FLANGES

Gestión de Compras manufactures and supplies flanges according to standards ANSI, BS, DIN, JIS and ISO as well as according to customer specifications.

PRODUCT:

Flanges are a pipe fitting which function is to join two pieces in a piping system, and easily separate them at a particular time, allowing be disassembled without destructive operations. By function and utility, the flanges are present in many sectors and areas such as construction and industry.

STANDARD FLANGE CLASSIFICATION:

It's possible to produce standard flanges as ASA/ANSI/ASME (USA), PN/DIN (European), BS10 (British/Australian), and JIS/KS (Japanese/Korean). And usually these standards are not interchangeable.

PRESSURE CLASS CLASIFICATION:

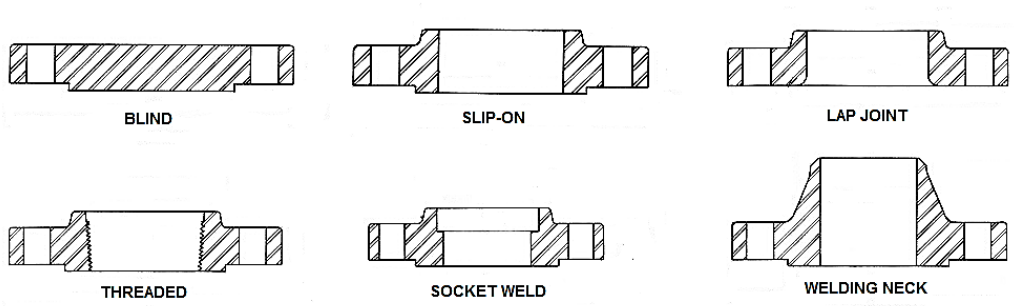
Many of the flanges in each standard are divided into "pressure classes", depending on the different rates of pressure that are able to endure. The most common flanges pressure classes are #150, #300, #600, #900, #1500, #2500 and #3000 according to ASME designation. To other standards, as DIN, pressure classes are defined by the acronym PN, as for example, PN10, PN16, PN20, PN25, PN40, PN50, PN100, PN150, PN250 or PN420. Flanges from different pressure classes are not usually interchangeable.

DESIGN CLASSIFICATION:

There is a wide variety of designs, sizes, materials and standards in relation to the flanges. But the most general classification is basis on design.

- **Blind Flanges:** They are round plates with no center hold. The use is to close the ends of pipes, valves or pressure vessel equipments. These flanges are available for standard pipes in all sizes at higher pressure ratings than other flange types.

- **Lap joint flanges:** This type of flanges can rotate around the pipe to allow an easy alignment and assembly of bolt holes even after the welds have been completed. These flanges are used in systems that require frequent disassembly of the flanges and pipe.
- **Slip-on flanges:** Ideal for lower pressure applications. They are designed to slide over the end of piping and then be welded in place. They provide easy and low cost installation.

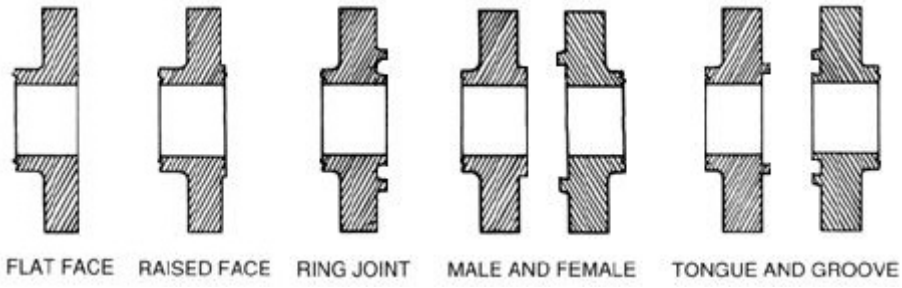


- **Socket weld flanges:** This group is typically used on smaller sizes of high pressure pipes. These flanges are attached by inserting the pipe into the socket end and applying fillet weld around the top.
- **Threaded flanges:** They are special types of pipe flange that can be fitted to the pipe without welding. This group is best used for small pipes and low pressures.

- **Welding neck flanges:** This group has a long tapered hub and is used for high pressure applications in a wide range of temperatures. The tapered hub transfers stress from the flange to the pipe itself and provides strength reinforcement that counteracts dishing.
- **Orifice flanges:** They are used in place of standard flanges to allow an orifice meter to be installed on the flange. The orifice flanges are used to measure volumes in liquids or gases.
- **Reducing flanges:** This group is used in place of standard flanges to allow for a change in pipe size and they are considered an economical means to make a pipe size transition. Welding neck, slip-on, and threaded flanges can be reducers.

FLANGE FACE CLASSIFICATION:

Another important parameter to define a flange is the flange faces. Exist five principal types of flange faces who its possible to see below:



- **Flat Face (FF):** The Flat Face flange has a gasket surface in the same plane as the bolting circle face. Applications using flat face flanges are frequently those in which the mating flange or flanged fitting is made from a casting.

- **Raised Face (RF):** The Raised Face flange is the most common type used in process plant applications, and is easily to identify. It is referred to as a raised face because the gasket surfaces are raised above the bolting circle face. This face type allows the use of a wide combination of gasket designs, including flat ring sheet types and metallic composites such as spiral wound and double jacketed types.

- **Ring-Type Joint (RTJ):** They have grooves cut into their faces which steel ring gaskets. The flanges seal when tightened bolts compress the gasket between the flanges into the grooves, deforming the gasket to make a metal to metal seal.

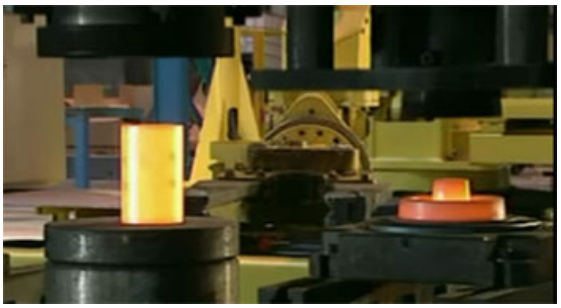
- **Tongue-and-Groove (T&G):** The Tongue and Groove faces of this flanges must be matched. One flange face has a raised ring (Tongue) machined onto the flange face while the mating flange has a matching depression (Groove) machined into it's face.

- **Male-and-Female (M&F):** With this type the flanges also must be matched. One flange face has an area that extends beyond the normal flange face (Male). The other flange or mating flange has a matching depression (Female) machined into it's face.

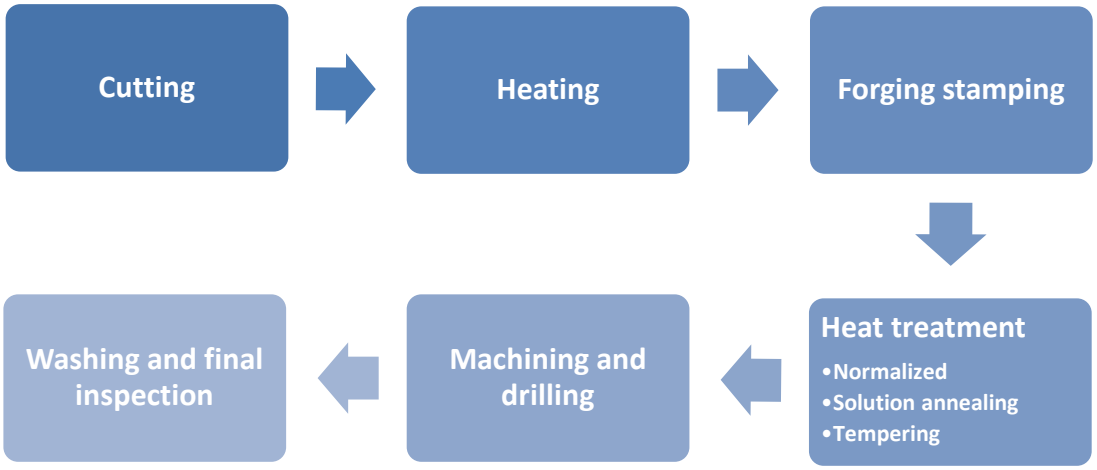
PRODUCTION:

Gestión de Compras manufactures and supplies flanges according to standards ANSI, BS, DIN, JIS and ISO. We can also manufacture products according to clients' drawings.

The most common process to produce flanges is by forging.



The typical production process to make flanges consist of:



MATERIALS:

The most common materials used to produce flanges are:

- Carbon Steel (ASTM A105, Q235, 20Mn)
- Stainless Steel (ASTM A182 F304/304L, F316/316L,F321)
- Alloy Steel (ASTM A182F1, F2, F5/A, F6/A, F9, F11, F12, F22, F91)
- Aluminum (1100, 2014, 3003, 5083, 5086, 6061, 7075).
- Inconel (600, 601, 625, 718)
- Copper.
- Titanium.

C/ Marzo, 9
02002 Albacete (Spain)
tel:+(34) 967 221 602
fax:+(34) 967 223 369
info@gestiondecompras.com
www.gestiondecompras.com

STANDARD AND CERTIFICATES:

We have the means to ensure our products comply the general regulation and the specific certificated regulations in manufacturing products that requires them.

- ISO 9001 and ISO 14001.
- EN 1092, BS 3293, etc.
- DIN 2527, DIN 2576, DIN 2673, DIN 86044, etc.
- ASME B16.5, ASME B16.47
- JIS B2220

CONTACT:

In **Gestión de Compras** work with a wide range of customers from different sectors but have in common the search for products that suit your needs at the best Price and the guaranteed maximum quality. Check with us about any product. We have a qualified staff who will advise you.

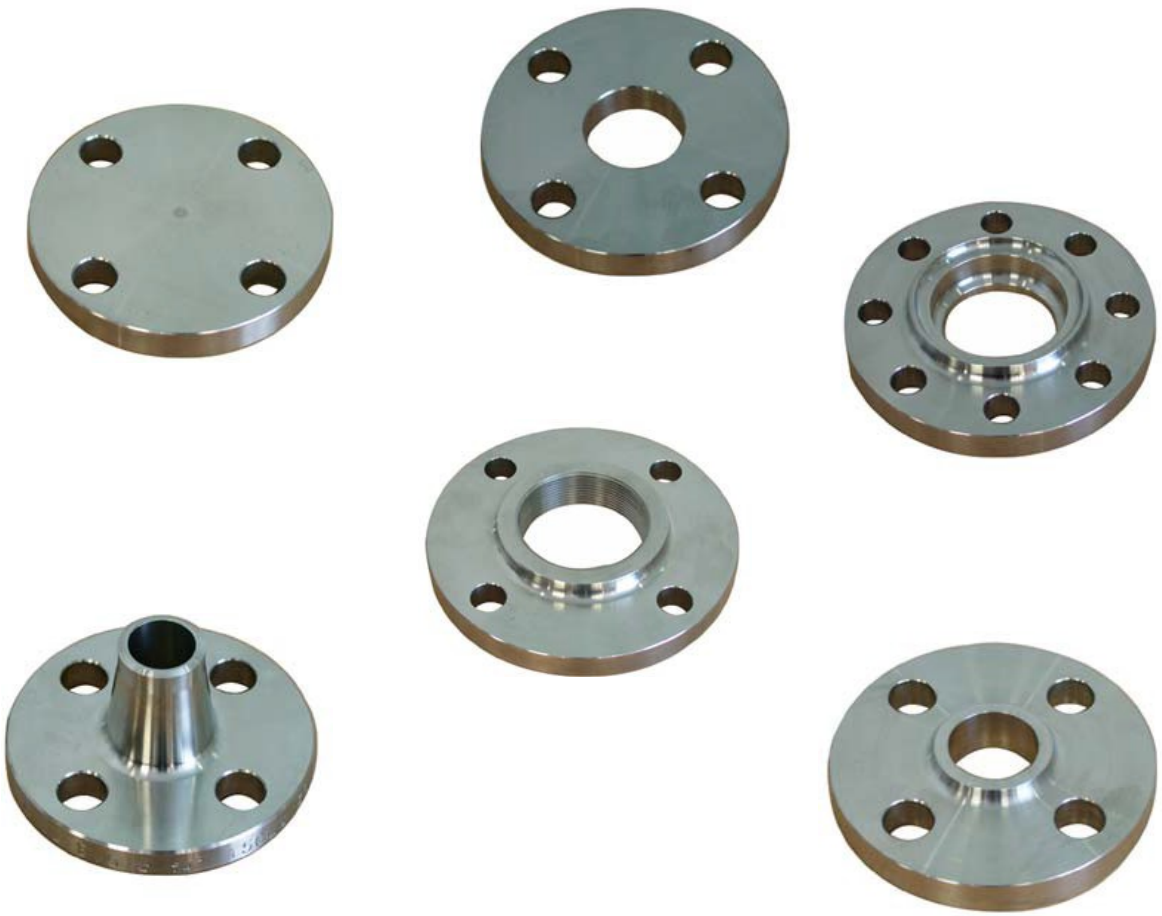
C/ Marzo, 9
02002 Albacete (Spain)
Phone: + (34) 967 221 602
Fax: + (34) 967 223 369
Email: info@gestiondecompras.com

FLANGES

Gestión de Compras suministra bridas para el mercado nacional e internacional, según normativas ANSI, BS, DIN, JIS, ISO, China GB/T, KS, etc., así como según especificaciones del cliente.

Suministramos bridas, tanto forjadas como obtenidas a partir de plancha de acero. Entre nuestros tipos de bridas forjadas, están incluidas bridas de cuello, bridas deslizantes, bridas de enchufe y soldadura, bridas roscadas, bridas locas, bridas reductoras, bridas ciegas, etc. Por otra parte, suministramos bridas de chapa de acero desde 15 mm a 2000 mm.

En cuanto a los materiales, los más utilizados son los aceros al carbono, aceros aleados y aceros inoxidables.



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ESPECIFICACIONES

Material of Flange

Item	Chemical Compositions								Mechanical properties				
	C(max) %	Mn(max) %	P(max) %	S(max) %	Si(max) %	Ni %	Cr %	Mo %	T.S (min) psi(kg/mm2)	Y.S (min) psi (kg/mm2)	EL. (min) %	Red. (min) %	HB (max)
ASTM A-105	0.35	0.60-1.05	0.040	0.050	0.35	--	--	--	70.000 (49.2)	36.000 (25.3)	22	30	187
AISI-304	0.08	2.00	0.040	0.030	1.00	8.0-11.0	18- 20	--	75.000 (52.7)	30.000 (21.1)	45	50	--
AISI-304L	0.035	2.00	0.040	0.030	1.00	8.0-13.0	18-20	--	70.000 (49.2)	25.000(17.6)	30	50	--
AISI-316	0.08	2.00	0.040	0.030	1.00	10.0-14.0	16-18	2.0-3.0	75.000 (52.7)	30.000 (21.7)	45	50	--
AISI-316L	0.035	2.00	0.040	0.030	1.00	10.0-15.0	16-18	2.0-3.0	65.000 (45.7)	25.000 (17.6)	30	50	--
JIS G3101 SS41 (16mmbelow)	--	--	--	50	50	--	--	--	24(min)	41-52	17	--	--
JIS G3106 SM41B	20 22	35	60-120	40min	40	--	--	--	24	41-52	22	--	--
JIS G3214 SUS F304	8	100	200	40	30	800-1100	1800-2000	--	21(min)	53(min)	45	30	187
JIS G3214 SUS F304L	3.0	100	200	40	30	900-1300	1800-2000	--	18(min)	46(min)	30	50	187
JIS G3214 SUS F316	8	100	200	40	30	1000-1400	1600-1800	200-300	21(min)	53(min)	45	50	187
JIS G3214 SUS F316L	3.0	100	200	40	30	1200-1500	1600-1800	200-300	18(min)	46(min)	30	50	187
DIN 17100	0.17	--	0.06	0.05	--	--	--	--	37-45	25	--	--	--
DIN 17200	0.18-0.25	0.30-0.60	0.045	0.045	0.15-0.35	--	--	--	55-65	36	--	--	--
BS4360-40B	0.14-0.22	0.30-0.65	0.045	0.05	0.30	0.30	0.30	--	--	--	--	--	--
BS304S15	0.06	2.0	0.045	0.03	1.0	8.0-11.0	17.5-19	--	--	--	--	--	--
BS304S12	0.03	0.50-2.00	0.045	0.03	0.20-1.00	9.0-12.0	17.5-19	--	--	--	--	--	--
BS 316S12	0.03	0.50-2.00	0.045	0.03	0.20-1.00	11.0-14.0	16.5-18.5	2.25-3.0	--	--	--	--	--
BS 316S16	0.07	0.50-2.00	0.045	0.03	0.20-1.00	10.0-13.0	16.5-18.5	--	--	--	--	--	--
GB Q235	0.14-0.22	0.30-0.65	0.045	0.03	0.30	0.03	--	--	62.6(44)	31.3(22)	24	--	--
GB 20 Mn	0.17-0.24	0.70-1.00	0.035	0.035	0.17-0.37	0.025	0.025	--	65.5(46)	40(28)	24	--	197
GB 25 Mn	0.22-0.30	0.70-1.00	0.035	0.035	0.17-0.37	0.025	0.025	--	71.2(50)	42.7(30)	22	--	207
GB OCr 19Ni9	0.08	2.00	0.035	0.03	1.00	8.0-10.50	18-20	--	75.4(53)	30(21)	40	--	187
GBOOCr 19Nill	0.030	2.00	0.035	0.03	1.00	9.0-13.0	18-20	--	70(49)	25.6(18)	40	--	187
GBOCr17 Ni12Mo2	0.08	2.00	0.035	0.03	1.00	10.0-14.0	16-18	--	75.4(53)	30(21)	40	--	187
GBOOCr17 Ni14Mo2	0.030	2.00	0.035	0.03	1.00	12.0-15.0	16-18	2-3	70(49)	25.6(18)	40	--	187

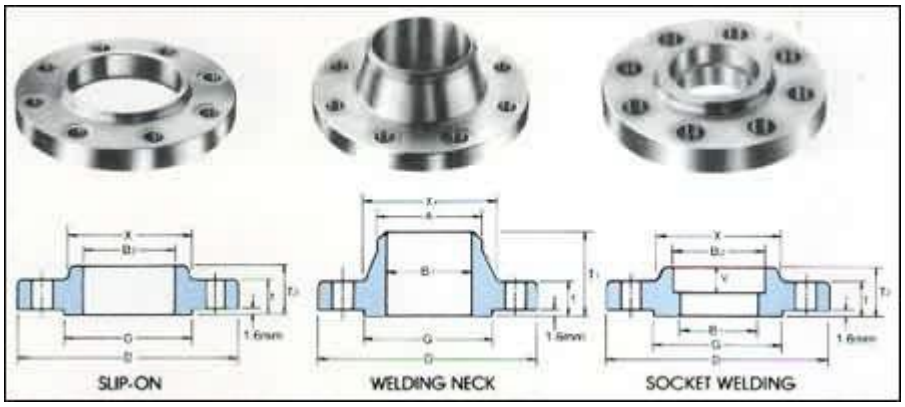
Technology Information

These flanges are manufactured to specifications of ANSI B16.5, ANSI B16.47, ANSI B16.36, BS10 Table D & Table E, BS Table F & Table H, BS Table J & Table K, API-6A/6BX, MSS SP44, DIN 2632-2638, DIN 2576, 2642, 2527, 2566, JIS B2220-1984.B2219-1984.Additionally, non-standard flanges are also made.

Technical Specifications			
Standard	Size	Rating	Type
ANSI B16.5	0.5"/24"	150/2500	WN / SO / BL/SW/LP
MSS SP 44	Upto 60" Upto 48"	150/300 600/900	WN / BL
ANSI B 16.47	Upto 60" Upto 48"	150/300 600/900	WN / BL
AWWA	Upto 60"	Class B,D,E& F	Ring Type
BS 4504/BS EN1092	Upto 60"	6Kg/250Kg	WN / SO / BL
DIN	Upto 60"	6Bar/40Bar	WN / SO / BL
API6A/6BX	Upto 24"	20000 psi	WN /SO/ Thd
JIS	Upto60"	1K/63K	SO/BL/WN

Drawing of ANSI B16.5

Flanges welding neck, socket weld, threaded, blind, slip on, lap joint to ANSI B 16.5 from 1/2" to 24" and classes 150 to 2500 (complete range). We can also manufacture in different shapes and sizes depending upon your purpose.



Unit mm

ANSI B16.5 FORGED FLANGES (CLASS 150)

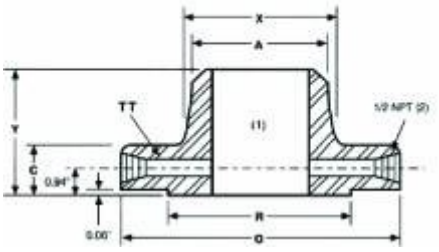
Normal Pipe Size	Depth of Socket	Drilling			Bolting				Approximate Weight				
		Bolt Circle Diam	Number of Holes	Diam of Holes	Diam of Bolts (inch)	Machine Bolt Length	Stud Bolt Length		Welding Neck	Slip-on and Threaded	Lap Joint	Blind	Socket Welding
	Y					Raised Face	Raised Face	Ring Joint	Kg	Kg	Kg	Kg	Kg
1/2	9.7	60.5	4	15.7	1/2	50.8	57.2	--	0.52	0.47	0.51	0.47	0.47
3/4	11.2	69.9	4	15.7	1/2	50.8	63.5	--	0.92	0.75	0.70	0.63	0.76
1	12.7	79.2	4	15.7	1/2	57.2	63.5	76.2	1.10	0.86	0.93	0.95	0.87
1 1/4	14.2	88.9	4	15.7	1/2	57.2	69.9	82.6	1.40	1.40	1.40	1.40	1.43
1 1/2	15.7	98.6	4	15.7	1/2	63.5	69.9	82.6	1.81	1.41	1.51	1.62	1.45
2	17.5	120.7	4	19.1	5/8	69.9	82.6	95.3	2.8	2.26	2.38	2.64	2.33
2 1/2	19.1	139.7	4	19.1	5/8	76.2	88.9	101.6	4.28	3.43	3.60	4.06	3.55
3	50.6	152.4	4	19.1	5/8	76.2	88.9	101.6	5.18	4.00	4.04	5.00	4.15
3 1/2	22.4	177.8	8	19.1	5/8	76.2	88.9	101.6	5.50	5.00	4.99	5.90	5.00
4	23.9	190.5	8	19.1	5/8	76.2	88.9	101.6	7.32	5.75	5.96	7.50	5.99
5	23.9	215.9	8	22.4	3/4	82.6	95.3	108.0	8.91	6.51	6.44	9.00	6.96
6	26.9	241.3	8	22.4	3/4	82.6	101.6	114.3	11.26	7.81	7.70	12.00	8.41
8	31.8	298.5	8	22.4	3/4	88.9	108.0	120.7	18.00	13.00	12.66	20.00	13.93
10	33.3	362.0	12	25.4	7/8	101.6	114.3	127.0	25.00	17.10	17.00	30.00	19.50

12	39.6	431.8	12	25.4	7/8	101.6	120.7	133.4	38.98	27.68	28.30	44.00	29.03
14	41.4	476.3	12	28.4	1	114.3	133.4	146.1	51.71	35.20	41.50	64.00	38.56
16	44.5	539.8	16	28.4	1	114.3	133.4	146.1	64.41	45.00	52.98	78.00	47.37
18	49.3	577.9	16	31.8	1 1/8	127.0	146.1	158.8	74.84	54.00	68.00	95.00	58.72
20	54.1	635.0	20	31.8	1 1/8	139.7	158.8	171.5	89.36	73.00	85.00	125.00	77.81
24	63.5	749.3	20	35.1	1 1/4	152.4	171.5	184.2	119.66	96.00	120.00	190.00	100.75

Drawing of ANSI B16.36

Orifice flanges from 1" to 24" and from 300 to 2500 lbs in accordance with ANSI B 16.36. We can also manufacture in different shapes and sizes depending upon your purpose.

Welding Neck Orifice Class 300



¡¡	Nominal	Outerside diam. of flange	Thick. of flange	Diam. of raised face	Diam. of hub at base	Diam. of hub at point of welding	Length thru hub	Diam. of pressure connection	No. of holes	Diam. of holes	Diam. of bolts	Diam. of bolt circle
¡¡	¡¡	O	C	R	X	A	Y	T T	¡¡	¡¡	¡¡	¡¡
in.	1"	4.88	1.50	2.00	2.12	1.32	3.25	1/4	4	0.69	5/8	3.50
mm.	¡¡	124	38.1	50.8	53.8	33.5	82.6	6.4	¡¡	17.5	15.9	88.9
in.	1-1/2"	6.12	1.5	2.88	2.75	1.9	3.38	1/4	4	0.81	3/4	4.5
mm.	¡¡	155.4	38.1	73.2	69.9	48.3	85.9	6.4	¡¡	20.6	19.1	114.3
in.	2"	6.5	1.5	3.62	3.31	2.38	3.38	1/4	8	0.69	5/8	5
mm.	¡¡	165.1	38.1	91.9	84.1	60.5	85.9	6.4	¡¡	17.5	15.9	127
in.	2-1/2"	7.5	1.5	4.12	3.94	2.88	3.5	1/4	8	0.81	3/4	5.88
mm.	¡¡	190.5	38.1	104.6	100.1	73.2	88.9	6.4	¡¡	20.6	19.1	149.4
in.	3"	8.25	1.5	5	4.62	3.5	3.5	3/8	8	0.81	3/4	6.62
mm.	¡¡	209.6	38.1	127	117.3	88.9	88.9	9.5	¡¡	20.6	19.1	168.1
in.	4"	10	1.5	6.19	5.75	4.5	3.62	1/2	8	0.81	3/4	7.88
mm.	¡¡	254	38.1	157.2	146.1	114.3	91.9	12.7	¡¡	20.6	19.1	200.2
in.	6"	12.5	1.5	8.5	8.12	6.63	3.94	1/2	12	0.88	3/4	10.62
mm.	¡¡	317.5	38.1	215.9	206.2	168.4	100.1	12.7	¡¡	22.4	19.1	269.7
in.	8"	15	1.62	10.62	10.25	8.63	4.38	1/2	12	1	7/8	13
mm.	¡¡	381	41.1	269.7	260.4	219.2	111.3	12.7	¡¡	25.4	22.2	330.2
in.	10"	17.5	1.88	12.75	12.62	10.75	4.62	1/2	16	1.12	1	15.25
mm.	¡¡	444.5	47.8	323.9	320.5	273.1	117.3	12.7	¡¡	28.4	25.4	387.4
in.	12"	20.5	2	15	14.75	12.75	5.12	1/2	16	1.25	1 1/8	17.75
mm.	¡¡	520.7	50.8	381	374.7	323.9	130	12.7	¡¡	31.8	28.6	450.9
in.	14"	23	2.12	16.25	16.75	14	5.62	1/2	20	1.25	1 1/8	20.25
mm.	¡¡	584.2	53.8	412.8	425.5	355.6	142.7	12.7	¡¡	31.8	28.6	514.4
in.	16"	25.5	2.25	18.5	19	16	5.75	1/2	20	1.38	1 1/4	22.5
mm.	¡¡	647.7	57.2	469.9	482.6	406.4	146.1	12.7	¡¡	35.1	31.8	571.5
in.	18"	28	2.38	21	21	18	6.25	1/2	24	1.38	1 1/4	24.75
mm.	¡¡	711.2	60.5	533.4	533.4	457.2	158.8	12.7	¡¡	35.1	31.8	628.7
in.	20"	30.5	2.5	23	23.12	20	6.38	1/2	24	1.38	1 1/4	27
mm.	¡¡	774.7	63.5	584.2	587.2	508	162.1	12.7	¡¡	35.1	31.8	685.8
in.	24"	36	2.75	27.25	27.62	24	6.62	1/2	24	1.62	1 1/2	32
mm.	¡¡	914.4	69.9	692.2	701.5	609.6	168.1	12.7	¡¡	41.1	38.1	812.8

Drawing of BS

Flanges 1/2" to 24" and up to 450 lbs to BS10 Table D & Table E, BS Table F & Table H, BS Table J & Table K. We can also manufacture in different shapes and sizes depending upon your purpose.

BS 4504 SECTION 3.1 1989 NP10 Code (101) Slip- on / NP10 Code (105)Blind

Nom Bore	Outside Dia	Bore	Thickness (101)	Thickness (105)	Drilling	PCD	Raised Dia	Pace Height
80	200	90.5	20	20	8-18mm	160	138	3
100	220	116.0	22	20	8-18mm	180	158	3
125	250	141.5	22	22	8-18mm	210	188	3
150	285	167.0	24	22	8-22mm	240	212	3
200	340	221.5	24	24	8-22mm	295	268	3
250	395	276.5	26	26	12-22mm	350	320	3
300	445	327.5	26	26	12-22mm	400	370	4
350	505	359.5	28	26	16-22mm	460	430	4
400	565	411.0	32	26	16-28mm	515	482	4
450	615	462.0	36	28	20-28mm	565	532	4
500	670	513.5	38	28	20-28mm	620	585	4
600	780	616.5	42	34	20-32mm	725	685	5
700	895	715.0	46	38	24-32mm	840	800	5
800	1050	816.0	52	42	24-35mm	950	905	5
900	1015	918.0	56	46	28-35mm	1050	1005	5
1000	1230	1020.0	62	52	28-38mm	1160	1110	5
1200	1455	1224.0	74	60	32-41mm	1380	1330	5
1400	1675	1424.0	86	-	36-44mm	1590	1535	5

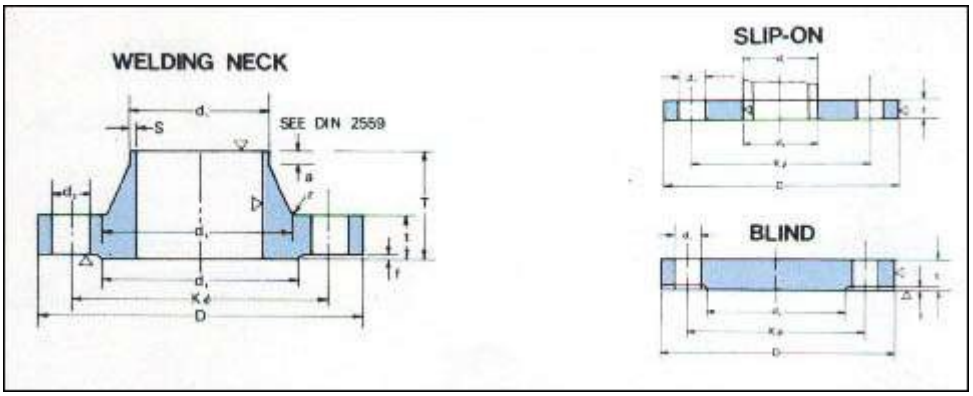
BS 4504 SECTION 3.1 1989 NP25 Code (101) Slip- on / NP25 Code (105)Blind

Nom Bore	Outside Dia	Bore	Thickness (101)	Thickness (105)	Drilling	PCD	Raised Dia	Pace Height
15	95	22.0	14	16	4-14mm	65	45	2
20	105	27.5	16	18	4-14mm	75	58	2
25	115	34.5	16	18	4-14mm	85	68	2
32	140	43.5	18	18	4-18mm	100	78	2
40	150	49.5	18	18	4-18mm	110	88	3
50	165	61.5	20	20	4-18mm	125	102	3
65	185	77.5	22	22	8-18mm	145	122	3
80	200	90.5	24	24	8-18mm	160	138	3
100	235	116.0	26	24	8-22mm	190	162	3
125	270	141.5	28	26	8-26mm	220	188	3
150	300	170.5	30	28	8-26mm	250	218	3
200	360	221.5	32	30	12-26mm	310	278	3
250	425	276.5	35	32	12-30mm	370	335	3
300	485	327.5	38	34	16-30mm	430	395	4
350	555	359.5	42	38	16-33mm	490	450	4
400	620	411.0	46	40	16-36mm	550	505	4
450	670	462.0	50	44	20-36mm	600	555	4
500	730	513.5	56	45	20-36mm	660	615	4
600	845	616.5	68	54	20-39mm	770	720	5

Drawing of DIN

Flange blind, slip on, welding neck from 6 Bar to 40 Bar in accordance with DIN. We can also manufacture in different shapes and sizes depending upon your purpose.

6 BAR
DIN 2573 SLIP-ON FLANGES
DIN 2527 BLAND FLANGES
DIN 2631 WELDING NECK FLANGES



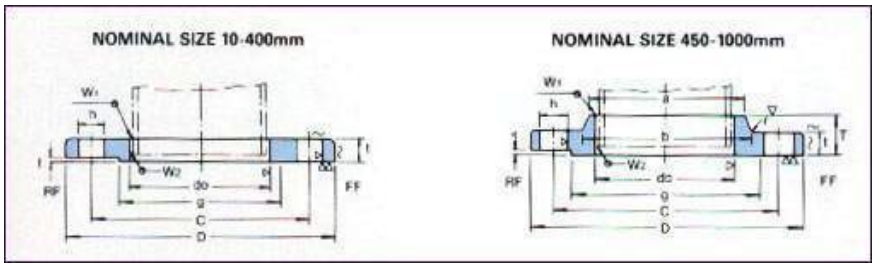
Unit mm

Bore		Common Dimension						Hub				Raised Face		Drlling				Approx Weight(kg)	
Nominal Bore	d1	D	t			K	T	d3	s	r	a	d4	f	Number of Bolt	x		d2	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	0.329
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	(1/2")	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	(1/2")	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	(1/2")	14	1.53	1.34
65	76.1*)	160	14	16	14	130	38	88	2.9	6	9	110	3	4	M12	(1/2")	14	1.89	1.67
80	88.9*)	190	16	18	16	150	42	102	3.2	8	10	128	3	4	M16	(1/2")	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	(5/8")	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	(5/8")	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	(5/8")	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	(5/8")	18	7.15	7.78
250	267 273*)	375	22	24	22	335	60	282 290	6.2	12	15	312	3	12	M16	(5/8")	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	(3/4")	23	12.6	14.0
350	355.6*) 368	490	22	26	22	445	62	385	7.1	12	15	415	4	12	M20	(3/4")	23	15.6	16.1
400	406.4*) 419	540	22	28	22	495	65	438	7.1	12	15	455	4	16	M20	(3/4")	23	18.4	18.3
500	508*) 521	645	24	30	24	600	68	538	7.1	12	15	570	4	20	M20	(3/4")	23	24.5	24.6
600	609*) 622	755	24	ii	ii	705	70	640	7.1	12	16	670	5	20	M24	(7/8")	27	ii	ii
700	711.2*) 720	860	24	ii	ii	810	70	740	7.1	12	16	775	5	24	M24	(7/8")	27	ii	ii
800	812.8*) 820	975	24	ii	ii	920	70	842	7.1	12	16	880	5	24	M27	(1")	30	ii	ii
900	914.4*) 920	1075	26	ii	ii	1020	70	942	7.1	12	16	980	5	24	M27	(1")	30	ii	ii
1000	1016*) 1020	1175	26	ii	ii	1120	70	1045	7.1	16	16	1080	5	28	M27	(1")	30	ii	ii

Drawing of JIS

Flange from 2kg to 210 kg according to JIS. We can also manufacture in different shapes and sizes depending upon your purpose.

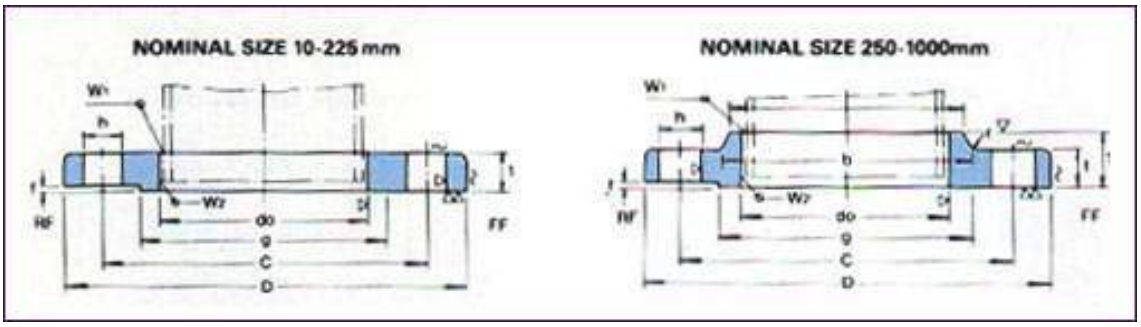
JIS/KS STANDARD FLANGES 5K KS B 1503 / JIS B2220



Unit mm

Nominal Dia. of Flange	Outside Dia. of Flange D	Sectional Dimensions of flange												Nominal Bolt Size	Welding		Weight (kg)
		Dia. of Bolt Circle C	Dia.of Raised Face g	Inside Dia.of Flange do	Outside Dia.of Applicable Pipe>	f	T	Dia.of Hub a	Dia.of Hub b	Radius r	Raised Face	Hole Dia. h	Number of Bolt Holes		W1	W2	
(10)	75	55	39	17.8	17.3	9	--	--	--	--	1	12	4	M10	5.0	2.5	0.27
15	80	60	44	22.2	21.7	9	--	--	--	--	1	12	4	M10	5.0	3.0	0.30
(20)	85	65	49	27.7	27.2	10	--	--	--	--	1	12	4	M10	5.0	3.0	0.37
25	95	75	59	34.5	34.0	10	--	--	--	--	1	12	4	M10	5.0	3.0	0.45
(32)	115	90	70	43.2	42.7	12	--	--	--	--	2	15	4	M12	6.0	3.0	0.78
40	120	95	75	49.1	48.6	12	--	--	--	--	2	15	4	M12	6.0	3.0	0.83
50	130	105	85	61.1	60.5	14	--	--	--	--	2	15	4	M12	6.0	3.0	1.07
65	155	130	110	77.1	76.3	14	--	--	--	--	2	15	4	M12	6.0	4.0	1.49
80	180	145	121	90.0	89.1	14	--	--	--	--	2	19	4	M16	6.0	4.0	1.99
(90)	190	155	131	102.6	101.6	14	--	--	--	--	2	19	4	M16	6.0	4.0	2.09
100	200	165	141	115.4	114.3	16	--	--	--	--	2	19	8	M16	7.0	4.0	2.39
125	235	200	176	141.2	139.8	16	--	--	--	--	2	19	8	M16	7.0	4.0	3.23
150	265	230	206	166.6	165.2	18	--	--	--	--	2	19	8	M16	7.0	5.0	4.41
(175)	300	260	232	192.1	190.7	18	--	--	--	--	2	23	8	M20	7.5	5.0	5.51
200	320	280	252	218.0	216.3	20	--	--	--	--	2	23	8	M20	8.5	6.0	6.33
(225)	345	305	277	243.7	241.8	20	--	--	--	--	2	23	12	M20	9.0	6.0	6.64
250	385	345	317	269.5	267.4	22	--	--	--	--	2	23	12	M20	10.0	6.0	9.45
300	430	390	360	321.0	318.5	22	--	--	--	--	3	23	12	M20	10.0	6.0	10.30
350	480	345	403	358.1	355.6	24	--	--	--	--	3	25	12	M22	12.0	7.0	14.0
400	540	495	463	409.0	406.4	24	--	--	--	--	3	25	16	M22	12.0	7.0	16.90
450	605	555	523	460.0	457.2	24	40	495	500	5	3	25	16	M22	12.0	7.0	24.8
500	655	605	573	511.0	508.0	24	40	546	552	5	3	25	20	M22	12.0	7.0	26.9
550	720	665	630	562.0	558.8	26	42	597	603	5	3	27	20	M24	12.0	7.0	34.1
600	770	715	680	613.0	609.6	26	44	648	654	5	3	27	20	M24	12.0	7.0	37.5
650	825	770	735	664.0	660.4	26	48	702	708	5	3	27	24	M24	12.0	7.0	42.8
700	875	820	785	715.0	711.2	26	48	751	758	5	3	27	24	M24	12.0	7.0	45.4
750	945	880	840	776.0	762.0	28	52	802	810	5	3	33	24	M30	12.0	7.0	57.4
800	995	930	890	817.0	812.8	28	52	854	862	5	3	33	24	M30	13.0	8.0	60.8
850	1045	980	940	868.0	863.6	28	54	904	912	5	3	33	24	M30	13.0	8.0	63.5
900	1095	1030	990	919.0	914.4	30	56	956	964	5	3	33	24	M30	13.0	8.0	75.3
1000	1195	1130	1090	1021.0	1016.0	32	60	1058	1066-	5	3	33	28	M30	14.0	9.0	88.5
*(1100)	1305	1240	1200	1123.0	1117.6	32	--	--	--	--	3	33	28	M30			
*1200	1420	1350	1305	1225.0	1219.2	34	--	--	--	--	3	33	32	M30	ii	ii	ii
*1350	1575	1505	1460	--	1371.6	34	--	--	--	--	3	33	32	M30			
*1500	1730	1660	1615	--	1524.0	36	--	--	--	--	3	33	36	M30	ii	ii	ii

10K KS B1503 / JIS B2220

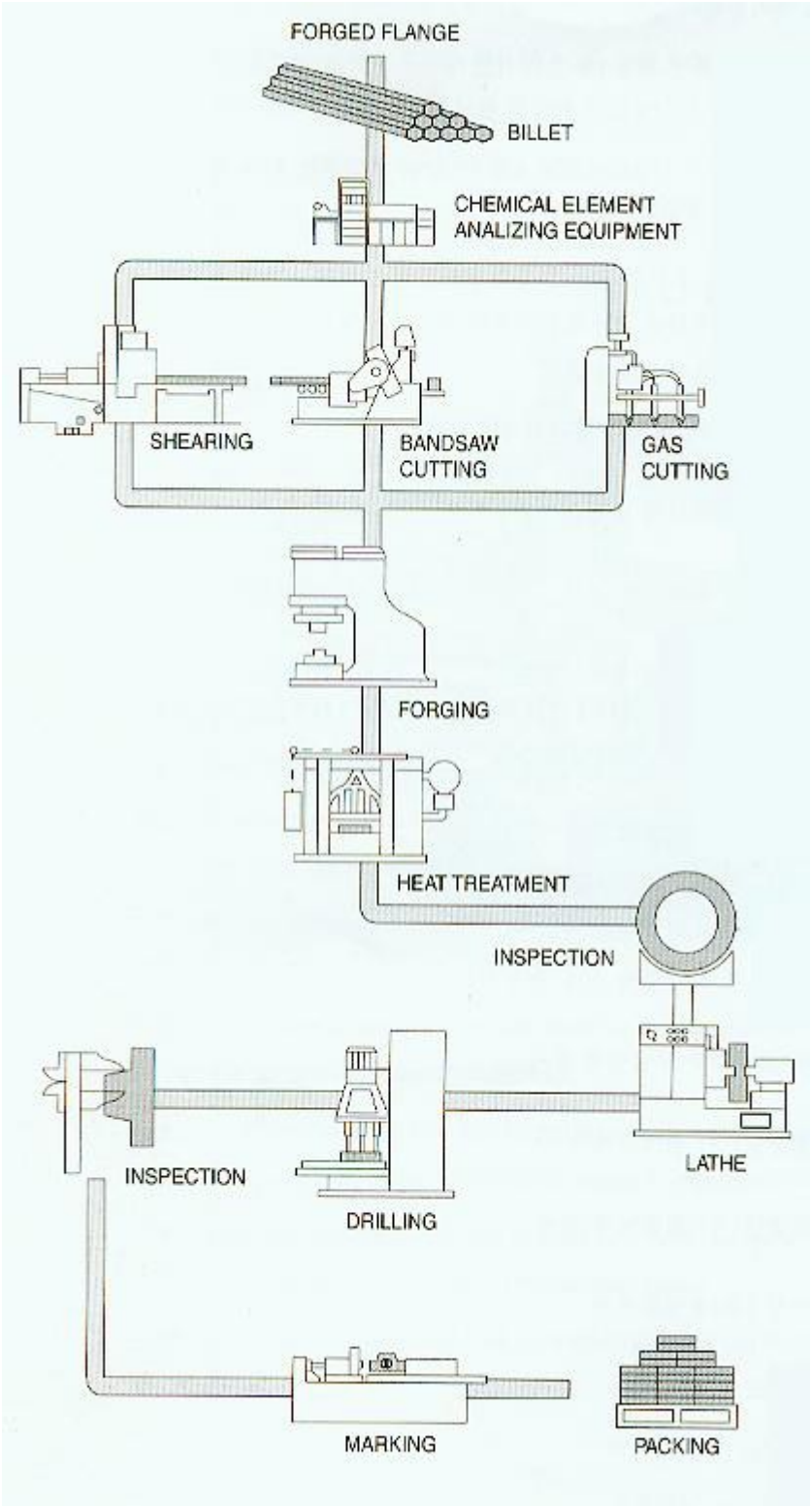


Unit mm

Nominal Dia. of Flange	Outside Dia. of Flange D	Sectional Dimensions of flange												Nominal Bolt Size	Welding		Weight (kg)
		Dia. of Bolt Circle C	Dia.of Raised Face g	Inside Dia.of Flange do	Outside Dia.of Applicable Pipe	f	T	Dia.of Hub a	Dia.of Hub b	Radius r	Raised Face	Hole Dia. h	Number of Bolt Holes		W1	W2	
10	90	65	46	17.8	17.3	12	--	--	--	--	1	15	4	M12	5	2.5	0.52
15	95	70	51	22.2	21.7	12	--	--	--	--	1	15	4	M12	5	3	0.57
20	100	75	56	27.7	27.2	14	--	--	--	--	1	15	4	M12	5	3	0.73
25	125	90	67	34.5	34	14	--	--	--	--	1	19	4	M16	5	3	1.13
32	135	100	76	43.2	42.7	16	--	--	--	--	2	19	4	M16	6	3	1.48
50	140	105	81	49.1	48.6	--	--	--	--	--	2	19	4	M12	6	3	1.56
50	155	120	96	61.1	60.5	16	--	--	--	--	2	19	4	M12	6	3	1.88
65	175	140	116	77.1	76.3	18	--	--	--	--	2	19	4	M12	6.5	4	2.6
80	185	150	126	90	89.1	18	--	--	--	--	2	19	8	M12	6.5	4	2.61
(90)	195	160	136	102.6	101.6	18	--	--	--	--	2	19	8	M12	6.5	4	2.76
100	210	175	151	115.4	114	18	--	--	--	--	2	19	8	M12	7	4	3.14
125	250	210	182	141.2	139.8	20	--	--	--	--	2	23	8	M20	7.5	4	4.77
150	280	240	212	166.6	165.2	22	--	--	--	--	2	23	8	M20	8	5	6.34
(175)	305	265	237	192.1	190.7	22	--	--	--	--	2	23	12	M20	9	5	6.82
200	330	290	262	218	216.3	22	--	--	--	--	2	23	12	M20	9	6	7.53
(225)	350	310	282	243.7	241.8	22	-	-	-	-	2	23	12	M20	9	6	7.74
250	400	355	324	269.5	267.4	24	36	288	292	6	2	25	12	M22	10	6	12.7
300	445	400	368	321	318.5	24	38	340	346	6	3	25	16	M22	10	6	13.8
350	490	445	413	358.1	355.6	26	42	380	386	6	3	25	16	M22	12	7	18.2
400	560	510	475	409	406.4	28	44	436	442	6	3	27	16	M24	12	7	25.2
450	620	565	530	460	457.2	30	48	496	502	6	3	27	20	M24	14	8	33
500	675	620	585	511	508	30	48	548	554	6	3	27	20	M24	14	8	37.6
550	745	680	640	562	558.8	32	52	604	610	6	3	33	20	M30	15	9	49.7
600	795	730	690	613	609.6	32	52	656	662	6	3	33	24	M30	16	10	52.6
650	845	780	740	664	660.4	34	56	706	712	6	3	33	24	M30	16	10	60.6
700	905	840	800	715	711.2	345	58	762	770	6	3	33	24	M30	17	10	70.6
750	970	900	855	766	762	36	62	816	824	6	3	33	24	M30	18	11	85.8
800	1020	950	905	817	812.8	36	64	868	876	6	3	33	28	M30	19	12	91.2
850	1070	1000	955	868	863.6	36	66	920	928	6	3	33	28	M30	19	12	98.6
900	1120	1050	1005	919	914.4	38	70	971	979	6	3	33	28	M30	22	14	109
1000	1235	1160	1110	1021	1016	40	74-	1073-	1081	6	3	39	28	M36	22	14	133
*(1100)	1345	1270	1220	1123	1117.6	42	-	-	--	--	3	39	28	M36			
*1200	1465	1380	1325	1225	1219.2	44	--	--	--	--	3	39	32	M36	ii	ii	ii
*1350	1630	1540	1480	--	1371.6	48	--	--	--	--	3	45	36	M42			
(1500)	1795	1700	1635	--	1524.0	50	--	--	--	--	3	45	40	M42	ii	ii	ii

Forged Flanges

Forged flanges manufactured by our company contain Blind, Slip on, Welding neck, Socket welding, Thread and Lap joint flanges according to ANSI, DIN, JIS, China GB/T and BS standards. Non-standard flanges are also manufactured according to our customer's drawings. Following is the process to manufacture forged flanges:



Welding neck Flanges

These are the most common type of flange used for high pressure applications. They are recognized by their long tapered hub. The hub provides an important reinforcement to the flange itself and acts to reduce rotation of the flange at bolt-up. The smooth transition between the flange and the hub combined with the strength of the butt weld joint, allows the flange to be used in extreme conditions of cyclic loading, bending and temperature fluctuations

- Size: 1/2"-60"
- Design Standard: ANSI, JIS, DIN, BS
- Material: Carbon Steel (ASTM A105, Q235, 20Mn)
  Stainless Steel (ASTM A182 F304/304L, F316/316L,F321)
  Alloy Steel (ASTM A182F1, F2, F5/A, F6/A, F9, F11, F12, F22, F91)
- Normal Pressure: CLASS 150, CLASS 300, CLASS 600, CLASS 900,CLASS 1500, CLASS 2500, CLASS 3000
- Face Type: F.F., R.F., R.T.J., M.F., T.G.

Slip-On Flanges

Slip-On Flanges are ideal for lower pressure applications. Their ease of fitting and welding reduces fabrication costs. Less time needs to be spent ensuring the accuracy of the cut pipe and they are somewhat easier to align. They do not have as much strength as a welding neck flange and are not available in higher pressure ratings and diameters.

- Size: 1/2"-60"
- Design Standard: ANSI, JIS, DIN, BS
- Material: Carbon Steel (ASTM A105, Q235, 20Mn)
  Stainless Steel (ASTM A182 F304/304L, F316/316L, F321)
  Alloy Steel (ASTM A182F1, F2, F5/A, F6/A, F9, F11, F12, F22, F91)
- Normal Pressure: CLASS 150, CLASS 300, CLASS 600, CLASS 900,CLASS 1500, CLASS 2500, CLASS 3000
- Face Type: F.F., R.F., R.T.J.

Lap Joint Flanges

Lap Joint Flanges must be used with their associated stub end. The stub is welded to the pipe and the Lap Joint then works as a backing ring. The main advantage of this type of flange is that the bolt holes can be aligned with the matching flange after the welds have been completed. A Lap Joint Flange is not suitable for areas with high external or dynamic loads. A Swivel Ring Flange should be used for this type of application.

- Size: 1/2"-60"
- Design Standard: ANSI, JIS, DIN, BS
- Material: Carbon Steel (ASTM A105, Q235, 20Mn)
  Stainless Steel (ASTM A182 F304/304L, F316/316L, F321)
  Alloy Steel (ASTM A182F1, F2, F5/A, F6/A, F9, F11, F12, F22, F91)
- Normal Pressure: CLASS 150, CLASS 300, CLASS 600, CLASS 900,CLASS 1500, CLASS 2500, CLASS 3000
- Face Type: F.F., R.F., R.T.J.,M.F.,T.G.

Threaded Flanges

Threaded Flanges can be fitted to the pipe without welding, though a seal weld can sometimes be used. They are suitable for small diameter high pressure services. At larger diameters, the difficulty in machining the thread on to both the flange and pipe makes them unviable. They are also not suitable for areas having high external loads, particularly torsion.

- Size: 1/2”-60”
- Design Standard: ANSI, JIS, DIN, BS
- Material: Carbon Steel (ASTM A105, Q235, 20Mn)
  Stainless Steel (ASTM A182 F304/304L, F316/316L, F321)
  Alloy Steel (ASTM A182F1, F2, F5/A, F6/A, F9, F11, F12, F22, F91)
- Normal Pressure: CLASS 150, CLASS 300, CLASS 600, CLASS 900,CLASS 1500, CLASS 2500, CLASS 3000
- Face Type: F.F., R.F., R.T.J. ,M.F.,T.G.

Blind Flanges

Blind Flanges are used to blank off the ends of pipe, valves and pressure vessel openings. They may often be supplied with NPT fittings to allow pressure test connections to be fitted.

- Size: 1/2”-60”
- Design Standard: ANSI, JIS, DIN, BS
- Material: Carbon Steel (ASTM A105, Q235, 20Mn)
  Stainless Steel (ASTM A182 F304/304L, F316/316L,F321)
  Alloy Steel (ASTM A182F1, F2, F5/A, F6/A, F9, F11, F12, F22, F91)
- Normal Pressure: CLASS 150, CLASS 300, CLASS 600, CLASS 900,CLASS 1500, CLASS 2500, CLASS 3000
- Face Type: F.F., R.F., R.T.J.

Orifice Flanges

Orifice Flanges are used with orifice meters to measure the flow rate of liquids and gases in a pipeline. They are similar to Welding neck, Slip-On and Screwed Flanges, except that they are modified to hold orifice plate carriers and have radial taped holes for the fitting of meter connections.

- Size: 1/2”-60”
- Design Standard: ANSI, JIS, DIN, BS
- Material: Carbon Steel (ASTM A105, Q235, 20Mn)
  Stainless Steel (ASTM A182 F304/304L, F316/316L, F321)
  Alloy Steel (ASTM A182F1, F2, F5/A, F6/A, F9, F11, F12, F22, F91)
- Normal Pressure: CLASS 150, CLASS 300, CLASS 600, CLASS 900,CLASS 1500, CLASS 2500, CLASS 3000
- Face Type: F.F., R.F., R.T.J.

Blind flange Slip on Flange Welding Neck Thread Flange Lap Joint Flange Socket Welding

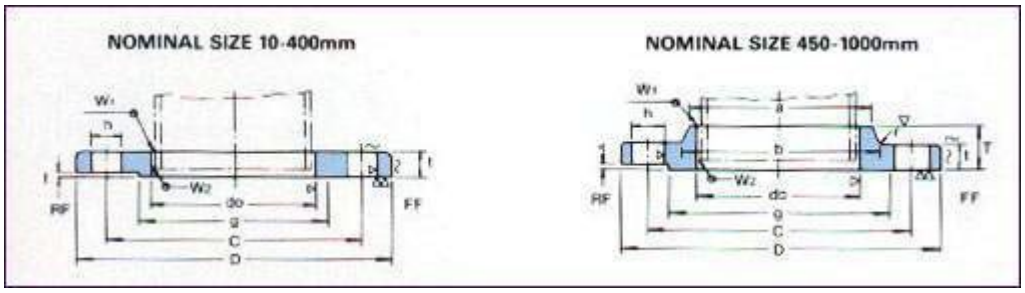
C/ Marzo, 9
02002 Albacete (Spain)
tel:+(34) 967 221 602
fax:+(34) 967 223 369
info@gestiondecompras.com
www.gestiondecompras.com

Steel plate flanges

We can supply steel plate flanges from 15mm to 2000mm.SS400 steel plate is adopted as materids ,This kind of flange can be available as follows.

JIS	2K,5K,10K,16K,20K,40K,63K
ANSI	150LB 300LB 600LB 900LB 1500LB 2500LB
API	150LB 300LB 600LB 900LB 1500LB 2500LB
MSS	150LB 300LB 600LB 900LB 1500LB 2500LB
DIN	2573 2526 2527 2633 2635 2637 86030
BSIO	TABLE D TABLE E TABLE F TABLE H
BS4504	PN2.5 PN6 PN10 PN16 PN25 PN40
AS2129	TABLE D TABLE E TABLE F TABLE H

5K KS B 1503 / JIS B2220



Unit mm

Nominal Dia. of Flange	Outside Dia. of Flange D	Sectional Dimensions of flange												Welding		Weight (kg)
		Dia. of Bolt Circle C	Dia.of Raised Face g	Inside Dia.of Flange do	Outside Dia.of Applicable Pipe	f	T	Dia.of Hub a	Dia.of Hub b	Radius r	Raised Face	Hole Dia. h	Number of Bolt Holes	Nominal Bolt Size	W1	W2	
(10)	75	55	39	17.8	17.3	9	--	--	--	--	1	12	4	M10	5.0	2.5	0.27
15	80	60	44	22.2	21.7	9	--	--	--	--	1	12	4	M10	5.0	3.0	0.30
(20)	85	65	49	27.7	27.2	10	--	--	--	--	1	12	4	M10	5.0	3.0	0.37
25	95	75	59	34.5	34.0	10	--	--	--	--	1	12	4	M10	5.0	3.0	0.45
(32)	115	90	70	43.2	42.7	12	--	--	--	--	2	15	4	M12	6.0	3.0	0.78
40	120	95	75	49.1	48.6	12	--	--	--	--	2	15	4	M12	6.0	3.0	0.83
50	130	105	85	61.1	60.5	14	--	--	--	--	2	15	4	M12	6.0	3.0	1.07
65	155	130	110	77.1	76.3	14	--	--	--	--	2	15	4	M12	6.0	4.0	1.49
80	180	145	121	90.0	89.1	14	--	--	--	--	2	19	4	M16	6.0	4.0	1.99
(90)	190	155	131	102.6	101.6	14	--	--	--	--	2	19	4	M16	6.0	4.0	2.09
100	200	165	141	115.4	114.3	16	--	--	--	--	2	19	8	M16	7.0	4.0	2.39
125	235	200	176	141.2	139.8	16	--	--	--	--	2	19	8	M16	7.0	4.0	3.23
150	265	230	206	166.6	165.2	18	--	--	--	--	2	19	8	M16	7.0	5.0	4.41
(175)	300	260	232	192.1	190.7	18	--	--	--	--	2	23	8	M20	7.5	5.0	5.51
200	320	280	252	218.0	216.3	20	--	--	--	--	2	23	8	M20	8.5	6.0	6.33
(225)	345	305	277	243.7	241.8	20	--	--	--	--	2	23	12	M20	9.0	6.0	6.64
250	385	345	317	269.5	267.4	22	--	--	--	--	2	23	12	M20	10.0	6.0	9.45
300	430	390	360	321.0	318.5	22	--	--	--	--	3	23	12	M20	10.0	6.0	10.30
350	480	345	403	358.1	355.6	24	--	--	--	--	3	25	12	M22	12.0	7.0	14.0
400	540	495	463	409.0	406.4	24	--	--	--	--	3	25	16	M22	12.0	7.0	16.90
450	605	555	523	460.0	457.2	24	40	495	500	5	3	25	16	M22	12.0	7.0	24.8
500	655	605	573	511.0	508.0	24	40	546	552	5	3	25	20	M22	12.0	7.0	26.9
550	720	665	630	562.0	558.8	26	42	597	603	5	3	27	20	M24	12.0	7.0	34.1
600	770	715	680	613.0	609.6	26	44	648	654	5	3	27	20	M24	12.0	7.0	37.5
650	825	770	735	664.0	660.4	26	48	702	708	5	3	27	24	M24	12.0	7.0	42.8

700	875	820	785	715.0	711.2	26	48	751	758	5	3	27	24	M24	12.0	7.0	45.4
750	945	880	840	776.0	762.0	28	52	802	810	5	3	33	24	M30	12.0	7.0	57.4
800	995	930	890	817.0	812.8	28	52	854	862	5	3	33	24	M30	13.0	8.0	60.8
850	1045	980	940	868.0	863.6	28	54	904	912	5	3	33	24	M30	13.0	8.0	63.5
900	1095	1030	990	919.0	914.4	30	56	956	964	5	3	33	24	M30	13.0	8.0	75.3
1000	1195	1130	1090	1021.0	1016.0	32	60	1058	1066-	5	3	33	28	M30	14.0	9.0	88.5
*(1100)	1305	1240	1200	1123.0	1117.6	3[illegible]	--	--	--	--	3	33	28	M30			
*1200	1420	1350	1305	1225.0	1219.2	3[illegible]	--	--	--	--	3	33	2	M30	ii	ii	ii
*1350	1575	1505	1460	--	1371.6	34	--	--	--	--	3	33	32	M30			
*1500	1730	1660	1615	--	1524.0	36	--	--	--	--	3	33	36	M30			