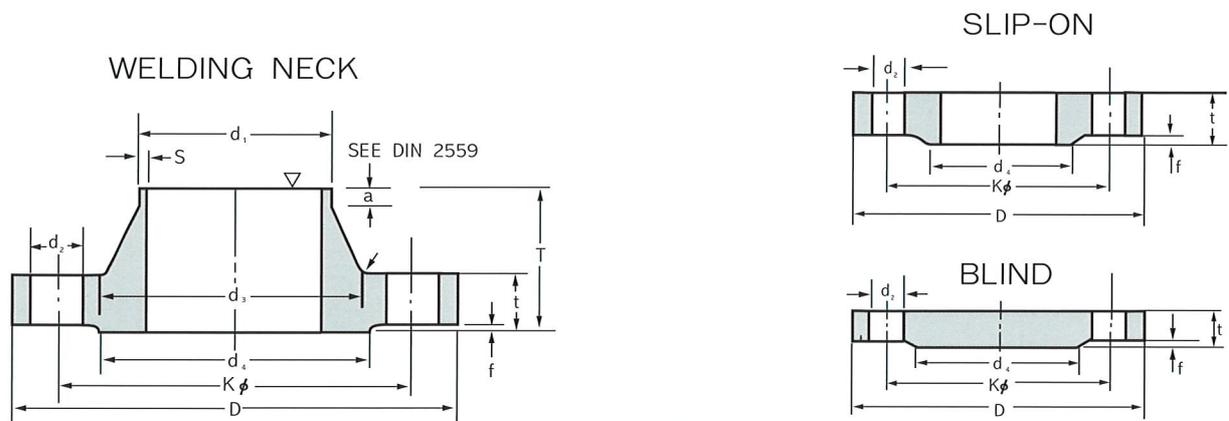
Unit: mm

Bore		Common Dimension					Hub				Raised Face		Drilling			Approx. Weight (kg)		
Nominal Bore	d ₁	D	t			k	T	d ₃	s	r	a ≈	d ₄	f	Number of Bolt	Dia. of Bolt	d ₂	DIN 2576	DIN 2632
			Welding Neck	Slip-on	Blind													
10	14 17.2 ⁺	90	14	14	14	60	35	25 28	1.8	4	6	40	2	4	M12 (1/2")	14	0.60	0.58
15	20 21.3 ⁺	95	14	14	14	65	35	30 32	2.0	4	6	45	2	4	M12 (1/2")	14	0.67	0.64
20	25 26.9 ⁺	105	16	16	16	75	38	38 40	2.3	4	6	58	2	4	M12 (1/2")	14	0.93	0.95
25	30 33.7 ⁺	115	16	16	16	85	38	42 45	2.6	4	6	68	2	4	M12 (1/2")	14	1.11	1.14
32	38 42.4 ⁺	140	16	16	16	100	40	52 56	2.6	6	6	78	2	4	M16 (5/8")	18	1.62	1.69
40	44.5 48.3 ⁺	150	16	16	16	110	42	60 64	2.6	6	7	88	3	4	M16 (5/8")	18	1.85	1.86
50	57 60.3 ⁺	165	18	18	18	125	45	72 75	2.9	6	8	102	3	4	M16 (5/8")	18	2.46	2.53
65	76.1 ⁺	185	18	18	18	145	45	90	2.9	6	10	122	3	4	M16 (5/8")	18	3.00	3.06
80	88.9 ⁺	200	20	20	20	160	50	105	3.2	8	10	138	3	4	M16 (5/8")	18	3.78	3.70
100	108 114.3 ⁺	220	20	20	20	180	52	125 131	3.6	8	12	158	3	8	M16 (5/8")	18	4.01	4.62
125	133 139.7 ⁺	250	22	22	22	210	55	150 156	4.0	8	12	188	3	8	M16 (5/8")	18	5.42	6.30
150	159 168.3 ⁺	285	22	22	22	240	55	175 184	4.5	10	12	212	3	8	M20 (3/4")	23	6.68	7.75
200	216 219.1 ⁺	340	24	24	24	295	62	232 235	5.9	10	16	268	3	8	M20 (3/4")	23	9.45	11.3
250	267 273 ⁺	395	26	26	26	350	68	285 292	6.3	12	16	320	3	12	M20 (3/4")	23	12.36	14.7
300	318 323.9 ⁺	445	26	26	28	400	68	335 344	7.1	12	16	370	4	12	M20 (3/4")	23	14.21	17.6
350	355.6 ⁺ 368	505	26	28	30	460	68	385	7.1	12	16	430	4	16	M20 (3/4")	23	20.44	21.4
400	406.4 ⁺ 419	565	26	32	32	515	72	440	7.1	12	16	482	4	16	M24 (7/8")	27	27.69	26.1
500	508 ⁺ 521	670	28	38	34	620	75	542	7.1	12	16	585	4	20	M24 (7/8")	27	40.60	34.7
600	609.6 ⁺ 622	780	28			725	80	642	7.1	12	18	685	5	20	M27 (1")	30		
700	711.2 ⁺ 720	895	30			840	80	745	8.0	12	18	800	5	24	M27 (1")	30		
800	812.8 ⁺ 820	1015	32			950	90	850	8.0	12	18	905	5	24	M30 (1 1/8")	33		
900	914.4 ⁺ 920	1115	34			1050	95	950	10.0	12	20	1005	5	28	M30 (1 1/8")	33		
1000	1016 ⁺ 1020	1230	34			1160	95	1052	10.0	16	20	1110	5	28	M33 (1 1/4")	36		

NOTE *Out side diameter of pipe complies with ISO recommendation R64

16BAR

DIN 2543 SLIP-ON FLANGES
 DIN 2527 BLIND FLANGES
 DIN 2633 WELDING NECK FLANGES



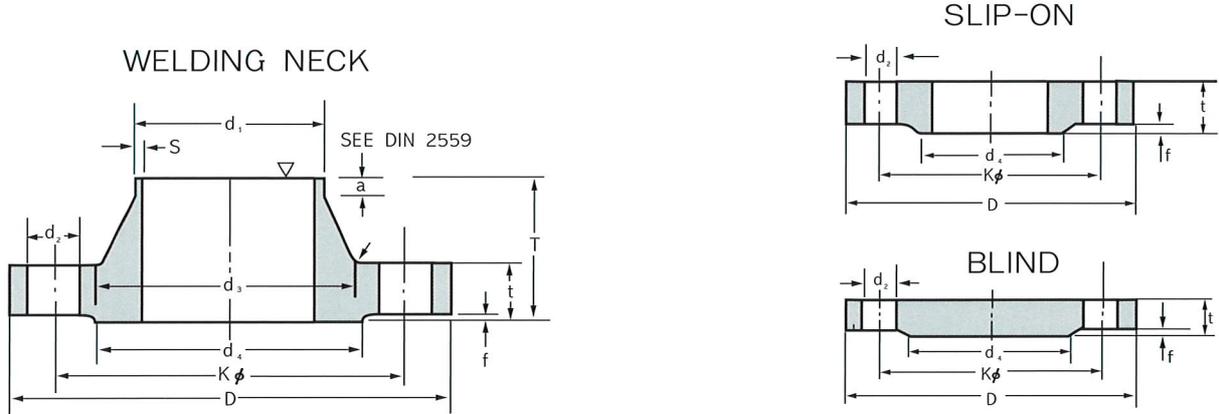
Unit:mm

Bore		Common Dimention						Hub				Raised Face		Drilling			Approx. Weight (kg)	
Nominal Bore	d ₁	D	t			k	T	d ₃	s	r	a ≈	d ₄	f	Number of Bolt	Dia. of Bolt	d ₂	DIN 2543	DIN 2633
			Welding Neck	Slip-on	Blind													
10	14 17.2*	90	14		14	60	35	25 28	1.8	4	6	40	2	4	M12 (1/2")	14	0.60	0.58
15	20 21.3*	95	14	14	14	65	35	30 32	2.0	4	6	45	2	4	M12 (1/2")	14	0.67	0.64
20	25 26.9*	105	16	16	16	75	38	38 40	2.3	4	6	58	2	4	M12 (1/2")	14	0.93	0.95
25	30 33.7*	115	16	16	16	85	38	42 45	2.6	4	6	68	2	4	M12 (1/2")	14	1.11	1.14
32	38 42.4*	140	16	16	16	100	40	52 56	2.6	6	6	78	2	4	M16 (5/8")	18	1.62	1.69
40	44.5 48.3*	150	16	16	16	110	42	60 64	2.6	6	7	88	3	4	M16 (5/8")	18	1.85	1.86
50	57 60.3*	165	18	18	18	125	45	72 75	2.9	6	8	102	3	4	M16 (5/8")	18	2.46	2.53
65	76.1*	185	18	18	18	145	45	90	2.9	6	10	122	3	4	M16 (5/8")	18	3.00	3.06
80	88.9*	200	20	20	20	160	50	105	3.2	8	10	138	3	8	M16 (5/8")	18	3.62	3.70
100	108 114.3*	220	20	20	20	180	52	125 131	3.6	8	12	158	3	8	M16 (5/8")	18	4.01	4.62
125	133 139.7*	250	22	22	22	210	55	150 156	4.0	8	12	188	3	8	M16 (5/8")	18	5.42	6.30
150	159 168.3*	285	22	22	22	240	55	175 184	4.5	10	12	212	3	8	M20 (3/4")	23	6.68	7.75
200	216 219.1*	340	24	24	24	295	62	232 235	5.9	10	16	268	3	12	M20 (3/4")	23	9.14	11.0
250	267 273	405	26	26	26	355	70	285 292	6.3	12	16	320	3	12	M24 (7/8")	27	13.25	15.6
300	318 323.9*	460	28	28	28	410	78	338 344	7.1	12	16	378	4	12	M24 (7/8")	27	17.24	22.0
350	355.6* 368	520	30	30	30	470	82	390	8.0	12	16	438	4	16	M24 (7/8")	27	24.15	28.7
400	406.4* 419	580	32	32	32	525	85	445	8.0	12	16	490	4	16	M27 (1")	30	30.54	36.3
500	508* 521	715	34	36	34	650	90	548	8.0	12	16	610	4	20	M30 (1 1/8")	33	50.70	59.3
600	609.6* 622	840	36	40		770	95	652	8.8	12	18	725	5	20	M33 (1 1/4")	36		
700	711.2* 720	910	36			840	100	755	8.8	12	18	795	5	24	M33 (1 1/4")	36		
800	812.8* 820	1025	38			950	105	855	10.0	12	20	900	5	24	M36 (1 3/8")	39		
900	914.4* 920	1125	40			1050	110	955	10.0	12	20	1000	5	28	M36 (1 3/8")	39		
1000	1016* 1020	1255	42			1170	120	1058	10.0	16	20	1115	5	28	M39 (1 1/2")	42		

NOTE *Out side diameter of pipe complies with ISO recommendation R64

25BAR

- DIN 2544 SLIP-ON FLANGES
- DIN 2527 BLIND FLANGES
- DIN 2634 WELDING NECK FLANGES



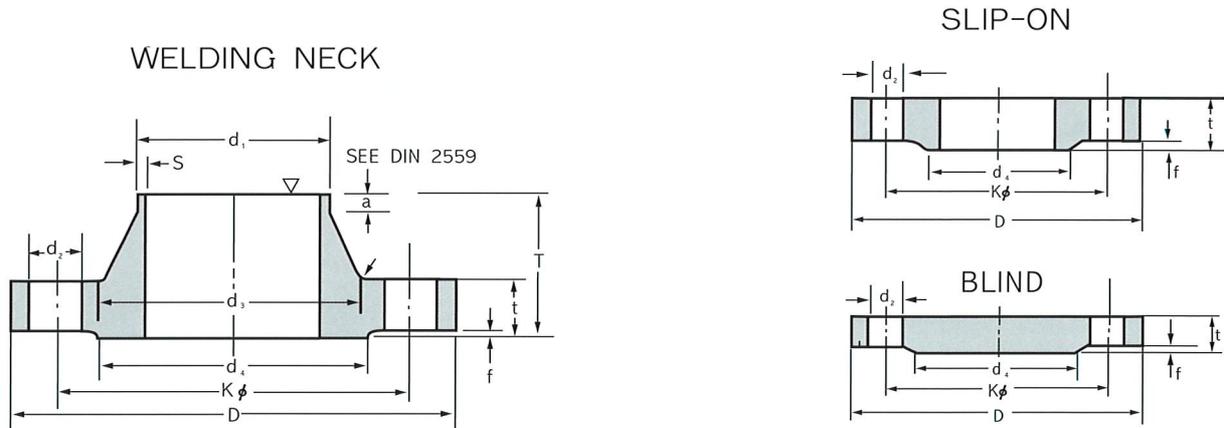
Unit:mm

Bore		Common Dimension						Hub				Raised Face		Drilling			Approx. Weight (kg)	
Nominal Bore	d ₁	D	t			k	T	d ₃	s	r	a ≈	d ₄	f	Number of Bolt	Dia. of Bolt	d ₂	DIN 2544	DIN 2634
			Welding Neck	Slip-on	Blind													
10	14 17.2 [*]	90	16		16	60	35	25 28	1.8	4	6	40	2	4	M12 (1/2")	14	0.69	0.72
15	20 21.3 [*]	95	16	16	16	65	38	30 32	2.0	4	6	45	2	4	M12 (1/2")	14	0.76	0.81
20	25 26.9 [*]	105	18	18	18	75	40	38 40	2.3	4	6	58	2	4	M12 (1/2")	14	1.05	1.24
25	30 33.7 [*]	115	18	18	18	85	40	42 46	2.6	4	6	68	2	4	M12 (1/2")	14	1.25	1.38
32	38 42.4 [*]	140	18	18	18	100	45	52 56	2.6	6	6	78	2	4	M16 (5/8")	18	1.82	2.03
40	44.5 48.3 [*]	150	18	18	18	110	45	60 64	2.6	6	7	88	3	4	M16 (5/8")	18	2.09	2.35
50	57 60.3 [*]	165	20	20	20	125	48	72 75	2.9	6	8	102	3	4	M16 (5/8")	18	2.74	3.20
65	76.1 [*]	185	22	22	22	145	52	90	2.9	6	10	122	3	8	M16 (5/8")	18	3.49	4.29
80	88.9 [*]	200	24	24	24	160	58	105	3.2	8	12	138	3	8	M16 (5/8")	18	4.34	5.88
100	108 114.3 [*]	235	24	24	24	190	65	128 134	3.6	8	12	162	3	8	M20 (3/4")	23	5.58	7.54
125	133 139.7 [*]	270	26	26	26	220	68	155 162	4.0	8	12	188	3	8	M24 (7/8")	27	7.56	10.8
150	159 168.3 [*]	300	28	28	28	250	75	182 192	4.5	10	12	218	3	8	M24 (7/8")	27	9.74	14.5
200	216 219.1 [*]	360	30	30	30	310	80	240 244	6.3	10	16	278	3	12	M24 (7/8")	27	13.57	22.3
250	267 273 [*]	425	32	32	32	370	88	292 298	7.1	12	18	335	3	12	M27 (1")	30	19.18	33.5
300	318 323.9 [*]	485	34	34	34	430	92	345 352	8.0	12	18	395	4	16	M27 (1")	30	24.70	46.3
350	355.6 [*] 368	555	38	38	38	490	100	398	8.0	12	20	450	4	16	M30 (1 1/8")	33	38.06	68.0
400	406.4 [*] 419	620	40	40	40	550	110	452	8.8	12	20	505	4	16	M33 (1 1/4")	36	48.45	89.7
500	508 [*] 521	730	44	44	44	660	125	558	10.0	12	20	615	4	20	M33 (1 1/4")	36	66.72	138.0
600	609.6 [*] 622	845	46			770	125	660	11.0	12	20	720	5	20	M36 (1 3/8")	39		
700	721.2 [*] 720	960	46			875	125	760	12.5	12	20	820	5	24	M39 (1 1/2")	42		
800	812.8 [*] 820	1085	50			990	135	865	14.2	12	22	930	5	24	M45 (1 3/4")	48		
900	914.4 [*] 930	1185	54			1090	145	968	16.0	12	24	1030	5	28	M45 (1 3/4")	48		
1000	1016 [*] 1020	1320	58			1210	155	1070	17.5	16	24	1140	5	28	M52 (2")	56		

NOTE *Out side diameter of pipe complies with ISO recommendation R64

40BAR

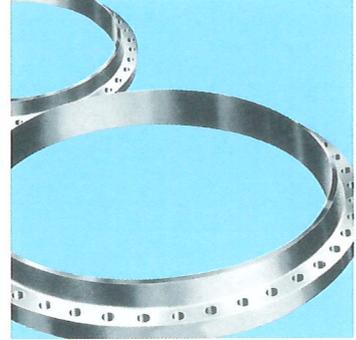
DIN 2545 SLIP-ON FLANGES
 DIN 2527 BLIND FLANGES
 DIN 2635 WELDING NECK FLANGES



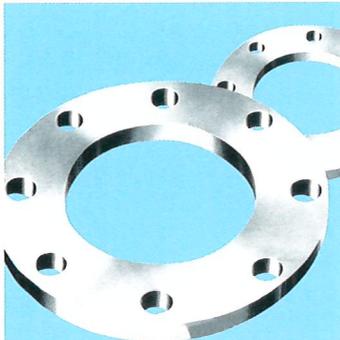
Unit:mm

Bore		Common Dimention						Hub				Raised Face		Drilling			Approx. Weight (kg)	
Nominal Bore	d1	D	t			k	T	d3	s	r	a ≈	d4	f	Number of Bolt	Dia. of Bolt	d2	DIN 2545	DIN 2635
			Welding Neck	Slip-on (No-Hub)	Blind													
10	14 17.2*	90	16		16	60	35	25 28	1.8	4	6	40	2	4	M12 (1/2")	14	0.69	0.72
15	20 21.3*	95	16	16	16	65	38	30 32	2.0	4	6	45	2	4	M12 (1/2")	14	0.76	0.81
20	25 26.9*	105	18	18	18	75	40	38 40	2.3	4	6	58	2	4	M12 (1/2")	14	1.05	1.24
25	30 33.7*	115	18	18	18	85	40	42 46	2.6	4	6	68	2	4	M12 (1/2")	14	1.25	1.38
32	38 42.4*	140	18	18	18	100	42	52 56	2.6	6	6	78	2	4	M16 (5/8")	18	1.82	2.03
40	44.5 48.3*	150	18	18	18	110	45	60 64	2.6	6	7	88	3	4	M16 (5/8")	18	2.09	2.35
50	57 60.3*	165	20	20	20	125	48	72 75	2.9	6	8	102	3	4	M16 (5/8")	18	2.74	3.20
65	76.1*	185	22	22	22	145	52	90	2.9	6	10	122	3	8	M16 (5/8")	18	3.49	4.29
80	88.9*	200	24	24	24	160	58	105	3.2	8	12	138	3	8	M16 (5/8")	18	4.34	5.88
100	108 114.3*	235	24	24	24	190	65	128 134	3.6	8	12	162	3	8	M20 (3/4")	23	5.58	7.54
125	133 139.7*	270	26	26	26	220	68	155 162	4.0	8	12	188	3	8	M24 (7/8")	27	7.56	10.8
150	159 168.3*	300	28	28	28	250	75	182 192	4.5	10	12	218	3	8	M24 (7/8")	27	9.74	14.5
(175)	191 193.7*	350	32	32	32	295	82	215 218	5.6	10	15	260	3	12	M27 (1")	30	18.2	22.1
200	216 219.1*	375	34	34	34	320	88	240 244	6.3	10	16	285	3	12	M27 (1")	30	17.26	27.2
250	267 273*	450	38	38	38	385	105	298 306	7.1	12	18	345	3	12	M30 (1 1/8")	33	27.38	43.8
300	318 323.9*	515	42	42	42	450	115	352 362	8.0	12	18	410	4	16	M30 (1 1/8")	33	37.50	63.3
350	355.6 368*	580	46	46	46	510	125	408	8.8	12	20	465	4	16	M33 (1 1/4")	36	53.18	89.5
400	406.4 419*	660	50	50	50	585	135	462	11.0	12	20	535	4	16	M36 (1 3/8")	39	75.24	127.0
500	508 521*	755	52	52	52	670	140	562	14.2	12	20	615	4	20	M39 (1 1/2")	42	87.76	172.0

NOTE *Out side diameter of pipe complies with ISO recommendation R64



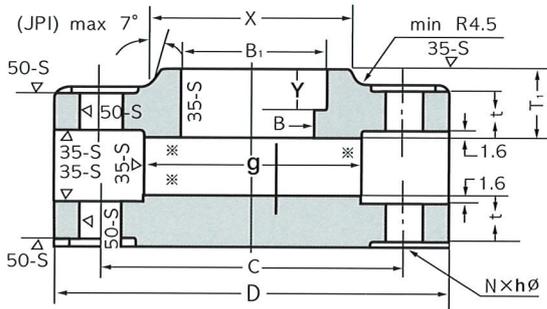
SIN-HUENG
FLANGE



CLASS 150-300 FLANGES

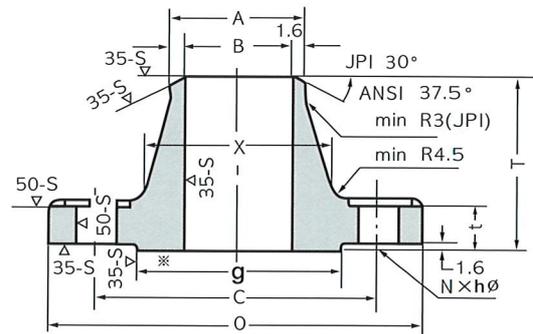
JIP 7S-15-84 & ANSI 16.5

SLIP-ON • SOCKET-WELDING



BLIND

WELDING-NECK



Class 150

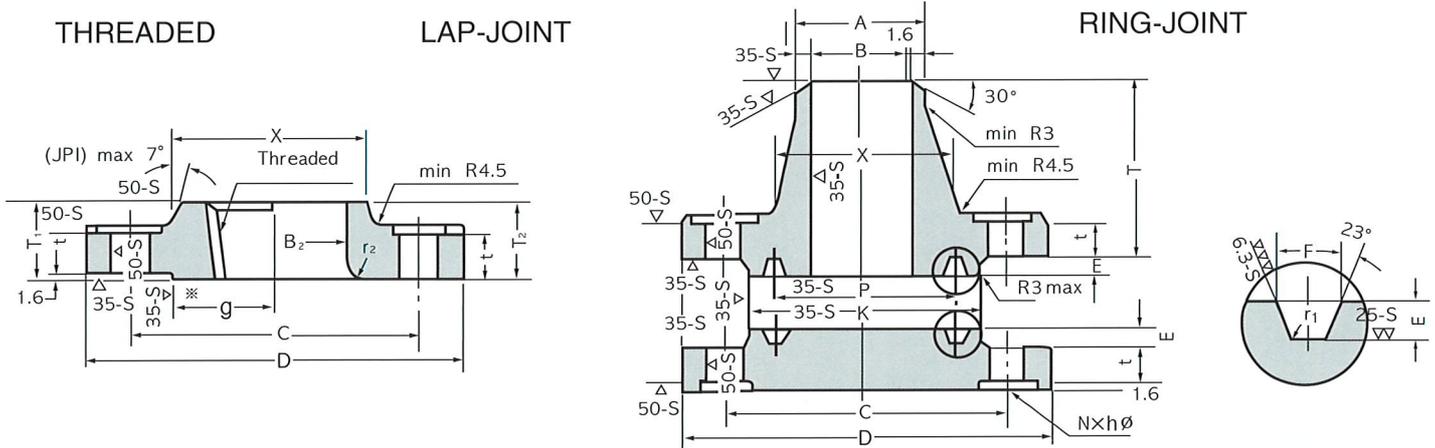
UNIT : mm

Nominal Pipe Size	Outside Dia. of Flanges	Dia of Bore	Dia of Bore										Dia. of Hub at Bevel A	Dia. of Hub at Base X	Dia. of Raised Face g	Thick of Flanges t	Radius of Fillet r ₂	
			Slip-on Socket, B ₁		Lap-Joint B ₂		Welding-Neck, Socket B											
			JPI	ANSI	JPI	ANSI	JPI			ANSI								
A	B	D	JPI	ANSI	JPI	ANSI	SCH40	SCH80	SCH160	SCH40	SCH80	SCH160	JPI	ANSI	X	g	t	r ₂
15	1/2	89	22.2	22.4	23.4	22.9	16.1	14.3	12.3	15.8	13.9	11.8	21.7	21.3	30.2	35.1	11.2	3
20	3/4	98	27.7	27.7	28.9	28.2	21.4	19.4	16.2	20.9	18.8	15.6	27.2	26.7	38.1	42.9	12.7	3
25	1	108	34.5	34.6	35.6	35.1	27.2	25.0	21.2	26.6	24.3	20.7	34.0	33.5	49.3	50.8	14.3	3
(32)	(1 1/4)	117	43.2	43.2	44.3	43.7	35.5	32.9	29.9	35.1	32.5	29.5	42.7	42.2	58.7	63.5	15.9	5
40	1 1/2	127	49.1	49.6	50.4	50.0	41.2	38.4	34.4	40.9	38.1	34.0	48.6	48.3	65.0	73.2	17.5	6
50	2	152	61.1	62.0	62.7	62.5	52.7	49.5	43.1	52.5	49.3	42.9	60.5	60.5	77.8	91.9	19.1	8
65	2 1/2	178	77.1	74.7	78.7	75.5	65.9	62.3	57.3	62.7	59.0	54.0	76.3	73.2	90.4	104.6	22.3	8
80	3	191	90.0	90.7	91.6	91.4	78.1	73.9	66.9	77.9	73.7	66.7	89.1	88.9	108.0	127.0	23.9	10
(90)	(3 1/2)	216	102.6	103.4	104.1	104.2	90.2	85.4	76.2	90.1	85.5	-	101.6	101.6	122.2	139.7	23.9	10
100	4	229	115.4	116.1	116.9	116.9	102.3	97.1	87.3	102.3	97.2	87.3	114.3	114.3	134.9	157.2	23.9	11
(125)	(5)	254	141.2	143.8	143.0	144.6	126.6	120.8	108.0	128.2	122.3	109.6	139.8	141.2	163.6	185.7	23.9	11
150	6	279	166.6	170.7	168.4	171.5	151.0	143.2	128.8	154.1	146.3	131.8	165.2	168.4	192.1	215.9	25.4	13
200	8	343	218.0	221.5	219.5	222.3	199.9	190.9	170.3	202.7	193.7	173.1	216.3	219.2	246.1	269.7	28.6	13
250	10	406	269.5	276.4	271.7	277.4	248.8	237.2	210.2	254.4	242.9	215.9	267.4	273.1	304.8	323.9	30.2	13
300	12	483	321.0	327.2	322.8	328.2	297.9	283.7	251.9	303.2	288.9	257.2	318.5	323.9	365.1	381.0	31.8	13
350	14	533	358.1	359.2	-	360.2	333.4	317.6	284.2	333.3	317.5	284.2	355.6	355.6	400.1	412.8	35.0	13
400	16	597	409.0	410.5	-	411.3	381.0	363.6	325.4	381.0	363.6	325.5	406.4	406.4	457.2	469.9	36.6	13
450	18	635	460.0	461.8	-	462.4	428.6	409.6	366.8	428.7	409.6	366.7	457.2	457.2	504.8	533.4	39.7	13
500	20	699	511.0	513.1	-	514.4	477.8	455.6	408.0	477.8	455.6	408.0	508.0	508.0	558.8	584.2	42.9	13
600	24	815	613.0	616.0	-	616.0	574.6	547.8	490.6	574.7	547.7	490.6	609.6	609.6	663.6	692.2	47.7	13

Class 300

UNIT : mm

Nominal Pipe Size	Outside Dia. of Flanges	Dia of Bore	Dia of Bore										Dia. of Hub at Bevel A	Dia. of Hub at Base X	Dia. of Raised Face g	Thick of Flanges t	Radius of Fillet r ₂	
			Slip-on Socket, B ₁		Lap-Joint B ₂		Welding-Neck, Socket B											
			JPI	ANSI	JPI	ANSI	JPI			ANSI								
A	B	D	JPI	ANSI	JPI	ANSI	SCH40	SCH80	SCH160	SCH40	SCH80	SCH160	JPI	ANSI	X	g	t	r ₂
15	1/2	95	22.2	22.4	23.4	22.9	16.1	14.3	12.3	15.8	13.9	11.8	21.7	21.3	38.1	35.1	14.3	3
20	3/4	117	27.7	27.7	28.9	28.2	21.4	19.4	16.2	20.9	18.8	15.6	27.2	26.7	47.6	42.9	15.9	3
25	1	124	34.5	34.6	35.6	35.1	27.2	25.0	21.2	26.6	24.3	20.7	34.0	33.5	54.0	50.8	17.5	3
(32)	(1 1/4)	133	43.2	43.2	44.3	43.7	35.5	32.9	29.9	35.1	32.5	29.5	42.7	42.2	63.5	63.5	19.1	5
40	1 1/2	156	49.1	49.6	50.4	50.0	41.2	38.4	34.4	40.9	38.1	34.0	48.6	48.3	69.9	73.2	20.6	6
50	2	165	61.1	62.0	62.7	62.5	52.7	49.5	43.1	52.5	49.3	42.9	60.5	60.5	84.1	91.9	22.4	8
65	2 1/2	191	77.1	74.7	78.7	75.5	65.9	62.3	57.3	62.7	59.0	54.0	76.3	73.2	100.0	104.6	25.4	8
80	3	210	90.0	90.7	91.6	91.4	78.1	73.9	66.9	77.9	73.7	66.7	89.1	88.9	117.5	127.0	28.6	10
(90)	(3 1/2)	229	102.6	103.4	104.1	104.2	90.2	85.4	76.2	90.1	85.5	-	101.6	101.6	133.4	139.7	30.2	10
100	4	254	115.4	116.1	116.9	116.9	102.3	97.1	87.3	102.3	97.2	87.3	114.3	114.3	146.1	157.2	31.8	11
(125)	(5)	279	141.2	143.8	143.0	144.6	126.6	120.8	108.0	128.2	122.3	109.6	139.8	141.2	177.8	185.7	35.1	11
150	6	318	166.6	170.7	168.4	171.5	151.0	143.2	128.8	154.1	146.3	131.8	165.2	168.4	206.4	215.9	36.6	13
200	8	381	218.0	221.5	219.5	222.3	199.9	190.9	170.3	202.7	193.7	173.1	216.3	219.2	260.4	269.7	41.3	13
250	10	445	269.5	276.4	271.7	277.4	248.8	237.2	210.2	254.4	242.9	215.9	267.4	273.1	320.7	323.9	47.8	13
300	12	521	321.0	327.2	322.8	328.2	297.9	283.7	251.9	303.2	288.9	257.2	318.5	323.9	374.7	381.0	50.8	13
350	14	584	358.1	359.2	-	360.2	333.4	317.6	284.2	333.3	317.5	284.2	355.6	355.6	425.5	412.8	54.0	13
400	16	650	409.0	410.5	-	411.3	381.0	363.6	325.4	381.0	363.6	325.5	406.4	406.4	482.6	469.9	57.2	13
450	18	710	460.0	461.8	-	462.4	428.6	409.6	366.8	428.7	409.6	366.7	457.2	457.2	533.4	533.4	60.4	13
500	20	775	511.0	513.1	-	514.4	477.8	455.6	408.0	477.8	455.6	408.0	508.0	508.0	587.4	584.2	63.5	13
600	24	914	613.0	616.0	-	616.0	574.6	547.8	490.6	574.7	547.7	490.6	609.6	609.6	701.7	692.2	69.9	13



Class 150

UNIT : mm

Length thru Hub			Depth of Socket	Drilling			Dia. of Raised Face for Ring Joint	Pitch Dia. of Ring & Groove	Ring No.	RTJ Type			Approx. Weight(kg)				Nominal Pipe Size	
Slip-on Socket Thread	Lap Joint	Welding Neck		Dia. of Bolt Circle	Number of Bolt	Dia. of Bolt Hole				Depth of Groove	Width of Groove	Radius of Groove	W.N	S.O	S.W	B.L	A	B
T ₁	T ₂	T	Y	C	N	h	K(min)	P	E	F	r ₁							
15.9	15.9	47.6	9.5	60.5	4	16	-	-	-	-	-	0.50	0.41	0.42	0.43	15	1/2	
15.9	15.9	52.4	11.1	70.0	4	16	-	-	-	-	-	0.75	0.57	0.58	0.62	20	3/4	
17.5	17.5	55.6	12.7	79.5	4	16	63.5	47.62	R15	6.35	8.74	0.8	1.02	0.78	0.80	0.87	25	1
20.6	20.6	57.1	14.3	89.0	4	16	73.0	57.15	R17	6.35	8.74	0.8	1.33	1.03	1.06	1.16	(32)	(11/4)
22.2	22.2	61.9	15.9	98.5	4	16	82.5	69.07	R19	6.35	8.74	0.8	1.72	1.32	1.35	1.54	40	1 1/2
25.4	25.4	63.5	17.5	120.5	4	19	102	82.55	R22	6.35	8.74	0.8	2.59	2.09	2.13	2.46	50	2
28.6	28.6	69.8	19.0	139.5	4	19	121	101.60	R25	6.35	8.74	0.8	4.06	3.25	3.35	3.99	65	2 1/2
30.2	30.2	69.8	20.6	152.5	4	19	133	114.30	R29	6.35	8.74	0.8	4.95	3.91	4.02	4.98	80	3
31.8	31.8	71.4	22.2	178.0	8	19	154	131.78	R33	6.35	8.74	0.8	6.08	4.86	4.99	6.20	(90)	(3 1/2)
33.3	33.3	76.2	23.8	190.5	8	19	171	149.22	R36	6.35	8.74	0.8	6.91	5.35	5.99	7.05	100	4
36.5	36.5	88.9	23.8	216.0	8	22	194	171.45	R40	6.35	8.74	0.8	8.75	6.22	6.68	8.67	(125)	(5)
39.7	39.7	88.9	27.0	241.5	8	22	219	193.68	R43	6.35	8.74	0.8	10.8	7.76	7.99	11.3	150	6
44.5	44.5	101.6	31.8	298.5	8	22	273	247.65	R48	6.35	8.74	0.8	18.0	12.6	13.29	19.9	200	8
49.2	49.2	101.6	33.3	362.0	12	25	330	304.80	R52	6.35	8.74	0.8	24.9	17.6	19.50	29.0	250	10
55.6	55.6	114.3	39.7	432.0	12	25	406	381.00	R56	6.35	8.74	0.8	38.6	27.8	29.03	43.7	300	12
57.2	*79.3	127.0	41.3	476.0	12	29	425	396.88	R59	6.35	8.74	0.8	50.6	35.2	38.56	58.6	350	14
63.5	*87.4	127.0	44.5	539.5	16	29	483	454.02	R64	6.35	8.74	0.8	63.9	45.3	44.49	76.6	400	16
68.3	*96.8	139.7	49.2	578.0	16	32	546	517.52	R68	6.35	8.74	0.8	74.9	49.7	54.43	94.5	450	18
73.0	*103.1	144.5	54.0	635.0	20	32	597	558.80	R72	6.35	8.74	0.8	93.5	63.5	70.31	123	500	20
82.6	*111.3	152.4	63.5	749.5	20	35	711	673.10	R76	6.35	8.74	0.8	133	90.5	95.25	188	600	24

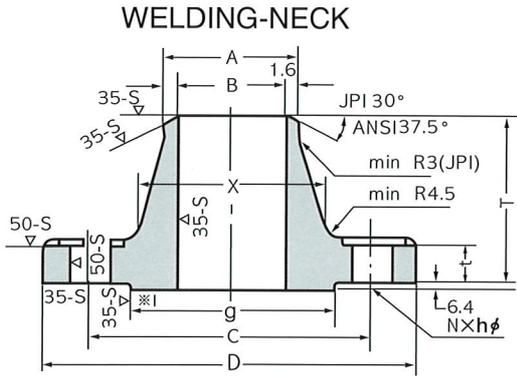
Class 300

UNIT : mm

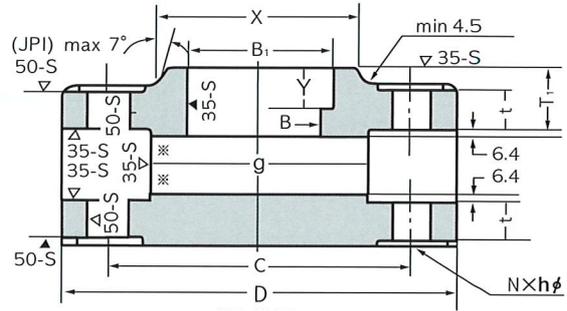
Length thru Hub			Depth of Socket	Drilling			Dia. of Raised Face for Ring Joint	Pitch Dia. of Ring & Groove	Ring No.	RTJ Type			Approx. Weight(kg)				Nominal Pipe Size	
Slip-on Socket Thread	Lap Joint	Welding Neck		Dia. of Bolt Circle	Number of Bolt	Dia. of Bolt Hole				Depth of Groove	Width of Groove	Radius of Groove	W.N	S.O	S.W	B.L	A	B
T ₁	T ₂	T	Y	C	N	h	K(min)	P	E	F	r ₁							
22.2	22.2	52.4	9.7	66.5	4	16	51.0	34.14	R11	5.56	7.14	0.8	0.80	0.65	0.67	0.65	15	1/2
25.4	25.4	57.2	11.2	82.6	4	19	63.5	42.88	R13	6.35	8.74	0.8	1.25	1.10	1.12	1.09	20	3/4
27.0	27.0	61.9	12.7	88.9	4	19	70.0	50.80	R16	6.35	8.74	0.8	1.58	1.35	1.39	1.38	25	1
27.0	27.0	65.1	14.2	98.6	4	19	79.5	60.32	R18	6.35	8.74	0.8	2.05	1.69	1.74	1.82	(32)	(1 1/4)
30.2	30.2	68.3	15.8	114.3	4	22	90.5	68.28	R20	6.35	8.74	0.8	2.93	2.54	2.60	2.70	40	1 1/2
33.3	33.3	69.8	17.5	127.0	8	19	108	82.55	R23	7.92	11.91	0.8	3.40	2.92	3.02	3.18	50	2
38.1	38.1	76.2	19.1	149.4	8	22	127	101.60	R26	7.92	11.91	0.8	5.10	4.24	4.43	4.86	65	2 1/2
42.9	43.9	79.4	20.6	168.1	8	22	146	123.82	R31	7.92	11.91	0.8	7.01	5.94	6.21	6.90	80	3
44.5	44.5	81.0	22.4	184.2	8	22	159	131.78	R34	7.92	11.91	0.8	8.71	7.90	-	8.79	(90)	(3 1/2)
47.6	47.6	85.7	23.9	200.2	8	22	175	149.22	R37	7.92	11.91	0.8	11.3	9.71	-	11.6	100	4
50.8	50.8	98.4	23.9	235.0	8	22	210	180.98	R41	7.92	11.91	0.8	15.1	12.4	-	15.5	(125)	(5)
52.4	52.4	98.4	26.9	269.7	12	22	241	211.12	R45	7.92	11.91	0.8	19.6	16.2	-	21.2	150	6
61.9	61.9	111.1	31.8	330.2	12	26	302	269.88	R49	7.92	11.91	0.8	30.3	24.8	-	34.5	200	8
66.7	95.3	117.5	33.3	387.3	16	29	356	323.85	R53	7.92	11.91	0.8	44.3	35.9	-	53.9	250	10
73.0	101.6	130.2	39.6	450.9	16	32	413	381.004	R57	7.92	11.91	0.8	64.1	51	-	78.9	300	12
76.2	*111.3	142.9	41.4	514.4	20	32	457	19.10	R61	7.92	11.91	0.8	88.3	70.1	-	106	350	14
82.6	*120.7	146.0	44.5	571.5	20	35	508	469.90	R65	7.92	11.91	0.8	113	90.4	-	139	400	16
89.9	*130.0	158.8	49.3	628.7	24	35	575	533.40	R69	7.92	11.91	0.8	138	109	-	175	450	18
95.2	*139.7	161.9	54.1	635.8	24	35	635	584.20	R73	9.52	13.49	1.5	169	136	-	222	500	20
106.4	*152.4	168.3	63.5	812.8	24	42	749	692.15	R77	11.13	16.66	1.5	248	204	-	340	600	24

CLASS 400-600 FLANGES

JIP 7S-15-84 ANSI B 16.5



SLIP-ON



BLIND

Class 400

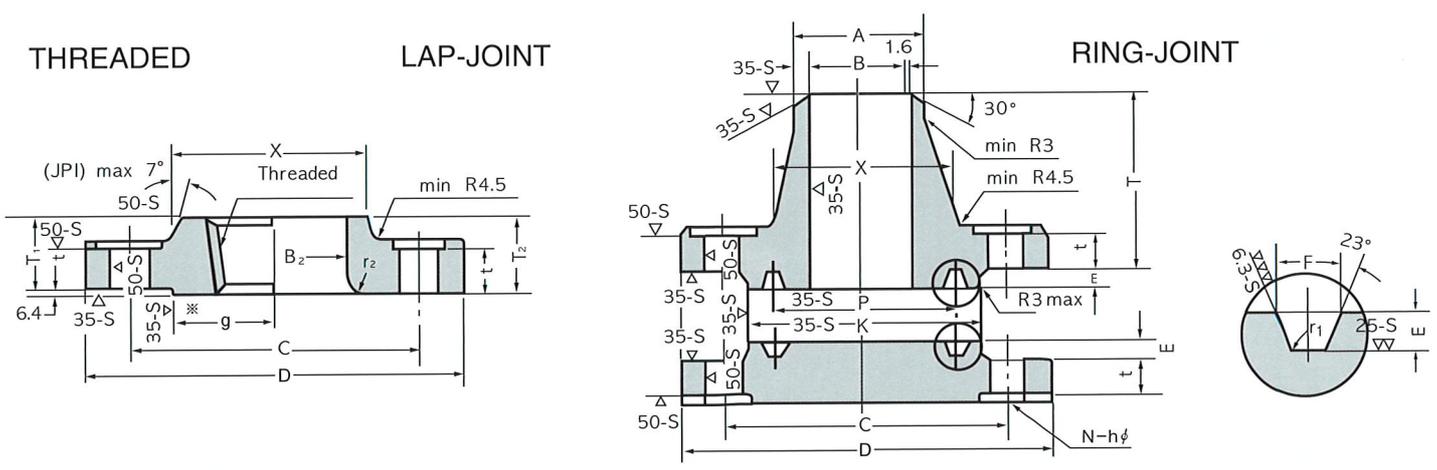
UNIT : mm

Nominal Pipe Size		Outside Dia. of Flanges	Dia of Bore										Dia. of Hub at Bevel A		Dia. of Hub at Base	Dia. of Raised Face	Thick of Flanges	Radius of Fillet
			Slip-on Socket, B ₁		Lap-Joint B ₂		Welding-Neck, Socket B											
							JPI			ANSI								
A	B	D	JPI	ANSI	JPI	ANSI	SCH40	SCH80	SCH160	SCH40	SCH80	SCH160	JPI	ANSI	X	g	t	r ₂
15	1/2	95	22.2	22.4	23.4	22.9	16.1	14.3	12.3	15.8	13.9	11.8	21.7	21.3	38.1	34.9	14.3	3
20	3/4	117	27.8	27.7	28.9	28.2	21.4	19.4	16.2	20.9	18.8	15.6	27.2	26.7	47.8	42.9	15.9	3
25	1	124	34.5	34.6	35.6	35.1	27.2	25.0	21.2	26.6	24.3	20.7	34.0	33.5	53.8	50.8	17.5	3
(32)	(1 1/4)	133	43.2	43.2	44.3	43.7	35.5	32.9	29.9	35.1	32.5	29.5	42.7	42.2	63.5	63.5	20.7	5
40	1 1/2	155	49.1	49.6	50.4	50.0	41.2	38.4	34.4	40.9	38.1	34.0	48.6	48.3	69.9	73.0	22.3	6
50	2	165	61.1	62.0	62.7	62.5	52.7	49.5	43.1	52.5	49.3	42.9	60.5	60.5	84.1	92.1	25.4	8
65	2 1/2	191	77.1	74.7	78.7	75.5	65.9	62.3	57.3	62.7	59.0	54.0	76.3	73.2	100.1	104.8	28.6	8
80	3	210	90.0	90.7	91.6	91.4	78.1	73.9	66.9	77.9	73.7	66.7	89.1	88.9	117.3	127.0	31.8	10
(90)	(3 1/2)	229	102.6	103.4	104.1	104.2	90.2	85.4	76.2	90.1	85.5	-	101.6	101.6	133.4	139.7	35.0	10
100	4	254	115.4	116.1	116.9	116.9	102.3	97.1	87.3	102.3	97.2	87.3	114.3	114.3	146.1	157.2	35.0	11
(125)	(5)	279	141.2	143.8	143.0	144.6	126.6	120.8	108.0	128.2	122.3	109.6	139.8	141.2	177.8	185.7	38.1	11
150	6	318	166.6	170.7	168.4	171.5	151.0	143.2	128.8	154.1	146.3	131.8	165.2	168.4	206.2	215.9	41.1	13
200	8	381	218.0	221.5	219.5	222.3	199.9	190.9	170.3	202.7	193.7	173.1	216.3	219.2	260.3	269.9	47.7	13
250	10	445	269.5	276.4	271.7	277.4	248.8	237.2	210.2	254.5	242.9	215.9	267.4	273.1	320.5	323.8	54.0	13
300	12	521	321.0	327.2	322.8	328.2	297.9	283.7	251.9	303.2	288.9	257.2	318.5	323.9	374.7	381.0	57.2	13
350	14	584	358.1	359.2	-	360.2	333.4	317.6	284.2	333.3	317.5	284.2	355.6	355.6	425.5	412.8	60.4	13
400	16	648	409.0	410.5	-	411.3	381.0	363.3	325.4	381.0	363.6	325.5	406.4	406.4	482.6	469.9	63.5	13
450	18	710	460.0	461.8	-	462.4	428.6	409.6	366.8	428.7	409.6	366.7	457.2	457.2	533.4	533.4	66.7	13
500	20	775	511.0	513.1	-	514.4	477.8	455.6	408.0	477.8	455.6	408.0	508.0	508.0	587.4	584.2	69.9	13
600	24	914	613.0	616.0	-	616.0	574.6	547.8	490.6	574.7	547.7	490.6	609.6	609.6	701.5	692.2	76.2	13

Class 600

UNIT : mm

Nominal Pipe Size		Outside Dia. of Flanges	Dia of Bore										Dia. of Hub at Bevel A		Dia. of Hub at Base	Dia. of Raised Face	Thick of Flanges	Radius of Fillet
			Slip-on Socket, B ₁		Lap-Joint B ₂		Welding-Neck, Socket B											
							JPI			ANSI								
A	B	D	JPI	ANSI	JPI	ANSI	SCH40	SCH80	SCH160	SCH40	SCH80	SCH160	JPI	ANSI	X	g	t	r ₂
15	1/2	95	22.2	22.4	-	22.9	16.1	14.3	12.3	15.8	13.9	11.8	21.7	21.3	38.1	34.9	14.3	3
20	3/4	117	27.7	27.7	-	28.2	21.4	19.4	16.2	20.9	18.8	15.6	27.2	26.7	47.8	42.9	15.9	3
25	1	124	34.5	34.6	-	35.1	27.2	25.0	21.2	26.6	24.3	20.7	34.0	33.5	53.8	50.8	17.5	3
(32)	(1 1/4)	133	43.2	43.2	-	43.7	35.5	32.9	29.9	35.1	32.5	29.5	42.7	42.2	63.5	63.5	20.7	5
40	1 1/2	155	49.1	49.6	-	50.0	41.2	38.4	34.4	40.9	38.1	34.0	48.6	48.3	69.9	73.0	22.3	6
50	2	165	61.1	62.0	-	62.5	52.7	49.5	43.1	52.5	49.3	42.9	60.5	60.5	84.1	92.1	25.4	8
65	2 1/2	191	77.1	74.7	-	75.5	65.9	62.3	57.3	62.7	59.0	54.0	76.3	73.2	100.1	104.8	28.6	8
80	3	210	90.0	90.7	-	91.4	78.1	73.9	66.9	77.9	73.7	66.7	89.1	88.9	117.3	127.0	31.8	10
(90)	(3 1/2)	229	102.6	103.4	-	104.2	90.2	85.4	76.2	90.1	85.5	-	101.6	101.6	133.4	139.7	35.0	10
100	4	273	115.4	116.1	-	116.9	102.3	97.1	87.3	102.3	97.2	87.3	114.3	114.3	152.4	157.2	38.1	11
(125)	(5)	330	141.2	143.8	-	144.6	126.6	120.8	108.0	128.2	122.3	109.6	139.8	141.2	189.0	185.7	44.5	11
150	6	356	166.6	170.7	-	171.5	151.0	143.2	128.8	154.1	146.3	131.8	165.2	168.4	222.3	215.9	47.7	13
200	8	419	218.0	221.5	-	222.3	199.9	190.9	170.3	202.7	193.7	173.1	216.3	219.2	273.1	269.9	55.6	13
250	10	508	269.5	276.4	-	277.4	248.8	237.2	210.2	254.4	242.9	215.9	267.4	273.1	342.9	323.8	63.5	13
300	12	559	321.0	327.2	-	328.2	297.9	283.7	251.9	303.2	288.9	257.2	318.5	323.9	400.1	381.0	66.7	13
350	14	603	358.1	359.2	-	360.2	333.4	317.6	284.2	333.3	317.5	284.2	355.6	355.6	431.8	412.8	69.9	13
400	16	686	409.0	410.5	-	411.3	381.0	363.6	325.4	381.0	363.6	325.5	406.4	406.4	495.3	469.9	76.2	13
450	18	743	460.0	461.8	-	462.4	428.6	409.6	366.8	428.7	409.6	366.7	457.2	457.2	546.1	533.4	82.6	13
500	20	813	511.0	513.1	-	514.4	477.8	455.6	408.0	477.8	455.6	408.0	508.0	508.0	609.6	584.2	88.9	13
600	24	940	613.0	616.0	-	616.0	574.6	547.8	490.6	574.7	547.7	490.6	609.6	609.6	717.6	692.2	101.6	13



Class 400

UNIT : mm

Length Thru Hub			Depth of Socket	Drilling			Dia. of Raised Face for Ring Joint	Pitch Dia. of Ring & Groove	Ring No.	RTJ Type			Approx. Weight(kg)				Nominal Pipe Size	
Slip-on Socket Thread	Lap Joint	Welding Neck		Dia. of Bolt Circle	Number of Bolt	Dia. of Bolt Hole				Depth of Groove	Width of Groove	Radius of Groove	W.N	S.O	S.W	B.L	A	B
T ₁	T ₂	T		C	N	h				E	F	r ₁						
22.4	22	52.3	9.5	66.5	4	16	51.0	34.14	R11	5.56	7.14	0.8	0.86	0.74	0.77	0.76	15	1/2
25.4	25	57.2	11.1	82.6	4	19	63.5	42.88	R13	6.35	8.74	0.8	1.40	1.24	1.28	1.27	20	3/4
26.9	27	62.0	12.7	88.9	4	19	70.0	50.80	R16	6.35	8.74	0.8	1.76	1.51	1.57	1.59	25	1
28.4	29	66.5	14.3	98.6	4	19	79.5	60.32	R18	6.35	8.74	0.8	2.41	2.03	2.11	2.24	(32)	(1 1/4)
31.8	32	69.9	15.9	114.3	4	22	90.5	68.28	R20	6.35	8.74	0.8	3.44	3.01	3.11	3.30	40	(1 1/2)
36.6	37	73.2	17.5	127.0	8	19	108	82.55	R23	7.92	11.91	0.8	4.18	3.62	3.77	4.11	50	2
41.1	41	79.2	19.0	149.4	8	22	127	101.60	R26	7.92	11.91	0.8	6.11	5.20	5.58	6.20	65	2 1/2
46.0	46	82.6	20.6	168.1	8	22	146	123.82	R31	7.92	11.91	0.8	8.27	7.08	7.47	8.51	80	3
49.3	49	85.9	22.2	184.2	8	25	159	131.78	R34	7.92	11.91	0.8	10.3	8.86	-	10.9	(90)	(3 1/2)
50.8	51	88.9	23.8	200.2	8	25	175	149.22	R37	7.92	11.91	0.8	12.9	11.1	-	13.7	100	4
53.8	54	101.6	23.8	235.0	8	25	210	180.98	R41	7.92	11.91	0.8	17.1	14.2	-	18.6	(125)	(5)
57.2	57	103.1	27.0	269.7	12	25	241	211.12	R45	7.92	11.91	0.8	22.6	18.9	-	25.7	150	6
68.3	68	117.3	31.8	330.2	12	29	302	269.88	R49	7.92	11.91	0.8	35.5	29.4	-	42.9	200	8
73.2	101.6	124.0	33.3	387.4	16	32	356	323.85	R53	7.92	11.91	0.8	50.4	41.1	-	64.6	250	10
79.2	108.0	136.7	39.7	450.9	16	35	413	381.00	R57	7.92	11.91	0.8	73.8	59.2	-	95.7	300	12
84.1	117.3	149.4	44.3	514.4	20	35	457	419.10	R61	7.92	11.91	0.8	99.0	80.0	-	125	350	14
93.7	127	152.4	44.5	571.5	20	39	508	469.90	R65	7.92	11.91	0.8	125	103	-	162	400	16
98	136.7	165.1	49.2	628.7	24	39	575	533.40	R69	7.92	11.91	0.8	153	123	-	205	450	18
101.6	146.1	168.1	54.0	685.8	24	42	635	584.20	R73	9.52	13.49	1.5	184	148	-	255	500	20
114.3	158.8	174.8	63.5	812.8	24	48	749	692.15	R77	11.13	16.66	1.5	270	223	-	388	600	24

Class 600

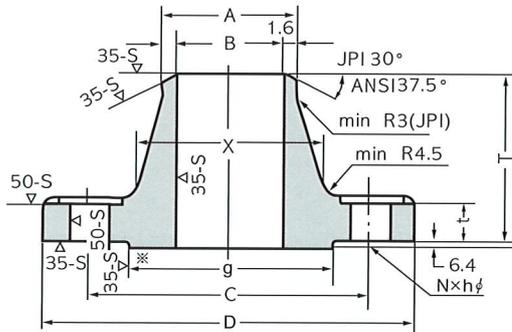
UNIT : mm

Length Thru Hub			Depth of Socket	Drilling			Dia. of Raised Face for Ring Joint	Pitch Dia. or Ring & Groove	Ring No.	RTJ Type			Approx. Weight(kg)				Nominal Pipe Size	
Slip-on Socket Thread	Lap Joint	Welding Neck		Dia. of Bolt Circle	Number of Bolt	Dia. of Bolt Hole				Depth of Groove	Width of Groove	Radius of Groove	W.N	S.O	S.W	B.L	A	B
T ₁	T ₂	T		C	N	h				E	F	r ₁						
22.4	22	52.3	9.5	66.5	4	16	51.0	34.14	R11	5.56	7.14	0.8	0.88	0.74	0.78	0.76	15	1/2
25.4	25	57.2	11.1	82.6	4	19	63.5	42.88	R13	6.35	8.74	0.8	1.44	1.24	1.29	1.27	20	3/4
26.9	27	62.0	12.7	88.9	4	19	70.0	50.80	R16	6.35	8.74	0.8	1.81	1.51	1.58	1.59	25	1
28.4	29	66.5	14.3	98.6	4	19	79.5	60.32	R18	6.35	8.74	0.8	2.49	2.03	2.14	2.24	(32)	(1 1/4)
31.8	32	69.9	15.9	114.3	4	22	90.5	68.28	R20	6.35	8.74	0.8	3.55	3.01	3.14	3.30	40	(1 1/2)
36.6	37	73.0	17.5	127.0	8	19	108	82.55	R23	7.92	11.91	0.8	4.34	3.62	3.82	4.11	50	2
41.1	41	79.2	19.0	149.4	8	22	127	101.60	R26	7.92	11.91	0.8	6.41	5.20	5.57	6.20	65	2 1/2
46.0	46	82.6	20.6	168.1	8	22	146	123.82	R31	7.92	11.91	0.8	8.62	7.08	7.59	8.51	80	3
49.3	49	85.9	22.2	184.2	8	26	159	131.78	R34	7.92	11.91	0.8	10.8	8.86	-	10.9	(90)	(3 1/2)
53.8	54	101.6	23.8	215.9	8	26	175	149.22	R37	7.92	11.91	0.8	17.6	14.6	-	17.4	100	4
60.5	60	114.3	23.8	266.9	8	29	210	180.98	R41	7.92	11.91	0.8	29.4	24.6	-	29.4	(125)	(5)
66.5	67	117.3	27.0	292.1	12	29	241	211.12	R45	7.92	11.91	0.8	35.7	29.6	-	36.4	150	6
76.2	76	133.4	31.8	349.3	12	32	302	269.88	R49	7.92	11.91	0.8	54.6	44.0	-	58.8	200	8
85.9	111.3	152.4	33.3	431.8	16	35	356	323.85	R53	7.92	11.91	0.8	90.7	73.3	-	98.4	250	10
91.9	117.3	155.4	39.7	489.0	20	35	413	381.00	R57	7.92	11.91	0.8	110	87.0	-	124	300	12
93.7	127.0	165.1	41.3	527.1	20	39	457	419.10	R61	7.92	11.91	0.8	130	99.8	-	152	350	14
106.4	139.7	177.8	44.5	603.3	20	42	508	469.90	R65	7.92	11.91	0.8	183	142	-	214	400	16
117.3	152.4	184.2	49.2	654.1	20	45	575	533.40	R69	7.92	11.91	0.8	226	176	-	275	450	18
127.0	165.1	190.5	54.0	723.9	24	45	635	584.20	R73	9.52	13.49	1.5	284	224	-	352	500	20
139.7	184.2	203.2	63.5	838.2	24	51	749	692.15	R77	11.13	16.66	1.5	408	317	-	536	600	24

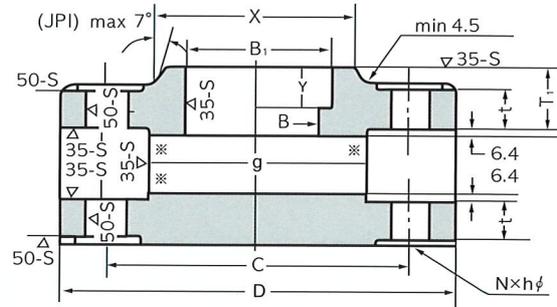
CLASS 900 FLANGES

JIP 7S-15-84 & ANSI B 16.5

WELDING-NECK



SLIP-ON SOCKET-WELDING



BLIND

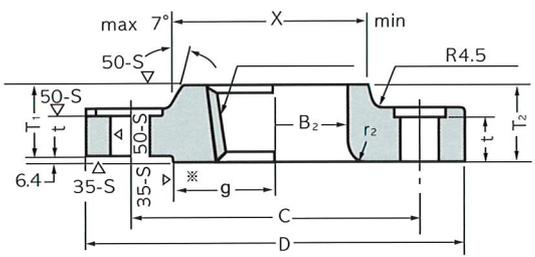
Class 900

UNIT : mm

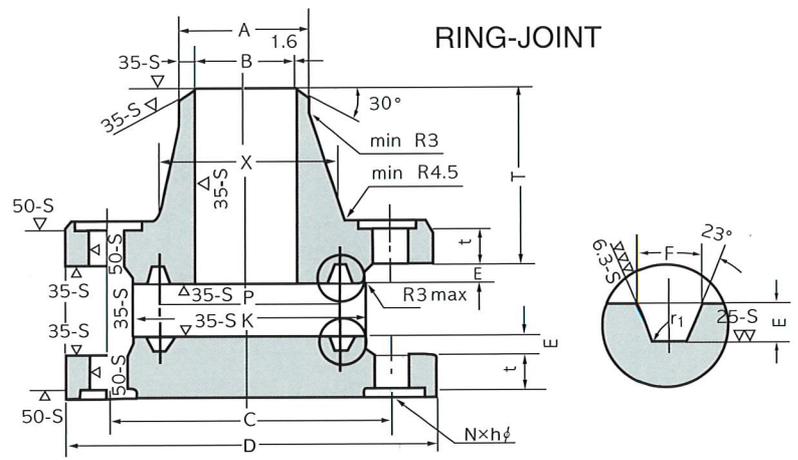
Nominal Pipe Size		Outside Dia. of Flanges	Dia of Bore										Dia. of Hub at Bevel A	Dia. of Hub at Base X	Dia. of Raised Face g	Thick of Flanges t	Radius of Fillet r ₂	
			Slip-on Socket, B ₁		Lap-Joint B ₂		Welding-Neck, Socket B											
			JPI	ANSI	JPI	ANSI	JPI			ANSI								
A	B	D	JPI	ANSI	JPI	ANSI	SCH40	SCH80	SCH160	SCH40	SCH80	SCH160	JPI	ANSI	X	g	t	r ₂
15	1/2	121	22.2	22.4	-	22.9	16.1	14.3	12.3	15.8	13.9	11.8	21.7	21.3	38.1	34.9	22.4	3
20	3/4	130	27.7	27.7	-	28.2	21.4	19.4	16.2	20.9	18.8	15.6	27.2	26.7	44.5	42.9	25.4	3
25	1	149	34.5	34.5	-	35.1	27.2	25.0	21.2	26.6	24.3	20.7	34.0	33.5	52.3	50.8	28.4	3
(32)	(1 1/4)	159	43.2	43.2	-	43.7	35.5	32.9	29.9	35.1	32.5	29.5	42.7	42.2	63.5	63.5	28.4	5
40	1 1/2	178	49.1	49.5	-	50.0	41.2	38.4	34.4	40.9	38.1	34.0	48.6	48.3	69.9	73.0	31.8	6
50	2	216	61.1	62.0	-	62.5	52.7	49.5	43.1	52.5	49.3	42.9	60.5	60.5	104.6	92.1	38.1	8
65	2 1/2	244	77.1	74.7	-	75.4	65.9	62.3	57.3	62.7	59.0	54.0	76.3	73.2	124.0	104.8	41.1	8
80	3	241	90.0	90.7	-	91.4	78.1	73.9	66.9	77.9	73.7	66.9	89.1	88.9	127.0	127.0	38.1	10
(90)	3 1/2	-	-	-	-	-	90.2	85.4	76.2	90.1	85.5	-	-	-	-	-	-	-
100	4	292	115.4	116.1	-	116.9	102.3	97.1	87.3	102.3	97.2	87.3	114.3	114.3	158.8	157.2	44.5	11
(125)	(5)	349	141.2	143.8	-	144.5	126.6	120.8	108.0	128.2	122.3	109.6	139.8	141.2	190.5	185.7	50.8	11
150	6	381	166.6	170.7	-	171.5	151.0	143.2	128.8	154.1	146.3	131.8	165.2	168.4	235.0	215.9	55.6	13
200	8	470	218.0	221.5	-	222.3	199.9	190.9	170.3	202.7	193.7	173.1	216.3	219.2	298.5	269.9	63.5	13
250	10	546	269.5	276.4	-	277.4	248.8	237.2	210.2	254.5	242.9	215.9	267.4	273.1	368.3	323.8	69.9	13
300	12	610	321.0	327.2	-	328.2	297.9	283.7	251.9	303.2	288.9	257.2	318.5	323.9	419.1	381.0	79.2	13
350	14	641	358.1	358.1	-	360.2	333.4	317.6	284.2	333.3	317.5	284.2	355.6	355.6	450.9	412.8	85.9	13
400	16	705	409.0	409.0	-	411.2	381.0	363.6	325.4	381.0	363.6	325.5	406.4	406.4	508.0	469.9	88.9	13
450	18	787	460.0	460.0	-	462.3	428.6	409.6	366.8	428.7	409.6	366.7	457.2	457.2	565.2	533.4	101.6	13
500	20	857	511.0	511.0	-	514.4	477.8	455.6	408.0	477.8	455.6	408.0	508.0	508.0	622.3	584.2	108.0	13
600	24	1041	613.0	613.0	-	616.0	574.6	547.8	490.6	574.6	547.6	490.6	609.6	609.6	749.3	692.2	139.7	13

THREADED

LAP-JOINT



RING-JOINT



Class 900

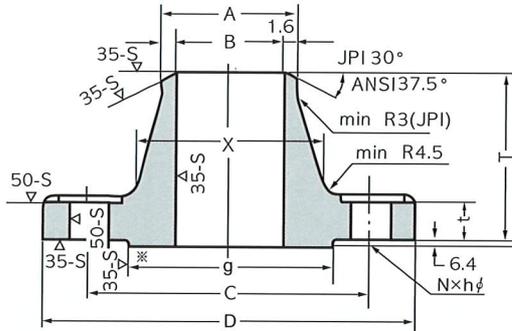
UNIT : mm

Length Thru Hub			Depth of Socket	Drilling			Dia. of Raised Face for Ring Joint	Pitch Dia. of Ring & Groove	Ring No.	RTJ Type			Approx. Weight(kg)				Nominal Pipe Size	
Slip-on Socket Thread	Lap Joint	Welding Neck		Dia. of Bolt Circle	Number of Bolt	Dia. of Bolt Hole				Depth of Groove	Width of Groove	Radius of Groove	W.N	S.O	S.W	B.L		
T ₁	T ₂	T	Y	C	N	h	K(min)	P	E	F	r ₁					A	B	
31.8	32	60.5	9.5	82.6	4	23	60.5	39.67	R12	6.35	8.74	0.8	1.98	1.76	1.81	1.88	15	1/2
35.1	35	69.9	11.1	88.9	4	23	66.5	44.45	R14	6.35	8.74	0.8	2.64	2.32	2.39	2.50	20	3/4
41.1	41	73.2	12.7	101.6	4	26	71.5	50.80	R16	6.35	8.74	0.8	3.84	3.44	3.56	3.68	25	1
41.1	41	773.2	14.3	111.3	4	26	81.0	60.32	R18	6.35	8.74	0.8	4.47	3.95	4.11	4.19	(32)	(1 1/4)
44.5	44	82.6	15.9	124.0	4	29	92.0	68.28	R20	6.35	8.74	0.8	6.13	5.41	5.61	5.92	40	1 1/2
57.2	57	101.6	17.5	165.1	8	26	124	95.25	R24	7.92	11.91	0.8	11.3	9.92	10.3	10.5	50	2
69.9	64	104.6	19	190.5	8	29	137	107.95	R27	7.92	11.91	0.8	15.3	13.5	14.2	14.2	65	2 1/2
53.8	54	101.6	20.6	190.5	8	26	156	123.82	R31	7.92	11.91	0.8	14.2	11.6	-	13.7	80	3
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(90)	(3 1/2)
69.9	70	114.3	23.8	235.0	8	32	181	149.2	R37	7.92	11.91	0.8	23.1	19.8	-	22.7	100	4
79.2	79	127.0	23.8	279.4	8	35	216	180.98	R41	7.92	11.91	0.8	37.4	32.4	-	37.5	(125)	(5)
85.9	86	139.7	27.0	317.5	12	32	241	211.12	R45	7.92	11.91	0.8	49.3	42.1	-	48.7	150	6
101.6	114.3	162.1	31.8	393.7	12	39	308	269.88	R49	7.92	11.91	0.8	83.7	71.6	-	84.0	200	8
108.0	127.0	184.2	33.3	469.9	16	39	362	323.85	R53	7.92	11.91	0.8	124	102	-	124	250	10
117.3	142.7	200.2	39.7	533.4	20	39	419	381.00	R57	7.92	11.91	0.8	168	136	-	176	300	12
130.0	155.4	212.9	44.3	558.8	20	42	467	419.10	R62	11.13	16.66	1.5	194	153	-	213	350	14
133.4	165.1	215.9	44.5	616.0	20	45	524	469.90	R66	11.13	16.66	1.5	239	186	-	269	400	16
152.4	190.5	228.6	49.2	685.8	20	51	594	533.40	R70	12.70	19.84	1.5	326	258	-	382	450	18
158.8	209.6	247.7	54.0	749.3	20	54	648	584.20	R74	12.70	19.84	1.5	410	317	-	481	500	20
203.2	266.7	292.1	63.5	901.7	20	67	772	692.15	R78	15.58	26.97	2.4	758	608	-	914	600	24

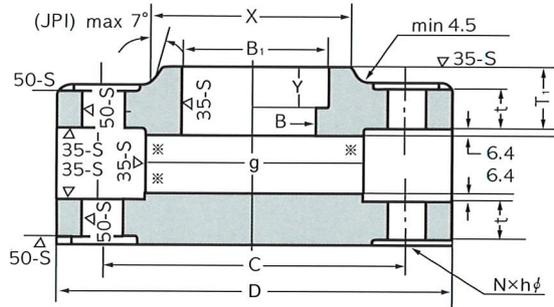
CLASS 1500-2500 FLANGES

JIP 7S-15-84 & ANSI B 16.5

WELDING-NECK



SLIP-ON • SOCKET-WELDING



BLIND

Class 1500

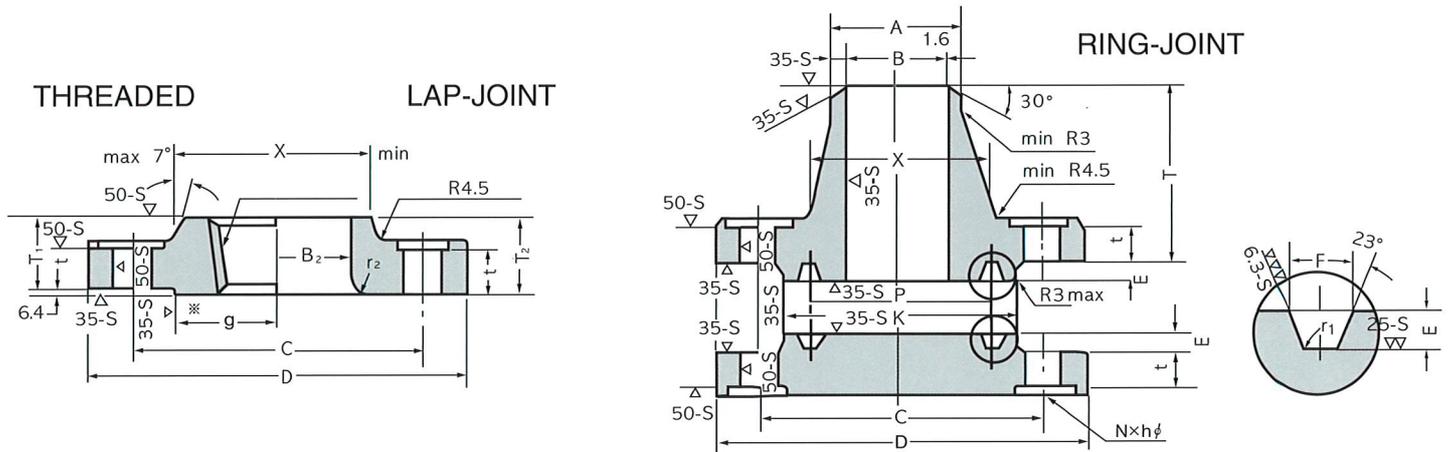
UNIT : mm

Nominal Pipe Size	Outside Dia. of Flanges	Dia of Bore											Dia. of Hub at Bevel A	Dia. of Hub at Base	Dia. of Raised Face	Thick of Flanges	Radius of Fillet	
		Slip-on Socket, B ₁		Lap-Joint B ₂		Welding-Neck, Socket B												
		JPI	ANSI	JPI	ANSI	JPI			ANSI									
A	B	D	JPI	ANSI	JPI	ANSI	SCH40	SCH80	SCH160	SCH40	SCH80	SCH160	JPI	ANSI	X	g	t	r ₂
15	1/2	121	22.2	22.4	-	22.9	16.1	14.3	12.3	15.8	13.9	11.8	21.7	21.3	38.1	34.9	22.4	3
20	3/4	130	27.7	27.7	-	28.2	21.4	19.4	16.2	20.9	18.8	15.6	27.2	26.7	44.5	42.9	25.4	3
25	1	149	34.5	34.5	-	35.1	27.2	25.0	21.2	26.6	24.3	20.7	34.0	33.5	52.3	50.8	28.6	3
(32)	(1 1/4)	159	43.2	43.2	-	43.7	35.5	32.9	29.9	35.1	32.5	29.5	42.7	42.2	63.5	63.5	28.6	5
40	1 1/2	178	49.1	49.5	-	50.0	41.2	38.4	34.4	40.9	38.1	34.0	48.6	48.3	69.9	73.0	31.8	6
50	2	216	61.1	62.0	-	62.5	52.7	49.5	43.1	52.5	49.3	42.8	60.5	60.5	104.6	92.1	38.1	8
65	2 1/2	244	77.1	74.7	-	75.4	65.9	62.3	57.3	62.7	59.0	54.0	76.3	73.2	124.0	104.8	41.3	8
80	3	267	90.0	90.7	-	91.4	78.1	73.9	66.9	77.9	73.7	66.7	89.1	88.91	133.4	127.0	47.8	10
(90)	(3 1/2)	-	102.6	103.4	-	-	90.2	85.4	76.2	90.1	85.5	-	-	-	-	-	-	-
100	4	311	115.4	116.1	-	116.9	102.3	97.1	87.3	102.3	97.2	87.3	114.3	114.3	162.1	157.2	54.0	11
(125)	(5)	375	141.2	143.8	-	144.5	126.6	120.8	108.0	128.2	122.3	109.6	139.8	141.2	196.9	185.7	73.2	11
150	6	394	166.6	170.7	-	171.5	151.0	143.2	128.8	154.1	146.3	131.8	165.2	168.4	228.6	215.9	82.6	13
200	8	483	218.0	221.5	-	222.3	199.9	190.9	170.3	202.7	193.7	173.1	216.3	219.2	292.1	269.9	92.1	13
250	10	584	269.5	276.4	-	277.4	248.8	237.2	210.2	254.5	242.9	215.9	267.4	273.1	368.3	323.8	108.0	13
300	12	673	321.0	327.2	-	328.2	297.9	283.7	251.9	303.2	288.9	257.2	318.5	323.9	450.9	381.0	124.0	13
350	14	749	358.1	358.1	-	360.2	333.4	317.6	284.2	333.3	317.5	284.2	355.6	355.6	495.6	412.8	133.4	13
400	16	826	409.0	409.0	-	411.2	381.0	363.6	325.4	381.0	363.6	325.5	406.4	406.4	552.5	469.9	146.1	13
450	18	914	460.0	460.0	-	462.3	428.6	409.6	366.8	428.7	409.6	366.7	457.2	457.2	596.9	533.4	162.1	13
500	20	984	511.0	511.0	-	514.4	477.8	455.6	408.0	477.8	455.6	408.0	508.0	508.0	641.4	584.2	177.8	13
600	24	1168	613.0	613.0	-	616.0	574.6	547.8	490.6	574.6	547.7	490.5	609.6	609.6	762.0	692.2	203.2	13

Class 2500

UNIT : mm

Nominal Pipe Size	Outside Dia. of Flanges	Dia of Bore											Dia. of Hub at Bevel A	Dia. of Hub at Base	Dia. of Raised Face	Thick of Flanges	Radius of Fillet	
		Slip-on Socket, B ₁		Lap-Joint B ₂		Welding-Neck, Socket B												
		JPI	ANSI	JPI	ANSI	JPI			ANSI									
A	B	D	JPI	ANSI	JPI	ANSI	SCH40	SCH80	SCH160	SCH40	SCH80	SCH160	JPI	ANSI	X	g	t	r ₂
15	1/2	133	22.2	22.4	-	22.9	16.1	14.3	12.3	15.8	13.9	11.8	21.7	21.3	42.9	34.9	30.2	3
20	3/4	140	27.7	27.7	-	28.2	21.4	19.4	16.2	20.9	18.8	15.6	27.2	26.7	50.8	42.9	31.8	3
25	1	159	34.5	34.5	-	35.1	27.2	25.0	21.2	26.6	24.3	20.7	34.0	33.5	57.2	50.8	35.1	3
(32)	(1 1/4)	184	43.2	43.2	-	43.7	35.3	32.9	29.9	35.1	32.5	29.5	42.7	42.2	73.2	63.5	38.1	5
40	1 1/2	203	49.1	49.5	-	50.0	41.2	38.4	34.4	40.9	38.1	34.0	48.6	48.3	79.2	73.0	44.5	6
50	2	235	61.1	62.0	-	62.5	52.7	49.5	43.1	52.5	49.3	42.9	60.5	60.5	95.3	92.1	50.8	8
65	2 1/2	267	77.1	74.7	-	75.4	65.9	62.3	57.3	62.7	59.0	54.0	76.3	73.2	114.3	104.8	57.2	8
80	3	305	90.0	90.7	-	91.4	78.1	73.9	66.9	77.9	73.7	66.9	89.1	88.9	133.4	127.0	66.5	10
(90)	(3 1/2)	-	-	-	-	-	90.2	85.4	76.2	90.1	85.5	-	-	-	-	-	-	-
100	4	356	115.4	116.1	-	116.9	102.3	97.1	87.3	102.3	97.2	87.3	114.3	114.3	165.1	157.2	76.8	11
(125)	(5)	419	141.2	143.8	-	144.5	126.6	120.8	108.0	128.2	122.3	109.6	139.8	141.2	203.2	185.7	91.5	11
150	6	483	166.6	170.7	-	171.5	151.0	143.2	128.8	154.1	146.3	131.8	165.2	168.4	235.0	215.9	108.0	13
200	8	552	218.0	221.5	-	222.3	199.9	190.9	170.3	202.7	193.7	173.1	216.3	219.2	304.8	269.9	127.0	13
250	10	673	269.5	276.4	-	277.4	248.8	237.2	210.2	254.5	242.9	215.9	267.4	273.1	374.7	323.8	165.1	13
300	12	762	321.0	327.2	-	328.2	297.9	283.7	251.9	303.2	288.9	257.2	318.5	323.9	441.5	381.0	184.2	13



Class 1500

UNIT : mm

Length Thru Hub			Depth of Socket	Drilling			Dia. of Raised Face for Ring Joint	Pitch Dia. of Ring & Groove	Ring No.	RTJ Type			Approx. Weight(kg)				Nominal Pipe Size	
Slip-on Socket Thread	Lap Joint	Welding Neck		Dia. of Bolt Circle	Number of Bolt	Dia. of Bolt Hole				Depth of Groove	Width of Groove	Radius of Groove	W.N	S.O	S.W	B.L	A	B
T ₁	T ₂	T		Y	C	N				h	E	F	r ₁					
31.8	31.8	60.5	9.5	82.6	4	23	60.5	39.67	R12	6.35	8.74	0.8	1.98	1.76	1.81	1.88	615	1/2
35.1	35.1	69.9	11.1	88.9	4	23	66.5	44.45	R14	6.35	8.74	0.8	2.64	2.32	2.39	2.50	20	3/4
41.1	41.1	73.2	12.7	101.6	4	26	71.5	50.80	R16	6.35	8.74	0.8	3.84	3.44	3.56	3.68	25	1
41.1	41.1	73.2	14.3	111.3	4	26	81.0	60.32	R18	6.35	8.74	0.8	4.47	3.95	4.11	4.29	(32)	(1 1/4)
44.5	44.5	82.6	15.9	124.0	4	29	92.0	68.28	R20	6.35	8.74	0.8	6.13	5.41	5.61	5.92	4	1 1/2
57.2	57.2	101.6	17.5	165.1	8	26	124	95.25	R24	7.92	11.91	0.8	11.3	9.92	10.3	10.5	50	2
63.5	63.5	104.6	19.0	190.5	8	29	137	107.95	R27	7.92	11.91	0.8	15.3	13.5	14.2	14.4	65	2 1/2
73.2	73.2	117.3	20.6	203.2	8	32	168	136.52	R35	7.92	11.91	0.8	20.7	18.1	-	20.0	80	3
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(90)	(3 1/2)
90.4	90.4	124.0	23.8	241.3	8	35	194	161.92	R39	7.92	11.91	0.8	30.8	27.8	-	30.8	100	4
104.6	104.6	155.4	27.8	292.1	8	42	229	193.68	R44	7.92	11.91	0.8	58.6	52.6	-	60.0	(125)	(5)
119.1	119.1	171.5	27.0	317.5	12	39	248	211.12	R46	9.52	13.49	1.5	70.7	62.1	-	73.7	150	6
142.7	142.7	212.9	31.8	393.7	12	45	318	269.88	R50	11.13	16.66	1.5	121	105	-	125	200	8
158.8	177.8	254.0	33.3	482.6	12	51	371	323.85	R54	11.13	16.66	1.5	211	180	-	216	250	10
180.8	218.9	282.4	39.7	571.5	16	54	438	381.00	R58	14.27	23.01	1.5	318	271	-	330	300	12
-	241.3	298.5	41.3	635.0	16	61	489	419.10	R63	15.88	26.97	2.4	415	-	-	437	350	14
-	260.4	311.2	44.5	704.9	16	67	546	469.90	R67	17.48	30.18	2.4	535	-	-	582	400	16
-	276.4	327.2	49.2	774.7	16	74	613	533.40	R71	17.48	30.18	2.4	702	-	-	769	450	18
-	292.1	355.6	54.0	831.9	16	80	673	584.20	R75	17.48	33.32	2.4	871	-	-	1001	500	20
-	330.2	406.4	63.5	990.6	16	93	794	692.15	R79	20.62	36.53	2.4	1405	-	-	1628	600	24

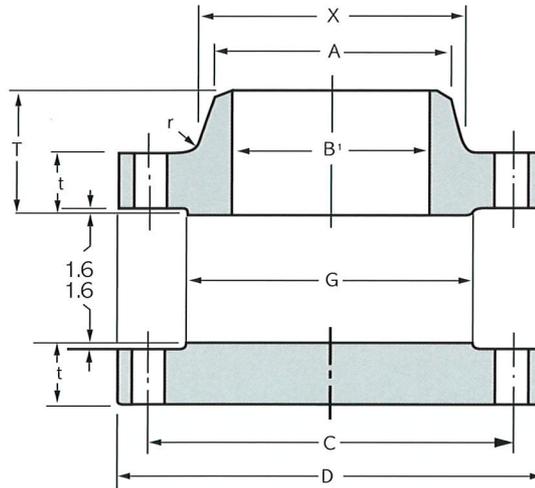
Class 2500

UNIT : mm

Length Thru Hub			Depth of Socket	Drilling			Dia. of Raised Face for Ring Joint	Pitch Dia. of Ring & Groove	Ring No.	RTJ Type			Approx. Weight(kg)				Nominal Pipe Size	
Slip-on Socket Thread	Lap Joint	Welding Neck		Dia. of Bolt Circle	Number of Bolt	Dia. of Bolt Hole				Depth of Groove	Width of Groove	Radius of Groove	W.N	S.O	S.W	B.L	A	B
T ₁	T ₂	T		Y	C	N				h	E	F	r ₁					
39.6	39.6	73.2	9.5	88.9	4	23	65.0	42.88	R13	6.35	8.74	0.8	3.28	3.2	-	3.09	15	1/2
42.9	42.9	79.2	11.1	95.3	4	23	73.0	50.80	R16	6.35	8.74	0.8	3.86	3.6	-	3.66	20	3/4
47.8	47.8	88.9	12.7	108.0	4	26	82.5	60.32	R18	6.35	8.74	0.8	5.40	5.0	-	5.14	25	1
52.3	52.3	95.3	14.3	130.0	4	29	102	72.24	R21	7.92	11.91	0.8	8.13	7.3	-	7.74	(32)	(1 1/4)
60.5	60.5	111.3	15.9	146.1	4	32	114	82.55	R23	7.92	11.91	0.8	6.13	11.3	-	10.8	40	1 1/2
69.9	69.9	127.0	17.5	171.5	8	29	133	101.60	R26	7.92	11.91	0.8	16.7	17.2	-	16.1	50	2
79.2	79.2	142.7	19.0	196.9	8	32	149	112.12	R28	9.52	13.49	1.5	24.5	24.9	-	23.7	65	2 1/2
91.9	92.9	168.1	20.6	228.6	8	35	168	127.00	R32	9.52	13.49	1.5	37.4	37.6	-	36.0	85	3
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(90)	(3 1/2)
108	108	190.5	23.8	273.1	8	42	203	157.18	R38	11.13	16.66	1.5	57.3	56.7	-	55.9	100	4
130	130	228.6	23.8	323.9	8	48	241	190.50	R42	12.70	19.84	1.5	96.1	95.3	-	94.1	(125)	(5)
152.4	152.4	273.1	27.0	368.3	8	54	279	228.60	R47	12.70	19.84	1.5	149	147.4	-	146	150	6
177.8	179.8	317.5	31.8	438.2	12	54	340	279.40	R51	14.27	23.01	1.5	222	220.0	-	220	200	8
228.6	228.6	419.1	33.3	540.0	12	67	425	342.90	R55	17.48	30.18	2.4	434	421.8	-	429	250	10
254.0	254.0	463.6	39.7	619.3	12	74	495	404.40	R60	17.48	33.32	2.4	610	499.0	-	609	300	12

CLASS 150 FLANGES

WELDING-ENDS FOR WELDING NECK FLANGES



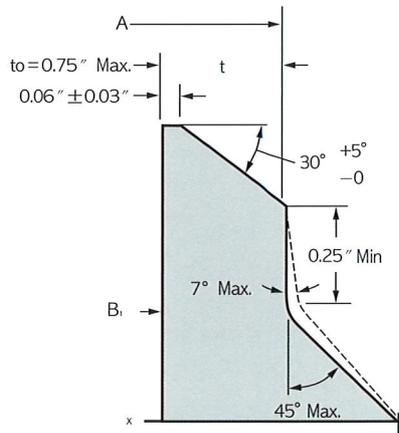
MSS SP44 FORGED FLANGES

Nominal Pipe Size	Outside Dia.of Flanges	Dir of Bore		HUB		Raised face
		WALL THK0.375"	WALL THK0.5"	Hub Dia at Base	Hub Dia at Bevel	
B	D	B ₁		X	※ A	G ± 0.8
(5)12	483	304.8	298.5	365.3	323.9	381.0
(5)14	533	336.6	330.2	400.1	355.6	412.8
(5)16	597	387.4	381.0	457.2	406.4	469.9
(5)18	635	438.2	431.8	505.0	457.2	533.4
(5)20	699	489.0	482.6	558.8	508.0	584.2
(5)22	749	539.8	533.4	610.0	558.8	641
(5)24	813	590.6	584.2	663.4	609.6	692.2
26	870	641.4	635.0	676	660.4	749
28	927	692.2	685.8	727	711.2	00
30	984	743.0	736.6	781	762.0	857
32	1060	793.8	787.4	832	812.8	914
34	1111	844.6	838.2	883	863.6	965
36	1168	895.4	889.0	933	914.4	1022
38	1238	946.2	939.8	991	965.2	1073
40	1289	997.0	990.6	1041	1016.0	1124
42	1346	1047.8	1041.4	1092	1066.8	1194
44	1403	1098.6	1092.2	1143	1117.6	1245
46	1454	1149.4	1143.0	1197	1168.4	1295
48	1511	1200.2	1193.8	1248	1219.2	1359
50	1568	1251.0	1244.6	1302	1270.0	1410
52	1626	1301.8	1295.4	1353	1320.8	1460
54	1683	1352.6	1346.2	1403	1371.6	1511
56	1746	1403.4	1397.0	1457	1422.4	1575
58	1803	1454.2	1447.8	1508	1473.2	1626
60	1854	1505.0	1498.6	1559	1524.0	1676

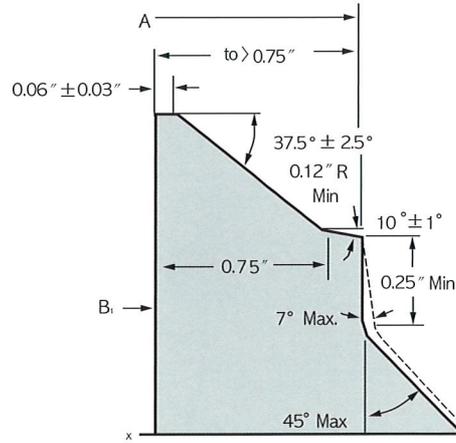
Notes :

(1) For the 'Bore' (B) other than wall thickness 0.375" and 0.500", refer to page 92,93

(2) Manle to specified by purchason.



BEVEL FOR WALL THICKNESS(t_o)
*0.75" IN (20mm) OR LESS.



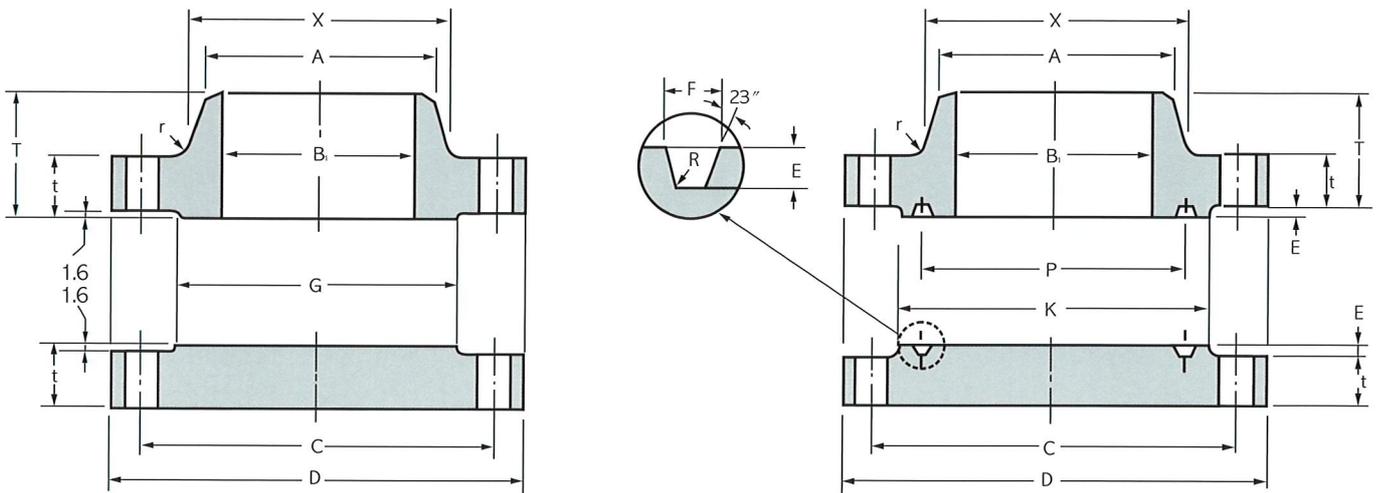
BEVEL FOR WALL THICKNESS(t_o)
GREATER THAN 0.75 IN (20mm)

UNIT : mm

THICKNESS		Radius	Lengh through Hub		DRILLING			
					Bolt Circle Diameter	Number of hole	Dia of Bolt hole	
t	r	T	C					
31.8		10	114.3	±3.2	431.8	±1.6	12	25.4
35.0	+ 3.2	10	127.0	±3.2	476.3	±1.6	12	28.4
36.6	-0	10	127.0	±3.2	539.8	±1.6	16	28.4
39.6		10	139.7	±3.2	577.9	±1.6	16	31.8
42.9	+ 4.8	10	144.5	±3.2	635.0	±1.6	20	31.8
46.0	-0	10	149.4	±3.2	692.2	±1.6	20	35.1
47.8		10	152.4	±3.2	749.3	±1.6	20	35.1
68.3	+ 4.8	10	121	±3.2	806.5	±1.6	24	35
71.4	-0	11	125	±3.2	863.6	±1.6	28	35
74.7		11	137	±3.2	914.4	±1.6	28	35
81.0	+ 4.8	11	144.5	±3.2	978	±1.6	28	41
82.5	-0	13	149	±3.2	1029	±1.6	32	41
90.5		13	157	±3.2	1086	±1.6	32	41
87.5	+ 4.8	13	157	±3.2	1149.4	±1.6	32	41
90.5	-0	13	164	±3.2	1200	±1.6	36	41
97.0		13	171.5	±3.2	1257	±1.6	36	41
102.0	+ 4.8	13	178	±3.2	1314	±1.6	40	41
103.0	-0	13	186	±3.2	1365	±1.6	40	41
108.0		13	192	±3.2	1422	±1.6	44	41
111.0	+ 4.8	13	203	±3.2	1480	±1.6	44	48
116.0	-0	13	210	±3.2	1537	±1.6	44	48
121.0		13	216	±3.2	1594	±1.6	44	48
124.0	+ 4.8	13	229	±3.2	1651	±1.6	48	48
129.0	-0	13	235	±3.2	1708	±1.6	48	48
132.0		13	240	±3.2	1759	±1.6	52	48

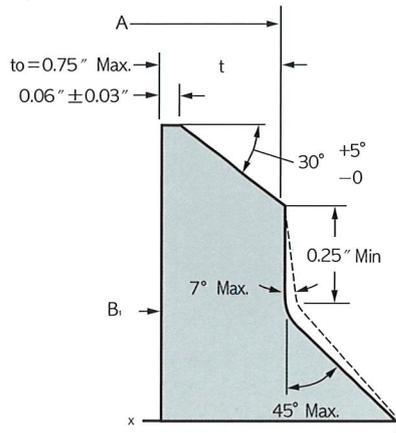
CLASS 300 FLANGES

WELDING-ENDS FOR WELDING NECK FLANGES

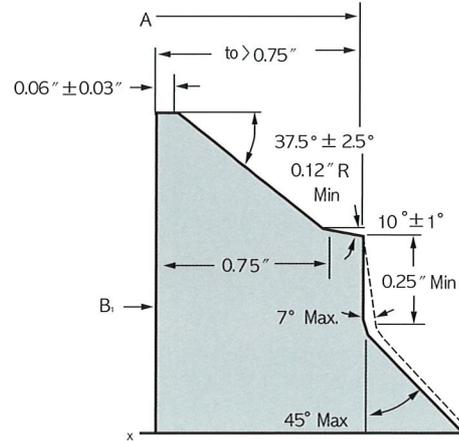


MSS SP44 FORGED FLANGES

Nominal Pipe Size	Outside Dia. of Flanges	Dir of Bore		HUB		Raised face	Thickness	
		WALL THK 0.375"	WALL THK 0.5"	Hub Dia at BASE	Hub Dia at Bevel		Welding Neck	Blind
B	D	B ₁		X	* A	G ± 0.8	t	
(4)12	521	304.8	298.5	374.7	323.9	381.0	50.8	50.8
(4)14	584	336.6	330.2	425.5	355.6	412.8	53.8	53.8
(4)16	648	387.4	381.0	482.6	406.4	469.9	57.2	57.2
(4)18	711	438.2	431.8	533.4	457.2	533.4	60.5	60.5
(4)20	775	489.0	482.6	587.2	508.0	584.2	63.5	63.5
(4)22	838	539.8	533.4	641	558.8	641.0	66.7	66.7
(4)24	914	590.6	584.2	701.5	609.6	692.2	69.9	69.9
26	972	641.4	635.0	721	666.8	749	79.5	84.0
28	1035	692.2	685.8	775	717.6	800	85.5	90.5
30	1092	743.0	736.6	827	768.4	857	92.0	95.0
32	1149	793.8	787.1	881	819.2	914	98.5	100.0
34	1207	844.6	838.2	937	871.7	965	102.0	105.0
36	1270	895.4	889.0	991	922.5	1022	105.0	111.0
38	1169	946.2	939.8	994	965.2	1029	108.0	108.0
40	1238	997.0	990.6	1048	1016.0	1086	114.0	114.0
42	1289	1047.8	1041.4	1099	1066.8	1137	119.0	119.0
44	1353	1098.6	1092.2	1150	1117.6	1194	124.0	124.0
46	1416	1149.4	1143.0	1204	1168.4	1245	129.0	129.0
48	1467	1200.2	1193.8	1254	1219.2	1301	133.0	133.0
50	1530	1251.0	1244.6	1305	1270.0	1359	140.0	140.0
52	1581	1301.8	1295.4	1366	1320.8	1410	144.0	144.0
54	1657	1352.6	1346.2	1410	1371.6	1467	152.0	152.0
56	1708	1403.4	1397.0	1464	1422.4	1518	154.0	154.0
58	1759	1454.2	1447.8	1514	1473.2	1575	159.0	159.0
60	1810	1505.0	1498.6	1565	1524.0	1626	164.0	164.0



BEVEL FOR WALL THICKNESS(t_o)
*0.75"IN(20mm)OR LESS.



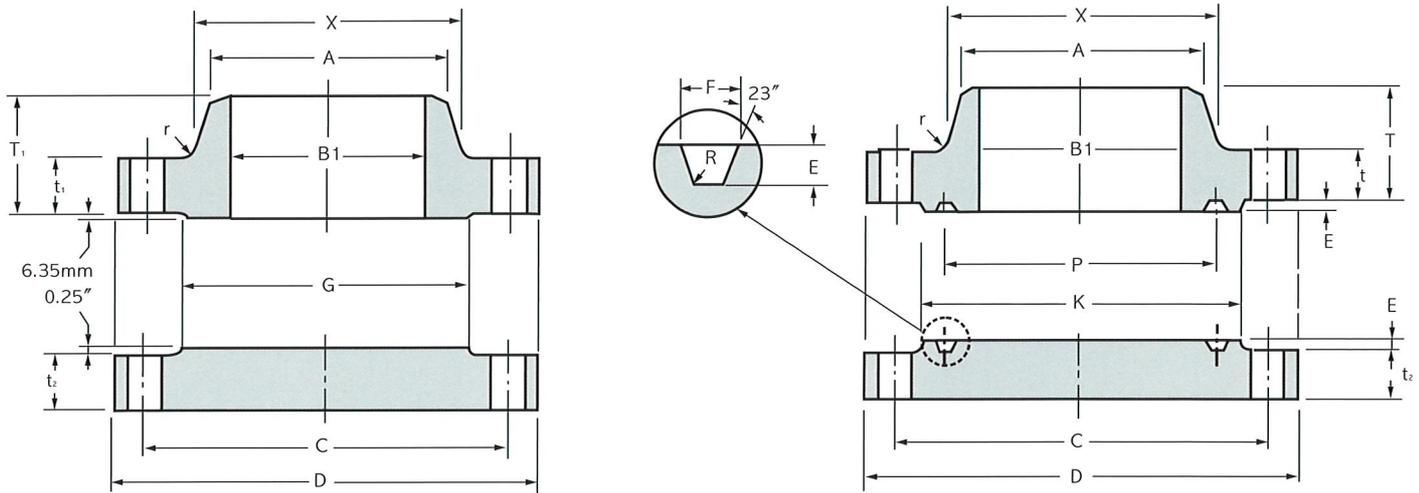
BEVEL FOR WALL THICKNESS(t_o)
GREATER THAN 0.75IN(20mm)

UNIT : mm

Hub Radius	Length through		DRILLING				Ring Type Joint						
			Bolt Circle Diameter		NO	Dia of Bolt hole	Dia of RAISED FACE	Center to Center	Ring NO	DEPTH	WEIGH	Radius	
			C										K
r	T		C										
10	130.0	±3.2	450.9	±1.6	16	31.8	413.0	381.00	R57	7.92	11.91	0.8	
10	142.7		514.4		20	31.8	457.0	419.10	R61	7.92	11.91	0.8	
10	146.1		571.5		20	35.1	508.0	469.90	R65	7.92	11.91	0.8	
10	158.8		628.8		24	35.1	575.0	533.40	R69	7.92	11.91	0.8	
10	162.1		685.8		24	35.1	635.0	584.20	R73	9.52	13.49	1.5	
10	165.1		743.0		24	41.1	685.0	635.00	R81	11.13	15.08	1.5	
10	168.1		812.8		24	41.1	749.0	692.15	R77	11.13	16.66	1.5	
10	184		876		28	44	810	749.30	R93	12.70	19.85	2	
11	197		940		28	44	860	800.10	R94	12.70	19.85	2	
11	210		997		28	48	918	857.25	R95	12.70	19.85	2	
11	222		1054		28	51	984	914.40	R96	14.30	23.00	2	
13	232		1105		28	51	1035	965.20	R97	14.30	23.00	2	
13	241		1168		32	53.8	1092	1022.35	R98	14.30	23.00	2	
13	181		1092		32	41	-	-	-	-	-	-	-
13	194		1156		32	44	-	-	-	-	-	-	-
13	200		1206		32	44	-	-	-	-	-	-	-
13	206		1264		32	48	-	-	-	-	-	-	-
13	216		1321		28	51	-	-	-	-	-	-	-
13	224		1372		32	51	-	-	-	-	-	-	-
13	232		1429		32	54	-	-	-	-	-	-	-
13	238		1480		32	54	-	-	-	-	-	-	-
13	252		1549		28	60	-	-	-	-	-	-	-
13	260		1600		28	60	-	-	-	-	-	-	-
13	267		1651		32	60	-	-	-	-	-	-	-
13	273		1702		32	60	-	-	-	-	-	-	-

CLASS 400 FLANGES

WELDING-ENDS FOR WELDING NECK FLANGES



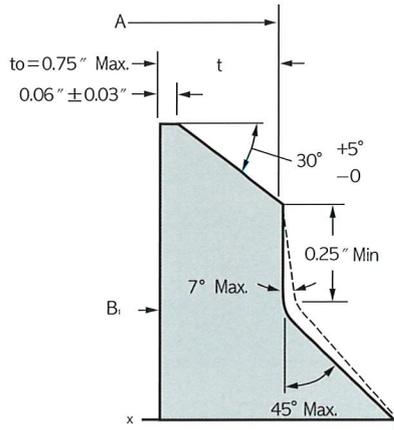
MSS SP44 FORGED FLANGES

Dimensions in mm

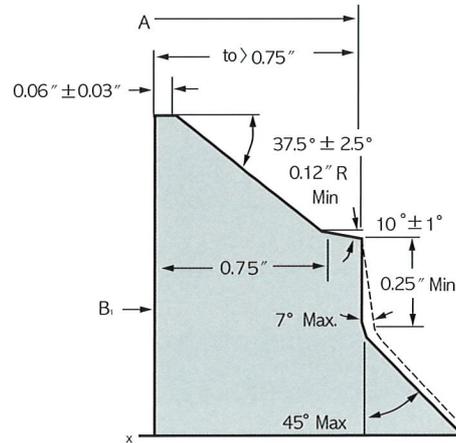
Nominal Pipe Size	Outside Diam	O.D. of Raised Face	Diam at Base of Hub	Thickness		BORE Wall Thickness		Length Through Hub	Diam of Hub	Radius of Fillet
				Welding Neck	Blind	0.075"	0.500"			
B	D	G	X	t_1	t_2	B ₁		T ₁	A	r
22	838	641	641	73.0	73.0	539.8	533.4	171	558.8	11.2
26	971	749	727	89.0	98.5	641.4	635.0	194	660.4	11.2
28	1035	800	783	95.0	105	692.2	685.8	206	711.2	12.7
30	1092	857	837	102	111	743.0	736.6	219	812.8	12.7
32	1150	914	890	108	116	793.6	787.4	232	812.8	12.7
34	1205	965	945	111	122	844.6	838.2	241	863.6	14.2
36	1270	1022	1000	114	129	895.4	889.0	251	914.4	14.2
38	1207	1035	1003	124	124	946.2	939.8	206	965.2	14.2
40	1270	1092	1054	130	130	997.0	990.6	216	1016.0	14.2
42	1321	1143	1108	133	133	1047.8	1041.4	224	1066.8	14.2
44	1385	1200	1159	140	140	1098.6	1092.2	233	1117.6	14.2
46	1441	1257	1213	146	146	1149.4	1143.0	244	1168.4	14.2
48	1511	1308	1267	152	152	1200.2	1193.8	257	1219.2	14.2
50	1570	1362	1321	157	159	1251.0	1244.6	268	1270.0	14.2
52	1620	1413	1372	162	164	1301.8	1295.4	276	1320.8	14.2
54	1702	1470	1425	170	171	1352.6	1346.2	289	1371.6	14.2
56	1753	1527	1480	175	176	1403.4	1397.0	298	1422.4	14.2
58	1803	1578	1530	178	181	1454.2	1447.8	306	1473.2	14.2
60	1886	1635	1585	186	189	1505.0	1498.6	319	1524.0	14.2

Note :

- (1) For the 'Bore' (B) other than wall thickness 0.375" and 0.500".
- (2) Class 400 flanges will be furnish with 0.25" raised face, which is not 'Thickness' (t) and 'Length throuh Hub'(T₁)
- (3) Dimensional tolerances are in accordance with ANSI B16.5



BEVEL FOR WALL THICKNESS(t_o)
*0.75"IN(20mm)OR LESS.



BEVEL FOR WALL THICKNESS(t_o)
GREATER THAN 0.75IN(20mm)

UNIT : mm

Bolt Circle Diam	DRILLING		Pitch Diam.	GROOVE DIMENSIONS			Diam of Raised Face	Ring and Groove Number	Nominal Pipe Size
	Number of Holes	Diam of Holes		Width	Depth	Radius			
C			P	F	E	R	K		
743	24	44	635.00	15.10	11.13	1.5	686	R81	22
876	28	48	749.30	19.84	12.70	1.5	810	R93	26
940	28	51	800.10	19.84	12.70	1.5	860	R94	28
997	28	54	857.25	19.84	12.70	1.5	918	R95	30
1054	28	54	914.40	23.00	14.30	1.5	984	R96	32
1105	28	54	965.20	23.00	14.30	1.5	1035	R97	34
1168	32	54	1022.35	23.00	14.30	1.5	1092	R98	36
1118	32	48	—	—	—	—	—	—	38
1175	32	51	—	—	—	—	—	—	40
1226	32	51	—	—	—	—	—	—	42
1283	32	54	—	—	—	—	—	—	44
1340	36	54	—	—	—	—	—	—	46
1403	28	60	—	—	—	—	—	—	48
1460	32	60	—	—	—	—	—	—	50
1511	32	60	—	—	—	—	—	—	52
1581	28	67	—	—	—	—	—	—	54
1632	32	67	—	—	—	—	—	—	56
1683	32	68	—	—	—	—	—	—	58
1753	32	73	—	—	—	—	—	—	60

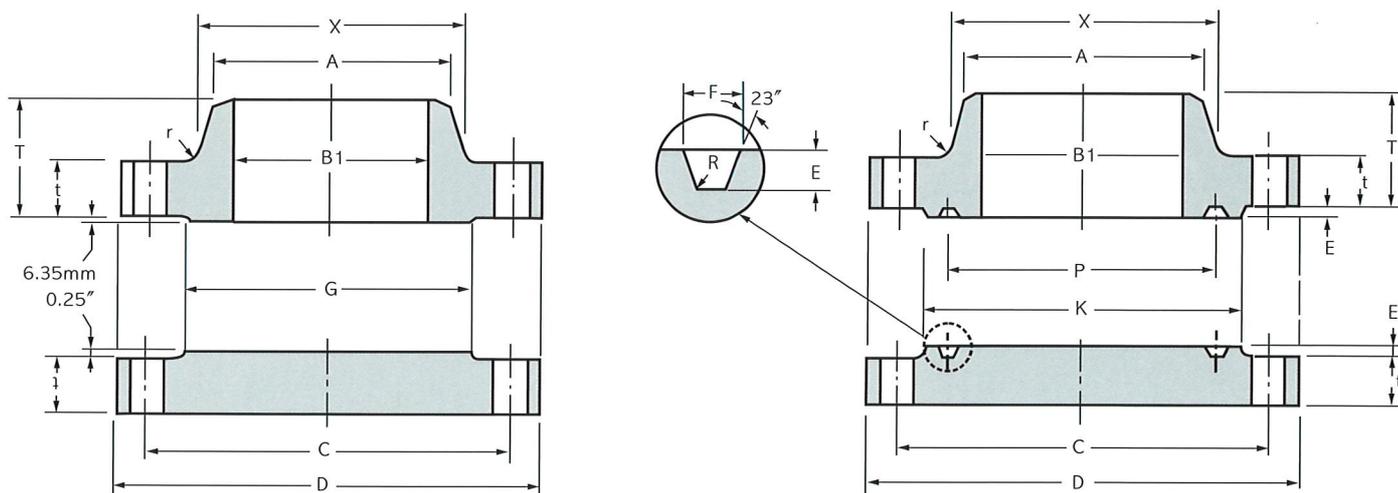
(4) Maximum Pressure Rating for raised face flanges is 985 psi (68BARS) at atmospheric temperature.

(5) Flange dimensions of 12" through 24" flanges(except 22") are in accordance with ANSI B16.5

(6) For size 26" and larger, Diameter of Hub at Bevel (A) are in accordance with ASME Boiler and pressure vessl code.

CLASS 600 FLANGES

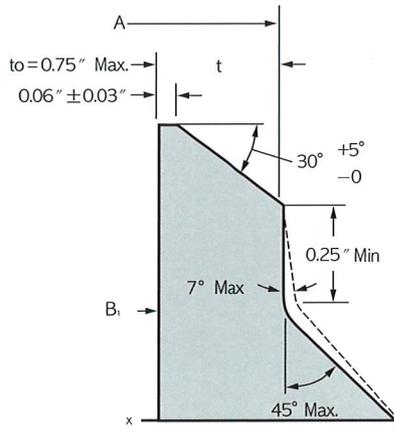
WELDING-ENDS FOR WELDING NECK FLANGES



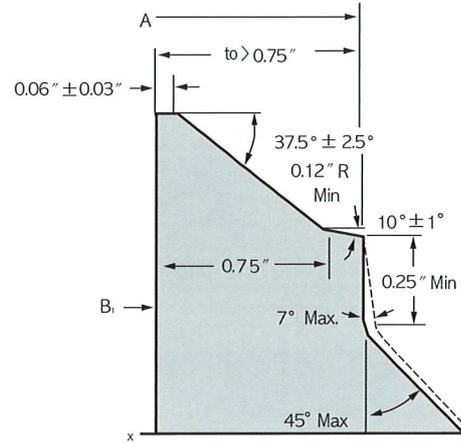
MSS SP44 FORGED FLANGES

UNIT : mm

Nominal pipe size	OUTSIDE Dia of Flanges	Dir of Bore		HUB		Raised face	Thickness	
		WALL THK 0.375"	WALL THK 0.5"	Hub Dia at BASE	Hub Dia at Bevel		Welding Nede	Blind
B	D	B ₁		X	※ A	G ± 0.8	t	
12	559	304.8	298.5	400.1	323.9	381.0	66.5	66.5
14	603	336.6	330.2	431.8	355.6	412.8	69.9	69.9
16	686	387.4	381.0	495.3	406.4	469.9	76.2	76.2
18	743	438.2	431.8	546.1	457.2	533.4	82.6	82.6
20	813	489.0	482.6	609.6	508.0	584.2	88.9	88.9
22	870	539.8	533.4	667.0	558.8	641.0	95.3	95.3
24	940	590.6	584.2	717.6	609.6	692.2	101.6	101.6
26	1016	641.4	635.0	748	660.4	749	108.0	125.0
28	1073	692.5	685.8	803	711.2	800	111.0	132.0
30	1130	743.0	736.6	862	762.0	857	114.0	140.0
32	1194	793.8	787.4	918	812.8	914	117.0	148.0
34	1245	844.6	838.2	973	863.6	965	121.0	154.0
36	1315	895.4	889.0	1032	914.4	1022	124.0	162.0
38	1270	946.2	939.8	1022	965.2	1054	152.0	156.0
40	1320	997.0	990.6	1073	1016.0	1111	159.0	162.0
42	1404	1047.8	1041.4	1127	1066.8	1168	168.0	171.0
44	1454	1098.6	1092.2	1181	1117.6	1226	173.0	178.0
46	1511	1149.4	1143.0	1235	1168.4	1276	179.0	186.0
48	1594	1200.2	1193.8	1290	1219.2	1334	189.0	195.0
50	1670	1251.0	1244.6	1343	1270.0	1384	197.0	203.0
52	1721	1301.8	1295.4	1395	1320.8	1435	203.0	210.0
54	1778	1352.6	1346.2	1448	1371.6	1492	210.0	217.0
56	1854	1403.4	1397.0	1500	1422.4	1543	217.0	225.0
58	1905	1454.2	1447.8	1552	1473.2	1600	222.0	232.0
60	1994	1505.0	1498.6	1610	1524.0	1657	232	243.0



BEVEL FOR WALL THICKNESS (to)
*0.75" IN (20mm) OR LESS.



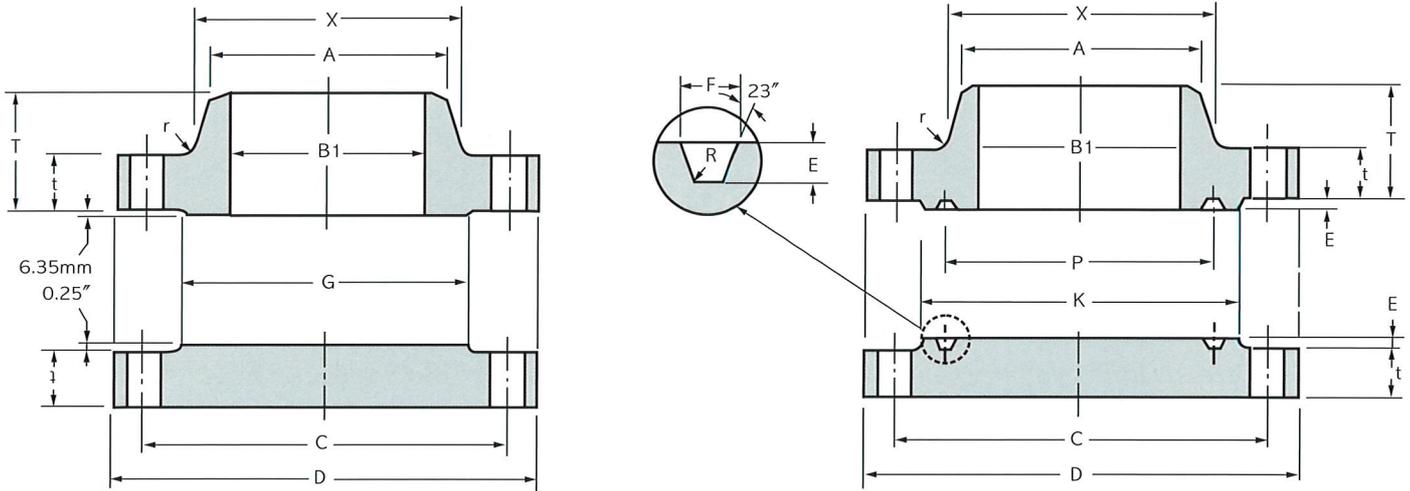
BEVEL FOR WALL THICKNESS (to)
GREATER THAN 0.75" IN (20mm)

UNIT : mm

Hub Radius	Length through Hub		DRILLING				Ring Type Joint					
			Pitch Circle Diameter	NO	Dia of Bolt hole	Dia of RASED FACE	Center to Center	Ring NO	DEPTH	Width	Radius	
									K	p	E	E
r ₁	T	C										
13	155.4	± 3.2	489.0	± 1.6	20	35.1	413.0	381.00	R57	7.92	11.91	0.8
13	165.1		527.1		20	38.1	457.0	419.10	R61	7.92	11.91	0.8
13	177.8		603.3		20	41.1	508.0	469.90	R65	7.92	11.91	0.8
13	184.2		654.1		20	44.5	575.0	533.40	R69	7.92	11.91	0.8
13	190.5		723.9		24	44.5	635.0	584.20	R73	9.52	13.49	1.5
11	196.9		777.9		24	47.7	686.0	635.00	R81	11.13	15.08	1.5
13	203.2		838.2		24	50.8	749.0	692.15	R77	11.13	16.66	1.5
11	222		914		28	51	810	749.30	R93	12.70	19.85	2
13	235		965		28	54	860	800.10	R94	12.70	19.85	2
13	248		1022		28	54	918	857.25	R95	12.70	19.85	2
13	260		1080		28	60	984	914.40	R96	14.30	23.00	2
14	270		1130		28	60	1035	965.20	R97	14.30	23.00	2
14	283		1194		28	66.5	1092	1022.35	R98	14.30	23.00	2
14	254		1162		28	60	—	—	—	—	—	—
14	264		1213		32	60	—	—	—	—	—	—
14	279		1283		28	67	—	—	—	—	—	—
14	289		1334		32	67	—	—	—	—	—	—
14	300		1391		32	67	—	—	—	—	—	—
14	316		1460		32	73	—	—	—	—	—	—
14	329		1524		28	79	—	—	—	—	—	—
14	337	1575	32	79	—	—	—	—	—	—		
14	349	1632	32	79	—	—	—	—	—	—		
16	362	1695	32	86	—	—	—	—	—	—		
16	370	1746	32	86	—	—	—	—	—	—		
17	389	1822	28	92	—	—	—	—	—	—		

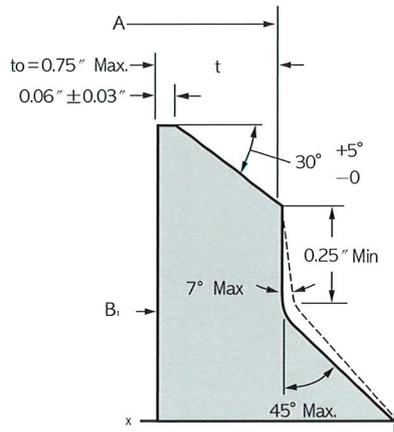
CLASS 900 FLANGES

WELDING-ENDS FOR WELDING NECK FLANGES

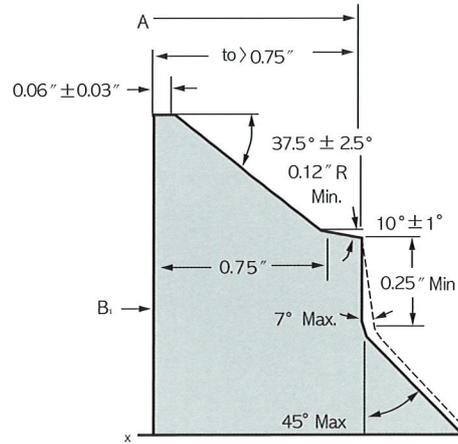


MSS SP44 FORGED FLANGES

Nominal pipe size	OUTSIDE		Dir of Bore		HUB		Raised face	Thickness			
	Dia of Flanges		WALL THK0.375"	WALL THK0.5"	Hub Dia at BASE	Hub Dia at Bevel		Welding Nede	Blind		
B	D		B		X	* A	G ± 0.8	t			
12	610	* ± 1.6	304.8	298.5	± 1.6	419.1	323.9	381.0	79.2	79.2	
14	641		336.8	330.2		450.9		355.6	412.8	85.9	85.9
16	705		387.4	381.0		508.0		406.4	469.9	88.9	88.9
18	787		438.2	431.8		565.2		457.2	533.4	101.6	101.6
20	857		489.0	482.6		622.3		508.0	584.2	108.0	108.0
24	1041		590.6	584.2		749.3		609.6	692.2	139.7	139.7
26	1086		641.4	635.0		775		660.4	749	140.0	160.0
28	1169		692.2	685.8		830		711.2	800	143.0	171.0
30	1232	743.0	736.6	+ 3.2 - 1.6	890	* ± 1.6	+ 4.0 - 0.8	857	149.0	183.0	
32	1315	793.8	787.4		945			812.8	914	159.0	194.0
34	1397	844.6	838.2		1005			863.6	965	165.0	205.0
36	1460	895.4	889.0		1065			914.4	1022	171.0	214.0
38	1460	946.2	939.8		1075			965.2	1099	190.0	216.0
40	1511	997.0	990.6		1125			1016.0	1162	197.0	224.0
42	1562	1047.8	1041.4		1175			1066.8	1213	206.0	232.0
44	1650	1098.6	1092.2		1235			1117.6	1270	214.0	243.0
46	1734	1149.4	1143.0	1290	1168.4	1334	225.0	256.0			
48	1784	1200.2	1193.8	1345	1219.2	1384	233.0	264.0			



BEVEL FOR WALL THICKNESS(t_o)
*0.75"IN(20mm)OR LESS.



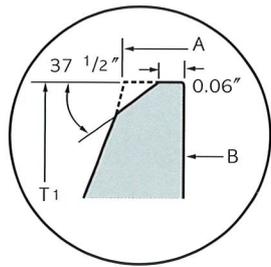
BEVEL FOR WALL THICKNESS(t_o)
GREATER THAN 0.75IN(20mm)

UNIT : mm

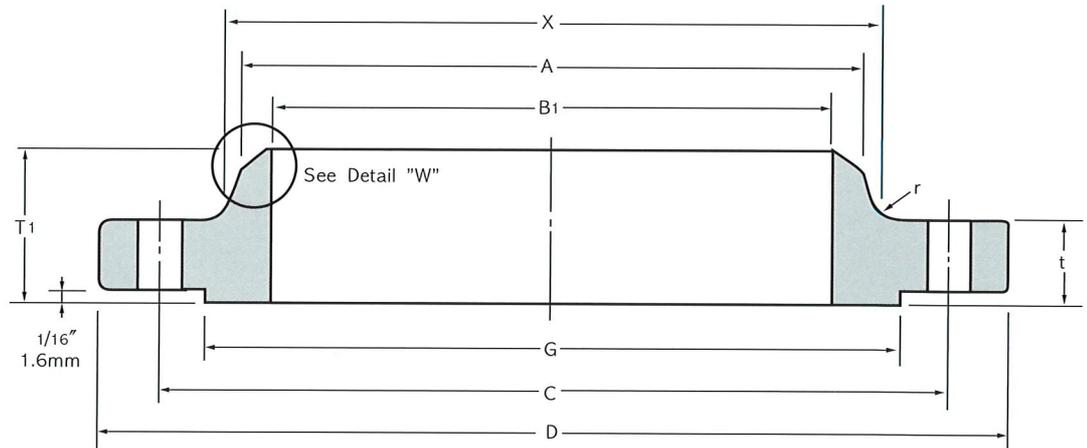
Hub Radius	Length through Hub		DRILLING				Ring Type Joint						
			Pitch Circle Diameter		NO	Dia of Bolt hole	Dia of RASED FACE K	Center to Center p	Ring NO	DEPTH	Width	Radius	
			C							E	E	r ₂	
r ₁	T												
13	220.2	± 3.2	533.4	± 1.6	20	38.1	419.0	381.00	R57	7.92	11.91	0.8	
13	212.9		558.8		20	41.1	467.0	419.10	R62	11.13	16.66	1.5	
13	215.9		616.0		20	44.5	524.0	469.90	R66	11.13	16.66	1.5	
13	228.6		685.8		20	50.8	594.0	533.40	R70	12.70	19.84	1.5	
13	247.7		749.3		20	53.8	648.0	584.20	R74	12.70	19.84	1.5	
11	292.1		901.7		20	66.5	772.0	692.15	R78	15.88	26.97	1.5	
11	286		952		20	73	832	749.30	R100	17.46	30.16	2	
13	298		1022		20	79	889	800.10	R101	17.46	33.34	2	
13	311		1086		20	79	946	857.25	R102	17.46	33.34	2	
13	330		1156		20	86	1003	914.40	R103	17.46	33.34	2	
14	349		1226		20	92	1067	965.20	R104	20.64	36.51	2	
14	362		1289		20	92	1124	1022.35	R105	20.64	36.51	2	
19	352		1289		20	92	-	-	-	-	-	-	-
21	364		1340		24	92	-	-	-	-	-	-	-
21	371		1391		24	92	-	-	-	-	-	-	-
22	391		1464		24	98	-	-	-	-	-	-	-
22	411		1537		24	105	-	-	-	-	-	-	-
24	419		1588		24	105	-	-	-	-	-	-	-

CLASS 75 FLANGES

ASME B 16.47 SER B(API 605)



Detail "W"
Typical Welding
end Preparation



API 605 FORGED FLANGES

UNIT : mm

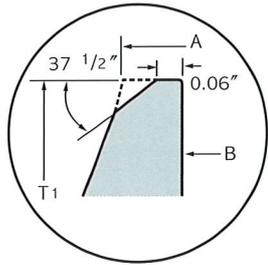
Nominal Pipe Size	Outside Diam. D	Thick-ness t	O.D. of Raised Face g	Diam. at Base of Hub X	BORE			Length Thru Hub T ₁	Diam of Hub at Bevel A	Radius at Base of Hub r	DRILLING			Approximate Weight Pounds(Kg)
					Wall Thickness						Bolt Circle Diam. C	Number of Holes N	Diam. of Holes h	
					6.35mm	9.5mm	12.7mm							
					B ₁									
26	762	33.3	704.9	676.1	647.7	641.4	635.0	58.7	661.9	7.9	723.9	36	19.1	63.9(29.01)
28	813	33.3	755.7	726.9	698.5	692.2	685.8	62.0	712.7	7.9	774.7	40	19.1	68.3(31.01)
30	864	33.3	806.5	777.7	749.3	743.0	736.6	65.0	763.5	7.9	825.5	44	19.1	77.2(35.05)
32	914	35.1	857.3	828.5	800.1	793.8	787.4	69.9	814.3	7.9	876.3	48	19.1	105.8(48.03)
34	965	35.1	908.1	879.3	850.9	844.6	838.2	73.2	865.1	7.9	927.1	52	19.1	110.2(50.03)
36	1034	36.6	965.2	935.0	850.9	895.4	889.0	85.9	915.9	9.7	992.1	40	22.4	136.7(62.06)
38	1084	38.1	1016.0	985.8	952.5	946.2	939.8	88.9	966.7	9.7	1042.9	40	22.4	154.3(70.05)
40	1135	38.1	1066.8	1036.6	1003.3	997.0	990.6	91.9	1017.5	9.7	1093.7	44	22.4	163.1(74.05)
42	1186	39.6	1117.6	1087.4	1054.1	1047.8	1041.4	95.3	1068.3	9.7	1144.5	48	22.4	169.8(77.09)
44	1251	42.9	1174.8	1140.0	1104.9	1049.4	1143.0	104.6	1119.1	9.7	1203.5	36	25.4	180.8(82.08)
46	1302	44.5	1225.6	1190.8	1155.7	1149.4	1143.0	108.0	1169.9	9.7	1254.3	40	25.4	231.5(105.01)
48	1353	46.0	1276.4	1241.6	1206.5	1200.2	1193.8	111.3	1220.7	9.7	1305.1	44	25.4	264.6(120.03)
50	1403	47.8	1327.2	1293.9	1257.3	1251.0	1244.6	115.8	1271.5	9.7	1355.9	44	25.4	295.8(134.28)
52	1457	47.8	1378.0	1344.7	1308.1	1301.8	1295.4	120.7	1322.3	9.7	1409.7	48	25.4	313.2(142.18)
54	1508	49.3	1428.8	1397.0	1358.9	1352.6	1346.2	125.5	1373.1	9.7	1460.5	48	25.4	396.8(180.15)
56	1575	50.8	1485.9	1450.8	1409.7	1403.4	1397.0	134.9	1423.9	11.2	1521.0	40	28.4	406.6(184.58)
58	1626	52.3	1536.7	1501.6	1460.5	1454.2	1447.8	138.2	1474.7	11.2	1571.8	44	28.4	430.8(195.56)
60	1676	55.6	1587.5	1552.4	1511.3	1505.0	1498.6	144.5	1525.5	11.2	1622.6	44	28.4	463.0(210.20)

Notes:

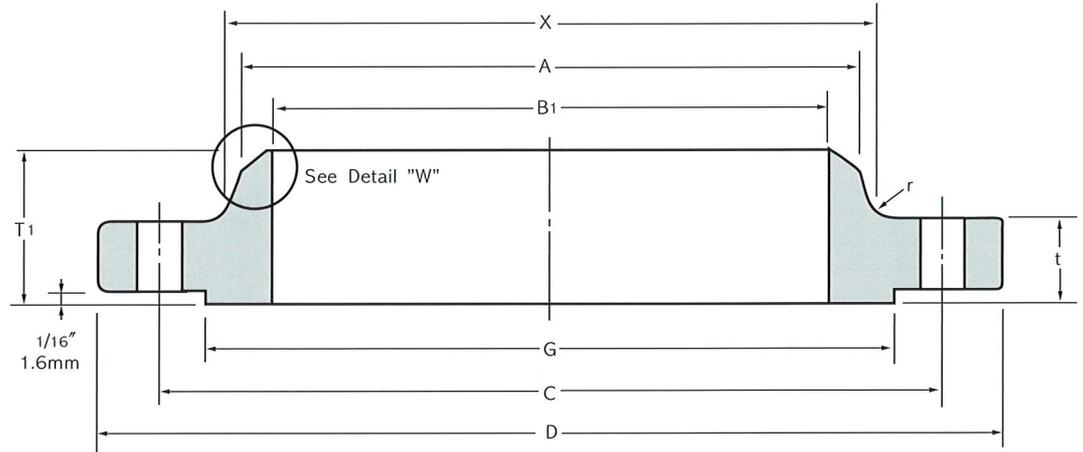
- (1) 'Bore' (B₁) of flanges is shall be specified by the purchaser.
- (2) Class 75 flanges will be furnished with 0.06"(1.6mm)raised face, which is included in 'Thickness' (t) and 'Length through Hub' (T₁).

CLASS 150 FLANGES

ASME B 16.47 SER B(API 605)



Detail "W"
Typical Welding
end Preparation



API 605 FORGED FLANGES

UNIT : mm

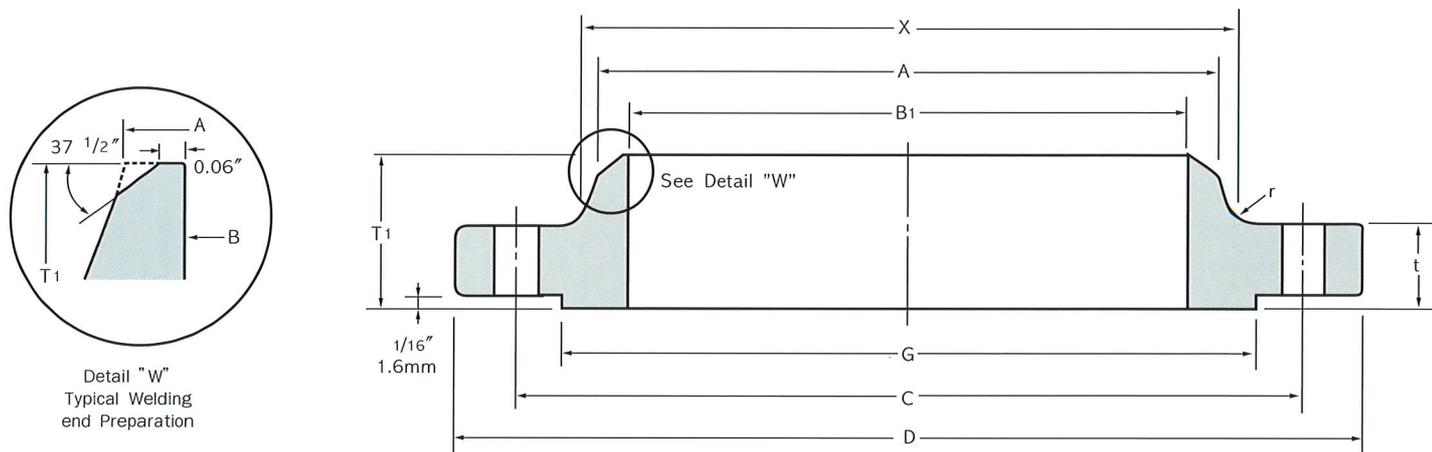
Nominal Pipe Size	Outside Diam. D	Thick-ness t	O.D. of Raised Face g	Diam. at Base of Hub X	BORE			Length Thru Hub T ₁	Diam of Hub at Bevel A	Radius at Baed of Hub r	DRILLING			Approximate Weight Pounds(Kg)
					Wall Thickness						Bolt Circle Diam. C	Number of Holes N	Diam. of Holes h	
					6.35mm	9.5mm	12.7mm							
					B ₁									
26	786	41.1	711.2	684.3	647.7	641.4	635.0	88.9	661.9	9.7	744.5	36	22.4	114.6 (52.03)
28	837	44.5	762.0	735.1	698.5	692.2	685.8	95.3	712.7	9.7	795.3	40	22.4	127.9 (58.07)
30	887	44.5	812.8	787.4	749.3	743.0	736.6	100.1	763.5	9.7	846.1	44	22.4	143.3 (65.06)
32	941	46.0	863.6	839.7	800.1	793.8	787.4	108.0	814.3	9.7	900.2	48	22.4	187.4 (85.08)
34	1005	49.3	920.8	892.0	850.9	844.6	838.2	110.2	865.1	9.7	957.3	40	25.4	220.5(100.11)
36	1057	52.3	971.6	944.6	901.7	895.4	889.0	117.3	915.9	9.7	1009.7	44	25.4	253.5(115.09)
38	1124	53.8	1022.4	997.0	952.5	946.2	939.8	124.0	968.2	9.7	1069.8	40	28.4	297.5(135.07)
40	1175	55.6	1079.5	1049.3	1003.3	997.0	990.6	128.5	1019.0	9.7	1120.6	44	28.4	330.7(150.14)
42	1226	58.7	1130.3	1101.9	1054.1	1047.8	1041.4	133.4	1069.8	11.2	1171.4	48	28.4	363.8(165.17)
44	1276	60.5	1181.1	1152.7	1104.9	1098.6	1092.2	136.7	1120.6	11.2	1222.2	52	31.8	440.9(200.17)
46	1341	62.0	1234.9	1205.0	1155.7	1149.4	1143.0	144.5	1171.4	11.2	1284.2	40	31.8	463.0(210.20)
48	1392	65.0	1289.1	1257.3	1206.5	1200.2	1193.8	149.4	1222.2	11.2	1335.0	44	31.8	529.1(240.21)
50	1442	68.3	1339.9	1308.1	1257.3	1251.0	1244.6	153.9	1273.0	11.2	1385.8	48	31.8	552.4(250.27)
52	1494	69.9	1390.7	1360.4	1308.1	1301.8	1295.4	157.2	1323.8	11.2	1436.6	52	31.8	585.9(265.77)
54	1549	71.4	1441.5	1412.7	1358.9	1352.6	1346.2	162.1	1374.6	11.2	1492.3	56	31.8	683.4(310.26)
56	1600	73.2	1492.3	1465.3	1409.7	1403.4	1397.0	166.6	1425.4	14.2	1543.1	60	31.8	674.8(306.08)
58	1675	74.7	1543.1	1516.1	1460.5	1454.2	1447.8	174.8	1476.2	14.2	1611.4	48	35.1	810.6(367.76)
60	1726	76.2	1600.2	1570.0	1511.3	1505.0	1498.6	179.3	1527.0	14.2	1662.2	52	35.1	903.9(410.37)

Notes:

- (1) 'Bore' (B₁) of flanges is shall be specified by the purchaser.
- (2) Class 150 flanges will be furnished with 0.06"(1.6mm)raised face, which is included in 'Thickness' (t) and 'Length through Hub' (T₁).

CLASS 300 FLANGES

ASME B 16.47 SER B(API 605)



UNIT : mm

Nominal Pipe Size	Outside Diam. D	Thick-ness t	O.D. of Raised Face g	Diam. at Base of Hub X	BORE			Length Thru Hub T ₁	Diam of Hub at Bevel A	Radius at Baed of Hub r	DRILLING			Approximate Weight Pounds(Kg)
					Wall Thickness						Bolt Circle Diam. C	Number of Holes N	Diam. of Holes h	
					6.35mm	9.5mm	12.7mm							
26	867	88.9	736.6	701.5	647.7	641.4	635.0	144.5	665.2	14.2	803.1	32	35.1	440.9(200.17)
28	921	88.9	787.4	755.7	698.5	692.2	685.8	149.4	716.0	14.2	857.3	36	35.1	463.0(210.20)
30	991	93.7	844.6	812.8	749.3	743.0	736.6	158.0	768.4	14.2	920.8	36	38.1	595.2(270.22)
32	1054	103.1	901.7	863.6	800.1	793.8	787.4	168.1	819.2	15.7	977.9	32	41.1	727.5(330.29)
34	1108	103.1	952.5	917.4	850.9	844.6	838.2	173.0	870.0	15.7	1031.7	36	41.1	793.7(360.34)
36	1171	103.1	1009.7	965.2	901.7	895.4	889.0	180.8	920.8	15.7	1089.2	32	44.5	903.9(410.37)
38	1222	111.3	1060.5	1016.0	952.5	946.2	939.8	192.0	971.6	15.7	1140.0	36	44.5	1256.6(570.50)
40	1273	115.8	1114.6	1066.8	1003.3	997.0	990.6	198.4	1022.4	15.7	1190.8	40	44.5	1455.0(660.57)
42	1334	119.1	1168.4	1117.6	1054.1	1047.8	1041.4	204.7	1074.7	15.7	1244.6	36	47.8	1587.3(720.63)
44	1384	127.0	1219.2	1173.2	1104.9	1098.6	1092.2	214.4	1125.5	15.7	1295.4	40	47.8	1763.7(800.72)
46	1461	128.5	1270.0	1128.9	1155.7	1149.4	1143.0	222.3	1176.3	15.7	1365.3	36	50.8	2138.5(970.88)
48	1511	128.5	1327.2	1277.9	1206.5	1200.2	1193.8	223.8	1227.1	15.7	1416.1	40	50.8	2182.5(990.86)
50	1562	138.2	1378.0	1330.5	1257.3	1251.0	1244.6	235.0	1277.9	15.7	1466.9	44	50.8	2308.2(1047.92)
52	1613	142.7	1428.8	1382.8	1308.1	1301.8	1295.4	242.8	1328.7	15.7	1517.7	48	50.8	2453.3(1113.79)
54	1673	136.7	1479.6	1435.1	1358.9	1352.6	1346.2	239.8	1379.5	15.7	1577.8	48	50.8	2557.3(1161.01)
56	1765	153.9	1536.7	1493.8	1409.7	1403.4	1397.0	268.2	1422.4	17.5	1651.0	36	60.5	2942.9(1336.07)
58	1827	153.9	1593.9	1547.9	1460.5	1454.2	1447.8	274.6	1481.1	17.5	1712.0	40	60.5	3144.5(1427.60)
60	1878	150.9	1651.0	1598.7	1511.3	1505.0	1498.6	271.5	1531.9	17.5	1763.8	40	60.5	3196.7(1451.30)

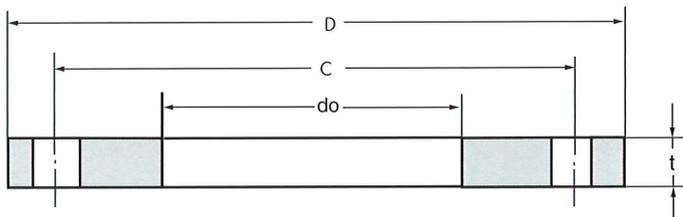
Notes:

- (1) 'Bore' (B₁) of flanges is shall be specified by the purchaser.
- (2) Class 300 flanges will be furnished with 0.06"(1.6mm)raised face, which is included in 'Thickness' (t) and 'Length through Hub' (T₁).

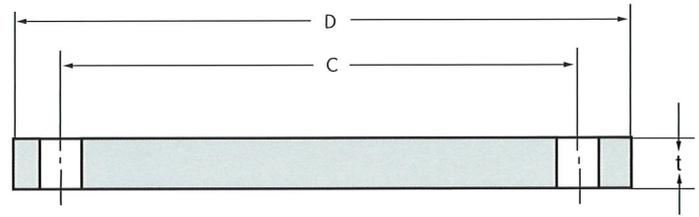
CLASS B & D FLANGES

TABLE 1

AWWA Standard Steel Ring Flanges,
Class B(86 psi) and Class D(175-150psi)



SLIP-ON



BLIND

AWWA C207

Dimensions in inches

Nominal Pipe Size	Outside Diam. D	Bore do	Thickness		DRILLING			
					Bolt Circle Diam. C	Number of Holes	Diam. of Holes	
							Class B	Class D
4	9	4.57	5/8	5/8	7 1/2	8	3/4	3/4
5	10	5.66	5/8	5/8	8 1/2	8	3/4	7/8
6	11	6.72	11/16	11/16	9 1/2	8	3/4	7/8
8	13 1/2	8.72	11/16	11/16	11 3/4	8	3/4	7/8
10	16	10.88	11/16	11/16	14 1/4	12	3/4	1
12	19	12.88	11/16	13/16	17	12	3/4	1
14	21	14.19	11/16	15/16	18 3/4	12	7/8	1 1/8
16	23 1/2	16.19	11/16	1	21 1/4	16	7/8	1 1/8
18	25	18.19	11/16	1 1/16	22 3/4	16	7/8	1 1/4
20	27 1/2	20.19	11/16	1 1/8	25	20	7/8	1 1/4
22	29 1/2	22.19	3/4	1 3/16	27 1/4	20	7/8	1 3/8
24	32 1/2	24.19	3/4	1 1/4	29 1/2	20	7/8	1 3/8
26	34 1/4	26.19	13/16	1 5/16	31 3/4	24	7/8	1 3/8
28	36 1/2	28.19	7/8	1 5/16	34	28	7/8	1 3/8
30	38 3/4	30.19	7/8	1 3/8	36	28	1	1 3/8
32	41 3/4	32.19	15/16	1 1/2	38 1/2	28	1	1 5/8
34	43 3/4	34.19	15/16	1 1/2	40 1/2	32	1	1 5/8
36	46	36.19	1	1 5/8	42 3/4	32	1	1 5/8
38	48 3/4	38.19	1	1 5/8	45 1/4	32	1	1 5/8
40	50 3/4	40.19	1	1 5/8	47 1/4	36	1	1 5/8
42	53	42.19	1 1/8	1 3/4	49 1/2	36	1 1/8	1 5/8
44	55 1/4	44.19	1 1/8	1 3/4	51 3/4	40	1 1/8	1 5/8
46	57 1/4	46.19	1 1/8	1 3/4	53 3/4	40	1 1/8	1 5/8
48	59 1/2	48.19	1 1/4	1 3/4	56	44	1 1/8	1 5/8
50	61 3/4	50.19	1 1/4	2	58 1/4	44	1 1/4	1 7/8
52	64	52.19	1 1/4	2	60 1/2	44	1 1/4	1 7/8
54	66 1/4	54.19	1 3/8	2 1/8	62 3/4	44	1 3/8	1 7/8
60	73	60.19	1 1/2	2 1/4	69 1/4	52	1 3/8	1 7/8
66	80	66.19	1 5/8	2 1/2	76	52	1 3/8	1 7/8
72	86 1/2	72.19	1 3/4	2 5/8	82 1/2	60	1 3/8	1 7/8
78	93	78.19	2	2 3/4	89	64	1 5/8	2 1/8
84	99 3/4	84.19	2	2 3/4	95 1/2	64	1 5/8	2 1/8
90	106 1/2	90.19	2 1/4	3	102	68	1 7/8	2 3/8
96	113 1/4	96.19	2 1/4	3	108 1/2	68	1 7/8	2 3/8
102	120	102.19	2 1/2	3 1/4	114 1/2	72	2 1/8	2 5/8
108	126 3/4	108.19	2 1/2	3 1/4	120 3/4	72	2 1/8	2 5/8
114	133 1/2	114.19	2 3/4	3 1/2	126 3/4	76	2 3/8	2 7/8
120	140 1/4	120.19	2 3/4	3 1/2	132 3/4	76	2 5/8	2 7/8

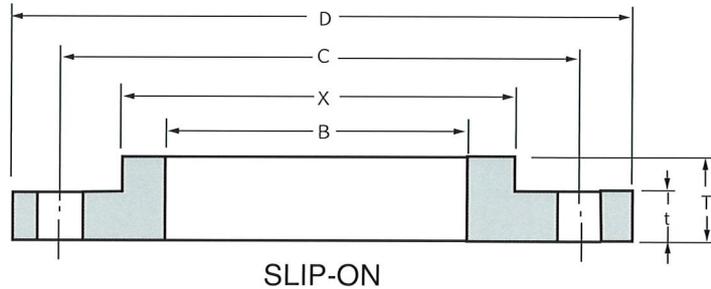
Notes:

(1) The 'Bore' (B) shall be 3/16" in. larger than the nominal outside diameter of the pipe, unless otherwise specified.

CLASS B & D FLANGES

TABLE 2

AWWA Standard Steel Hub Flanges, Class B(86 psi) and Class D(175-150psi)



AWWA C207

Dimensions in inches

Nominal Pipe Size	Outside Diam. D	Bore do	Thickness t	Length Through Hub T	Diam of Hub at Base g	DRILLING			
						Bolt Circle Diam. C	Number of Holes	Diam. of Holes	
								Class B	Class D
4	9	4.57	1/2	7/8	5 ⁵ / ₁₆	7 ¹ / ₂	8	3/4	3/4
5	10	5.66	9/16	1 ¹ / ₄	6 ⁵ / ₁₆	8 ¹ / ₂	8	3/4	7/8
6	11	6.72	9/16	1 ¹ / ₄	7 ⁹ / ₁₆	9 ¹ / ₂	8	3/4	7/8
8	13 ¹ / ₂	8.72	9/16	1 ¹ / ₄	9 ¹¹ / ₁₆	11 ³ / ₄	8	3/4	7/8
10	16	10.88	11/16	1 ¹ / ₄	12	14 ¹ / ₄	12	3/4	1
12	19	12.88	11/16	1 ¹ / ₄	14 ³ / ₈	17	12	3/4	1
14	21	14.19	3/4	1 ¹ / ₄	15 ³ / ₄	18 ³ / ₄	12	7/8	1 ¹ / ₈
16	23 ¹ / ₂	16.19	3/4	1 ¹ / ₄	18	21 ¹ / ₄	16	7/8	1 ¹ / ₈
18	25	18.19	3/4	1 ¹ / ₄	19 ⁷ / ₈	22 ³ / ₄	16	7/8	1 ¹ / ₄
20	27 ¹ / ₂	20.19	3/4	1 ¹ / ₄	22	25	20	7/8	1 ¹ / ₄
22	29 ¹ / ₂	22.19	1	1 ³ / ₄	24 ¹ / ₄	27 ¹ / ₄	20	7/8	1 ³ / ₈
24	32	24.19	1	1 ³ / ₄	26 ¹ / ₈	29 ¹ / ₂	20	7/8	1 ³ / ₈
26	34 ¹ / ₄	26.19	1	1 ³ / ₄	28 ¹ / ₂	31 ³ / ₄	24	7/8	1 ³ / ₈
28	36 ¹ / ₂	28.19	1	1 ³ / ₄	30 ¹ / ₂	34	28	7/8	1 ³ / ₈
30	38 ³ / ₄	30.19	1	1 ³ / ₄	32 ¹ / ₂	36	28	1	1 ³ / ₈
32	41 ³ / ₄	32.19	1 ¹ / ₈	1 ³ / ₄	34 ³ / ₄	38 ¹ / ₂	28	1	1 ⁵ / ₈
34	43 ³ / ₄	34.19	1 ¹ / ₈	1 ³ / ₄	36 ³ / ₄	40 ¹ / ₂	32	1	1 ⁵ / ₈
36	46	36.19	1 ¹ / ₈	1 ³ / ₄	38 ³ / ₄	42 ³ / ₄	32	1	1 ⁵ / ₈
38	48 ³ / ₄	38.19	1 ¹ / ₈	1 ³ / ₄	40 ³ / ₄	45 ¹ / ₄	32	1	1 ⁵ / ₈
40	50 ³ / ₄	40.19	1 ¹ / ₈	1 ³ / ₄	43	47 ¹ / ₄	36	1	1 ⁵ / ₈
42	53	42.19	1 ¹ / ₄	1 ³ / ₄	45	49 ¹ / ₂	36	1 ¹ / ₈	1 ⁵ / ₈
44	55 ¹ / ₄	44.19	1 ¹ / ₄	2 ¹ / ₄	47	51 ³ / ₄	40	1 ¹ / ₈	1 ⁵ / ₈
46	57 ¹ / ₄	46.19	1 ¹ / ₄	2 ¹ / ₄	49	53 ³ / ₄	40	1 ¹ / ₈	1 ⁵ / ₈
48	59 ¹ / ₂	48.19	1 ³ / ₈	2 ¹ / ₂	51	56	44	1 ¹ / ₈	1 ⁵ / ₈
50	61 ³ / ₄	50.19	1 ³ / ₈	2 ¹ / ₂	53	58 ¹ / ₄	44	1 ¹ / ₄	1 ⁷ / ₈
52	64	52.19	1 ³ / ₈	2 ¹ / ₂	55	60 ¹ / ₂	44	1 ¹ / ₄	1 ⁷ / ₈
54	66 ¹ / ₄	54.19	1 ³ / ₈	2 ¹ / ₂	57	62 ³ / ₄	44	1 ³ / ₈	1 ⁷ / ₈
60	73	60.19	1 ¹ / ₂	2 ³ / ₄	63	69 ¹ / ₄	52	1 ³ / ₈	1 ⁷ / ₈
66	80	66.19	1 ¹ / ₂	2 ³ / ₄	69	76	52	1 ³ / ₈	1 ⁷ / ₈
72	86 ¹ / ₂	72.19	1 ¹ / ₂	2 ³ / ₄	75	82 ¹ / ₂	60	1 ³ / ₈	1 ⁷ / ₈
78	93	78.19	1 ³ / ₄	3	81 ¹ / ₄	89	64	1 ⁵ / ₈	2 ¹ / ₈
84	99 ³ / ₄	84.19	1 ³ / ₄	3	87 ¹ / ₂	95 ¹ / ₂	64	1 ⁵ / ₈	2 ¹ / ₈
90	106 ¹ / ₂	90.19	2	3 ¹ / ₄	93 ³ / ₄	102	68	1 ⁷ / ₈	2 ³ / ₈
96	113 ¹ / ₄	96.19	2	3 ¹ / ₄	100	108 ¹ / ₂	68	1 ⁷ / ₈	2 ³ / ₈
102	120	102.19	2 ¹ / ₄	3 ¹ / ₂	105 ³ / ₄	114 ¹ / ₂	72	2 ¹ / ₈	2 ⁵ / ₈
108	126 ³ / ₄	108.19	2 ¹ / ₄	3 ¹ / ₂	111 ¹ / ₂	120 ³ / ₄	72	2 ¹ / ₈	2 ⁵ / ₈
114	133 ¹ / ₂	114.19	2 ¹ / ₂	3 ³ / ₄	117 ³ / ₄	126 ³ / ₄	76	2 ³ / ₈	2 ⁷ / ₈
120	140 ¹ / ₄	120.19	2 ¹ / ₂	3 ³ / ₄	124	132 ³ / ₄	76	2 ³ / ₈	2 ⁷ / ₈

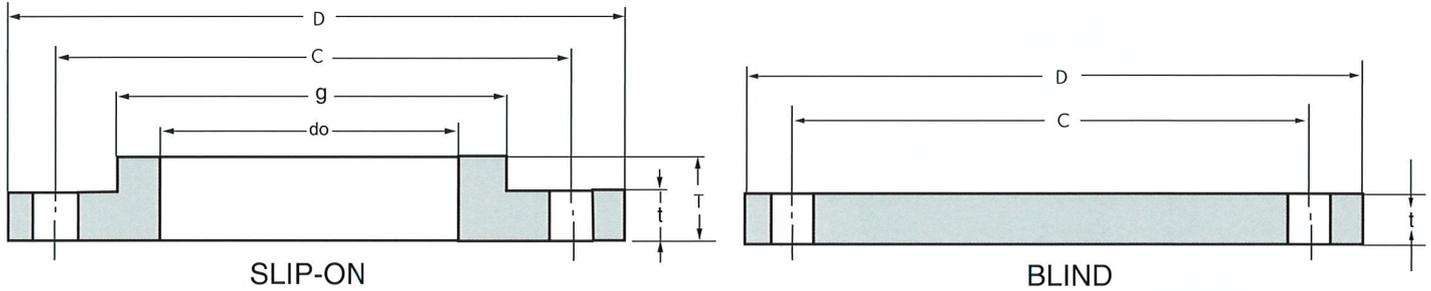
Notes:

- (1) For standard finishes for contact face, refer to page 94.
- (2) For Slip-on Flanges, (HubType Flanges), the hubs can be shaped either vertical from base to top or tapered within the limits of 7 degrees.
- (3) The 'Bore' (B) shall be 3/16 in. larger than the nominal outside diameter of the pipe, unless otherwise specified.

CLASS B & D FLANGES

TABLE 3

AWWA Standard Steel Hub Flanges, Class E(275psi)



AWWA C207

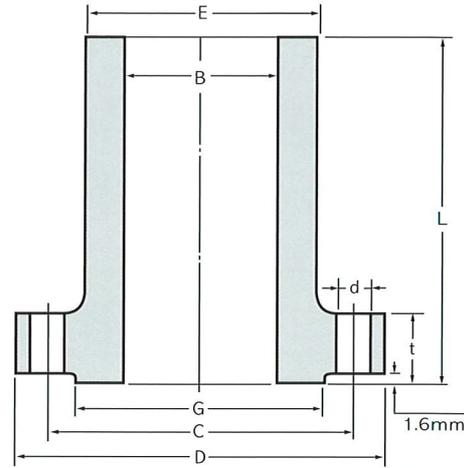
Dimensions in inches

Nominal Pipe Size	Outside Diam. D	Bore do	Thickness t	Length Through Hub T	Diam. of Hub at Base g	DRILLING		
						Bolt Circle Diam. C	Number of Holes	Diam. of Holes
4	9	4.57	15/16	15/16	55/16	7 1/2	8	3/4
5	10	5.66	15/16	17/16	67/16	8 1/2	8	7/8
6	11	6.72	1	19/16	79/16	9 1/2	8	7/8
8	13 1/2	8.72	1 1/8	1 3/4	9 11/16	11 3/4	8	7/8
10	16	10.88	1 3/16	1 15/16	12	14 1/4	12	1
12	19	12.88	1 1/4	2 3/16	14 3/8	17	12	1
14	21	14.19	1 3/8	2 1/4	15 3/4	18 3/4	12	1 1/8
16	23 1/2	16.19	1 7/16	2 1/2	18	21 1/4	16	1 1/8
18	25	18.19	1 9/16	2 11/16	19 7/8	22 3/4	16	1 1/4
20	27 1/2	20.19	1 11/16	2 7/8	22	25	20	1 1/4
22	29 1/2	22.19	1 13/16	3 1/8	24	27 1/4	20	1 3/8
24	32	24.19	1 7/8	3 1/4	26 1/8	29 1/2	20	1 3/8
26	34 1/4	26.19	2	3 3/8	28 1/2	31 3/4	24	1 3/8
28	36 1/2	28.19	2 1/16	3 7/16	30 3/4	34	28	1 3/8
30	38 3/4	30.19	2 1/8	3 1/2	32 3/4	36	28	1 3/8
32	41 3/4	32.19	2 1/4	3 5/8	35	38 1/2	28	1 5/8
34	43 3/4	34.19	2 5/16	3 11/16	37	40 1/2	32	1 5/8
36	46	36.19	2 3/8	3 3/4	39 1/4	42 3/4	32	1 5/8
38	48 3/4	38.19	2 3/8	3 3/4	41 3/4	45 1/4	32	1 5/8
40	50 3/4	40.19	2 1/2	3 7/8	43 3/4	47 1/4	36	1 5/8
42	53	42.19	2 5/8	4	46	49 1/2	36	1 5/8
44	55 1/4	44.19	2 5/8	4	48	51 3/4	40	1 5/8
46	57 1/4	46.19	2 11/16	4 1/16	50	53 3/4	40	1 5/8
48	59 1/2	48.19	2 3/4	4 1/8	52 1/4	56	44	1 5/8
50	61 3/4	50.19	2 3/4	4 1/8	54 1/4	58 1/4	44	1 7/8
52	64	52.19	2 7/8	4 1/4	56 1/2	60 1/2	44	1 7/8
54	66 1/4	54.19	3	4 3/8	58 3/4	62 3/4	44	1 7/8
60	73	60.19	3 1/8	4 1/2	65 1/4	69 1/4	52	1 7/8
66	80	66.19	3 3/8	4 7/8	71 1/2	76	52	1 7/8
72	86 1/2	72.19	3 1/2	5	78 1/2	82 1/2	60	1 7/8
78	93	78.19	3 7/8	5 3/8	84 1/2	89	64	2 1/8
84	99 3/4	84.19	3 7/8	5 3/8	90 1/2	95 1/2	64	2 1/8
90	106 1/2	90.19	4 1/4	5 3/4	96 3/4	102	68	2 3/8
96	113 1/4	96.19	4 1/4	5 3/4	102 3/4	108 1/2	68	2 3/8
102	120	102.19	4 5/8	6 1/8	108 3/4	114 1/2	72	2 5/8
108	126 3/4	108.19	4 5/8	6 1/8	114 1/2	120 3/4	72	2 5/8
114	133 1/2	114.19	5	6 1/2	121 1/4	126 3/4	76	2 7/8
120	140 1/4	120.19	5	6 1/2	128	132 3/4	76	2 7/8

Notes:
 (1) The 'Bore' (B) shall be 3/16" in. larger than the nominal outside diameter of the pipe, unless otherwise specified.

CLASS 150 FLANGES

LONG WELDING NECKS



UNIT : mm

Nominal Pipe Size	Outside Diameter D	Thickness of Flange Min. G	O.D. of Raised Face E	Hub Diameter at Bevel B	Diameter of Bore t	Length Through Hub L	DRILLING		
							Diameter of Bolt Circle C	Number of Holes	Diameter of Holes d
1/2	89	35.1	30.2	12.7	11.2	228.6	60.5	4	15.7
3/4	99	42.9	38.1	19.1	12.7	228.6	69.9	4	15.7
1	108	50.8	50.8	25.4	14.2	228.6	79.2	4	15.7
1 1/4	117	63.5	60.5	31.8	15.7	228.6	88.9	4	15.7
1 1/2	127	73.2	66.5	38.1	17.5	228.6	98.6	4	15.7
2	152	91.9	82.6	50.8	19.1	228.6	120.7	4	19.1
2 1/2	178	104.6	95.3	63.5	22.4	228.6	139.7	4	19.1
3	191	127.0	108.0	76.2	23.9	228.6	152.4	4	19.1
3 1/2	216	139.7	124.0	88.9	23.9	228.6	177.8	8	19.1
4	229	157.2	139.7	101.6	23.9	304.8	190.5	8	19.1
5	254	185.7	165.1	127.0	23.9	304.8	215.9	8	22.4
6	279	215.9	196.9	152.4	25.4	304.8	241.3	8	22.4
8	343	269.7	247.7	203.2	28.4	304.8	298.5	8	22.4
10	406	323.9	304.8	254.0	30.2	304.8	362.0	12	25.4
12	483	381.0	365.3	304.8	31.8	304.8	431.8	12	25.4
14	533	412.8	406.4	355.6	35.1	304.8	476.3	12	28.4
16	597	469.9	457.2	406.4	36.6	304.8	539.8	16	28.4
18	635	533.4	508.0	457.2	39.6	304.8	577.9	16	31.8
20	699	584.2	558.8	508.0	42.9	304.8	635.0	20	31.8
24	813	692.2	666.8	609.6	47.8	304.8	749.3	20	35.1

CLASS 300 FLANGES

LONG WELDING NECKS

UNIT : mm

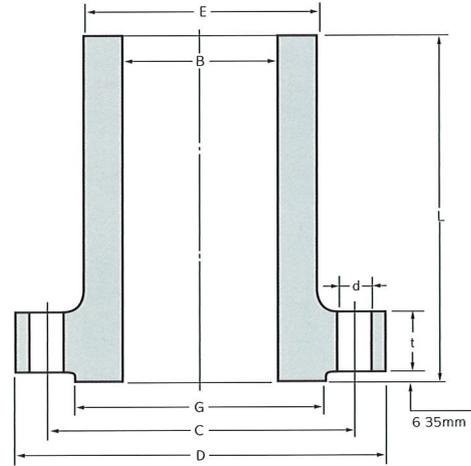
Nominal Pipe Size	Outside Diameter D	Hub Diameter at Bevel E	O.D. of Raised Face G	Thickness of Flange Min. t	Diameter of Bore B	Length Through Hub L	DRILLING		
							Diameter of Bolt Circle C	Number of Holes	Diameter of Holes d
1/2	95	38.1	35.1	14.2	12.7	228.6	66.5	4	15.7
3/4	117	47.8	42.9	15.7	19.1	228.6	82.6	4	19.1
1	124	53.8	50.8	17.5	25.4	228.6	88.9	4	19.1
1 1/4	133	63.5	63.5	19.1	31.8	228.6	98.6	4	19.1
1 1/2	155	69.9	73.2	20.6	38.1	228.6	114.3	4	22.4
2	165	84.1	91.9	22.4	50.8	228.6	127.0	8	19.1
2 1/2	191	100.1	104.6	25.4	63.5	228.6	149.4	8	22.4
3	210	117.3	127.0	28.4	76.2	228.6	168.1	8	22.4
3 1/2	229	133.4	139.7	30.2	88.9	228.6	184.2	8	22.4
4	254	146.1	157.2	31.8	101.6	304.8	200.2	8	22.4
5	279	177.8	185.7	35.1	127.0	304.8	235.0	8	22.4
6	318	206.2	215.9	36.6	152.4	304.8	269.7	12	22.4
8	381	260.4	269.7	41.1	203.2	304.8	330.2	12	25.4
10	445	320.5	323.9	47.8	254.0	304.8	387.4	16	28.4
12	521	374.7	381.0	50.8	304.8	304.8	450.9	16	31.8
14	584	425.5	412.8	53.8	355.6	304.8	514.4	20	31.8
16	648	482.6	469.9	57.2	406.4	304.8	571.5	20	35.1
18	711	533.4	533.4	60.5	457.2	304.8	628.7	24	35.1
20	775	587.2	584.2	63.5	508.0	304.8	685.8	24	35.1
24	914	701.5	692.2	69.9	609.6	304.8	812.8	24	41.1

Notes:

- (1) Bore (B) is the same as nominal pipe size.
- (2) Welding necks longer than listed are available in all sizes on special order.

CLASS 400 FLANGES

LONG WELDING NECKS



UNIT : mm

Nominal Pipe Size	Outside Diameter D	Thickness of Flange Min. G	O.D. of Raised Face E	Hub Diameter at Bevel B	Diameter of Bore t	Length Through Hub L	Length DRILLING											
							Diameter of Bolt Circle C	Number of Holes	Diameter of Holes d									
1 1 1/4 1 1/2	Use Class 600 dimensions in the these sizes.																	
2 2 1/2 3 3 1/2																		
4										254	157.2	146.1	101.6	35.1	304.8	200.2	8	25.4
5										279	185.7	177.8	127.0	38.1	304.8	235.0	12	25.4
6	318	215.9	206.2	152.4	41.1	304.8	269.7	12	25.4									
8	381	269.7	260.4	203.2	47.8	304.8	330.2	12	28.4									
10	445	323.9	320.5	254.0	53.8	304.8	387.4	16	31.8									
12	521	381.0	374.7	304.8	57.2	304.8	450.9	16	35.1									
14	584	412.8	425.5	355.6	60.5	304.8	514.4	20	35.1									
16	648	469.9	482.4	406.4	63.5	304.8	571.5	24	38.1									
18	711	533.4	533.4	457.2	66.5	304.8	628.7	24	38.1									
20	775	584.2	587.2	508.0	69.9	304.8	685.8	24	41.1									
24	914	692.2	701.5	609.6	76.2	304.8	812.8	24	47.8									

CLASS 600 FLANGES

LONG WELDING NECKS

UNIT : mm

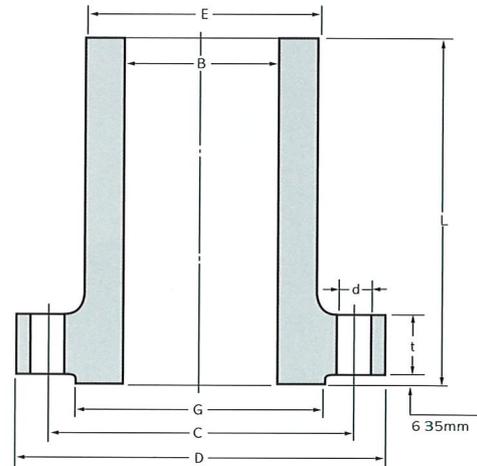
Nominal Pipe Size	Outside Diameter D	Thickness of Flange Min. E	O.D. of Raised Face G	Hub Diameter at Bevel B	Diameter of Bore t	Length Through Hub L	Length DRILLING		
							Diameter of Bolt Circle C	Number of Holes	Diameter of Holes d
1	124	53.8	50.8	25.4	17.5	228.6	88.9	4	19.1
1 1/4	133	63.5	63.5	31.8	20.6	228.6	98.6	4	19.1
1 1/2	155	69.9	73.2	38.1	22.4	228.6	114.3	4	22.4
2	165	84.1	91.9	50.8	25.4	228.6	127.0	8	19.1
2 1/2	191	100.1	104.6	63.5	28.4	228.6	149.4	8	22.4
3	210	117.3	127.0	76.2	31.8	228.6	168.1	8	22.4
3 1/2	229	133.4	139.7	88.9	35.1	228.6	184.2	8	25.4
4	273	152.4	157.2	101.6	38.1	304.8	215.9	8	25.4
5	330	190.5	185.7	127.0	44.5	304.8	266.7	8	28.4
6	356	222.3	215.9	152.4	47.8	304.8	292.1	12	28.4
8	419	273.1	269.7	203.2	55.6	304.8	349.3	12	31.8
10	508	342.9	323.9	254.0	63.5	304.8	431.8	16	35.1
12	559	400.1	381.0	304.8	66.5	304.8	489.0	20	35.1
14	603	431.8	412.8	355.6	69.9	304.8	527.1	20	38.1
16	686	495.3	469.9	406.4	76.2	304.8	603.3	20	41.1
18	743	546.1	533.4	457.2	82.6	304.8	654.1	20	44.5
20	813	609.6	584.2	508.0	88.9	304.8	723.9	24	44.5
24	940	717.6	692.2	609.6	101.6	304.8	838.2	24	50.8

Notes:

- (1) Bore (B) is the same as nominal pipe size.
- (2) Welding necks longer than listed are available in all sizes on special order.

CLASS 900 FLANGES

LONG WELDING NECKS



UNIT : mm

Nominal Pipe Size	Outside Diameter D	O.D. of Raised Face G	Hub Diameter at Bevel E	Diameter of Bore B	Thickness of Flange Min. t	Length Through Hub L	DRILLING		
							Diameter of Bolt Circle C	Number of Holes	Diameter of Holes d
1 1 1/4 1 1/2	Use Class 1500 dimensions in the these sizes.								
2 2 1/2									
3									
4	241	127.0	127.0	76.2	38.1	304.8	190.5	8	25.4
5	292	157.2	158.8	101.6	44.5	304.8	235.0	8	31.8
6	349	185.7	190.5	127.0	50.8	304.8	279.4	8	35.1
8	381	215.9	235.0	152.4	55.6	304.8	317.5	12	31.8
10	470	269.7	298.5	203.2	63.5	304.8	393.7	12	38.1
12	546	323.9	368.3	254.0	69.9	406.4	469.9	16	38.1
14	610	381.0	419.1	304.8	79.2	406.4	533.4	20	38.1
16	641	412.8	450.9	355.6	85.9	To be specified by purchaser	558.8	20	41.1
18	705	469.9	508.0	406.4	88.9		616.0	20	44.5
20	787	533.4	565.2	457.2	101.6		685.8	20	50.8
24	857	584.2	622.3	508.0	108.0		749.3	20	53.8
24	1041	692.2	749.3	609.6	139.7		901.7	20	66.5

CLASS 1500 FLANGES

LONG WELDING NECKS

UNIT : mm

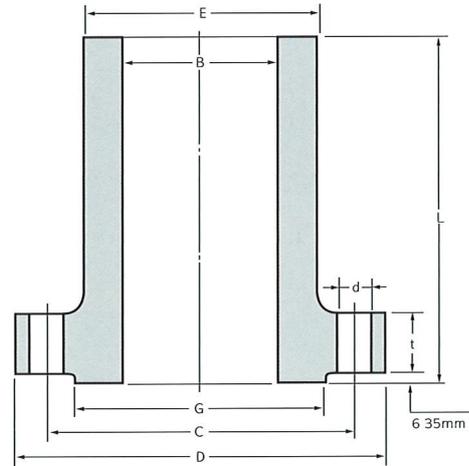
Nominal Pipe Size	Outside Diameter D	Hub Diameter at Bevel E	O.D. of Raised Face G	Thickness of Flange Min. t	Diameter of Bore B	Length Through Hub L	DRILLING		
							Diameter of Bolt Circle C	Number of Holes	Diameter of Holes d
1	149	52.3	50.8	28.4	25.4	228.6	101.6	4	25.4
1 1/4	159	63.5	63.5	28.4	31.8	228.6	111.3	4	25.4
1 1/2	178	69.9	73.2	31.8	38.1	228.6	124.0	4	28.4
2	216	104.6	91.9	38.1	50.8	228.6	165.1	8	25.4
2 1/2	244	124.0	104.6	41.1	63.5	304.8	190.5	8	28.4
3	267	133.4	127.0	47.8	76.2	304.8	203.2	8	31.8
4	311	162.1	157.2	53.8	101.6	304.8	241.3	8	35.1
5	375	196.9	185.7	73.2	127.0	304.8	292.1	8	41.1
6	394	228.6	215.9	82.6	152.4	304.8	317.5	12	38.1
8	483	292.1	269.7	91.9	203.2	304.8	393.7	12	44.5
10	584	368.3	323.9	108.0	254.0	406.4	482.6	12	50.8
12	673	450.9	381.0	124.0	304.8	406.4	571.5	16	53.8
14	749	495.3	412.8	133.4	355.6	To be specified by purchaser	635.0	16	60.5
16	826	552.5	469.9	146.1	406.4		704.9	16	66.5
18	914	596.9	533.4	162.1	457.2		774.7	16	73.2
20	984	641.4	584.2	177.8	508.0		831.9	16	79.2
24	1168	762.0	692.2	203.2	609.6		990.6	16	91.9

Notes:

- (1) Bore (B) is the same as nominal pipe size.
- (2) Welding necks longer than listed are available in all sizes on special order.

CLASS 2500 FLANGES

LONG WELDING NECKS



UNIT : mm

Nominal Pipe Size	Outside Diameter D	Hub Diameter at Bevel E	O.D. of Raised Face G	Thickness of Flange Min t	Diameter of Bore B	Length Through Hub L	DRILLING		
							Diameter of Bolt Circle C	Number of Holes	Diameter of Holes d
1	159	57.2	50.8	35.1	25.4	228.6	108.0	4	25.4
1 1/4	184	73.2	63.5	38.1	31.8	228.6	130.0	4	28.4
1 1/2	203	79.2	73.2	44.5	38.1	228.6	146.1	4	31.8
2	235	95.3	91.9	50.8	50.8	228.6	171.5	8	28.4
2 1/2	267	114.3	104.6	57.2	63.5	304.8	196.9	8	31.8
3	305	133.4	127.0	66.5	76.2	304.8	228.6	8	35.1
4	356	165.1	157.2	76.2	101.6	304.8	273.1	8	41.1
5	419	203.2	185.7	91.9	127.0	304.8	323.9	8	47.8
6	483	235.0	215.9	108.0	152.4	304.8	368.3	8	53.8
8	552	304.8	269.7	127.0	203.2	304.8	438.2	12	53.8
10	673	374.7	323.9	165.1	254.0	406.4	539.8	12	66.5
12	762	441.5	381.0	184.2	304.8	406.4	619.3	16	73.2

GUIDE TO MATERIAL LAYOUT & SPECIFICATIONS

Pipe	Weld Fittings	Screwed & Socket Fittings	Flanges	Valves
A-53	A-234 WPB	A-105, A-181 Gr. 60 or 70	A-105, A-181 Gr. 60 or 70	A-105 A-216 WCB
A-106B	A-234 WPB	A-105 A-181 Gr. 60 or 70	A-105 A-181 Gr. 60 or 70	A-105 A-216 WCB
A-312 T304	A-403 WP-304	A-182 F-304	A-182 F-304	A-182 F-304 CMO
A-312 T316	A-403 WP-316	A-182 F-316	A-182 F-316	A-350 F-316 CM 8MO
A-333 Gr. 1 or 6	A-420 WPL 1 & 6	A-350 LF-1	A-350 LF-1	A-350 LF-1 A-352 LCB
A-333 Gr. 3	A-420 WPL-3	A-350 LF-3	A-350 LF-3	A-350 LF-3 A-352 LC-3
A-335 P-1	A-234 WP-1	A-182 F-1	A-182 F-1	A-217 WC-6
A-335 P-11	A-234 WP-11	A-182 F-11	A-182 F-11	A-182 F-11 A-217 WC-6
A-335 P-12	A-234 WP-12	A-182 F-12	A-182 F-12	A-217 WC-6
A-335 P-22	A-234 WP-22	A-182 F-22	A-182 F-22	A-182 F-22 A-217 WC-9
A-335 P-5	A-234 WP-5	A-182 F-5	A-182 F-5	A-182 F-5 A-216 WC-5
A-335 P-7	A-234 WP-7	A-182 F-7	A-182 F-7	A-182 F-7 A-217 WC-12
A-335 P-9	A-234 WP-9	A-182 F-9	A-182 F-9	A-182 F-9 A-217 WC-12

Notes:

- (1) Bore (B) is the same as nominal pipe size.
- (2) Welding necks longer than listed are available in all sizes on special order.

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