



 A 105N - SA 105N 26 AH
C 21 - BF 48N



FLANGES
BRIDAS
ANSI

FITTINGS
ACCESORIOS

 **ULMA**

FLANGES
BRIDAS
ANSI



FITTINGS
ACCESORIOS



ULMA

Forging

PRESENTATION PRESENTACION





Situated in Oñati (Spain) ULMA Forging is a company which specializes in the manufacture and marketing of Accessories for Pipes according to ASME-ANSI standards. It offers both its customers and hence the end-purchasers of its products an excellent service which is always at the level of customer requirements.

Together with other companies involved in other activities (such as construction, packaging and warehousing) it is part of the ULMA group. It is a business group with 1.100 employees and a turnover of 160 millions dollars.

Its renowned international prestige as a supplier allows ULMA Forging to take a global outlook towards its natural market. In fact 60% of its sales are exported outside the European Community.

ULMA Forging has received company homologation from LLOYD'S REGISTER QUALITY ASSURANCE, LTD. under standard no. ISO 9002.

The international position which ULMA has reached and its constant growth based upon values such as a reliability and service set the scene for its future size and development.

Ubicada en Oñati (Gipuzkoa), ULMA Forja es una empresa especializada en la fabricación y comercialización de Accesorios para Tubería según normas ASME-ANSI. Se caracteriza por ofrecer al distribuidor y usuario final un exigente nivel de servicio, siempre a la altura que requiere la demanda.

Forma parte, junto a otros negocios y actividades (Construcción, Envase y Embalaje y Manutención), del Grupo ULMA. Grupo empresarial que cuenta con 1.100 personas y un volumen de negocio de 22.700 millones de pesetas.

Su reconocido prestigio internacional como suministrador le permite contemplar su mercado natural con una proyección global. De hecho, sitúa el 60% de sus ventas fuera de la Comunidad Europea.

La calidad contrastada de los productos de ULMA Forja le ha posibilitado acceder a la homologación de empresa bajo norma ISO 9002 de manos de LLOYD'S REGISTER QUALITY ASSURANCE, LTD.

La posición internacional alcanzada por ULMA Forja y su crecimiento sostenido, basado en valores como la Fiabilidad y el Servicio, determinan su dimensión y desarrollo futuros.

TOTAL QUALITY CALIDAD TOTAL





ULMMA Forging's commitment to total quality has given the company direction and has involved the whole organization in a fundamental task involving processes of improvement and quality assurance.

Its constant and permanent development towards total quality, including concepts such as Quality Management and Control means that ULMA is amongst the world leaders in its sector.

The homologation of our main end-clients such as EXXON, ESSO, SHELL, BP, DOW CHEMICAL, ICI, REPSOL, GULF, ARANCO, P.D.V.S.A., PEMEX, YPF, etc. and our official certificates: TÜV, STOOMWEZEN, LLOYD'S, etc. confirm the quality and reliability of ULMA Forging products.

The introduction of a Quality Assurance System and the fact that we are included within the Register of homologated Companies, under standard ISO n°. 9002 guarantees the controlled development of all stages of the production process and the quality of the products we manufacture. Products which are subjected to periodical and rigorous inspection by the most competent international bodies.

La decidida apuesta de ULMA Forja por la Calidad Total, orientando e involucrando a toda la organización se resuelve como tarea fundamental para acometer procesos de mejora y aseguramiento.

La constante y permanente evolución hacia la Calidad Total, integrando conceptos como Gestión y Control de la Calidad, posicionan a ULMA Forja entre los líderes mundiales del sector.

Las homologaciones de los principales usuarios finales; EXXON, ESSO, SHELL, BP, DOW CHEMICAL, ICI, REPSOL, GULF, ARANCO, P.D.V.S.A., PEMEX, YPF, etc., y las certificaciones oficiales; TÜV, STOOMWEZEN, LLOYD'S, etc., confirman la calidad y la fiabilidad de los productos de ULMA Forja.

La implantación de un Sistema de Aseguramiento de la Calidad y la consecución del Registro de Empresa homologada bajo norma ISO 9002, garantizan el desarrollo controlado de todas las fases del proceso productivo y acreditan la calidad de los productos ofrecidos. Productos que, por otra parte, están sometidos a periódicas y rigurosas auditorias de los organismos internacionales más competentes.

FACILITIES PRODUCTION MEDIOS PRODUCTIVOS



The appliance of the most advanced technology in our manufacturing process allows ULMA Forging to generate great production capacity and thus strengthen its industrial competitiveness.

ULMA Forging has a forging capacity of over 50,000 tons per year. Its main advantage in this competitive world is a plant where we can develop multi-stage forging processes with automatic transfer and CNC machines, stations with complete finishing of the process in one unit per center.

La aplicación de las más avanzadas tecnologías en el proceso de fabricación permite a ULMA Forja generar grandes capacidades productivas que refuerzan su competitividad industrial.

ULMA Forja ofrece una capacidad instalada de forja superior a 50.000 Tm. por año. Cuenta, como principales bases competitivas, con instalaciones que desarrollan procesos de forja multi-estación con transferencia automática y con estaciones de mecanizado de CN con criterios de acabado integral del proceso en una unidad por centro.



SERVICE QUALITY CALIDAD DE SERVICIO



This point, which is of vital importance for ULMA Forging, is obtained by compiling all the areas mentioned previously, together with the strict supervision of the following aspects:

- The search for customer satisfaction through the product which is being supplied.
- Product reliability is always backed up by the corresponding Quality Certificate.
- Collaboration with both customers and distributors. ULMA Forging analyzes needs jointly with its clients, and adapts its manufacturing process in accordance with the specifications which its clients require.
- Flexibility in its reply capacity and a commitment to always making its products on time. In this way neither clients nor end-product users lose time and savings are made in delivery times.

Este punto, de vital importancia para ULMA Forja, se obtiene de la compilación de todos los apartados anteriormente expuestos y de la aplicación rigurosa de los siguientes aspectos:

- Búsqueda de la satisfacción del cliente a través del producto ofrecido.
- Fiabilidad que requieren las prestaciones del producto, siempre acompañado del correspondiente Certificado de Calidad.
- Colaboración con clientes y distribuidores. ULMA Forja analiza las necesidades de los clientes, conjuntamente con ellos, y adapta la fabricación en función de las especificaciones que demanden.
- Agilidad en la respuesta y compromiso en el cumplimiento de plazos. De esta manera, se evitan las pérdidas de tiempo a los clientes y usuarios finales y se logra el consiguiente ahorro en la recepción del pedido.

BUSINESS PROJECTION PROYECCION EMPRESARIAL



- ULMA Venezolana
- ULMA USA



The business projection ULMA Forging as a European company specialized in the energy sector keeps a vocation of internationalization.

Its international "quality label" and its global projection through its distributors is ULMA's symbol of reliability and safety.

ULMA Forging reaches the core centres of the sector: Houston, Calgary, Singapore, Rotterdam, etc., as well as Germany, Saudi Arabia, Argentina, Australia, USA, The Arab Emirates, France, Great Britain, Kuwait, Canada, Morocco, Mexico, Portugal, Venezuela and so on.

La proyección empresarial de ULMA Forja, como empresa europea especializada en el sector energético, mantiene una clara vocación de internacionalización.

Su "sello de calidad", reconocido internacionalmente, y proyectado a los cinco continentes a través de sus distribuidores, es su máximo exponente de fiabilidad y seguridad.

ULMA Forja alcanza los centros neurálgicos más importantes del sector; Houston, Calgary, Singapur, Rotterdam, etc., además de llegar a países como Alemania, Arabia Saudí, Argentina, Australia, EEUU, Emiratos Árabes, Francia, Inglaterra, Kuwait, Canadá, Marruecos, México, Portugal, Venezuela...



FLANGES BRIDAS ANSI





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MATERIALS SPECIFICATION

ESPECIFICACION DE MATERIALES

MATERIAL	MECHANICAL PROPERTIES PROPIEDADES MECANICAS					CHEMICAL COMPOSITION COMPOSICION QUIMICA											
	Strength Tensile MPa	Strength Yield MPa	Elongation % min	Area Reduction % min	Impact Test Energy Joules	C	Mn	Si	S	P	Cr	Ni	Mo	Ti	Cu	V	Nb
A-105	485 min	250 min	22 min	30 min	—	0.25 max	0.55-1.05	0.10-0.35	0.050 max	0.040 max	0.30 max	0.40 max	0.12 max	—	0.40 max	0.05 max	0.02 max
C-21	485-630 min	250 min	20 min	40 min	21 min	0.18-0.25	0.80-1.20	0.15-0.35	0.030 max	0.035 max	—	—	—	—	—	—	—
BF48	475-600 min	235 min	25 min	—	—	0.22 max	0.70-1.20	0.15-0.30	0.035 max	0.030 max	—	1.40 max	—	—	—	—	—
UNE 362048	480-630 min	250 min	25 min	45 min	40 min	0.18-0.25	0.40-1.10	0.15-0.35	0.030 max	0.025 max	0.30 max	—	—	—	—	—	—
A350 LF 2	485-655 min	280 min	22 min	30 min	20 min	0.30 max	1.35 max	0.15-0.30	0.040 max	0.035 max	0.30 max	0.40 max	0.13 max	—	0.40 max	0.05 max	0.02 max
A350 LF 3	485-655 min	280 min	22 min	30 min	20 min	0.30 max	0.90 max	0.20-0.35	0.040 max	0.035 max	0.30 max	1.25-3.75 max	0.12 max	—	0.40 max	0.05 max	0.02 max
A182 F 1	485 min	275 min	20 min	30 min	—	0.28 max	0.80-0.90	0.15-0.25	0.045 max	0.045 max	—	—	0.44-0.65 max	—	—	—	—
A182 F 5	485 min	275 min	20 min	35 min	—	0.15 max	0.30-0.60	0.50 max	0.030 max	0.030 max	0.5-6.0 max	0.50 max	0.44-0.65 max	—	—	—	—
A182 F 6	485 min	275 min	18 min	35 min	—	0.15 max	1.0 max	1.0 max	0.030 max	0.040 max	11.5-13.5 max	0.50 max	—	—	—	—	—
A182 F 9	505 min	380 min	20 min	40 min	—	0.15 max	0.30-0.60	0.50-1.0 max	0.030 max	0.030 max	8.0-11.0 max	—	0.44-0.65 max	—	—	—	—
A182 F 11	485 min	275 min	20 min	30 min	—	0.10-0.20 max	0.30-0.80	0.50-1.0 max	0.040 max	0.040 max	1.5-1.5 max	—	0.44-0.65 max	—	—	—	—
A182 F 22	515 min	310 min	20 min	30 min	—	0.05-0.15 max	0.30-0.60	0.50 max	0.040 max	0.040 max	2.0-2.5 max	—	0.07-1.12 max	—	—	—	—
A182 F 304	515 min	205 min	38 min	50 min	—	0.08 max	2.0 max	1.0 max	0.030 max	0.040 max	18.0-20.0 max	8.0-11.0 max	—	—	—	—	—
A182 F 304 L	485 min	170 min	38 min	50 min	—	0.035 max	2.0 max	1.0 max	0.030 max	0.040 max	18.0-20.0 max	8.0-11.0 max	—	—	—	—	—
A182 F 316	515 min	205 min	38 min	50 min	—	0.08 max	2.0 max	1.0 max	0.030 max	0.040 max	10.0-18.0 max	10.0-14.0 max	2.0-3.0 max	—	—	—	—
A182 F 316 L	485 min	170 min	38 min	50 min	—	0.035 max	2.0 max	1.0 max	0.030 max	0.040 max	10.0-18.0 max	10.0-14.0 max	2.0-3.0 max	—	—	—	—
A182 F 321	515 min	205 min	38 min	50 min	—	0.08 max	2.0 max	1.0 max	0.030 max	0.040 max	17.0 max	9.0-12.0 max	—	> 0.10 max	—	—	—

MATERIALS SPECIFICATION

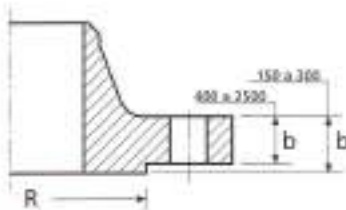
ESPECIFICACION DE MATERIALES

MECHANICAL PROPERTIES PROPIEDADES MECANICAS						CHEMICAL COMPOSITION COMPOSICION QUIMICA											
MATERIAL	Strength Min. ¹ Resistencia Mínima	Strength Max. ² L. Último Yield	Elongation Min. Alargamiento %	Area Reduction Min. Reducción %	Impact Transition Temperature	C	Mn	Si	S	P	Cr	Ni	Mo	Ti	Cu	V	
A-105	485 min.	250 min.	22 min.	30 min.	—	0.25 max.	0.60-1.05	0.10-0.35	0.008 max.	0.040 max.	0.30 max.	0.40 max.	0.12 max.	—	0.40 max.	0.03 max.	
C-21	480-620	250 min.	20 min.	45 min.	31 min.	0.18-0.23	0.40-1.35	0.10-0.35	0.030 max.	0.035 max.	—	—	—	—	—	—	
8F48	470-600	255 min.	24 min.	—	—	0.25 max.	0.70-1.35	0.10-0.35	0.035 max.	0.035 max.	—	1.40 max.	—	—	—	—	
UNE 362048	480-620	250 min.	25 min.	40 min.	40 min.	0.18-0.24	0.40-1.10	0.10-0.35	0.030 max.	0.035 max.	0.20 max.	—	—	—	—	—	
A350 LF 2	485-555	260 min.	22 min.	30 min.	29 min.	0.20 max.	1.25 max.	0.10-0.30	0.040 max.	0.035 max.	0.40 max.	0.40 max.	0.12 max.	—	0.40 max.	0.03 max.	
A350 LF 3	485-555	260 min.	22 min.	35 min.	30 min.	0.20 max.	0.90 max.	0.20-0.35	0.040 max.	0.035 max.	0.50 max.	3.25-3.75	0.12 max.	—	0.40 max.	0.03 max.	
A182 F 1	485 min.	275 min.	28 min.	33 min.	—	0.20 max.	0.40-0.60	0.10-0.35	0.040 max.	0.045 max.	—	—	0.44-0.60	—	—	—	
A182 F 5	485 min.	275 min.	28 min.	35 min.	—	0.15 max.	0.30-0.60	0.50 max.	0.030 max.	0.030 max.	4.0-6.0	0.50 max.	0.44-0.65	—	—	—	
A182 F 8	485 min.	275 min.	28 min.	35 min.	—	0.15 max.	1.0 max.	1.0 max.	0.030 max.	0.040 max.	11.0-12.5	0.50 max.	—	—	—	—	
A182 F 9	505 min.	380 min.	20 min.	48 min.	—	0.15 max.	0.20-0.50	0.50-1.0	0.030 max.	0.030 max.	8.0-11.0	—	0.2-1.0	—	—	—	
A182 F 11	485 min.	275 min.	28 min.	38 min.	—	0.10-0.20	0.30-0.60	0.50-1.0	0.040 max.	0.040 max.	1.0-1.5	—	0.44-0.65	—	—	—	
A182 F 22	515 min.	310 min.	28 min.	40 min.	—	0.05-0.15	0.40-0.60	0.50 max.	0.040 max.	0.040 max.	2.0-2.5	—	0.87-1.10	—	—	—	
A182 F 304	515 min.	205 min.	38 min.	50 min.	—	0.08 max.	2.0 max.	1.0 max.	0.030 max.	0.040 max.	18.0-20.0	8.0-11.0	—	—	—	—	
A182 F 304 L	485 min.	170 min.	38 min.	50 min.	—	0.05 max.	2.0 max.	1.0 max.	0.030 max.	0.040 max.	18.0-20.0	8.0-11.0	—	—	—	—	
A182 F 316	515 min.	305 min.	30 min.	28 min.	—	0.08 max.	2.0 max.	1.0 max.	0.030 max.	0.040 max.	16.0-18.0	10.0-14.0	2.0-3.0	—	—	—	
A182 F 316 L	485 min.	170 min.	30 min.	50 min.	—	0.035 max.	2.0 max.	1.0 max.	0.030 max.	0.040 max.	16.0-18.0	10.0-15.0	2.0-3.0	—	—	—	
A182 F 321	515 min.	305 min.	30 min.	50 min.	—	0.08 max.	2.0 max.	1.0 max.	0.030 max.	0.040 max.	17.0 min.	8.0-12.0	—	> 50% C ≤ 0.70	—	—	

FLANGE FACINGS CARAS DE JUNTA

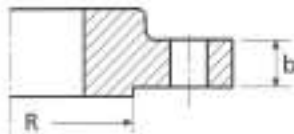
ANSI 150 - 2.500 Lb.

RAISED
FACE

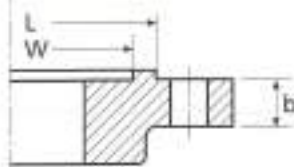


LARGUE MALE-FEMALE

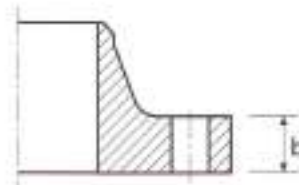
MALE



FEMALE

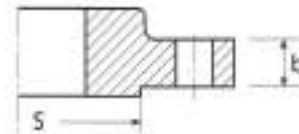


FLAT
FACE

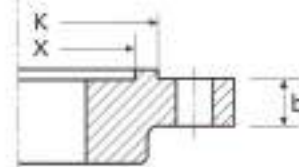


SMALL MALE-FEMALE

MALE

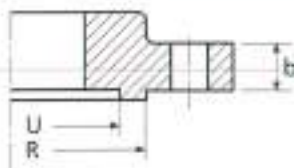


FEMALE

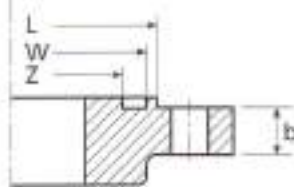


LARGUE TONGUE-GROOVE

TONGUE

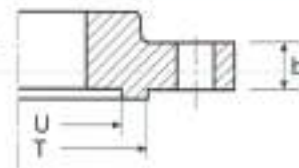


GROOVE

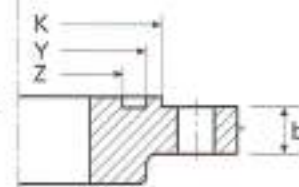


SMALL TONGUE-GROOVE

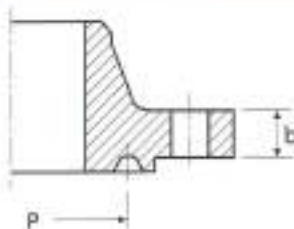
TONGUE



GROOVE

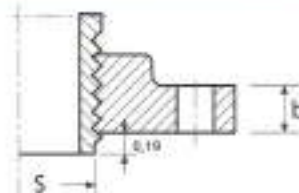


RING JOINT

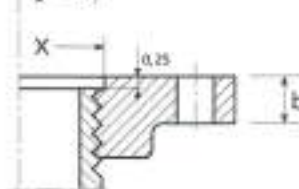


SMALL MALE-FEMALE

MALE



FEMALE



FLANGE FACINGS

CARAS DE JUNTA

ANSI 150 - 2.500 Lb.

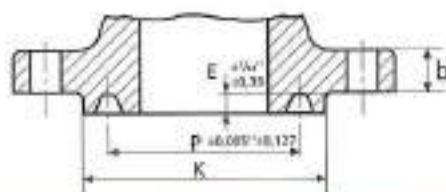
ASME/ANSI - B 16.5

Nominal pipe size Diámetro nominal	Outside diameter			Inside diameter of Large and Small Groove	Outside diameter			Inside diameter of Large and Small Groove	Hight Altura	Depth of Groove or Female Profundidad de Groove o Female	Outside diameter of raised portion	
	Diámetro exterior				Diámetro exterior						Mínimo diámetro exterior de la zona de resalte	
	Raised Face Large Male and Large Tongue	Small	Small		Large Female and Large Groove	Small	Small				Small Female and Groove	Large Female and Groove
		Male	Tongue			Female	Groove					
	R mm. inches	S mm. inches	T mm. inches	U mm. inches	W mm. inches	X mm. inches	Y mm. inches	Z mm. inches	mm. inches	mm. inches	K mm. inches	L mm. inches
1/2"	34,90 1 3/8	18,25 23/32	34,90 1 3/8	25,40 1	36,50 1 7/16	19,80 25/32	36,50 1 7/16	23,80 15/16	6,35 1/4	4,80 3/16	44,45 1 3/4	46,03 1 13/16
3/4"	42,90 1 11/16	23,80 15/16	42,90 1 11/16	33,30 1 5/16	44,40 1 3/4	25,40 1	44,40 1 3/4	31,70 1 1/4	6,35 1/4	4,80 3/16	52,38 2 1/16	53,97 2 1/8
1"	50,80 2	30,20 1 3/16	47,60 1 7/8	38,10 1 1/2	52,40 2 1/16	31,70 1 1/4	49,20 1 15/16	36,50 1 7/16	6,35 1/4	4,80 3/16	57,15 2 1/4	58,91 2 7/16
1 1/4"	63,50 2 1/2	38,10 1 1/2	57,10 2 1/4	47,60 1 7/8	65,10 2 9/16	39,70 1 9/16	58,70 2 5/16	46,00 1 13/16	6,35 1/4	4,80 3/16	66,68 2 5/8	74,61 2 15/16
1 1/2"	73,00 2 7/8	44,40 1 3/4	63,50 2 1/2	54,00 2 1/8	74,60 2 15/16	46,00 1 13/16	65,10 2 9/16	52,40 2 1/16	6,35 1/4	4,80 3/16	73,02 2 7/8	84,14 3 5/16
2"	92,10 3 5/8	57,10 2 1/4	82,50 3 1/4	73,00 2 7/8	93,70 3 11/16	58,70 2 5/16	84,10 3 5/16	71,40 2 13/16	6,35 1/4	4,80 3/16	92,08 3 5/8	103,19 4 1/16
2 1/2"	104,80 4 1/8	68,30 2 11/16	95,20 3 3/4	85,70 3 3/8	106,40 4 3/16	69,80 2 3/4	96,80 3 13/16	84,10 3 5/16	6,35 1/4	4,80 3/16	104,78 4 1/8	115,89 4 9/16
3"	127,00 5	84,10 3 5/16	117,50 4 5/8	107,95 4 1/4	128,60 5 1/16	85,70 3 3/8	119,10 4 11/16	106,40 4 3/16	6,35 1/4	4,80 3/16	127,00 5	138,11 5 7/16
3 1/2"	139,70 5 1/2	96,80 3 13/16	130,20 5 1/8	120,65 4 3/4	141,30 5 9/16	98,40 3 7/8	131,80 5 3/16	119,10 4 11/16	6,35 1/4	4,80 3/16	139,70 5 1/2	150,81 5 15/16
4"	157,20 6 3/16	109,50 4 5/16	144,50 5 11/16	131,80 5 3/16	158,75 6 1/4	111,10 4 3/8	146,05 5 3/4	130,20 5 1/8	6,35 1/4	4,80 3/16	157,16 6 3/16	168,28 6 5/8
5"	185,70 7 5/16	136,50 5 3/8	173,00 6 13/16	160,90 6 5/16	187,30 7 3/8	138,10 5 7/16	174,60 6 7/8	158,75 6 1/4	6,35 1/4	4,80 3/16	185,74 7 5/16	196,85 7 3/4
6"	215,90 8 1/2	161,90 6 3/8	203,20 8	190,50 7 1/2	217,50 8 9/16	163,50 6 7/16	204,80 8 1/16	188,90 7 7/16	6,35 1/4	4,80 3/16	215,90 8 1/2	227,01 8 15/16
8"	269,90 10 5/8	212,70 8 3/8	254,00 10	238,10 9 3/8	271,50 10 11/16	214,30 8 7/16	255,60 10 1/16	236,50 9 5/16	6,35 1/4	4,80 3/16	269,88 10 5/8	280,99 11 1/16
10"	323,80 12 3/4	266,70 10 1/2	304,80 12	285,10 11 1/4	325,40 12 13/16	268,30 10 9/16	306,40 12 1/16	284,20 11 3/16	6,35 1/4	4,80 3/16	323,85 12 3/4	334,96 13 3/16
12"	381,00 15	317,50 12 1/2	361,90 14 1/4	342,90 13 1/2	382,60 15 1/16	319,10 12 9/16	363,50 14 5/16	341,30 13 7/16	6,35 1/4	4,80 3/16	381,00 15	392,11 15 7/16
14"	412,70 16 1/8	348,20 13 3/4	393,70 15 1/2	374,60 14 3/4	414,30 16 5/16	350,80 13 13/16	395,30 15 9/16	373,10 14 11/16	6,35 1/4	4,80 3/16	412,75 16 1/4	423,86 16 11/16
18"	469,90 18 1/2	400,00 15 3/4	447,70 17 5/8	425,40 16 3/4	471,50 18 9/16	401,60 15 13/16	449,25 17 11/16	423,85 16 11/16	6,35 1/4	4,80 3/16	469,90 18 1/2	481,01 18 15/16
24"	533,40 21	450,80 17 3/4	511,20 20 1/8	488,90 19 1/4	535,00 21 1/16	452,40 17 13/16	512,75 20 3/16	487,35 19 3/16	6,35 1/4	4,80 3/16	533,40 21,00	544,53 21 7/16
20"	584,20 23	501,60 19 3/4	558,80 22	533,40 21	585,80 23 1/16	503,20 19 13/16	560,40 22 1/16	531,80 20 15/16	6,35 1/4	4,80 3/16	584,20 23,00	595,31 23 7/16
24"	692,10 27 1/4	603,20 23 3/4	666,70 26 1/4	641,30 25 1/4	693,70 27 5/16	604,80 23 13/16	668,30 26 5/16	639,75 25 3/16	6,35 1/4	4,80 3/16	692,15 27 1/4	703,26 27 11/16

RTJ - OCTOGONAL RING JOINT

RTJ - JUNTA ANILLO OCTOGONAL

SI 150 Lb.



ME/ANSI - B 16.5 y 16.20

Nominal pipe size Diámetro nominal del tubo	Flange diam. Ring & groove Diámetro interno del anillo y canal	Groove dimensions (Dimensiones del canal)			Ring dimensions Dimensiones del anillo				Diam. raised face Diámetro del rebaje	Distance between flanges when ring is compressed Distancia entre bridas cuando el anillo está comprimido	Ring and groove number Número del anillo y canal
		Width Espesor	Depth Profundidad	Radius Radio	Width Espesor	Height Altura		Width flat Espesor parte plana			
						Oval	Octagonal				
		A mm. inches	B mm. inches	C mm. inches	H mm. inches	K mm. inches					
1/2"	47.62 1.91	8.75 11/16	6.35 1/4	0.75 3/32	7.50 5/16	14.30 9/16	12.70 1/2	5.23 .206	63.50 2 1/2	3.97 5/32	R15
3/4"	57.15 2.25	8.75 11/16	6.35 1/4	0.75 3/32	7.50 5/16	14.30 9/16	12.70 1/2	5.23 .206	73.00 2 3/4	3.97 5/32	R17
1"	65.99 2.598	8.75 11/16	6.35 1/4	0.75 3/32	7.50 5/16	14.30 9/16	12.70 1/2	5.23 .206	82.60 3 1/4	3.97 5/32	R19
1 1/2"	82.55 3.25	8.75 11/16	6.35 1/4	0.75 3/32	7.50 5/16	14.30 9/16	12.70 1/2	5.23 .206	101.60 4	3.97 5/32	R23
2"	101.60 4	8.75 11/16	6.35 1/4	0.75 3/32	7.50 5/16	14.30 9/16	12.70 1/2	5.23 .206	120.70 4 3/4	3.97 5/32	R25
2 1/2"	116.30 4.58	8.75 11/16	6.35 1/4	0.75 3/32	7.50 5/16	14.30 9/16	12.70 1/2	5.23 .206	133.40 5 1/4	3.97 5/32	R29
3"	131.75 5.19	8.75 11/16	6.35 1/4	0.75 3/32	7.50 5/16	14.30 9/16	12.70 1/2	5.23 .206	154 6 1/8	3.97 5/32	R33
3 1/2"	146.22 5.76	8.75 11/16	6.35 1/4	0.75 3/32	7.50 5/16	14.30 9/16	12.70 1/2	5.23 .206	171.50 6 3/4	3.97 5/32	R36
4"	171.45 6.75	8.75 11/16	6.35 1/4	0.75 3/32	7.50 5/16	14.30 9/16	12.70 1/2	5.23 .206	193.70 7 3/8	3.97 5/32	R40
5"	193.80 7.63	8.75 11/16	6.35 1/4	0.75 3/32	7.50 5/16	14.30 9/16	12.70 1/2	5.23 .206	215.10 8 3/8	3.97 5/32	R43
6"	243.80 9.6	8.75 11/16	6.35 1/4	0.75 3/32	7.50 5/16	14.30 9/16	12.70 1/2	5.23 .206	273.10 10 3/4	3.97 5/32	R48
8"	304.80 12	8.75 11/16	6.35 1/4	0.75 3/32	7.50 5/16	14.30 9/16	12.70 1/2	5.23 .206	330.20 13	3.97 5/32	R52
10"	381.20 15	8.75 11/16	6.35 1/4	0.75 3/32	7.50 5/16	14.30 9/16	12.70 1/2	5.23 .206	406.40 16	3.97 5/32	R58
12"	457.20 18	8.75 11/16	6.35 1/4	0.75 3/32	7.50 5/16	14.30 9/16	12.70 1/2	5.23 .206	482.60 19	3.97 5/32	R64
14"	533.20 21	8.75 11/16	6.35 1/4	0.75 3/32	7.50 5/16	14.30 9/16	12.70 1/2	5.23 .206	558.80 22 1/2	3.97 5/32	R70
16"	609.20 24	8.75 11/16	6.35 1/4	0.75 3/32	7.50 5/16	14.30 9/16	12.70 1/2	5.23 .206	635.00 25 1/2	3.97 5/32	R76
18"	685.20 27	8.75 11/16	6.35 1/4	0.75 3/32	7.50 5/16	14.30 9/16	12.70 1/2	5.23 .206	711.20 28	3.97 5/32	R82
20"	761.20 30	8.75 11/16	6.35 1/4	0.75 3/32	7.50 5/16	14.30 9/16	12.70 1/2	5.23 .206	787.40 31	3.97 5/32	R88
22"	837.20 33	8.75 11/16	6.35 1/4	0.75 3/32	7.50 5/16	14.30 9/16	12.70 1/2	5.23 .206	863.60 34	3.97 5/32	R94
24"	913.20 36	8.75 11/16	6.35 1/4	0.75 3/32	7.50 5/16	14.30 9/16	12.70 1/2	5.23 .206	939.80 37	3.97 5/32	R100

The depth of groove is added to the minimum flange thickness.

La profundidad del canal se añade al espesor mínimo "b" de la brida.

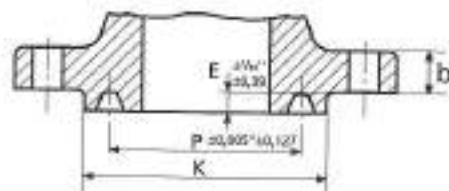
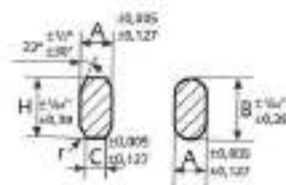
Radio "r" es de 1,58 mm para espesores de anillo igual o inferiores a 22,22 mm y de 2,38 mm para espesores

mayores que 25,40 mm.

RTJ - OCTOGONAL RING JOINT

RTJ - JUNTA ANILLO OCTOGONAL

ANSI 300, 400 y 600 Lb.



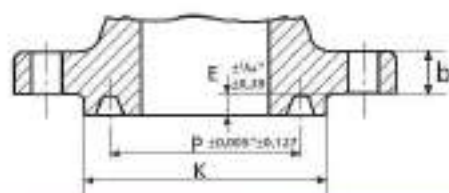
ASME/ANSI - B 16.5 Y B 16.20

Nominal pipe size Diámetro nominal del tubo	Pitch diam. ring & groove Diámetro primitivo del anillo y canal	Groove dimensiones Dimensiones del canal			Ring dimensiones Dimensiones del anillo				Diam. raised face Diámetro del resalte	Distance between flanges when ring is compressed Distancia entre bridas cuando el anillo está comprimido			Ring gro num. Número del anillo
		Width Espesor	Depth Profund.	Radius Radio	Width Espesor	Height Altura		Width of flat Espesor parte plana					
						Oval Oval	Octagonal Octogonal						
P mm. inches	F mm. inches	E mm. inches	R mm. inches	A mm. inches	B mm. inches	H mm. inches	C mm. inches	K mm. inches	300 Lb. mm inches	400 Lb. mm inches	600 Lb. mm inches		
1/2"	34.13 1 11/32	7.10 9/32	5.55 7/32	0.79 1/32	4.35 1/4	11.10 7/16	9.53 3/8	4.32 1/20	50.80 2	3.18 1/8	3.18 1/8	3.18 1/8	1
3/4"	42.86 1 11/16	8.70 11/32	6.35 1/4	0.79 1/32	7.90 5/16	14.30 9/16	12.70 1/2	5.23 206	63.50 2 1/2	3.97 5/32	3.97 5/32	3.97 5/32	1
1"	50.80 2	8.70 11/32	6.35 1/4	0.79 1/32	7.90 5/16	14.30 9/16	12.70 1/2	5.23 206	69.90 2 3/4	3.97 5/32	3.97 5/32	3.97 5/32	1
1 1/4"	60.32 2 3/8	8.70 11/32	6.35 1/4	0.79 1/32	7.90 5/16	14.30 9/16	12.70 1/2	5.23 206	79.40 3 1/8	3.97 5/32	3.97 5/32	3.97 5/32	1
1 1/2"	68.26 2 11/16	8.70 11/32	6.35 1/4	0.79 1/32	7.90 5/16	14.30 9/16	12.70 1/2	5.23 206	90.50 3 9/16	3.97 5/32	3.97 5/32	3.97 5/32	1
2"	82.55 3 1/4	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 305	107.90 4 1/4	5.56 7/32	4.76 3/16	4.76 3/16	1
2 1/2"	101.60 4	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 305	127.00 5	5.56 7/32	4.76 3/16	4.76 3/16	1
3"	123.82 4 7/8	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 305	146.10 5 3/4	5.56 7/32	4.76 3/16	4.76 3/16	1
3 1/2"	131.76 5 3/16	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 305	158.80 6 1/4	5.56 7/32	4.76 3/16	4.76 3/16	1
4"	149.22 5 7/8	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 305	174.60 6 7/8	5.56 7/32	4.76 3/16	4.76 3/16	1
5"	180.98 7 1/8	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 305	209.60 8 1/4	5.56 7/32	4.76 3/16	4.76 3/16	1
6"	211.14 8 15/16	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 305	241.30 9 1/2	5.56 7/32	4.76 3/16	4.76 3/16	1
8"	269.88 10 5/8	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 305	301.60 11 7/8	5.56 7/32	4.76 3/16	4.76 3/16	1
10"	323.85 12 3/4	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 305	355.60 14	5.56 7/32	4.76 3/16	4.76 3/16	1
12"	381.00 15	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 305	412.80 16 1/4	5.56 7/32	4.76 3/16	4.76 3/16	1
14"	419.10 16 1/2	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 305	457.20 18	5.56 7/32	4.76 3/16	4.76 3/16	1
16"	469.90 18 1/2	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 305	508.00 20	5.56 7/32	4.76 3/16	4.76 3/16	1
18"	523.40 21	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 305	574.70 22 5/8	5.76 7/32	5.76 7/32	4.76 3/16	1
20"	584.20 22	13.58 17/32	9.50 3/8	1.59 1/16	12.70 1/2	13.50 11/16	17.46 11/16	8.66 341	635.00 25	5.76 7/32	5.76 7/32	4.76 3/16	1
22"	635.00 25	15.08 19/32	11.10 7/16	1.59 1/16	14.29 9/16		15.05 34	9.58 377	685.80 27				1
24"	682.15 27 1/4	16.70 21/32	11.10 7/16	1.59 1/16	15.90 5/8	16.70 7/8	20.64 13/16	10.49 413	749.30 29 1/2	6.35 1/4	6.35 1/4	5.76 7/32	1

RTJ - OCTOGONAL RING JOINT

RTJ - JUNTA ANILLO OCTOGONAL

SI 900 Lb.



E/ANSI - B 16.5 Y B 16.20

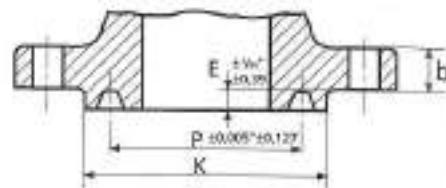
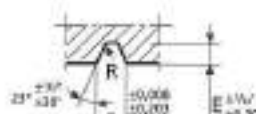
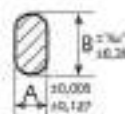
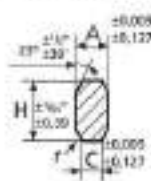
Nominal pipe size Diámetro nominal del tubo	Pitch diam. ring & groove Diámetro primitivo del anillo y canal	Groove dimensiones Dimensiones del canal			Ring dimensions Dimensiones del anillo				Diameter raised face Diámetro del resalte	Distance between flanges when ring is compressed Distancia entre bridas cuando el anillo está comprimido	Ring and groove number Número del anillo y canal
		Width Espesor	Depth Profundad	Radius Radio	Width Espesor	Height Altura		Width flat Espesor parte plana			
						Oval Oval	Octagonal Octogonal				
P mm. inches	F mm. inches	E mm. inches	R mm. inches	A mm. inches	B mm. inches	H mm. inches	C mm. inches	K mm. inches	mm. inches		
2"	123.82 4 7/8	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 .305	155.60 6 1/8	3.97 5/32	R31
2 1/2"	149.22 5 7/8	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 .305	181.0 7 1/8	3.97 5/32	R37
3"	180.98 7 1/8	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 .305	215.90 8 1/2	3.97 5/32	R41
3 1/2"	211.14 8 3/16	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 .305	241.30 9 1/2	3.97 5/32	R45
4"	269.88 10 5/8	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 .305	308.00 12 1/8	3.97 5/32	R49
5"	321.85 12 3/4	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 .305	361.90 14 1/4	3.97 5/32	R53
5 1/2"	381.90 15	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 .305	419.10 16 1/2	3.97 5/32	R57
6"	439.30 16 1/2	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 .305	486.70 18 3/8	3.97 5/32	R62
6 1/2"	489.90 18 1/2	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 .305	523.90 20 5/8	3.97 5/32	R66
8"	531.40 21	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 .305	593.70 23 3/8	4.76 3/16	R70
10"	584.20 23	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 .305	647.70 25 1/2	4.76 3/16	R74
14"	692.15 27 1/4	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.88 5/8	7.75 .305	771.50 30 3/8	5.56 7/32	R78

sizes 1/2" through 2 1/2", use 1,500 Lb standard dimensions.)
 a dimensiones entre 1/2" y 2 1/2", emplear las dimensiones correspondientes a 1,500 Lb.)

RTJ - OCTOGONAL RING JOINT

RTJ - JUNTA ANILLO OCTOGONAL

ANSI 1.500 Lb.

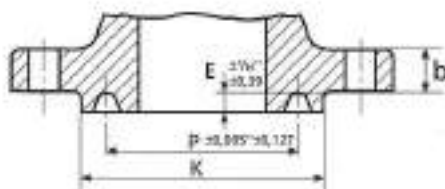
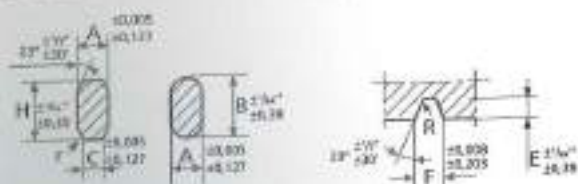


Nominal pipe size	Pitch diam. ring & groove	Groove dimensiones			Ring dimensiones Dimensiones del anillo				Diam. raised face	Distance between flanges when ring is compressed
		Dimensiones del canal			Height			Width flat		
		Width	Depth	Radius	Width	Altura				
						Oval	Octogonal			
Diámetro nominal del tubo	Diámetro primitivo del anillo y canal	Width Espesor	Depth Profund.	Radio Radio	Width Espesor	Oval	Octogonal	Espeor parte plana	Diámetro del resalte	Distancia entre bridas cuando el anillo está comprimido
	P mm. inches	F mm. inches	E mm. inches	R mm. inches	A mm. inches	B mm. inches	H mm. inches	C mm. inches	K mm. inches	mm. inches
1/2"	39.69 1 5/16	8.70 11/32	6.35 1/4	0.79 1/32	7.90 5/16	14.30 9/16	12.70 1/2	5.23 206	60.30 2 3/8	3.97 5/32
3/4"	44.45 1 3/4	8.70 11/32	6.35 1/4	0.79 1/32	7.90 5/16	14.30 9/16	12.70 1/2	5.23 206	66.70 2 5/8	3.97 5/32
1"	50.80 2	8.70 11/32	6.35 1/4	0.79 1/32	7.90 5/16	14.30 9/16	12.70 1/2	5.23 206	71.40 2 13/16	3.97 5/32
1 1/4"	60.32 2 3/8	8.70 11/32	6.35 1/4	0.79 1/32	7.90 5/16	14.30 9/16	12.70 1/2	5.23 206	81.60 3 3/16	3.97 5/32
1 1/2"	68.26 2 11/16	8.70 11/32	6.35 1/4	0.79 1/32	7.90 5/16	14.30 9/16	12.70 1/2	5.23 206	92.10 3 5/8	3.97 5/32
2"	95.25 3 3/4	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.90 5/8	7.75 305	123.80 4 7/8	3.18 1/8
2 1/2"	107.95 4 1/4	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.90 5/8	7.75 305	136.50 5 3/8	3.18 1/8
3"	136.52 5 3/8	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.90 5/8	7.75 305	168.30 6 5/8	3.18 1/8
4"	161.92 6 3/8	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.90 5/8	7.75 305	193.70 7 5/8	3.18 1/8
5"	193.68 7 5/8	11.90 15/32	7.90 5/16	0.79 1/32	11.10 7/16	17.50 11/16	15.90 5/8	7.75 305	228.60 9	3.18 1/8
6"	211.14 8 5/16	13.90 17/32	9.50 3/8	1.59 1/16	12.70 1/2	19.00 3/4	17.50 1 1/16	8.56 341	247.60 9 3/4	3.18 1/8
8"	268.88 10 5/8	16.70 21/32	11.10 7/16	1.59 1/16	15.90 5/8	22.20 7/8	20.64 13/16	10.49 413	317.50 12 1/2	3.97 5/32
10"	323.85 12 3/4	16.70 21/32	11.10 7/16	1.59 1/16	15.90 5/8	22.20 7/8	20.64 13/16	10.49 413	371.50 14 5/8	3.97 5/32
12"	381.00 15	23.00 29/32	14.90 9/16	1.59 1/16	22.20 7/8	28.60 1 1/8	27.00 1 1/16	14.81 583	438.10 17 1/4	4.76 3/16
14"	419.90 16 1/2	27.00 1 1/16	15.90 5/8	2.38 3/32	25.40 1	33.30 1 5/16	31.75 1 1/4	17.30 681	488.90 19 1/4	5.56 7/32
16"	469.90 18 1/2	30.20 1 3/16	17.50 1 1/16	2.38 3/32	28.60 1 1/8	36.50 1 7/16	34.93 1 3/8	19.81 780	546.10 21 1/2	7.90 5/16
18"	533.40 21	30.20 1 3/16	17.50 1 1/16	2.38 3/32	28.60 1 1/8	36.50 1 7/16	34.93 1 3/8	19.81 780	612.80 24 1/8	7.90 5/16
20"	584.20 23	33.30 1 5/16	17.50 1 1/16	2.38 3/32	31.70 1 1/4	39.70 1 9/16	38.10 1 1/2	22.33 879	673.10 26 1/2	9.50 3/8
24"	692.15 27 1/4	36.50 1 7/16	20.60 13/16	2.38 3/32	36.90 1 3/8	44.40 1 3/4	41.28 1 5/8	24.82 977	793.70 31 1/4	11.10 7/16

RTJ - OCTOGONAL RING JOINT

RTJ - JUNTA ANILLO OCTOGONAL

SI 2.500 Lb.



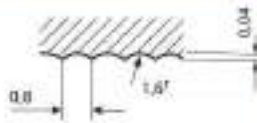
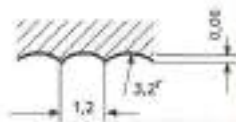
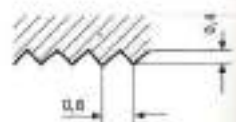
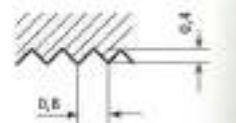
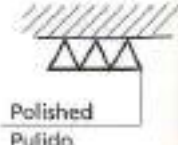
Nominal pipe size Diámetro nominal del tubo	Flange diam. ring & groove Diámetro primitivo del anillo y canal	Groove dimensiones			Ring dimensiones Dimensiones del anillo				Diam. raised face Diámetro del resalte	Distance between flanges when ring is compressed Distancia entre bridas cuando el anillo está comprimido	Ring and groove number Número del anillo y canal
		Dimensiones del canal			Width Espesor	Height Altura		Width flat Espesor parte plana			
		Width Espesor	Depth Profund.	Radius Radio		Oval Oval	Octogonal Octogonal				
P. mm. inches	F. mm. inches	D. mm. inches	R. mm. inches	A. mm. inches	B. mm. inches	H. mm. inches	C. mm. inches	K. mm. inches	mm. inches		
1/2"	42,86 1 1/16	8,70 11/32	6,35 1/4	0,79 1/32	7,90 5/16	14,30 9/16	12,70 1/2	5,23 .206	65,10 2 9/16	3,97 5/32	R13
3/4"	50,80 2	8,70 11/32	6,35 1/4	0,79 1/32	7,90 5/16	14,30 9/16	12,70 1/2	5,23 .206	73,00 2 7/8	3,97 5/32	R16
1"	60,30 2 3/8	8,70 11/32	6,35 1/4	0,79 1/32	7,90 5/16	14,30 9/16	12,70 1/2	5,23 .206	82,50 3 1/4	3,97 5/32	R18
1 1/4"	72,20 2 21/32	11,90 15/32	7,90 5/16	0,79 1/32	11,10 7/16	17,50 11/16	15,90 5/8	7,75 .305	101,60 4	3,18 1/8	R21
1 1/2"	85,55 3 1/4	11,90 15/32	7,90 5/16	0,79 1/32	11,10 7/16	17,50 11/16	15,90 5/8	7,75 .305	114,30 4 1/2	3,18 1/8	R23
2"	101,60 4	11,90 15/32	7,90 5/16	0,79 1/32	11,10 7/16	17,50 11/16	15,90 5/8	7,75 .305	133,35 5 1/4	3,18 1/8	R26
2 1/2"	111,10 4 3/8	11,90 15/32	9,50 3/8	1,59 1/16	12,70 1/2	19,05 3/4	17,50 11/16	8,66 .341	149,20 5 7/8	3,18 1/8	R28
3"	127,00 5	11,90 15/32	9,50 3/8	1,59 1/16	12,70 1/2	19,05 3/4	17,50 11/16	8,66 .341	168,30 6 5/8	3,18 1/8	R32
4"	157,20 6 3/16	16,70 21/32	11,10 7/16	1,59 1/16	15,90 5/8	22,20 7/8	20,60 13/16	10,49 .413	203,20 8	3,97 5/32	R38
5"	190,50 7 1/2	19,80 25/32	12,70 1/2	1,59 1/16	19,05 3/4	25,40 1	20,60 13/16	12,32 .485	241,30 9 1/2	3,97 5/32	R42
6"	228,60 9	19,80 25/32	12,70 1/2	1,59 1/16	19,05 3/4	25,40 1	23,80 15/16	12,32 .485	279,40 11	3,97 5/32	R47
8"	279,40 11	23,00 29/32	14,30 9/16	1,59 1/16	22,20 7/8	28,60 1 1/8	27,00 1 1/16	14,80 .583	339,70 13 3/8	4,76 3/16	R51
10"	342,90 13 1/2	30,20 1 3/16	17,50 11/16	2,40 3/32	28,60 1 1/8	36,50 1 7/16	35,00 1 3/8	19,81 .780	425,40 16 3/4	6,35 1/4	R55
12"	406,40 16	33,30 1 5/16	17,50 11/16	2,40 3/32	31,70 1 1/4	39,70 1 9/16	38,10 1 1/2	22,33 .879	495,30 19 1/2	7,90 5/16	R60

Depth of groove is added to the minimum flange thickness.
Profundidad del canal se añade al mínimo espesor de la brida.

GASKET SURFACE FINISH

ACABADO DE CARA DE JUNTA

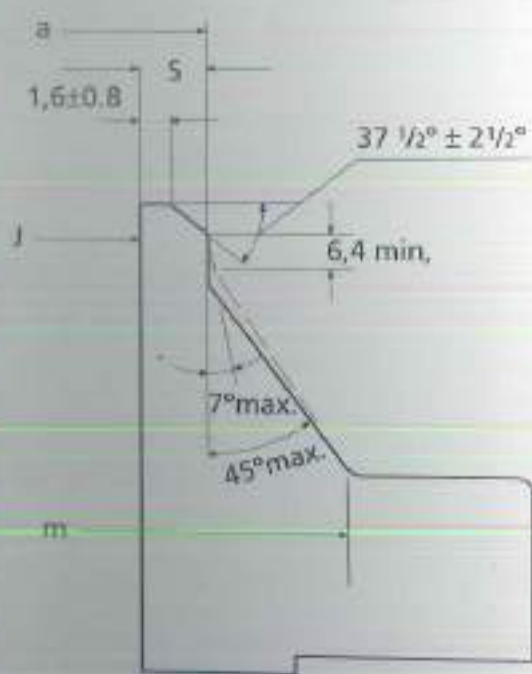
MSS - SP 6

	DENOMINATION DENOMINACION	N.P.S. TAMAÑO NOMINAL	TYPE TIPO	PERFIL PROFILE
1	STOCK FINISH	-12"	Spiral Espiral	
		+12"	Spiral Espiral	
2	SPIRAL SERRATED	For all dimensions Para todas las medidas	Spiral Espiral	
3	CONCENTRIC - SERRATED	For all dimensions Para todas las medidas	Concentric Concéntrico	
4	SMOOTH FINISH	For all dimensions Para todas las medidas	—	
5	COLD WATER FINISH	For all dimensions Para todas las medidas	—	 Polished Pulido

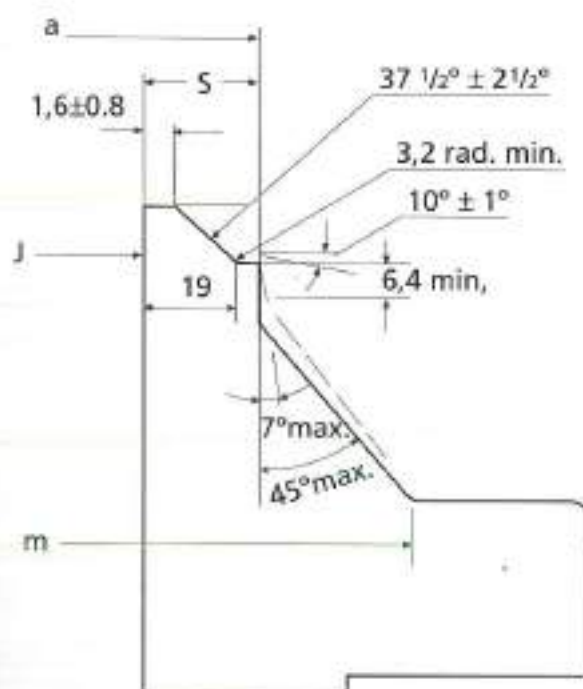
WELD. PREPARATION CHAFLAN DE SOLDADURA

WELDING NECK

SI B 16,5



Bevel for wall thickness (t) 4.8 to 22.3 mm.
Chaflán para S entre 4.8 y 22.3 mm.



Bevel for wall thickness (t) greater than 22.3 mm.
Chaflán para S mayor que 22.3 mm.

TOLERANCES TOLERANCIAS

ANSI B 16,5

Outside diameter Diámetro exterior	O.D. ≤ 610 mm.	$\pm 1,6$
	O.D. > 610 mm.	$\pm 3,2$
Inside diameter Diámetro interior	Threaded	$\pm 2,1$
	Slip-on $\leq 10^{\circ}$ Lap-joint	$+0,8$ -0
	Slip-on $> 10^{\circ}$ Lap-joint	$+1,6$ -0
Outside diameter of the hub Diámetro exterior del cuello de la base	12° and smaller y menor	$+2,4$ $-1,6$
	14° and larger y mayor	$\pm 3,2$
Diameter of the contact face Diámetro del resalte	1,66 mm. RF	$\pm 0,8$
	6,4 mm. RF Tongue and groove Male - Female Encaje anular Macho - Hembra	$\pm 0,5$
Drilling Taladrado	Bolt hole diameter Diámetro del agujero	$\pm 1,6$
	Bolt hole circle Distancia entre agujeros	$\pm 0,8$
Thickness Espesor de la base	$\leq 18^{\circ}$	$+3,2$ -0
	$\geq 20^{\circ}$	$+4,8$ -0
Length through the hub Altura total de la brida	$\leq 10^{\circ}$	$\pm 1,6$
	≥ 12	$\pm 3,2$

Outside diameter Diámetro exterior	O.D. ≤ 610 mm.	$\pm 1,6$
	O.D. ≥ 610 mm.	$\pm 3,2$
Inside diameter Diámetro interior	$\leq 10^{\circ}$	$\pm 1,6$
	$12^{\circ} < \text{I. D.} \leq 18^{\circ}$	$\pm 1,6$
	$\geq 20^{\circ}$	$+3,2$ $-1,6$
Outside diameter of the hub Diámetro exterior del cuello de la base	$m \leq 610$ mm.	$\pm 1,6$
	$m > 610$ mm.	$\pm 3,2$
Diameter of the neck Diámetro del cuello	$\leq 5^{\circ}$	$+2,4$ -0
	$\geq 6^{\circ}$	$+4,8$ -0
Diameter of the contact face Diámetro del resalte	1,66 mm. RF	$\pm 0,8$
	6,4 mm. RF Tongue and groove Male - Female Encaje anular Macho - Hembra	$\pm 0,5$
Drilling Taladrado	Bolt hole diameter Diámetro del agujero	$\pm 1,6$
	Bolt hole circle Distancia entre agujeros	$\pm 0,8$
Thickness Espesor de la base	$\leq 18^{\circ}$	$+3,2$ -0
	$\geq 20^{\circ}$	$+4,8$ -0
Length through the hub Altura total de la brida	$\leq 10^{\circ}$	$\pm 1,6$
	≥ 12	$\pm 3,2$

SCHEDULES CHART

TABLA DE SCHEDULES

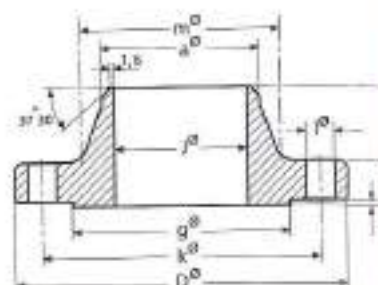
ISI

Nominal pipe size Pase nominal	Outside Ø Ø exterior del tubo	Sch. 40		Sch. 80		Sch. 160	
		Thickness Espesor	Inside Ø interior	Thickness Espesor	Inside Ø interior	Thickness Espesor	Inside Ø interior
1/8"	13.76	2.23	9.24	2.03	7.66	—	—
1/4"	17.12	2.30	12.54	3.18	10.74	—	—
3/8"	21.30	2.80	15.73	3.65	14.00	4.73	11.84
1/2"	26.75	2.93	18.82	3.95	16.80	5.35	15.00
3/4"	33.40	3.40	26.70	4.35	24.40	6.35	20.80
1"	42.20	3.55	35.30	4.85	32.50	6.35	29.50
1 1/4"	48.30	3.70	40.90	5.10	36.10	7.15	34.00
1 1/2"	55.40	3.90	52.60	5.55	46.30	8.25	42.90
2"	63.50	5.20	62.70	7.10	58.00	9.55	54.00
2 1/2"	76.20	5.45	76.00	7.60	73.70	11.15	68.00
3"	88.90	5.70	80.30	8.15	85.30	—	—
3 1/2"	114.30	5.95	102.40	8.50	97.30	13.50	87.30
4"	141.30	6.45	128.10	9.50	122.20	15.80	109.80
5"	166.40	7.10	154.30	11.85	146.30	18.30	131.80
6"	175.20	8.25	202.70	12.70	195.80	22.85	173.30
8"	213.00	9.25	254.50	15.85	242.80	26.65	215.90
10"	273.00	10.30	303.30	17.40	289.80	32.80	257.20
12"	325.40	11.15	333.30	19.05	317.50	35.70	284.20
14"	356.40	12.75	381.00	21.40	363.60	40.45	325.50
16"	407.20	14.25	428.70	23.80	409.80	45.25	364.70
20"	548.90	15.85	477.80	26.20	455.60	50.00	408.00
24"	648.40	17.45	574.70	30.95	547.70	55.90	486.60

Nominal pipe size Pase nominal	Outside Ø Ø exterior del tubo	Standard		Extra strong		Double extra strong	
		Thickness Espesor	Inside Ø interior	Thickness Espesor	Inside Ø interior	Thickness Espesor	Inside Ø interior
1/8"	13.76	2.23	9.24	3.02	7.66	—	—
1/4"	17.12	2.30	12.50	3.18	10.74	—	—
3/8"	21.30	2.80	15.70	3.65	14.00	7.45	6.40
1/2"	26.75	2.93	20.80	3.95	16.80	7.55	11.00
3/4"	33.40	3.40	26.70	4.35	24.40	9.15	15.00
1"	42.20	3.55	35.10	4.85	32.50	9.70	22.80
1 1/4"	48.30	3.70	40.90	5.10	36.10	10.20	27.90
1 1/2"	55.40	3.90	52.60	5.55	46.30	11.10	38.20
2"	63.50	5.20	62.70	7.10	58.00	14.65	45.00
2 1/2"	76.20	5.45	76.00	7.60	73.70	15.25	56.40
3"	88.90	5.70	80.30	8.15	85.30	—	—
3 1/2"	114.30	5.95	102.40	8.50	97.30	—	—
4"	141.30	6.45	128.10	9.50	122.20	17.10	80.10
5"	166.40	7.10	154.30	11.85	146.30	22.80	124.40
6"	175.20	8.25	202.70	12.70	195.80	22.30	174.60
8"	213.00	9.25	254.50	15.85	242.80	—	—
10"	273.00	10.30	304.80	17.70	298.40	—	—
12"	325.40	11.15	356.30	19.05	354.00	—	—
14"	356.40	12.75	408.00	21.40	409.80	—	—
16"	407.20	14.25	459.70	23.80	465.60	—	—
20"	548.90	15.85	511.40	26.20	521.40	—	—
24"	648.40	17.45	563.10	30.95	577.20	—	—

WELDING NECK

ANSI 150 Lb.

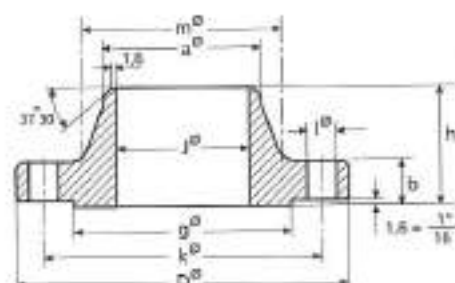


ASME/ANSI B 16.5

Nominal pipe size Diámetro nominal	Flange Brida				Hub Cuello		Raised face Resalte	Drilling template Taladros		
	D mm. inches	J mm. inches	b mm. inches	h mm. inches	a mm. inches	m mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches
1/2"	88.9 3 1/2	15.75 0.62	11.1 7/16	47.6 1 7/8	21.3 0.84	30.2 1 3/16	34.9 1 3/8	4	15.9 5/8	60.3 2 3/8
3/4"	98.4 3 7/8	20.8 0.82	12.7 1/2	52.4 2 1/16	26.7 1.05	38.1 1 1/2	42.9 1 11/16	4	15.3 5/8	69.8 2 3/4
1"	107.9 4 1/4	26.7 1.05	14.3 9/16	55.6 2 3/16	33.5 1.32	46.2 1 15/16	50.8 2	4	15.9 5/8	79.4 3 1/8
1 1/4"	117.5 4 5/8	35.05 1.38	15.9 5/8	57.1 2 1/4	42.2 1.66	56.7 2 5/16	63.5 2 1/2	4	15.9 5/8	88.9 3 1/2
1 1/2"	127.0 5	40.9 1.61	17.5 11/16	61.9 2 7/16	48.3 1.90	65.1 2 9/16	73.0 2 7/8	4	15.9 5/8	98.4 3 7/8
2"	152.4 6	52.6 2.07	19.1 3/4	63.5 2 1/2	60.4 2.34	77.8 3 1/16	92.1 3 5/8	4	19.05 3/4	129.6 4 3/4
2 1/2"	177.8 7	62.7 2.47	22.2 7/8	69.8 2 3/4	73.1 2.88	90.5 3 9/16	104.8 4 1/8	4	19.0 3/4	139.7 5 1/2
3"	190.5 7 1/2	76.0 3.07	23.8 15/16	69.8 2 3/4	88.9 3.50	107.9 4 1/4	127.0 5	4	19.05 3/4	152.4 6
3 1/2"	215.9 8 1/2	90.2 3.55	23.8 15/16	71.4 2 13/16	101.6 4.00	122.2 4 13/16	139.7 5 1/2	8	19.05 3/4	177.8 7
4"	228.6 9	102.4 4.03	23.8 15/16	76.2 3	114.3 4.50	134.9 5 5/16	157.2 6 3/16	8	19.05 3/4	190.5 7 1/2
5"	254.0 10	128.3 5.05	23.8 15/16	88.9 3 1/2	141.2 5.56	163.5 6 7/16	185.7 7 5/16	8	22.2 7/8	215.9 8 1/2
6"	279.4 11	154.2 6.07	25.4 1	88.9 3 1/2	168.4 6.63	192.1 7 9/16	215.9 8 1/2	8	22.2 7/8	241.3 9 1/2
8"	342.9 13 1/2	202.7 7.98	28.6 1 1/8	101.6 4	219.2 8.63	246.1 9 11/16	269.9 10 5/8	8	22.2 7/8	288.4 11 3/4
10"	406.4 16	254.5 10.02	30.2 1 3/16	101.6 4	273.0 10.75	304.8 12	323.8 12 3/4	12	25.4 1	361.9 14 1/8
12"	482.6 19	304.8 12.00	31.8 1 1/4	114.3 4 1/2	323.8 12.75	365.1 14 3/8	381.0 15	12	25.4 1	431.8 17
14"	533.4 21	To be specified by purchaser. Debe ser especificado por el comprador.	34.9 1 3/8	127.0 5	355.6 14.00	400.0 15 3/4	412.7 16 1/4	12	28.6 1 1/8	476.2 18 3/4
16"	596.9 23 1/2		36.5 1 7/16	127.0 5	406.4 16.00	457.2 18	469.9 18 1/2	16	28.6 1 1/8	539.7 21 1/8
18"	635.0 25		39.7 1 9/16	139.7 5 1/2	457.2 18.00	504.8 19 7/8	533.4 21	16	31.7 1 5/8	577.8 22 3/4
20"	698.5 27 1/2		42.9 1 11/16	144.5 5 11/16	508.0 20.00	558.8 22	584.2 23	20	31.7 1 5/8	635.0 25
22"	749.3 29 1/2		46 1 13/16	149.2 5 7/8	558.8 22.00	616 24 1/4	641.2 25 1/4	20	34.9 1 3/8	692.1 27 1/4
24"	812.8 32		47.6 1 7/8	152.4 6	605.6 24.00	663.6 26 1/8	692.1 27 1/4	20	34.9 1 3/8	749.3 29 1/2

WELDING NECK

ANSI 300 Lb.

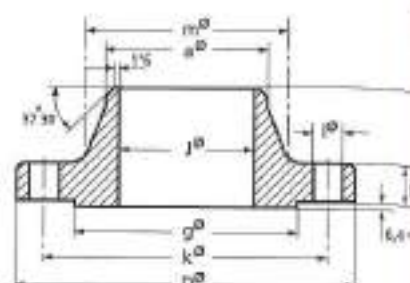


ME/ANSI B 16.5

Nominal pipe size	Flange Brida				Hub Cuello		Raised face Resalte	Drilling template Taladros			Approx. weight Peso aprox.
Diameter nominal	D mm. inches	J mm. inches	b mm. inches	h mm. inches	a mm. inches	m mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches	Kg. Pounds
1/2"	95.2 3 3/8	15.75 0.62	14.3 9/16	52.4 2 1/16	21.3 0.84	38.1 1 1/2	34.8 1 3/8	4	15.9 5/8	66.7 2 5/8	0.9 2
3/4"	117.5 4 5/8	20.8 0.82	15.9 5/8	57.1 2 1/4	26.7 1.05	47.6 1 7/8	42.9 1 11/16	4	19.05 3/4	82.5 3 1/4	1.4 3
1"	123.8 4 7/8	26.7 1.05	17.5 11/16	61.0 2 7/16	33.5 1.32	54.0 2 1/8	50.8 2	4	19.05 3/4	88.9 3 1/2	1.8 4
1 1/4"	133.35 5 1/4	35.05 1.38	19.05 3/4	65.1 2 9/16	42.2 1.66	63.5 2 1/2	63.5 2 1/2	4	19.05 3/4	98.4 3 7/8	2.3 5
1 1/2"	155.6 6 1/8	40.9 1.61	20.8 13/16	68.3 2 11/16	48.3 1.90	69.8 2 3/4	73.0 2 7/8	4	22.2 7/8	114.3 4 1/2	3.2 7
2"	165.1 6 1/2	52.4 2.07	22.2 7/8	69.8 2 3/4	60.45 2.38	84.1 3 5/16	82.1 3 5/8	8	19.05 3/4	127.0 5	4.1 9
2 1/2"	190.5 7 1/2	62.7 2.47	25.4 1	76.2 3	73.1 2.88	100.0 3 15/16	104.8 4 1/8	8	22.2 7/8	149.2 5 7/8	5.4 12
3"	209.55 8 1/4	78.0 3.07	28.6 1 1/8	79.4 3 1/8	88.9 3.50	117.5 4 5/8	127.0 5	8	22.2 7/8	168.3 6 5/8	6.8 15
3 1/2"	228.6 9	98.2 3.85	30.2 1 3/16	81.0 3 3/16	101.6 4.00	133.35 5 1/4	139.7 5 1/2	8	22.2 7/8	184.15 7 1/4	8.2 18
4"	254.0 10	102.0 4.03	31.8 1 1/4	85.7 3 3/8	114.3 4.50	146.05 5 3/4	157.2 6 3/16	8	22.2 7/8	200.0 7 7/8	11.3 25
5"	279.4 11	128.3 5.05	34.9 1 3/8	98.4 3 7/8	141.2 5.56	177.8 7	185.7 7 5/16	8	22.2 7/8	234.95 9 1/4	14.5 32
6"	312.5 12 1/2	154.2 6.07	36.5 1 7/16	98.4 3 7/8	168.4 6.63	206.4 8 1/8	215.9 8 1/2	12	22.2 7/8	269.9 10 5/8	19.0 42
8"	381.0 15	202.7 7.98	41.3 1 5/8	111.1 4 3/8	219.2 8.63	260.35 10 1/4	269.9 10 5/8	12	25.4 1	330.2 13	30.4 67
10"	444.5 17 1/2	254.5 10.02	47.6 1 7/8	117.5 4 5/8	273.0 10.75	320.7 12 5/8	323.8 12 3/4	16	28.6 1 1/8	387.3 15 1/4	41.3 91
12"	520.7 20 1/2	304.8 12.00	50.8 2	130.2 5 1/8	323.85 12.75	374.6 14 3/4	381.0 15	16	31.7 1 5/8	450.8 17 3/4	63.5 140
14"	584.2 23	To be specified by purchaser. Debe ser especificado por el comprador.	54.0 2 1/8	142.9 5 5/8	355.6 14.00	425.4 16 3/4	412.7 16 1/4	20	31.7 1 1/4	514.3 20 1/4	81.6 180
16"	647.7 25 1/2		57.2 2 1/4	146.05 5 3/4	406.4 16.00	482.6 19	469.9 18 1/2	20	34.9 1 3/8	571.5 22 1/2	113 250
18"	711.7 28		60.3 2 3/8	158.75 6 1/4	457.2 18.00	533.4 21	533.4 21	24	34.9 1 3/8	628.6 24 3/4	145 320
20"	774.7 30 1/2		63.5 2 1/2	161.9 6 3/8	508.0 20.00	587.4 23 1/8	584.2 23	24	34.9 1 3/8	685.8 27	181 400
22"	838.2 33		66.7 2 5/8	165.1 6 1/2	558.8 22.00	641.2 25 1/4	641.2 25 1/4	24	41.3 1 5/8	742.9 29 1/4	211 465
24"	914.4 36		69.8 2 3/4	168.3 6 5/8	609.5 24.00	701.7 27 5/8	692.1 27 1/4	24	41.3 1 5/8	812.8 32	263 580

WELDING NECK

ANSI 400 Lb.

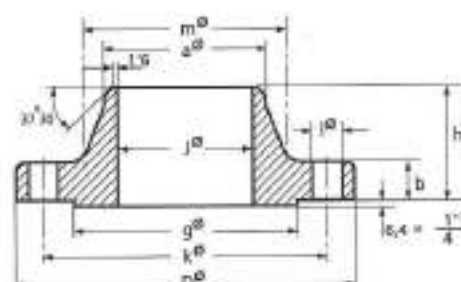


ASME/ANSI B 16.5

Nominal pipe size	Flange Brides				Hub Cuello		Raised face Resalte	Drilling template Taladros			Approx weight Peso aprox
Diámetro nominal	D mm. inches	J mm. inches	b mm. inches	h mm. inches	a mm. inches	m mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches	Kg. Pounds
1/2"	95.2 3 3/4	14.0 0.55	14.3 9/16	52.4 2 1/16	21.3 0.84	38.1 1 1/2	34.9 1 3/8	4	15.9 5/8	66.7 2 5/8	6.0 2
3/4"	117.5 4 5/8	18.8 0.74	15.9 5/8	57.1 2 1/4	26.7 1.05	47.6 1 7/8	42.9 1 11/16	4	19.05 3/4	82.5 3 1/4	1.8 4
1"	123.8 4 7/8	24.4 0.96	17.5 11/16	61.9 2 7/16	33.5 1.32	54.0 2 1/8	50.8 2	4	19.05 3/4	88.9 3 1/2	1.8 4
1 1/4"	133.35 5 1/4	32.5 1.28	20.6 13/16	66.7 2 5/8	42.2 1.66	63.5 2 1/2	63.5 2 1/2	4	19.05 3/4	98.4 3 7/8	2.7 6
1 1/2"	155.6 6 1/8	38.1 1.50	22.2 7/8	69.8 2 3/4	48.3 1.90	68.8 2 3/4	73.0 2 7/8	4	22.2 7/8	114.3 4 1/2	3.6 8
2"	165.1 6 1/2	49.3 1.94	25.4 1	73.0 2 7/8	60.45 2.38	84.1 3 5/16	92.1 3 5/8	8	19.05 3/4	127.0 5	5.4 12
2 1/2"	190.5 7 1/2	58.9 2.32	28.6 1 1/8	79.4 3 1/8	73.15 2.88	100.0 3 15/16	104.8 4 1/8	8	22.2 7/8	149.2 5 7/8	6.7 18
3"	209.55 8 1/4	73.7 2.90	31.8 1 1/4	82.5 3 1/4	88.9 3.50	117.5 4 5/8	127.0 5	8	22.2 7/8	168.3 6 5/8	18.4 23
3 1/2"	228.6 9	85.3 3.36	34.9 1 3/8	85.7 3 3/8	101.6 4.00	133.35 5 1/4	139.7 5 1/2	8	25.4 1	184.15 7 1/4	11.8 28
4"	254.0 10	97.3 3.83	34.9 1 3/8	88.9 3 1/2	114.3 4.50	146.05 5 3/4	157.2 6 3/16	8	25.4 1	200.0 7 7/8	16.9 35
5"	279.4 11	122.2 4.81	38.1 1 1/2	101.6 4	141.2 5.56	177.8 7	185.7 7 5/16	8	25.4 1	234.95 9 1/4	19.5 43
6"	317.5 12 1/2	146.3 5.76	41.3 1 5/8	103.2 4 1/16	168.4 6.63	206.4 8 1/8	215.0 8 1/2	12	25.4 1	269.9 10 5/8	26.0 57
8"	381.0 15	193.8 7.63	47.6 1 7/8	117.5 4 5/8	219.2 8.63	260.35 10 1/4	269.9 10 5/8	12	28.6 1 1/8	330.2 13	40.4 89
10"	444.5 17 1/2	247.65 9.75	54.0 2 1/8	123.8 4 7/8	273.05 10.75	320.7 12 5/8	323.8 12 3/4	16	31.7 1 1/4	387.3 15 1/8	58.7 125
12"	520.7 20 1/2	298.45 11.75	57.2 2 1/4	136.5 5 3/8	323.85 12.75	374.6 14 3/4	381.0 15	16	34.9 1 3/8	450.8 17 3/4	78.4 175
14"	584.2 23	To be specified by purchaser. Debe ser especificado por el comprador	60.8 2 3/8	149.2 5 7/8	355.6 14.00	425.4 16 3/4	412.7 16 1/4	20	34.9 1 3/8	514.3 20 1/4	104 230
16"	647.7 25 1/2		63.5 2 1/2	152.4 6	406.4 16.00	482.6 19	488.9 18 1/2	20	38.1 1 1/2	571.5 22 1/2	114 255
18"	711.2 28		66.7 2 5/8	165.1 6 1/2	457.2 18.00	533.4 21	533.4 21	24	38.1 1 1/2	628.6 24 3/4	158 350
20"	774.7 30 1/2		69.9 2 3/4	168.3 6 5/8	508.0 20.00	587.4 23 1/8	584.2 23	28	41.3 1 5/8	685.8 27	193 425
22"	838.2 33		73 2 7/8	171.4 6 3/4	558.8 22.00	641.2 25 1/4	641.2 25 1/4	24	44.4 1 3/4	742.9 29 1/4	229 505
24"	914.4 36		76.2 3	174.6 6 7/8	609.6 24.00	701.7 27 5/8	692.1 27 1/4	24	47.6 1 7/8	812.8 32	281 620

WELDING NECK

ANSI 600 Lb.

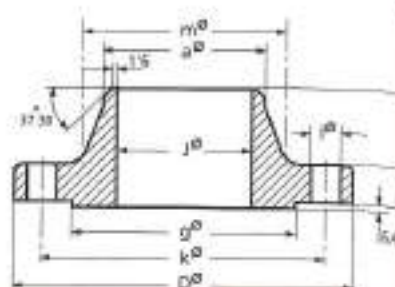


ANSI B 16.5

Nominal pipe size	Flange Brida				Hub Cuello		Raised face Resalte	Drilling template Taladros			Approx. weight Peso aprox.
Diámetro nominal	D mm. inches	i mm. inches	b mm. inches	h mm. inches	a mm. inches	m mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches	Kg. Pounds
1/2"	95.2 3 3/4	14.0 0.55	14.3 9/16	52.4 2 1/16	21.3 0.84	38.1 1 1/2	34.9 1 3/8	4	15.9 5/8	66.7 2 5/8	0.9 2
3/4"	117.5 4 5/8	18.8 0.74	15.9 5/8	57.1 2 1/4	26.7 1.05	47.6 1 7/8	42.9 1 11/16	4	19.05 3/4	82.5 3 1/4	1.8 4
1"	123.8 4 7/8	24.4 0.96	17.5 11/16	61.9 2 7/16	33.5 1.32	54.0 2 1/8	50.8 2	4	19.05 3/4	88.9 3 1/2	1.8 4
1 1/4"	133.35 5 1/8	32.5 1.28	20.6 13/16	66.7 2 5/8	42.2 1.66	63.5 2 1/2	63.5 2 1/2	4	19.05 3/4	98.4 3 7/8	2.7 6
1 1/2"	155.6 6 1/8	38.1 1.50	22.2 7/8	69.8 2 3/4	48.3 1.90	69.8 2 3/4	73.0 2 7/8	4	22.2 7/8	114.3 4 1/2	3.6 8
2"	165.1 6 1/2	49.3 1.94	25.4 1	73.0 2 7/8	65.45 2.58	84.1 3 5/16	92.1 3 5/8	8	19.05 3/4	127.0 5	5.4 12
2 1/2"	190.5 7 1/2	58.9 2.32	28.6 1 1/8	79.4 3 1/8	73.15 2.88	100.0 3 15/16	104.8 4 1/8	8	22.2 7/8	143.2 5 7/8	8.2 18
3"	203.55 8 1/4	73.7 2.90	31.8 1 1/4	82.5 3 1/4	88.9 3.50	117.5 4 5/8	127.0 5	8	22.2 7/8	168.3 6 5/8	10.4 23
3 1/2"	228.6 9	85.3 3.36	34.9 1 3/8	85.7 3 3/8	101.6 4.00	133.35 5 1/4	139.7 5 1/2	8	25.4 1	184.15 7 1/4	11.8 26
4"	273.05 10 3/4	97.3 3.83	38.1 1 1/2	101.6 4	114.3 4.50	152.4 6	157.2 6 3/16	8	25.4 1	215.9 8 1/2	19.0 42
5"	330.2 13	122.2 4.81	44.4 1 3/4	114.3 4 1/2	141.2 5.56	188.9 7 7/16	185.7 7 5/16	8	28.6 1 1/8	266.7 10 1/2	31.0 68
6"	355.6 14	146.3 5.76	47.6 1 7/8	117.5 4 5/8	168.4 6.63	222.25 8 3/4	215.9 8 1/2	12	28.6 1 1/8	292.1 11 1/2	36.7 81
8"	419.1 16 1/2	193.8 7.63	55.6 2 3/16	133.35 5 1/4	219.2 8.63	273.05 10 3/4	269.9 10 5/8	12	31.7 1 1/8	349.2 13 3/4	54.4 120
10"	508.0 20	241.65 9.75	63.5 2 1/2	152.4 6	273.05 10.75	342.9 13 1/2	323.8 12 3/4	16	34.9 1 3/8	431.8 17	86.2 190
12"	558.8 22	268.45 11.75	66.7 2 5/8	155.6 6 1/8	323.85 12.75	400.0 15 3/4	381.0 15	20	34.9 1 3/8	488.9 19 1/4	102 225
14"	603.2 23 3/4	To be specified by purchaser Debe ser especificado por el comprador	69.9 2 3/4	165.1 6 1/2	355.6 14.00	431.8 17	412.7 16 1/4	20	38.1 1 1/2	527.0 20 3/4	127 280
16"	685.8 27		76.2 3	177.8 7	405.4 16.00	495.3 19 1/2	468.9 18 1/2	20	41.3 1 5/8	603.2 23 3/4	177 390
18"	742.9 29 1/4		82.6 3 1/4	184.15 7 1/4	457.2 18.00	546.1 21 1/2	533.4 21	20	44.4 1 3/4	654.0 25 3/4	215 475
20"	812.8 32		88.9 3 1/2	190.5 7 1/2	508.0 20.00	609.6 24	584.2 23	24	44.4 1 3/4	723.9 28 1/2	268 590
22"	889.9 34 1/4		95.2 3 3/4	196.8 7 3/4	558.8 22.00	666.7 26 1/4	641.2 25 1/4	24	47.6 1 7/8	777.9 30 5/8	327 720
24"	939.8 37		101.6 4	203.2 8	609.6 24.00	717.5 28 1/8	692.1 27 1/4	24	50.8 2	838.2 33	376 830

WELDING NECK

ANSI 900 Lb.

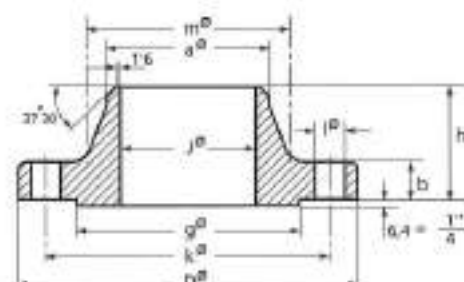


ASME/ANSI B 16.5

Nominal pipe size	Flange Brida				Hub Cuello		Raised face Resalte	Drilling template Taladros			App weight Peso aprox
Diámetro nominal	D mm. inches	J mm. inches	b mm. inches	h mm. inches	a mm. inches	m mm. inches	g mm. inches	Number Número	I mm. inches	k mm. inches	Kg Pounds
1/2"	120.65 4 3/4		22.2 7/8	60.3 2 3/8	21.3 084	38.1 1 1/2	34.9 1 3/8	4	22.2 7/8	82.5 3 1/4	2.5 5
3/4"	130.2 5 1/8		25.4 1	69.8 2 3/4	26.7 1.05	44.4 1 3/4	42.9 1 11/16	4	22.2 7/8	88.9 3 1/2	2.1 6
1"	149.2 5 7/8		28.6 1 1/8	78.0 2 7/8	33.5 1.32	52.4 2 1/16	50.8 2	4	25.4 1	101.6 4	4.1 9
1 1/4"	158.75 6 1/4		28.6 1 1/8	73.0 2 7/8	42.2 1.66	63.5 2 1/2	63.5 2 1/2	4	25.4 1	111.1 4 3/8	4.5 10
1 1/2"	177.8 7		31.8 1 1/4	82.5 3 1/4	48.3 1.90	69.8 2 3/4	73.0 2 7/8	4	28.6 1 1/8	123.8 4 7/8	5.3 11
2"	215.9 8 1/2		38.1 1 1/2	101.6 4	60.45 2.38	104.8 4 1/8	92.1 3 5/8	8	25.4 1	165.1 6 1/2	11.7 25
2 1/2"	244.5 9 5/8		41.3 1 5/8	104.8 4 1/8	73.15 2.88	123.8 4 7/8	104.8 4 1/8	8	28.6 1 1/8	190.5 7 1/2	16.1 35
3"	241.3 9 1/2		38.1 1 1/2	101.6 4	88.9 3.50	127.0 5	127.0 5	8	25.4 1	190.5 7 1/2	14.0 31
4"	292.1 11 1/2		44.5 1 3/4	114.3 4 1/2	114.3 4.50	158.75 6 1/4	157.2 6 3/16	8	31.7 1 1/4	234.95 9 1/4	23.8 51
5"	349.2 13 3/4		50.8 2	127.0 5	141.3 5.56	190.5 7 1/2	185.7 7 5/16	8	34.9 1 3/8	279.4 11	38.7 86
6"	381.0 15		55.6 2 3/16	139.7 5 1/2	168.4 6.63	234.95 9 1/4	215.9 8 1/2	12	31.7 1 1/4	317.5 12 1/2	58.9 118
8"	488.9 18 1/2		63.5 2 1/2	161.9 6 3/8	219.2 8.63	298.4 11 3/4	269.9 10 5/8	12	38.1 1 1/2	393.7 15 1/2	73.0 157
10"	546.1 21 1/2		69.9 2 3/4	184.15 7 1/4	273.05 10.75	368.3 14 1/2	323.8 12 3/4	16	38.1 1 1/2	469.9 18 1/2	116 256
12"	609.6 24		79.4 3 1/8	200.0 7 7/8	323.85 12.75	419.1 16 1/2	381.0 15	20	38.1 1 1/2	533.4 21	147 325
14"	641.3 25 1/4		85.7 3 3/8	21.7 8 3/8	355.6 14.00	450.8 17 3/4	412.7 16 1/4	20	41.3 1 5/8	558.8 22	181 400
16"	704.8 27 3/4		88.9 3 1/2	215.9 8 1/2	406.4 16.00	508.0 20	469.9 18 1/2	20	46.4 1 3/4	615.9 24 1/4	215 475
18"	787.4 31		101.6 4	228.6 9	457.2 18.00	565.1 22 1/4	533.4 21	20	50.8 2	685.8 27	305 680
20"	857.2 33 3/4		107.95 4 1/4	247.65 9 3/4	508.0 20.00	622.3 24 1/2	584.2 23	20	54.0 2 1/8	749.3 29 1/2	378 830
24"	1041.4 41		139.7 5 1/2	292.1 11 1/2	609.6 24.00	749.3 29 1/2	692.1 27 1/4	20	66.7 2 5/8	901.7 35 1/2	688 1500

WELDING NECK

ISI 1.500 Lb.



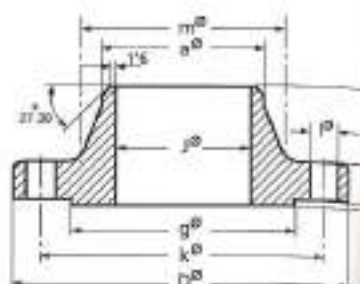
ME/ANSI B 16.5

Nominal pipe size Diámetro nominal	Flange Brida				Hub Cuello		Raised face Resalte	Drilling template Taladros			Approx. weight Peso aprox. Kg. Pounds
	D mm. inches	J mm. inches	b mm. inches	h mm. inches	a mm. inches	m mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches	
1/2"	120.65 4 3/4		22.2 7/8	60.3 2 3/8	21.3 084	38.1 1 1/2	34.9 1 3/8	4	22.2 7/8	82.5 3 1/4	2.3 5
3/8"	130.2 5 1/8		25.4 1	69.8 2 3/4	26.7 1.05	44.4 1 3/4	42.9 1 13/16	4	22.2 7/8	88.9 3 1/2	2.7 6
1"	149.2 5 7/8		28.6 1 1/8	73.0 2 7/8	33.5 1.32	52.4 2 1/16	50.8 2	4	25.4 1	101.6 4	4.1 9
1 1/4"	158.7 6 1/4		28.6 1 1/8	73.0 2 7/8	42.2 1.66	63.5 2 1/2	63.5 2 1/2	4	25.4 1	111.1 4 3/8	4.5 10
1 1/2"	177.8 7		31.8 1 1/4	82.5 3 1/4	48.3 1.90	69.8 2 3/4	73.0 2 7/8	4	28.6 1 1/8	123.8 4 7/8	5.9 13
2"	215.9 8 1/2		38.1 1 1/2	101.6 4	60.4 2.38	104.8 4 1/8	92.1 3 5/8	8	25.4 1	165.1 6 1/2	11.3 25
2 1/2"	244.5 9 5/8		41.3 1 5/8	104.8 4 1/8	73.1 2.88	123.8 4 7/8	104.8 4 1/8	8	28.6 1 1/8	190.5 7 1/2	16.3 36
3"	265.7 10 1/2		47.6 1 7/8	117.5 4 5/8	88.9 3.50	133.3 5 1/4	127.0 5	8	31.7 1 1/4	203.2 8	21.8 48
4"	311.1 12 1/4		54.0 2 1/8	123.8 4 7/8	114.3 4.50	161.9 6 3/8	157.2 6 3/16	8	34.9 1 3/8	241.3 9 1/2	33.9 73
5"	374.6 14 3/4		73.0 2 7/8	155.6 6 1/8	141.2 5.55	196.8 7 3/4	185.7 7 5/16	8	41.3 1 5/8	292.1 11 1/2	59.0 130
6"	393.7 15 1/2		82.6 3 1/4	171.4 6 3/4	160.4 6.63	228.6 9	215.9 8 1/2	12	38.1 1 1/2	317.5 12 1/2	75.0 165
8"	482.6 19		92.1 3 1/4	212.7 8 3/8	219.2 8.63	292.1 11 1/2	269.9 10 5/8	12	44.4 1 3/4	393.7 15 1/2	125 275
10"	584.2 23		107.9 4 1/4	254.0 10	273.0 10.75	368.3 14 1/2	323.8 12 3/4	12	50.8 2	482.6 19	206 455
12"	673.1 26 1/2		123.8 4 7/8	282.5 11 1/8	323.8 12.75	450.8 17 3/4	381.0 15	16	54.0 2 1/8	571.5 22 1/2	313 690
14"	749.3 29 1/2		133.4 5 1/4	298.4 11 3/4	355.6 14.00	495.3 19 1/2	412.7 16 1/4	16	60.3 2 3/8	635.0 25	426 940
16"	825.5 32 1/2		146.1 5 3/4	311.1 12 1/4	406.4 16.00	552.4 21 3/4	469.9 18 1/2	16	66.7 2 5/8	704.8 27 3/4	567 1250
18"	914.4 36		161.9 6 3/8	327.0 12 7/8	457.2 18.00	596.9 23 1/2	533.4 21	16	73.0 2 7/8	774.7 30 1/2	737 1625
20"	984.2 39 3/4		177.8 7	355.6 14	508.0 20.00	641.3 25 1/4	584.2 23	16	79.4 3 1/8	831.8 32 3/4	930 2050
24"	1148.4 46		203.2 8	406.4 16	609.6 24.00	762.0 30	692.1 27 1/4	16	92.1 3 5/8	990.6 39	1510 3325

To be specified by purchaser.
Debe ser especificado por el comprador.

WELDING NECK

ANSI 2.500 Lb.

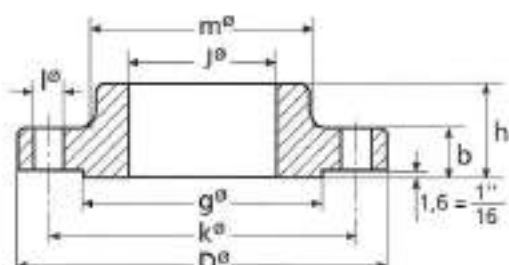


ASME/ANSI B 16.5

Nominal pipe size	Flange Brida				Hub Cuello		Raised face Resalte	Drilling template Taladros			Aplicación Perforación
Diámetro nominal	D mm. inches	J mm. inches	b mm. inches	h mm. inches	a mm. inches	m mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches	by Por
1/2"	133,35 5 1/4	To be specified by purchaser Debe ser especificado por el comprador	30,2 1 3/16	73,0 2 7/8	21,3 0.84	42,9 1 11/16	34,9 1 3/8	4	22,2 7/8	88,9 3 1/2	1 1/2"
3/4"	139,7 5 1/2		31,7 1 1/4	79,4 3 1/8	26,7 1.05	50,8 2	42,9 1 11/16	4	22,2 7/8	95,2 3 3/4	2"
1"	158,75 6 1/4		34,9 1 3/8	88,9 3 1/2	38,5 1.32	57,1 2 1/4	50,8 2	4	25,4 1	107,95 4 1/4	2 1/2"
1 1/4"	184,15 7 1/4		38,1 1 1/2	95,2 3 3/4	42,2 1.66	73,0 2 7/8	63,5 2 1/2	4	28,6 1 1/8	130,2 5 1/8	3"
1 1/2"	203,2 8		44,4 1 3/4	111,1 4 3/8	48,3 1.90	79,4 3 1/8	73,0 2 7/8	4	31,7 1 1/4	146,05 5 3/4	3 1/2"
2"	234,95 9 1/4		50,8 2	127,0 5	62,45 2.38	95,2 3 3/4	92,1 3 5/8	8	28,6 1 1/8	171,45 6 3/4	4"
2 1/2"	266,7 10 1/2		57,1 2 1/4	142,9 5 5/8	73,15 2.88	114,3 4 1/2	104,8 4 1/8	8	31,7 1 1/4	196,85 7 3/4	4 1/2"
3"	304,8 12		65,7 2 5/8	168,3 6 5/8	88,9 3.50	133,35 5 1/4	127,0 5	8	34,9 1 3/8	228,6 9	5"
4"	355,6 14		76,2 3	190,5 7 1/2	114,3 4.50	165,1 6 1/2	157,2 6 3/16	8	41,3 1 5/8	273,05 10 3/4	6"
5"	419,1 16 1/2		92,1 3 5/8	228,6 9	141,2 5.56	203,2 8	185,7 7 5/16	8	47,6 1 7/8	323,8 12 3/4	8"
6"	482,6 19		107,95 4 1/4	273,05 10 3/4	168,4 6.63	234,95 9 1/4	215,9 8 1/2	8	54,0 2 1/8	368,3 14 1/2	10"
8"	552,4 21 3/4		127,0 5	317,5 12 1/2	219,2 8.63	304,8 12	269,9 10 5/8	12	54,0 2 1/8	438,1 17 1/4	14"
10"	673,1 26 1/2		165,1 6 1/2	419,1 16 1/2	273,05 10.75	374,6 14 3/4	323,8 12 3/4	12	66,7 2 5/8	539,7 21 1/4	18"
12"	762,0 30		184,15 7 1/4	463,5 18 1/4	323,85 12.75	441,3 17 3/8	381,0 15	12	73,0 2 7/8	619,1 24 3/8	24"

SLIP-ON

SI 150 Lb.

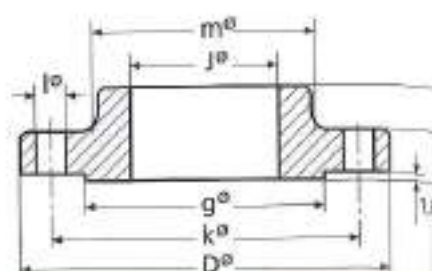


ME/ANSI B 16.5

Nominal pipe size	Flange Bride				Hub Cuello	Raised face Resalte	Drilling template Taladros			Approx. weight Peso aprox.
	D mm. inches	d mm. inches	b mm. inches	h mm. inches	m mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches	
1/2"	88.9 3 1/2	22.3 0.88	11.1 7/16	15.9 5/8	30.2 1 3/16	34.9 1 3/8	4	15.9 5/8	60.3 2 3/8	0.5 1
3/4"	98.4 3 7/8	27.7 1.09	12.7 1/2	15.9 5/8	38.1 1 1/2	42.9 1 11/16	4	15.9 5/8	69.8 2 3/4	0.9 2
1"	107.9 4 1/8	34.5 1.36	14.3 9/16	17.5 11/16	49.2 1 15/16	50.8 2	4	15.9 5/8	79.4 3 1/8	0.9 2
1 1/4"	117.5 4 5/8	43.2 1.70	15.9 5/8	20.6 13/16	58.7 2 5/16	63.5 2 1/2	4	15.9 5/8	88.9 3 1/2	1.4 3
1 1/2"	127.0 5	49.5 1.95	17.5 11/16	22.2 7/8	65.1 2 9/16	73.0 2 7/8	4	15.9 5/8	98.4 3 7/8	1.4 3
2"	152.4 6	62.0 2.44	19.1 3/4	25.4 1	77.8 3 1/16	92.1 3 5/8	4	19.0 3/4	120.6 4 3/4	2.3 5
2 1/2"	177.8 7	74.7 2.94	22.2 7/8	28.6 1 1/8	90.5 3 9/16	104.8 4 1/8	4	19.0 3/4	139.7 5 1/2	3.2 7
3"	190.5 7 1/2	90.7 3.57	23.8 15/16	30.2 1 3/16	107.9 4 1/4	127.0 5	4	19.0 3/4	152.4 6	3.6 8
3 1/2"	215.9 8 1/2	103.4 4.07	23.8 15/16	31.7 1 1/4	122.2 4 13/16	139.7 5 1/2	8	19.0 3/4	177.8 7	5.0 11
4"	228.6 9	116.1 4.57	23.8 15/16	33.3 1 5/16	134.9 5 5/16	157.2 6 3/16	8	19.0 3/4	190.5 7 1/2	5.9 13
5"	254 10	143.8 5.66	23.8 15/16	36.5 1 7/16	163.5 6 7/16	185.7 7 5/16	8	22.2 7/8	215.9 8 1/2	6.8 15
6"	279.4 11	170.7 6.72	25.4 1	39.7 1 9/16	192.1 7 9/16	215.9 8 1/2	8	22.2 7/8	241.3 9 1/2	8.6 19
8"	342.9 13 1/2	221.5 8.72	28.6 1 1/8	44.4 1 3/4	246.1 9 11/16	269.9 10 5/8	8	22.2 7/8	298.4 11 3/4	13.6 30
10"	406.4 16	276.35 10.88	30.2 1 3/16	49.2 1 15/16	304.8 12	323.8 12 3/4	12	25.4 1	361.9 14 1/4	19.5 43
12"	482.6 19	327.15 12.88	31.8 1 1/4	55.6 2 3/16	365.1 14 3/8	381.0 15	12	25.4 1	431.8 17	29.0 64
14"	533.4 21	359.15 14.14	34.9 1 3/8	57.1 2 1/4	400.0 15 3/4	412.7 16 1/4	12	28.6 1 1/8	476.2 18 3/4	41.0 90
16"	596.9 23 1/2	410.5 16.16	36.5 1 7/16	63.5 2 1/2	457.2 18	469.9 18 1/2	16	28.6 1 1/8	539.7 21 1/4	44.5 98
18"	635.0 25	461.8 18.18	39.7 1 9/16	68.3 2 11/16	504.8 19 7/8	533.4 21	16	31.7 1 1/4	577.8 22 3/4	59.0 130
20"	686.5 27 1/2	513.1 20.20	42.9 1 11/16	73.0 2 7/8	558.8 22	584.2 23	20	31.7 1 1/4	635.0 25	75.0 165
22"	749.3 29 1/2	564.4 22.22	46.0 1 13/16	79.4 3 1/8	609.6 24	641.2 25 1/4	20	34.9 1 3/8	692.1 27 1/4	84 185
24"	812.8 32	615.95 24.25	47.6 1 7/8	82.5 3 1/4	663.6 26 1/8	692.1 27 1/4	20	34.9 1 3/8	749.3 29 1/2	99.8 220

SLIP-ON

ANSI 300 Lb.

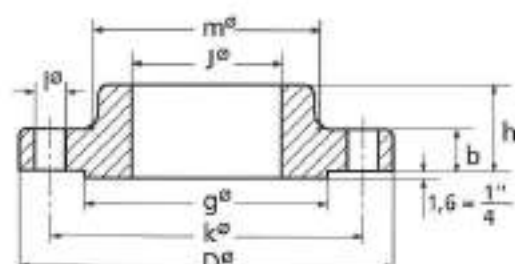


ASME/ANSI B 16.5

Nominal pipe size	Flange Breda				Hub Cuello	Raised face Resalte	Drilling template Taladros			Approx. weight Peso aprox.
Diámetro nominal	D mm. inches	J mm. inches	b mm. inches	h mm. inches	m mm. inches	g mm. inches	Number Número	t mm. inches	k mm. inches	Kg. Pounds
1/2"	95,2 3 3/4	22,3 0,88	14,1 9/16	22,2 7/8	38,1 1 1/2	34,9 1 3/8	4	15,9 5/8	66,7 2 5/8	0,9 2
3/4"	117,5 4 5/8	27,7 1,09	15,9 5/8	25,4 1	47,6 1 7/8	42,9 1 11/16	4	19,0 3/4	82,5 3 1/4	1,4 3
1"	123,8 4 7/8	34,5 1,36	17,5 11/16	27,0 1 1/16	54,0 2 1/8	50,8 2	4	19,0 3/4	88,9 3 1/2	1,4 3
1 1/4"	133,35 5 1/4	43,2 1,70	19,0 3/4	27,0 1 1/16	63,5 2 1/2	63,5 2 1/2	4	19,0 3/4	98,4 3 7/8	1,8 4
1 1/2"	155,6 6 1/8	49,5 1,95	20,6 13/16	30,2 1 3/16	69,8 2 3/4	73,0 2 7/8	4	22,2 7/8	114,3 4 1/2	2,7 6
2"	165,1 6 1/2	62,0 2,44	22,2 7/8	33,3 1 5/16	84,1 3 5/16	92,1 3 5/8	8	19,0 3/4	127,0 5	3,7 8
2 1/2"	190,5 7 1/2	74,7 2,94	25,4 1	38,1 1 1/2	100,0 3 15/16	104,8 4 1/8	8	22,2 7/8	149,2 5 7/8	4,5 10
3"	209,5 8 1/4	90,7 3,57	28,6 1 1/8	42,9 1 11/16	117,5 4 5/8	127,0 5	8	22,2 7/8	168,3 6 5/8	5,9 13
3 1/2"	228,6 9	103,4 4,07	30,2 1 3/16	44,4 1 3/4	133,4 5 1/4	139,7 5 1/2	8	22,2 7/8	184,1 7 1/4	7,7 17
4"	254,0 10	116,1 4,57	31,8 1 1/4	47,6 1 7/8	146,0 5 3/4	157,2 6 3/16	8	22,2 7/8	200,0 7 7/8	10,8 24
5"	279,4 11	143,8 5,66	34,9 1 3/8	50,8 2	177,8 7	185,7 7 5/16	8	22,2 7/8	234,95 9 1/4	12,7 28
6"	317,5 12 1/2	170,7 6,72	36,5 1 7/16	52,4 2 1/16	206,4 8 1/8	215,9 8 1/2	12	22,2 7/8	269,9 10 5/8	17,7 39
8"	381,0 15	221,5 8,72	41,3 1 5/8	61,9 2 7/16	260,3 10 1/4	269,9 10 5/8	12	25,4 1	330,2 13	26,9 59
10"	444,5 17 1/2	276,35 10,88	47,6 1 7/8	66,7 2 5/8	320,7 12 5/8	323,8 12 3/4	16	28,6 1 1/8	387,3 15 1/4	38,1 84
12"	520,7 20 1/2	327,15 12,89	50,8 2	73,0 2 7/8	374,8 14 3/4	381,0 15	16	31,7 1 1/4	450,8 17 3/4	52,1 115
14"	584,2 23	359,15 14,14	54,0 2 1/8	76,2 3	425,4 16 3/4	432,7 16 1/4	20	31,7 1 1/4	514,3 20 1/4	74,6 165
16"	647,7 25 1/2	410,5 16,16	57,2 2 1/4	82,5 3 1/4	482,6 19	489,9 19 1/2	20	34,9 1 3/8	571,5 22 1/2	86,6 190
18"	711,2 28	461,8 18,18	60,3 2 3/8	88,9 3 1/2	533,4 21	533,4 21	24	34,9 1 3/8	628,6 24 3/4	111 250
20"	774,7 30 1/2	513,1 20,20	63,5 2 1/2	95,2 3 3/4	587,4 23 1/8	584,2 23	24	34,9 1 3/8	685,8 27	141 311
22"	838,2 33	564,4 22,22	66,7 2 5/8	101,6 4	641,2 25 1/4	641,2 25 1/4	24	41,3 1 5/8	742,9 29 1/4	164 363
24"	914,4 36	615,95 24,25	69,8 2 3/4	106,4 4 3/16	701,7 27 5/8	692,1 27 1/4	24	41,3 1 5/8	812,8 32	219 485

SLIP-ON

SI 400 Lb.

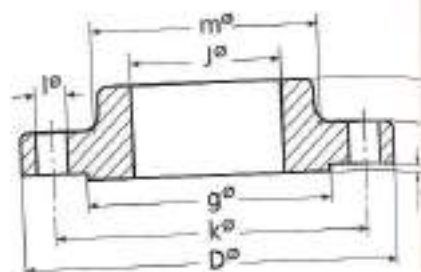


ANSI B 16.5

Nominal pipe size	Flange Brida				Hub Cuello	Raised face Resalte	Drilling template Taladros			Approx. weight Peso aprox.
Diameter nominal	D mm inches	J mm inches	b mm inches	h mm inches	m mm inches	g mm inches	Number Número	I mm inches	k mm inches	Kg Pounds
1/2"	95.2 3 3/4	22.3 0.88	14.3 9/16	22.2 7/8	38.1 1 1/2	34.9 1 3/8	4	15.9 5/8	66.7 2 5/8	0.9 2
3/4"	117.5 4 5/8	27.7 1.09	15.9 5/8	25.4 1	47.6 1 7/8	42.9 1 11/16	4	19.0 3/4	82.5 3 1/4	1.4 3
1"	123.8 4 7/8	34.5 1.36	17.5 11/16	27.0 1 1/16	54.0 2 1/8	50.8 2	4	19.0 3/4	88.9 3 1/2	1.8 4
1 1/8"	133.35 5 1/4	43.2 1.70	20.6 13/16	28.6 1 1/8	63.5 2 1/2	63.5 2 1/2	4	19.0 3/4	98.4 3 7/8	2.3 5
1 1/2"	155.6 6 1/8	49.5 1.95	22.2 7/8	31.7 1 1/4	69.8 2 3/4	73.0 2 7/8	4	22.2 7/8	114.3 4 1/2	3.2 7
2"	165.1 6 1/2	62.0 2.44	25.4 1	36.5 1 7/16	84.1 3 5/16	92.1 3 5/8	8	19.0 3/4	127.0 5	4.1 9
2 1/2"	190.5 7 1/2	74.7 2.94	28.6 1 1/8	41.3 1 5/8	100.0 3 15/16	104.8 4 1/8	8	22.2 7/8	149.2 5 7/8	5.9 13
3"	209.55 8 1/4	90.7 3.57	31.8 1 1/4	46.0 1 13/16	117.5 4 5/8	127.0 5	8	22.2 7/8	168.3 6 5/8	7.3 16
3 1/2"	228.6 9	103.4 4.07	34.9 1 3/8	49.2 1 15/16	133.3 5 1/4	139.7 5 1/2	8	25.4 1	184.1 7 1/4	9.5 21
4"	254.0 10	116.1 4.57	34.9 1 3/8	50.8 2	146.0 5 3/4	157.2 6 3/16	8	25.4 1	200.0 7 7/8	11.8 26
5"	279.4 11	143.8 5.66	38.1 1 1/2	54.0 2 1/8	177.8 7	185.7 7 5/16	8	25.4 1	234.9 9 1/4	14.1 31
6"	317.5 12 1/2	176.7 6.92	41.3 1 5/8	57.1 2 1/4	206.4 8 1/8	215.9 8 1/2	12	25.4 1	269.9 10 5/8	20.0 44
8"	381.0 15	221.5 8.72	47.6 1 7/8	68.3 2 11/16	260.3 10 1/4	269.9 10 5/8	12	28.6 1 1/8	330.2 13	30.4 67
10"	444.5 17 1/2	276.95 10.88	54.0 2 1/8	73.0 2 7/8	320.7 12 5/8	323.8 12 3/4	16	31.7 1 1/4	387.3 15 1/4	41.3 91
12"	520.7 20 1/2	327.15 12.88	57.2 2 1/4	79.4 3 1/8	374.6 14 3/4	381.0 15	16	34.9 1 3/8	450.0 17 3/4	59.0 130
14"	584.2 23	359.15 14.14	60.3 2 3/8	84.1 3 5/16	425.4 16 3/4	412.7 16 1/4	20	34.9 1 3/8	514.3 20 1/4	81.6 180
16"	647.7 25 1/2	410.5 16.16	63.5 2 1/2	93.7 3 11/16	482.6 19	469.9 18 1/2	20	38.1 1 1/2	571.5 22 1/2	107 235
18"	711.2 28	461.8 18.18	66.7 2 5/8	98.4 3 7/8	533.4 21	533.4 21	24	38.1 1 1/2	628.6 24 3/4	129 285
20"	774.7 30 1/2	513.1 20.20	69.9 2 3/4	101.6 4	587.4 23 1/8	584.2 23	24	41.3 1 5/8	685.8 27	156 345
22"	838.2 33	564.4 22.22	73 2 7/8	107.9 4 1/4	641.2 25 1/4	641.2 25 1/4	24	44.4 1 3/4	742.9 29 1/4	184 405
24"	914.4 36	615.95 24.25	76.2 3	114.3 4 1/2	701.7 27 5/8	692.1 27 1/4	24	47.6 1 7/8	812.8 32	231 510

SLIP-ON

ANSI 600 Lb.

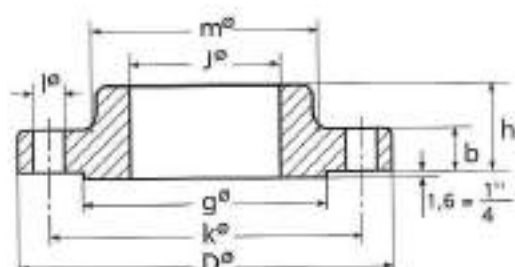


ASME/ANSI B 16.5

Nominal pipe size	Flange Brida				Hub Cuello	Raised face Resalte	Drilling template Taladros		
	D mm. inches	J mm. inches	b mm. inches	h mm. inches	m mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches
1/2"	95,2 3 3/4	22,3 0.88	14,3 9/16	22,2 7/8	38,1 1 1/2	34,9 1 3/8	4	15,9 5/8	66,7 2 5/8
3/4"	117,5 4 5/8	27,7 1.09	15,9 5/8	25,4 1	47,6 1 7/8	42,9 1 11/16	4	19,0 3/4	82,5 3 1/4
1"	123,8 4 7/8	34,5 1.36	17,5 11/16	27,0 1 1/16	54,0 2 1/8	50,8 2	4	19,0 3/4	88,9 3 1/2
1 1/4"	133,3 5 1/4	43,2 1.70	20,6 13/16	28,6 1 1/8	63,5 2 1/2	63,5 2 1/2	4	19,0 3/4	98,4 3 7/8
1 1/2"	155,6 6 1/8	49,5 1.95	22,2 7/8	31,7 1 1/4	69,8 2 3/4	73,0 2 7/8	4	22,2 7/8	114,3 4 1/2
2"	165,1 6 1/2	62,0 2.44	25,4 1	36,5 1 7/16	84,1 3 5/16	92,1 3 5/8	8	15,0 3/4	127,0 5
2 1/2"	190,5 7 1/2	74,7 2.94	28,6 1 1/8	41,3 1 5/8	100,0 3 15/16	104,8 4 1/8	8	22,2 7/8	149,2 5 7/8
3"	209,5 8 1/4	90,7 3.57	31,8 1 1/4	46,0 1 13/16	117,5 4 5/8	127,0 5	8	22,2 7/8	168,3 6 5/8
3 1/2"	228,6 9	103,4 4.07	34,9 1 3/8	49,2 1 15/16	133,3 5 1/4	139,7 5 1/2	8	25,4 1	184,15 7 1/4
4"	273,0 10 3/4	116,1 4.57	38,1 1 1/2	54,0 2 1/8	152,4 6	157,2 6 3/16	8	25,4 1	215,9 8 1/2
5"	330,2 13	143,8 5.66	44,4 1 3/4	60,3 2 3/8	188,9 7 7/16	185,7 7 5/16	8	28,6 1 1/4	266,7 10 1/2
6"	355,6 14	170,7 6.72	47,6 1 7/8	66,7 2 5/8	222,2 8 3/4	215,9 8 1/2	12	28,6 1 1/8	292,1 11 1/2
8"	419,1 16 1/2	221,5 8.72	55,6 2 3/16	76,2 3	273,0 10 3/4	269,9 10 5/8	12	31,7 1 1/4	349,2 13 3/4
10"	508,0 20	276,35 10.88	63,5 2 1/2	85,7 3 3/8	342,9 13 1/2	323,8 12 3/4	16	34,9 1 3/8	431,8 17
12"	558,0 22	327,15 12.88	66,7 2 5/8	92,1 3 5/8	400,0 15 3/4	381,0 15	20	34,9 1 3/8	488,9 19 1/4
14"	603,2 23 3/4	359,15 14.14	69,9 2 3/4	93,7 3 11/16	431,8 17	412,7 16 1/4	20	38,1 1 1/2	527,0 20 3/4
16"	685,8 27	410,5 16.16	76,2 3	106,4 4 1/8	495,8 19 1/2	469,9 18 1/2	20	41,3 1 5/8	603,2 23 3/4
18"	742,9 29 1/4	461,8 18.18	82,6 3 1/4	117,5 4 5/8	546,1 21 1/2	513,4 21	20	44,4 1 3/4	654,0 25 3/4
20"	812,8 32	513,1 20.20	88,9 3 1/2	127,0 5	609,6 24	584,2 23	24	44,4 1 3/4	723,9 28 1/2
22"	869,0 34 1/4	564,4 22.22	95,2 3 3/4	133,3 5 1/4	666,7 26 1/4	641,2 25 1/4	24	47,6 1 7/8	777,9 30 5/8
24"	939,8 37	615,95 24.25	101,6 4	139,7 5 1/2	717,5 28 1/4	692,1 27 1/4	24	50,8 2	818,2 33

SLIP-ON

SI 900 Lb.

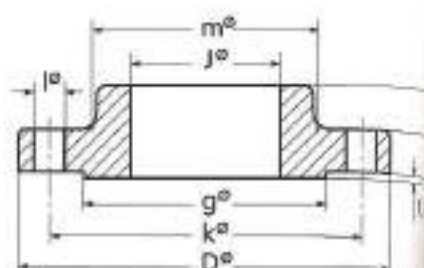


ME/ANSI B 16.5

Nominal pipe size	Flange Brida				Hub Cuello	Raised face Resalte	Drilling template Taladros			Approx. weight Peso aprox.
Diámetro nominal	D mm. inches	J mm. inches	b mm. inches	h mm. inches	m mm. inches	g mm. inches	Number Número	I mm. inches	k mm. inches	Kg. Pounds
1/8"	120,65 4 3/8	22,3 0,88	22,2 7/8	31,7 1 1/4	38,1 1 1/2	34,9 1 3/8	4	22,2 7/8	82,5 3 1/4	1,8 4
3/4"	130,2 5 1/8	27,7 1,09	25,4 1	34,9 1 3/8	44,4 1 3/4	42,9 1 11/16	4	22,2 7/8	88,9 3 1/2	2,3 5
1"	149,2 5 7/8	34,5 1,36	28,6 1 1/8	41,3 1 5/8	52,4 2 1/16	50,8 2	4	25,4 1	101,6 4	3,6 8
1 1/4"	158,75 6 1/4	43,2 1,70	28,6 1 1/8	41,3 1 5/8	63,5 2 1/2	63,5 2 1/2	4	25,4 1	111,1 4 3/8	4,1 9
1 1/2"	177,8 7	48,5 1,95	31,8 1 1/4	44,4 1 3/4	69,8 2 3/4	73,0 2 7/8	4	28,6 1 1/8	123,8 4 7/8	5,4 12
2"	215,9 8 1/2	62,0 2,44	38,1 1 1/2	57,1 2 1/4	104,8 4 1/8	92,1 3 5/8	8	25,4 1	165,1 6 1/2	11,3 25
2 1/2"	244,5 9 5/8	74,7 2,94	41,3 1 5/8	63,5 2 1/2	123,8 4 7/8	104,8 4 1/8	8	28,6 1 1/8	190,5 7 1/2	16,3 36
3"	241,3 9 1/2	90,7 3,57	38,1 1 1/2	54,0 2 1/8	127,0 5	127,0 5	8	25,4 1	190,5 7 1/2	11,8 26
4"	292,1 11 1/2	116,1 4,57	44,5 1 3/4	69,8 2 3/4	158,7 6 1/4	157,2 6 3/16	8	31,7 1 1/4	234,95 9 1/4	24,0 53
5"	349,2 13 3/4	143,8 5,66	50,8 2	79,4 3 1/8	190,5 7 1/2	185,7 7 5/16	8	34,9 1 3/8	279,4 11	37,6 83
6"	381,0 15	170,7 6,72	55,6 2 1/16	85,7 3 3/8	234,9 9 1/4	215,9 8 1/2	12	31,7 1 1/4	317,5 12 1/2	49,9 110
8"	469,9 18 1/2	221,5 8,72	63,5 2 1/2	101,6 4	298,4 11 3/4	269,9 10 5/8	12	38,1 1 1/2	393,7 15 1/2	77,1 170
10"	546,1 21 1/2	276,35 10,88	69,9 2 3/4	107,9 4 1/4	368,3 14 1/2	323,8 12 3/4	16	38,1 1 1/2	469,9 18 1/2	111 245
12"	609,6 24	327,15 12,88	79,4 3 1/8	117,5 4 5/8	419,1 16 1/2	381,0 15	20	38,1 1 1/2	533,4 21	147 325
14"	641,3 25 1/4	359,15 14,14	85,7 3 3/8	130,2 5 1/8	450,8 17 3/4	412,7 16 1/4	20	41,3 1 5/8	558,8 22	181 400
16"	704,6 27 3/4	410,5 16,16	88,9 3 1/2	133,3 5 1/4	508,0 20	469,9 18 1/2	20	44,4 1 3/4	615,9 24 1/4	193 425
18"	787,4 31	461,8 18,18	101,6 4	152,4 6	585,1 22 1/4	533,4 21	20	50,8 2	685,8 27	272 600
20"	857,2 33 3/4	513,1 20,20	107,5 4 1/4	158,7 6 1/4	622,3 24 1/2	584,2 23	20	54,0 2 1/8	749,3 29 1/2	331 730
24"	1041,4 41	615,95 24,25	139,7 5 1/2	203,2 8	749,3 29 1/2	692,1 27 1/4	20	66,7 2 5/8	991,7 35 1/2	635 1400

SLIP-ON

ANSI 1.500 Lb.

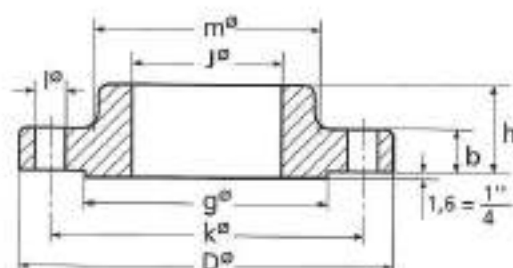


ASME/ANSI B 16.5

Nominal pipe size	Flange Brida				Hub Cuello	Raised face Resalte	Drilling template Taladros			Approx weight Peso aprox
Diámetro nominal	D mm. inches	J mm. inches	b mm. inches	h mm. inches	m mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches	Kg. Pounds
1/2"	120,5 4 3/4	22,3 0,88	22,2 7/8	31,7 1 1/4	38,1 1 1/2	34,9 1 3/8	4	22,2 7/8	82,5 3 1/4	13 4
3/4"	130,2 5 1/8	27,7 1,09	25,4 1	34,9 1 3/8	44,4 1 3/4	42,9 1 11/16	4	22,2 7/8	88,9 3 1/2	21 5
1"	149,2 5 7/8	34,5 1,36	28,6 1 1/8	41,3 1 5/8	52,4 2 1/16	50,8 2	4	25,4 1	101,6 4	34 8
1 1/4"	158,7 6 1/4	43,2 1,70	28,6 1 1/8	41,3 1 5/8	63,5 2 1/2	63,5 2 1/2	4	25,4 1	111,1 4 3/8	41 9
1 1/2"	177,8 7	49,5 1,95	31,8 1 1/4	44,4 1 3/4	69,8 2 3/4	73,0 2 7/8	4	28,6 1 1/8	123,8 4 7/8	54 12
2"	215,9 8 1/2	62,0 2,44	38,1 1 1/2	57,1 2 1/4	104,8 4 1/8	92,1 3 5/8	8	25,4 1	165,1 6 1/2	111 25
2 1/2"	244,5 9 5/8	74,7 2,94	41,3 1 5/8	63,5 2 1/2	123,8 4 7/8	104,8 4 1/8	8	28,6 1 1/8	190,5 7 1/2	161 36
3"	266,7 10 1/2	90,7 3,57	47,6 1 7/8	73,0 2 7/8	133,3 5 1/4	127,0 5	8	31,7 1 1/4	203,2 8	210 46
4"	311,1 12 1/4	116,1 4,57	54,0 2 1/8	90,5 3 5/16	161,9 6 3/8	157,2 6 3/16	8	34,9 1 3/8	241,3 9 1/2	271 60
5"	374,6 14 3/4	143,8 5,66	73,0 2 7/8	104,8 4 1/8	196,8 7 3/4	185,7 7 5/16	8	41,3 1 5/8	292,1 11 1/2	330 73
6"	393,7 15 1/4	170,7 6,72	82,6 3 1/4	119,1 4 11/16	228,6 9	215,9 8 1/2	12	38,1 1 1/2	317,5 12 1/2	350 80
8"	482,6 19	221,5 8,72	92,1 3 5/8	142,9 5 5/8	292,1 11 1/2	269,9 10 5/8	12	44,4 1 3/4	393,7 15 1/2	440 100
10"	584,2 23	276,3 10,88	107,9 4 1/4	158,7 6 1/4	368,3 14 1/2	323,8 12 3/4	12	50,8 2	482,6 19	540 120
12"	673,1 26 1/2	327,1 12,88	123,8 4 7/8	181,0 7 1/8	450,8 17 3/4	381,0 15	16	54,0 2 1/8	571,5 22 1/2	640 140

SLIP-ON

ANSI 2.500 Lb.

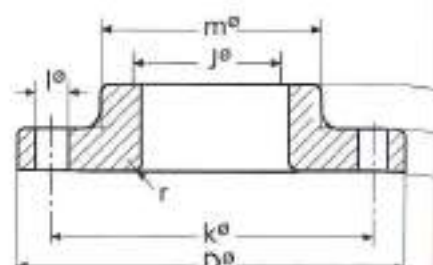


ME/ANSI B 16.5

Nominal pipe size	Flange Brida				Hub Cuello	Raised face Resalte	Drilling template Taladros			Approx. weight Peso aprox.
Diámetro nominal	D mm. inches	J mm. inches	b mm. inches	h mm. inches	m mm. inches	g mm. inches	Number Número	I mm. inches	k mm. inches	Kg. Pounds
1/2"	133,35 5 1/4	22,35 0,88	30,2 1 3/16	39,7 1 9/16	42,9 1 11/16	34,9 1 3/8	4	22,2 7/8	88,9 3 1/2	3,2 7
3/4"	139,7 5 1/2	27,7 1,09	31,7 1 1/4	42,9 1 11/16	50,8 2	42,9 1 11/16	4	22,2 7/8	95,2 3 3/4	4 8
1"	158,75 6 1/4	34,5 1,36	34,9 1 3/8	47,6 1 7/8	57,1 2 1/4	50,8 2	4	25,4 1	107,95 4 1/4	5 11
1 1/4"	184,15 7 1/4	43,2 1,70	38,1 1 1/2	52,4 2 1/16	73,0 2 7/8	63,5 2 1/2	4	28,6 1 1/8	130,2 5 1/8	7,3 16
1 1/2"	203,2 8	49,5 1,95	44,4 1 3/4	60,3 2 3/8	79,4 3 1/8	73,0 2 7/8	4	31,7 1 1/4	146,05 5 3/4	10 22
2"	234,95 9 1/4	62,0 2,44	50,8 2	69,8 2 3/4	95,2 3 3/4	92,1 3 5/8	8	28,6 1 1/8	171,45 6 3/4	17,3 38
2 1/2"	266,7 10 1/2	74,7 2,94	57,1 2 1/4	79,4 3 1/8	114,3 4 1/2	104,8 4 1/8	8	31,7 1 1/4	196,85 7 3/4	25 55
3"	304,8 12	90,7 3,57	66,7 2 5/8	92,1 3 5/8	133,35 5 1/4	127,0 5	8	34,9 1 3/8	228,6 9	37,7 83
4"	355,6 14	116,1 4,57	76,2 3	107,95 4 1/4	165,1 6 1/2	157,2 6 3/16	8	41,3 1 5/8	273,05 10 3/4	56,7 125
5"	419 16 1/2	143,8 5,66	92,1 3 5/8	130,2 5 1/8	203,2 8	185,7 7 5/16	8	47,6 1 7/8	323,8 12 3/4	95,3 210
6"	482,6 19	170,7 6,72	107,95 4 1/4	152,4 6	234,95 9 3/4	215,0 8 1/2	8	54,0 2 1/8	368,3 14 1/2	147,4 325
8"	552,4 21 3/4	221,5 8,72	127,0 5	177,8 7	304,8 12	269,9 10 5/8	12	54,0 2 1/8	438,1 17 1/4	220 485
10"	621,1 24 1/2	276,35 10,88	165,1 6 1/2	228,6 9	374,6 14 3/4	323,8 12 3/4	12	66,7 2 5/8	539,7 21 1/4	422 930
12"	762,0 30	327,15 12,88	184,15 7 1/4	254,0 10	441,3 17 3/8	381,0 15	12	73,0 2 7/8	619,1 24 3/8	499 1.100

LAP JOINT

ANSI 150 Lb.

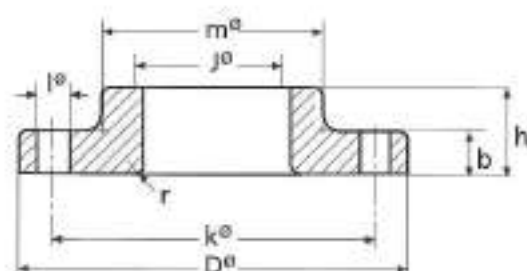


ASME/ANSI B 16.5

Nominal pipe size	Flange Brida					Hub Cuello	Drilling template Taladros			App. weig. Peso aprox.
Diámetro nominal	D mm, inches	J mm, inches	b mm, inches	h mm, inches	r mm, inches	m mm, inches	Number Número	l mm, inches	k mm, inches	Kg Pounds
1/2"	88.9 3 1/2	22.9 0.90	11.1 7/16	15.9 5/8	3.2 1/8	30.2 1 3/16	4	15.9 5/8	60.3 2 3/8	0.5 1
3/4"	98.4 3 7/8	28.2 1.11	12.7 1/2	15.9 5/8	3.2 1/8	38.1 1 1/2	4	15.9 5/8	69.8 2 3/4	0.5 1
1"	107.9 4 1/4	35.05 1.38	14.3 9/16	17.5 11/16	3.2 1/8	49.2 1 15/16	4	15.9 5/8	79.4 3 1/8	0.5 1
1 1/4"	117.5 4 5/8	43.7 1.72	15.9 5/8	20.6 13/16	4.8 3/16	58.7 2 3/16	4	15.9 5/8	88.9 3 1/2	1.4 3
1 1/2"	127.0 5	50.0 1.97	17.5 11/16	22.2 7/8	6.35 1/4	65.1 2 9/16	4	15.9 5/8	98.4 3 7/8	1.4 3
2"	152.4 6	62.5 2.46	19.1 3/4	25.4 1	7.9 5/16	77.8 3 1/16	4	19.0 3/4	120.6 4 3/4	2.3 5
2 1/2"	177.8 7	75.4 2.97	22.2 7/8	28.6 1 1/8	7.9 5/16	90.5 3 9/16	4	19.0 3/4	139.7 5 1/2	3.7 8
3"	190.5 7 1/2	91.4 3.60	23.8 15/16	30.2 1 3/16	9.5 3/8	107.9 4 1/4	4	19.0 3/4	152.4 6	3.6 8
3 1/2"	215.9 8 1/2	104.1 4.10	23.8 15/16	31.7 1 1/4	9.5 3/8	122.2 4 13/16	8	19.0 3/4	177.8 7	5 11
4"	228.6 9	116.8 4.60	23.8 15/16	33.3 1 5/16	11.1 7/16	134.9 5 5/16	8	19.0 3/4	190.5 7 1/2	5.9 13
5"	254 10	144.5 5.69	23.8 15/16	36.5 1 7/16	11.1 7/16	163.5 6 7/16	8	22.2 7/8	215.9 8 1/2	8.8 19
6"	279.4 11	171.45 6.75	25.4 1	39.7 1 9/16	12.7 1/2	192.1 7 9/16	8	22.2 7/8	241.3 9 1/2	8.8 19
8"	342.9 13 1/2	222.25 8.75	28.6 1 1/8	44.4 1 3/4	12.7 1/2	246.1 9 11/16	8	22.2 7/8	298.4 11 3/4	13.6 30
10"	406.4 16	277.4 10.92	30.2 1 3/16	49.2 1 15/16	12.7 1/2	304.8 12	12	25.4 1	361.9 14 1/4	18.5 40
12"	482.6 19	328.2 12.92	31.8 1 1/4	55.6 2 3/16	12.7 1/2	365.1 14 3/8	12	25.4 1	431.8 17	28 62
14"	533.4 21	360.2 14.18	34.9 1 3/8	75.4 3 1/8	12.7 1/2	400.0 14 3/4	12	28.6 1 1/8	476.2 18 3/8	47.5 105
16"	596.9 23 1/2	411.2 16.19	36.5 1 7/16	87.3 3 7/16	12.7 1/2	457.2 18	16	28.6 1 1/8	539.7 21 1/4	63.1 140
18"	635.0 25	462.3 18.20	39.7 1 9/16	96.8 3 13/16	12.7 1/2	504.8 19 7/8	16	31.7 1 1/4	577.8 22 3/4	77.8 170
20"	698.5 27 1/2	514.35 20.25	42.9 1 11/16	103.2 4 1/16	12.7 1/2	558.8 22	20	31.7 1 1/4	635.0 25	88.5 195
22"	749.3 29 1/2	565.2 22.25	46.0 1 13/16	108 4 1/4	12.7 1/2	616 24 1/4	20	34.9 1 3/8	692.1 27 1/4	116.2 260
24"	812.8 32	615.95 24.25	47.6 1 7/8	111.1 4 3/8	12.7 1/2	663.6 26 1/8	20	34.9 1 3/8	749.3 29 1/2	127 280

LAP JOINT

NSI 300 Lb.

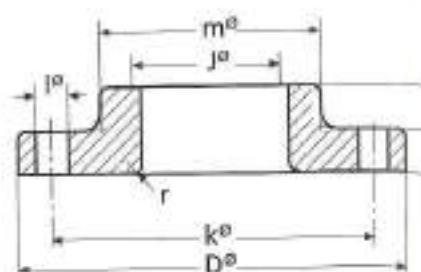


ASME/ANSI B 16.5

Nominal pipe size	Flange Brida					Hub Cuello	Drilling template Taladros			Approx. weight Peso aprox.
Diámetro nominal	D mm, inches	J mm, inches	b mm, inches	h mm, inches	r mm, inches	m mm, inches	Number Número	l mm, inches	k mm, inches	Kg. Pounds
1/2"	95,2 3 3/4	22,9 0,90	14,3 9/16	22,2 7/8	3,2 1/8	38,1 1 1/2	4	15,9 5/8	66,7 2 5/8	0,9 2
3/4"	117,5 4 5/8	26,2 1,11	15,9 5/8	25,4 1	3,2 1/8	47,6 1 7/8	4	19,0 3/4	82,5 3 1/4	1,4 2,4
1"	123,8 4 7/8	35,05 1,38	17,5 11/16	27,0 1 1/16	3,2 1/8	54,0 2 1/8	4	19,0 3/4	88,9 3 1/2	2,4 3
1 1/4"	133,3 5 1/8	43,7 1,72	19,05 3/4	27,0 1 1/16	4,8 3/16	63,5 2 1/2	4	19,0 3/4	98,4 3 7/8	1,8 4
1 1/2"	155,6 6 1/8	50,0 1,97	20,6 13/16	30,2 1 3/16	6,35 1/4	69,8 2 3/4	4	22,2 7/8	114,3 4 1/2	2,7 6
2"	165,1 6 1/2	62,5 2,46	22,2 7/8	33,3 1 5/16	7,9 5/16	84,1 3 5/16	8	19,0 3/4	127,0 5	3,2 7
2 1/2"	190,5 7 1/2	75,4 2,97	25,4 1	38,1 1 1/2	7,9 5/16	100,0 3 15/16	8	22,2 7/8	109,2 5 7/8	4,5 10
3"	209,5 8 1/4	91,4 3,60	28,6 1 1/8	42,9 1 11/16	9,5 3/8	117,5 4 5/8	8	22,2 7/8	168,3 6 5/8	5,9 13
3 1/2"	228,6 9	104,1 4,10	30,2 1 9/16	44,4 1 3/4	9,5 3/8	133,4 5 1/4	8	22,2 7/8	184,15 7 1/4	7,7 17
4"	254,0 10	116,8 4,60	31,8 1 1/4	47,6 1 7/8	11,1 7/16	146,0 5 3/4	8	22,2 7/8	200,0 7 7/8	10 22
5"	279,4 11	144,5 5,69	34,9 1 3/8	50,8 2	11,1 7/16	177,8 7	8	22,2 7/8	234,9 9 1/4	12,7 28
6"	312,5 12 1/2	171,45 6,75	36,5 1 7/16	52,4 2 3/16	12,7 1/2	206,3 8 1/8	12	22,2 7/8	269,9 10 5/8	17,7 39
8"	381,0 15	222,25 8,75	41,3 1 5/8	61,9 2 7/16	12,7 1/2	260,35 10 1/4	12	25,4 1	330,2 13	26,3 58
10"	444,5 17 1/2	277,4 10,92	47,6 1 7/8	95,2 3 3/4	12,7 1/2	320,7 12 5/8	16	28,6 1 1/8	387,3 15 1/4	41,3 91
12"	520,7 20 1/2	328,2 12,92	50,8 2	101,6 4	12,7 1/2	374,6 14 3/4	16	31,7 1 1/4	450,8 17 3/4	63,5 140
14"	584,2 23	360,2 14,18	54,0 2 1/8	111,1 4 3/4	12,7 1/2	425,4 16 3/4	20	31,7 1 1/4	514,3 20 1/4	85,2 190
16"	647,7 25 1/2	411,2 16,19	57,2 2 1/4	120,65 4 3/4	12,7 1/2	482,6 19	20	34,9 1 3/8	571,5 22 1/2	113 250
18"	711,2 28	462,3 18,20	60,3 2 3/8	130,2 5 1/8	12,7 1/2	533,4 21	24	34,9 1 3/8	628,6 24 3/4	134 295
20"	774,7 30 1/2	514,35 20,25	63,5 2 1/2	139,7 5 1/2	12,7 1/2	587,4 23 1/8	24	34,9 1 3/8	685,8 27	168 370
24"	838,2 33	565,2 22,25	66,7 2 5/8	146 5 3/4	12,7 1/2	641,2 25 1/4	24	41,3 1 5/8	742,9 29 1/4	197 435
30"	914,4 36	615,95 24,25	69,8 2 3/4	152,4 6	12,7 1/2	701,7 27 5/8	24	41,3 1 5/8	812,8 32	249 550

LAP JOINT

ANSI 400 Lb.

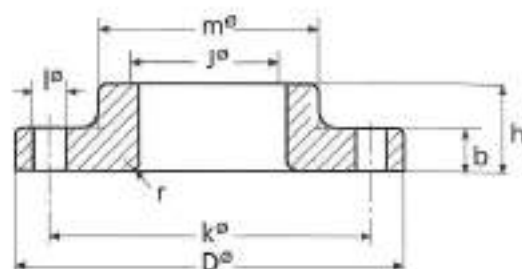


ASME/ANSI B 16.5

Nominal pipe size	Flange Brida					Hub Cuello	Drilling template Taladros			Approx. weight Peso aprox.
Diámetro nominal	D mm. inches	J mm. inches	b mm. inches	h mm. inches	r mm. inches	m mm. inches	Number Número	l mm. inches	k mm. inches	Kg. Pounds
1/2"	95.2 3 3/4	22.9 0.90	14.3 9/16	22.2 7/8	3.2 1/8	38.1 1 1/2	4	15.9 5/8	66.7 2 5/8	8.1 2
3/4"	117.5 4 5/8	28.2 1.11	15.9 5/8	25.4 1	3.2 1/8	47.6 1 7/8	4	19.0 3/4	82.5 3 1/4	11.3 3
1"	123.8 4 7/8	35.05 1.38	17.5 11/16	27.9 1 1/16	3.2 1/8	54.0 2 1/8	4	19.0 3/4	88.9 3 1/2	12.4 4
1 1/4"	133.3 5 1/4	43.7 1.72	20.6 13/16	28.6 1 1/8	4.8 3/16	63.5 2 1/2	4	19.0 3/4	98.4 3 7/8	22.5 5
1 1/2"	155.6 6 1/8	50.0 1.97	22.2 7/8	31.7 1 1/4	6.35 1/4	69.8 2 3/4	4	22.2 7/8	114.3 4 1/2	25.5 6
2"	165.1 6 1/2	62.5 2.46	25.4 1	36.5 1 7/16	7.9 5/16	84.1 3 5/16	8	19.0 3/4	127.0 5	41.5 9
2 1/2"	190.5 7 1/2	75.4 2.97	28.6 1 1/8	41.3 1 5/8	7.9 5/16	106.0 3 15/16	8	22.2 7/8	149.2 5 7/8	54.5 12
3"	209.5 8 1/4	91.4 3.60	31.8 1 1/4	46.0 1 13/16	9.5 3/8	117.5 4 5/8	8	22.2 7/8	168.3 6 5/8	63.5 14
3 1/2"	228.6 9	104.1 4.10	34.9 1 3/8	49.2 1 15/16	9.5 3/8	133.35 5 1/4	8	25.4 1	184.1 7 1/4	81.5 18
4"	254.0 10	116.8 4.60	34.9 1 3/8	50.8 2	11.1 7/16	146.0 5 3/4	8	25.4 1	200.0 7 7/8	110.5 24
5"	279.4 11	144.5 5.69	38.1 1 1/2	54.0 2 1/8	11.1 7/16	177.8 7	8	25.4 1	234.9 9 1/4	131.5 29
6"	317.5 12 1/2	171.45 6.75	41.3 1 5/8	57.1 2 1/4	12.7 1/2	206.4 8 1/8	12	25.4 1	269.9 10 5/8	159.5 35
8"	381.0 15	222.25 8.75	47.6 1 7/8	68.3 2 11/16	12.7 1/2	260.3 10 1/4	12	28.6 1 1/8	330.2 13	214.5 47
10"	444.5 17 1/2	277.4 10.92	54.0 2 1/8	101.6 4	12.7 1/2	320.7 12 5/8	16	31.7 1 1/4	382.3 15 1/4	264.5 58
12"	520.7 20 1/2	328.2 12.92	57.2 2 1/4	107.95 4 1/4	12.7 1/2	374.6 14 3/4	16	34.9 1 3/8	450.8 17 3/4	317.5 70
14"	584.2 23	360.2 14.18	60.3 2 3/8	117.5 4 5/8	12.7 1/2	425.4 16 3/4	20	34.9 1 3/8	514.3 20 1/4	363.5 80
16"	647.7 25 1/2	411.2 16.19	63.5 2 1/2	127.0 5	12.7 1/2	482.6 19	20	38.1 1 1/2	571.5 22 1/2	408.5 90
18"	711.2 28	462.3 18.20	66.7 2 5/8	136.5 5 3/8	12.7 1/2	533.4 21	24	38.1 1 1/2	628.6 24 3/4	450.5 100
20"	774.7 30 1/2	514.35 20.25	69.9 2 3/4	146.05 5 3/4	12.7 1/2	587.4 23 1/8	24	41.3 1 5/8	685.8 27	490.5 110
22"	838.2 33	565.2 22.25	73 2 7/8	152.4 6	12.7 1/2	641.2 25 1/4	24	44.4 1 3/4	742.9 29 1/4	520.5 115
24"	914.4 36	615.95 24.25	76.2 3	158.75 6 1/4	12.7 1/2	701.7 27 5/8	24	47.6 1 7/8	812.8 32	562.5 124

LAP JOINT

ANSI 600 Lb.

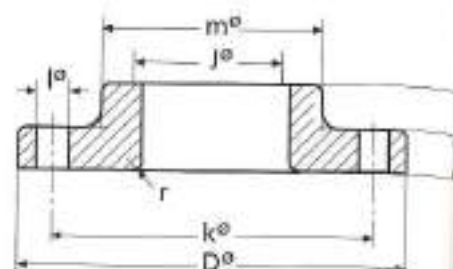


SME/ANSI B 16.5

Nominal pipe size	Flange Brida					Hub Cuello	Drilling template Taladros			Approx. weight Peso aprox.
	D nom. inches	J mm. inches	b mm. inches	h mm. inches	r mm. inches	m mm. inches	Number Número	l mm. inches	k mm. inches	Kg. Pounds
1/2"	85,2 3 3/4	22,9 0.90	14,3 9/16	22,2 7/8	3,2 1/8	38,1 1 1/2	4	15,9 5/8	66,7 2 5/8	0,9 2
3/4"	117,5 4 5/8	28,2 1.11	15,9 5/8	25,4 1	3,2 1/8	47,6 1 7/8	4	19,0 3/4	62,5 2 1/4	1,4 3
1"	123,8 4 7/8	35,05 1.38	17,5 11/16	27,0 1 1/16	3,2 1/8	54,0 2 1/8	4	19,0 3/4	88,9 3 1/2	1,8 4
1 1/4"	133,3 5 1/4	43,7 1.72	20,6 13/16	28,6 1 1/8	4,8 3/16	63,5 2 1/2	4	19,0 3/4	98,4 3 7/8	2,3 5
1 1/2"	155,6 6 1/8	50,0 1.97	22,2 7/8	31,7 1 1/4	6,35 1/4	69,8 2 3/4	4	22,2 7/8	114,3 4 1/2	3,2 7
2"	165,1 6 1/2	62,5 2.46	25,4 1	36,5 1 3/16	7,9 5/16	84,1 3 5/16	8	19,0 3/4	127,0 5	4,1 9
2 1/2"	190,5 7 1/2	75,4 2.97	28,6 1 1/8	41,3 1 5/8	7,9 5/16	100,0 3 15/16	8	22,2 7/8	149,2 5 7/8	5,4 12
3"	209,5 8 1/4	91,4 3.60	31,8 1 1/4	46,0 1 13/16	9,5 3/8	117,5 4 5/8	8	22,2 7/8	168,3 6 5/8	6,8 15
3 1/2"	228,6 9	104,1 4.10	34,9 1 3/8	49,2 1 15/16	9,5 3/8	133,3 5 1/4	8	25,4 1	184,15 7 1/4	9,1 20
4"	273,05 10 3/4	116,8 4.60	38,1 1 1/2	54,0 2 1/8	11,1 7/16	152,4 6	8	25,4 1	215,9 8 1/2	14,3 36
5"	330,2 13	144,5 5.69	44,4 1 3/4	60,3 2 3/8	11,1 7/16	188,9 7 7/16	8	28,6 1 1/8	266,7 10 1/2	27,7 61
6"	355,6 14	171,45 6.73	47,6 1 7/8	66,7 2 5/8	12,7 1/2	222,2 8 3/4	12	28,6 1 1/8	292,1 11 1/2	35,4 78
8"	419,1 16 1/2	222,25 8.75	55,4 2 3/16	76 3	12,7 1/2	273,0 10 3/4	12	31,7 1 1/4	349,2 13 3/4	49,9 110
10"	508,0 20	277,4 10.92	63,5 2 1/2	111,1 4 3/8	12,7 1/2	342,9 13 1/2	16	34,9 1 3/8	431,8 17	77,1 170
12"	558,0 22	328,2 12.92	66,7 2 5/8	117,5 4 5/8	12,7 1/2	400,0 15 3/4	20	34,9 1 3/8	488,9 19 1/4	90,7 200
14"	603,2 23 3/4	360,2 14.18	69,9 2 3/4	127,0 5	12,7 1/2	431,8 17	20	38,1 1 1/2	527,0 20 3/4	113 250
16"	685,8 27	411,2 16.19	76,2 3	139,7 5 1/2	12,7 1/2	485,3 19 1/2	20	41,3 1 5/8	603,2 23 3/4	166 365
18"	742,9 29 1/4	462,3 18.20	82,6 3 1/4	152,4 6	12,7 1/2	546,1 21 1/2	20	44,4 1 3/4	654,0 25 3/4	197 435
20"	812,8 32	514,35 20.25	88,9 3 1/2	165,1 6 1/2	12,7 1/2	609,6 24	24	46,4 1 3/4	723,9 28 1/2	259 570
22"	869,9 34 1/4	565,2 22.25	95,2 3 3/4	174,6 6 7/8	12,7 1/2	666,8 26 1/4	24	47,6 1 7/8	777,9 30 5/8	304 670
24"	931,8 37	615,95 24.25	101,6 4	184,15 7 1/4	12,7 1/2	717,5 28 1/4	24	50,8 2	838,2 33	367 810

LAP JOINT

ANSI 900 Lb.

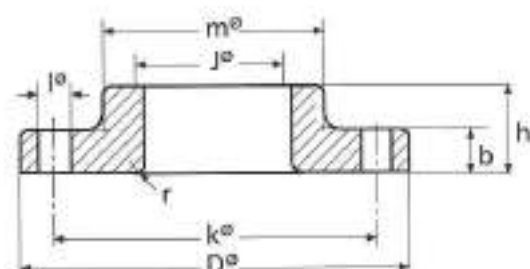


ASME/ANSI B 16.5

Nominal pipe size	Flange Brida					Hub Cuello	Drilling template Taladros			Approx. weight Peso aprox.
Diámetro nominal	D mm. inches	J mm. inches	b mm. inches	h mm. inches	r mm. inches	m mm. inches	Number Número	I mm. inches	k mm. inches	Kg. Pounds
1/2"	129,6 4 3/4	22,9 0,90	22,2 7/8	31,7 1 1/4	3,2 1/8	38,1 1 1/2	4	22,2 7/8	82,5 3 1/4	1,8 4
3/4"	139,2 5 1/8	28,2 1,11	25,4 1	34,9 1 3/8	3,2 1/8	44,4 1 3/4	4	22,2 7/8	88,9 3 1/2	2,3 5
1"	149,2 5 7/8	35,05 1,38	28,6 1 1/8	41,3 1 5/8	3,2 1/8	52,4 2 1/16	4	25,4 1	101,6 4	3,6 8
1 1/4"	158,7 6 1/4	43,7 1,72	28,6 1 1/8	41,3 1 5/8	4,8 3/16	63,5 2 1/2	4	25,4 1	111,1 4 3/8	4,1 9
1 1/2"	177,8 7	50,8 1,97	31,8 1 1/4	44,4 1 3/4	6,35 1/4	68,8 2 3/4	4	28,6 1 1/8	123,8 4 7/8	5,4 12
2"	215,9 8 1/2	62,5 2,46	38,1 1 1/2	57,1 2 1/4	7,9 5/16	104,8 4 1/8	8	25,4 1	165,1 6 1/2	11,3 25
2 1/2"	244,5 9 5/8	75,4 2,97	41,3 1 5/8	63,5 2 1/2	7,9 5/16	123,8 4 7/8	8	28,6 1 1/8	190,5 7 1/2	16 35
3"	241,3 9 1/2	91,4 3,60	38,1 1 1/2	54,0 2 1/8	9,5 3/8	127,0 5	8	25,4 1	190,5 7 1/2	11,3 25
4"	292,1 11 1/2	116,8 4,60	44,5 1 3/4	69,8 2 3/4	11,1 7/16	158,7 6 1/4	8	31,7 1 1/4	234,9 9 1/4	23,1 51
5"	349,2 13 3/4	144,5 5,69	50,8 2	79,4 3 1/8	11,1 7/16	190,5 7 1/2	8	34,9 1 3/8	279,4 11	16,7 37
6"	381,0 15	171,45 6,75	55,6 2 3/16	85,7 3 3/8	12,7 1/2	234,9 9 1/4	12	31,7 1 1/4	317,5 12 1/2	47,9 105
8"	469,9 18 1/2	222,25 8,75	63,5 2 1/2	114,3 4 1/2	12,7 1/2	298,4 11 3/4	12	38,1 1 1/2	393,7 15 1/2	86,1 190
10"	546,1 21 1/2	277,4 10,92	69,9 2 3/4	127,0 5	12,7 1/2	368,3 14 1/2	16	38,1 1 1/2	469,9 18 1/2	125 275
12"	609,6 24	328,2 12,92	79,4 3 1/8	142,9 5 5/8	12,7 1/2	419,1 16 1/2	20	38,1 1 1/2	533,4 21	189 370
14"	641,3 25 1/4	360,2 14,18	85,7 3 3/8	155,6 6 1/8	12,7 1/2	450,8 17 3/4	20	41,3 1 5/8	538,8 22	188 415
16"	704,8 27 3/4	411,2 16,19	88,9 3 1/2	165,1 6 1/2	12,7 1/2	500,0 20	20	44,4 1 3/4	615,9 24 1/4	211 465
18"	782,4 31	462,3 18,20	101,6 4	190,3 7 1/2	12,7 1/2	565,1 22 1/4	20	50,8 2	685,8 27	245 540
20"	852,2 33 3/4	514,35 20,25	107,9 4 1/4	209,55 8 1/4	12,7 1/2	622,3 24 1/2	20	54,0 2 1/8	749,3 29 1/2	367 810
24"	1041,4 41	615,95 24,25	135,7 5 1/2	266,7 10 1/2	12,7 1/2	749,3 29 1/2	20	66,7 2 5/8	901,7 35 1/2	551 1210

LAP JOINT

ANSI 1.500 Lb.

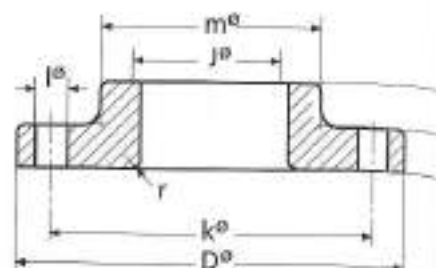


ASME/ANSI B 16.5

Nominal pipe size	Flange Brida					Hubi Cuello	Drilling template Taladros			Approx. weight Peso aprox.
Diámetro nominal	D mm. inches	J mm. inches	b mm. inches	h mm. inches	r mm. inches	m mm. inches	Number Número	I mm. inches	k mm. inches	Kg. Pounds
1/2"	120,6 4 3/4	22,9 0,90	22,2 7/8	31,7 1 1/4	3,2 1/8	38,1 1 1/2	4	22,2 7/8	82,5 3 1/4	1,8 4
3/4"	130,2 5 1/8	28,2 1,11	25,4 1	34,9 1 3/8	3,2 1/8	44,4 1 3/4	4	22,2 7/8	88,9 3 1/2	2,3 5
1"	149,2 5 7/8	35,05 1,38	28,6 1 1/8	41,3 1 5/8	3,2 1/8	52,4 2 1/16	4	25,4 1	101,6 4	3,6 8
1 1/8"	158,7 6 1/4	43,7 1,72	28,6 1 1/8	41,3 1 5/8	4,8 3/16	63,5 2 1/2	4	25,4 1	111,1 4 3/8	4,1 9
1 1/2"	177,8 7	50,0 1,97	31,8 1 5/8	44,4 1 3/4	6,35 1/4	69,8 2 3/4	4	28,6 1 1/8	123,8 4 7/8	5,4 12
2"	215,9 8 1/2	62,5 2,46	38,1 1 1/2	57,1 2 1/8	7,9 5/16	104,8 4 1/8	8	25,4 1	165,1 6 1/2	11,3 25
2 1/2"	244,5 9 5/8	75,4 2,97	41,3 1 5/8	63,5 2 1/2	7,9 5/16	123,8 4 7/8	8	28,6 1 1/8	190,5 7 1/2	16 35
3"	266,7 10 1/2	91,4 3,60	47,6 1 7/8	73,0 2 7/8	9,5 3/8	133,3 5 1/4	8	31,7 1 1/4	203,2 8	21,3 47
4"	311,1 12 1/4	116,8 4,60	54,0 2 1/8	90,5 3 5/16	11,1 7/16	161,0 6 3/8	8	34,9 1 3/8	241,3 9 1/2	34 75
5"	374,6 14 3/4	144,5 5,69	73,0 2 7/8	104,8 4 1/8	11,1 7/16	196,8 7 3/4	8	41,3 1 5/8	292,1 11 1/2	63,5 140
6"	393,7 15 1/2	171,45 6,75	82,6 3 1/4	119,1 4 11/16	12,7 1/2	228,6 9	12	38,1 1 1/2	317,5 12 1/2	77,1 170
8"	482,6 19	222,25 8,75	92,1 3 5/8	142,9 5 5/8	12,7 1/2	292,1 11 1/2	12	44,4 1 3/4	393,7 15 1/2	129 285
10"	584,2 23	277,4 10,92	107,9 4 1/4	177,8 7	12,7 1/2	368,3 14 1/2	12	50,8 2	482,6 19	220 485
12"	673,1 26 1/2	328,2 12,92	123,8 4 7/8	219,1 8 5/8	12,7 1/2	450,8 17 3/4	16	54,0 2 1/8	571,5 22 1/2	286 630
14"	749,3 29 1/2	360,2 14,18	133,4 5 1/4	241,3 9 1/2	12,7 1/2	495,3 19 1/2	16	60,3 2 3/8	635,0 25	404 890
16"	825,5 32 1/2	411,2 16,19	146,1 5 3/4	260,4 10 1/4	12,7 1/2	552,4 21 3/4	16	66,7 2 5/8	704,8 27 3/4	521,6 1,150
18"	914,4 36	462,3 18,20	161,9 6 3/8	276,3 10 7/8	12,7 1/2	596,9 23 1/2	16	73,03 2 7/8	774,7 30 1/2	669,1 1,475
20"	984,3 38 3/4	514,4 20,25	177,8 7	292,1 11 1/2	12,7 1/2	641,35 25 1/4	16	79,38 3 1/8	831,9 32 3/4	805,1 1,775
24"	1,168,4 46	616 24,25	203,2 8	330,2 13	12,7 1/2	762 30	16	92,1 3 5/8	990,6 39	1,281,4 2,825

LAP JOINT

ANSI 2.500 Lb.

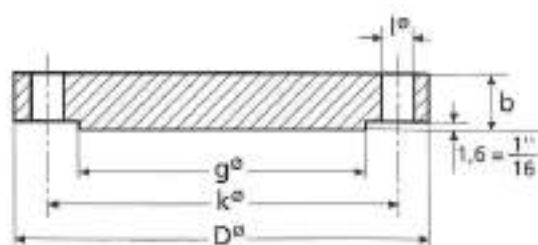


ASME/ANSI B 16.5

Nominal pipe size Diámetro nominal	Flange Brida					Hub Cuello	Drilling template Taladros			Approx. weight Peso aprox. Kg. Pound
	D mm. inches	J mm. inches	b mm. inches	h mm. inches	r mm. inches	m mm. inches	Number Número	l mm. inches	k mm. inches	
1/2"	133,35 5 1/4	22,9 0,90	30,2 1 1/16	39,7 1 9/16	3,2 1/8	42,9 1 11/16	4	22,2 7/8	88,9 3 1/2	3 7
3/4"	139,7 5 1/2	28,2 1,11	31,7 1 1/4	42,9 1 11/16	3,2 1/8	50,8 2	4	22,2 7/8	95,2 3 3/4	4 9
1"	158,75 6 1/4	35,05 1,38	34,9 1 3/8	47,6 1 7/8	3,2 1/8	57,1 2 1/4	4	25,4 1	107,95 4 1/4	5 12
1 1/4"	184,15 7 1/4	43,7 1,72	38,1 1 1/2	52,4 2 1/16	4,8 3/16	73,0 2 7/8	4	28,6 1 1/8	130,2 5 1/8	8 18
1 1/2"	203,2 8	50,0 1,97	44,4 1 3/4	60,3 2 3/8	6,35 1/4	79,4 3 1/8	4	31,7 1 1/4	146,05 5 3/4	11 25
2"	234,95 9 1/4	62,5 2,46	50,8 2	69,8 2 3/4	7,9 5/16	95,2 3 3/4	8	28,6 1 1/8	171,45 6 3/4	17 38
2 1/2"	266,7 10 1/2	75,4 2,97	57,1 2 1/4	79,4 3 1/8	7,9 5/16	114,3 4 1/2	8	31,7 1 1/4	196,85 7 3/4	25 55
3"	304,8 12	91,4 3,60	66,7 2 5/8	92,1 3 5/8	9,5 3/8	133,35 5 1/4	8	34,9 1 3/8	228,6 9	38 83
4"	355,6 14	116,8 4,60	76,2 3	107,95 4 1/4	11,1 7/16	165,1 6 1/2	8	41,3 1 5/8	273,05 10 3/4	58 127
5"	419,1 16 1/2	144,5 5,69	92,1 3 5/8	130,2 5 1/8	11,1 7/16	203,2 8	8	47,6 1 7/8	323,8 12 3/4	75 165
6"	482,6 19	171,45 6,75	107,95 4 1/4	152,4 6	12,7 1/2	234,95 9 1/4	8	54,0 2 1/8	368,3 14 1/2	108 237
8"	552,4 21 3/4	222,25 8,75	127,0 5	177,8 7	12,7 1/2	304,8 12	12	54,0 2 1/8	438,1 17 1/4	220 485
10"	673,1 26 1/2	277,4 10,92	165,1 6 1/2	228,6 9	12,7 1/2	374,6 14 3/4	12	66,7 2 5/8	539,7 21 1/4	408 905
12"	762,0 30	328,2 12,92	184,15 7 1/4	254,0 10	12,7 1/2	441,3 17 3/8	16	73,0 2 7/8	619,1 24 3/8	590 1,080

BLIND

SI 150 Lb.

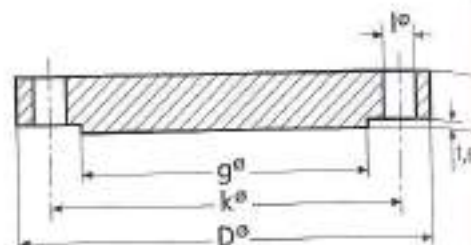


ANSI B 16.5

Nominal pipe size	Flange Breda		Raised face Resalte	Drilling template Taladros			Approx. weight Peso aprox.
Diametro nominal	D mm. inches	b mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches	Kg. Pounds
1/2"	88.9 3 1/2	11.1 7/16	34.9 1 3/8	4	15.9 5/8	69.3 2 3/8	0.5 1
3/4"	98.4 3 7/8	12.7 1/2	42.0 1 11/16	4	15.9 5/8	69.8 2 3/4	0.9 2
1"	108.0 4 1/4	14.3 9/16	50.8 2	4	15.9 5/8	79.4 3 1/8	0.9 2
1 1/4"	117.5 4 5/8	15.9 5/8	63.5 2 1/2	4	15.9 5/8	88.9 3 1/2	1.4 3
1 1/2"	127.0 5	17.5 11/16	73.0 2 7/8	4	15.9 5/8	98.4 3 7/8	1.8 4
2"	152.4 6	19.1 3/4	92.1 3 5/8	4	19.0 3/4	120.6 4 3/4	2.3 5
2 1/2"	177.8 7	22.2 7/8	104.8 4 1/8	4	19.0 3/4	139.7 5 1/2	3.2 7
3"	190.5 7 1/2	23.8 15/16	127.0 5	4	19.0 3/4	152.4 6	4.1 9
3 1/2"	215.9 8 1/2	23.8 15/16	139.7 5 1/2	8	19.0 3/4	177.8 7	5.9 13
4"	228.6 9	23.8 15/16	157.2 6 3/16	8	19.0 3/4	190.5 7 1/2	7.7 17
5"	254.0 10	23.8 15/16	185.7 7 5/16	8	22.2 7/8	215.9 8 1/2	9.1 20
6"	279.4 11	25.4 1	215.9 8 1/2	8	22.2 7/8	241.3 9 1/2	11.8 26
8"	342.9 13 1/2	28.6 1 1/8	269.9 10 5/8	8	22.2 7/8	298.4 11 3/4	21 46.2
10"	406.4 16	30.2 1 3/16	323.8 12 3/4	12	25.4 1	361.9 14 1/4	31.8 70
12"	482.6 19	31.8 1 1/4	381.0 15	12	25.4 1	431.8 17	49.9 110
14"	533.4 21	34.9 1 3/8	412.7 16 1/4	12	28.6 1 1/8	476.2 18 3/4	63.5 140
16"	596.3 23 1/2	36.5 1 7/16	469.9 18 1/2	16	28.6 1 1/8	539.7 21 1/4	81.6 180
18"	635.0 25	39.7 1 9/16	533.4 21	16	31.7 1 1/4	577.8 22 3/4	99.8 220
20"	698.5 27 1/2	42.9 1 11/16	584.2 23	20	31.7 1 1/4	635.0 25	129 285
24"	749.3 29 1/2	46.0 1 13/16	641.2 25 1/4	20	34.9 1 3/8	692.1 27 1/4	161 355
26"	812.8 32	47.6 1 7/8	692.1 27 1/4	20	34.9 1 3/8	749.3 29 1/2	195 430

BLIND

ANSI 300 Lb.

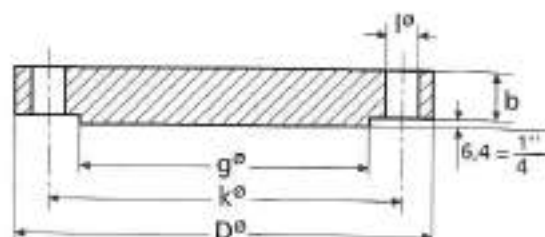


ASME/ANSI B 16.5

Nominal pipe size Diámetro nominal	Flange Brida		Raised face Resalte	Drilling template Taladros			Approx. weight Peso aprox. Kg. Pounds
	D mm. inches	b mm. inches		Number Número	l mm. inches	k mm. inches	
1/2"	95,2 3 3/4	14,3 9/16	34,9 1 3/8	4	15,9 5/8	66,7 2 5/8	0,9 2
3/4"	117,5 4 5/8	15,9 5/8	42,9 1 11/16	4	19,0 3/4	82,5 3 1/4	1,4 3
1"	123,8 4 7/8	17,5 11/16	50,8 2	4	19,0 3/4	88,9 3 1/2	1,4 3
1 1/4"	133,3 5 1/4	19,0 3/4	63,5 2 1/2	4	19,0 3/4	98,4 3 7/8	1,8 4
1 1/2"	155,4 6 1/8	20,6 13/16	73,0 2 7/8	4	22,2 7/8	114,3 4 1/2	2,7 6
2"	165,1 6 1/2	22,7 7/8	92,1 3 5/8	8	19,0 3/4	127,0 5	3,6 8
2 1/2"	190,5 7 1/2	25,4 1	104,8 4 1/8	8	22,2 7/8	149,2 5 7/8	5,4 12
3"	209,5 8 1/4	28,6 1 1/8	127,0 5	8	22,2 7/8	168,3 6 5/8	7,3 16
3 1/2"	228,6 9	30,2 1 3/16	139,7 5 1/2	8	22,2 7/8	184,1 7 1/4	9,5 21
4"	254,0 10	31,8 1 1/4	157,2 6 3/16	8	22,2 7/8	200,0 7 7/8	12,7 27
5"	279,4 11	34,9 1 3/8	185,7 7 5/16	8	22,2 7/8	234,9 9 1/4	15,9 35
6"	317,5 12 1/2	36,5 1 7/16	215,9 8 1/2	12	22,2 7/8	269,9 10 5/8	22,7 50
8"	381,0 15	41,3 1 5/8	269,9 10 5/8	12	25,4 1	330,2 13	36,7 81
10"	444,5 17 1/2	47,6 1 7/8	323,8 12 3/4	16	28,6 1 1/8	387,3 15 1/4	57 125
12"	520,7 20 1/2	50,8 2	381,0 15	16	31,7 1 1/4	450,8 17 3/4	64 141
14"	584,2 23	54,0 2 1/8	412,7 16 1/4	20	31,7 1 1/4	514,3 20 1/4	113 250
16"	647,7 25 1/2	57,2 2 1/4	469,9 18 1/2	20	34,9 1 3/8	571,5 22 1/2	134 295
18"	711,2 28	60,3 2 3/8	533,4 21	24	34,9 1 3/8	628,6 24 3/4	178 392
20"	774,7 30 1/2	63,5 2 1/2	584,2 23	24	34,9 1 3/8	685,8 27	229 505
22"	838,2 33	66,7 2 5/8	641,2 25 1/4	24	41,3 1 5/8	742,9 29 1/4	258 568
24"	914,4 36	69,8 2 3/4	692,1 27 1/4	24	41,3 1 5/8	812,8 32	358 790

BLIND

ANSI 400 Lb.

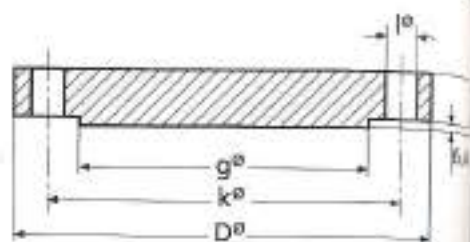


ASME/ANSI B 16.5

Nominal pipe size	Flange Brida		Raised face Resalte	Drilling template Taladros			Approx. weight Peso aprox.
Diámetro nominal	D mm. inches	b mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches	Kg. Pounds
1/2"	95.2 3 3/4	14.3 9/16	34.9 1 3/8	4	15.9 5/8	66.7 2 5/8	0.9 2
3/4"	117.5 4 5/8	15.8 5/8	42.9 1 11/16	4	19.0 3/4	82.5 3 1/4	1.4 3
1"	123.8 4 7/8	17.5 11/16	50.8 2	4	19.0 3/4	88.9 3 1/2	1.8 4
1 1/4"	133.3 5 1/4	20.6 13/16	63.5 2 1/2	4	19.0 3/4	98.4 3 7/8	2.3 5
1 1/2"	155.6 6 1/8	22.2 7/8	73.0 2 7/8	4	22.2 7/8	114.3 4 1/2	3.6 8
2"	165.1 6 1/2	25.4 1	92.1 3 5/8	8	19.0 3/4	127.0 5	4.5 10
2 1/2"	190.5 7 1/2	28.6 1 1/8	104.8 4 1/8	8	22.2 7/8	149.2 5 7/8	6.8 15
3"	209.5 8 1/4	31.8 1 1/4	127.0 5	8	22.2 7/8	168.3 6 5/8	9.1 20
3 1/2"	228.6 9	34.9 1 3/8	139.7 5 1/2	8	25.4 1	184.1 7 1/4	13.2 29
4"	254.0 10	34.9 1 3/8	157.2 6 3/16	8	25.4 1	200.0 7 7/8	15 33
5"	279.4 11	38.1 1 1/2	185.7 7 5/16	8	25.4 1	234.9 9 1/4	20 44
6"	317.5 12 1/2	41.3 1 5/8	215.9 8 1/2	12	25.4 1	268.9 10 5/8	27.7 61
8"	381.0 15	47.6 1 7/8	289.9 10 5/8	12	28.6 1 1/8	330.2 13	45.4 100
10"	404.5 17 1/2	54.0 2 1/8	323.8 12 3/4	16	31.7 1 1/4	387.3 15 1/8	70.3 155
12"	520.7 20 1/2	57.2 2 1/4	381.0 15	16	34.9 1 3/8	450.8 17 3/4	102 225
14"	584.2 23	60.3 2 3/8	412.7 16 1/4	20	34.9 1 3/8	514.3 20 1/4	132 290
16"	647.7 25 1/2	63.5 2 1/2	459.9 18 1/2	20	38.1 1 1/2	571.5 22 1/2	168 370
18"	711.2 28	66.7 2 5/8	533.4 21	24	38.1 1 1/2	628.6 24 3/4	206 454
20"	774.7 30 1/2	69.9 2 3/4	584.2 23	24	41.3 1 5/8	685.8 27	255 565
22"	838.2 33	73 2 7/8	641.2 25 1/4	24	44.4 1 3/4	742.9 29 1/4	327 720
24"	914.4 36	76.2 3	692.1 27 1/4	24	47.6 1 7/8	812.8 32	404 890

BLIND

ANSI 600 Lb.

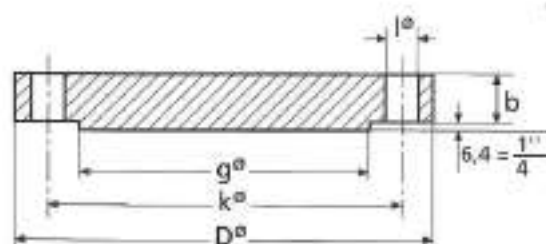


ASME/ANSI B 16.5

Nominal pipe size	Flange Breda		Raised face Resalte	Drilling template Taladros			Approx. weight Peso aprox.
Diámetro nominal	D mm, inches	b mm, inches	g mm, inches	Number Número	l mm, inches	k mm, inches	Kg Pounds
1/2"	95,2 3 3/4	14,3 9/16	34,9 1 3/8	4	15,9 5/8	66,7 2 5/8	0,9 2
3/4"	117,5 4 5/8	15,9 5/8	42,9 1 11/16	4	19,0 3/4	82,5 3 1/4	1,4 3
1"	123,8 4 7/8	17,5 11/16	50,8 2	4	19,0 3/4	88,9 3 1/2	1,8 4
1 1/4"	133,3 5 1/4	20,6 13/16	63,5 2 1/2	4	19,0 3/4	98,4 3 7/8	2,3 5
1 1/2"	155,6 6 1/8	22,2 7/8	73,0 2 7/8	4	22,2 7/8	114,3 4 1/2	3,6 8
2"	165,1 6 1/2	25,4 1	92,1 3 5/8	8	19,0 3/4	127,0 5	4,3 10
2 1/2"	190,5 7 1/2	28,6 1 1/8	104,8 4 1/8	8	22,2 7/8	149,2 5 7/8	6,8 15
3"	209,5 8 1/4	31,8 1 1/4	127,0 5	8	22,2 7/8	168,3 6 5/8	9,1 20
3 1/2"	228,6 9	34,9 1 3/8	139,7 5 1/2	8	25,4 1	184,15 7 1/4	13,2 29
4"	273,0 10 3/4	38,1 1 1/2	157,2 6 3/16	8	25,4 1	215,9 8 1/2	16,6 41
5"	330,2 13	44,4 1 3/4	185,7 7 5/16	8	28,6 1 1/8	266,7 10 1/2	20,8 68
6"	355,6 14	47,6 1 7/8	215,9 8 1/2	12	28,6 1 1/8	292,1 11 1/2	33 80
8"	419,1 16 1/2	55,6 2 3/16	269,9 10 5/8	12	31,7 1 1/4	349,2 13 3/4	63,5 140
10"	508,0 20	63,5 2 1/2	323,8 12 3/4	16	34,9 1 3/8	431,8 17	104 230
12"	558,0 22	66,7 2 5/8	381,0 15	20	34,9 1 3/8	488,9 19 1/4	134 295
14"	603,2 23 3/4	69,9 2 3/4	412,7 16 1/4	20	38,1 1 1/2	527,0 20 3/4	181 395
16"	665,8 27	76,2 3	469,9 18 1/2	20	41,3 1 5/8	603,2 23 3/4	225 495
18"	742,9 29 1/4	82,6 3 1/4	533,4 21	20	44,4 1 3/4	654,0 25 3/4	289 633
20"	812,8 32	88,9 3 1/2	584,2 23	24	44,4 1 3/4	723,9 28 1/2	387 850
22"	869,9 34 1/4	95,2 3 3/4	641,2 25 1/4	24	47,6 1 7/8	777,9 30 5/8	454 1000
24"	939,8 37	101,6 4	692,1 27 1/4	24	50,8 2	838,2 33	562 1250

BLIND

ANSI 900 Lb.

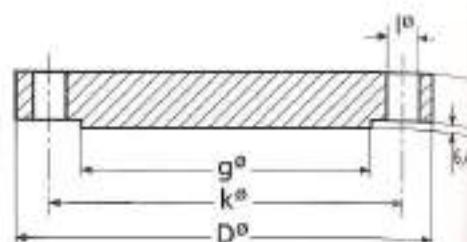


ASME/ANSI B 16.5

Nominal pipe size Diámetro nominal	Flange Brides		Raised face Resalte	Drilling template Taladros			Approx. weight Peso aprox. Kg. Pounds
	O mm. inches	b mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches	
1/2"	120,65 4 3/4	22,2 7/8	34,9 1 3/8	4	22,2 7/8	82,5 3 1/4	1,8 4
3/4"	139,2 5 1/8	25,4 1	42,9 1 11/16	4	22,2 7/8	88,9 3 1/2	2,7 6
1"	149,2 5 7/8	28,6 1 1/8	50,8 2	4	25,4 1	101,6 4	3,6 8
1 1/4"	158,75 6 1/4	28,6 1 1/8	63,5 2 1/2	4	25,4 1	111,1 4 3/8	4,1 9
1 1/2"	177,8 7	31,8 1 1/4	73,0 2 7/8	4	28,6 1 1/8	123,8 4 7/8	5,9 13
2"	215,9 8 1/2	38,1 1 1/2	92,1 3 5/8	8	25,4 1	165,1 6 1/2	11,3 25
2 1/2"	244,5 9 5/8	41,3 1 5/8	104,6 4 1/8	8	28,6 1 1/8	190,5 7 1/2	15,9 35
3"	241,3 9 1/2	38,1 1 1/2	127,0 5	8	25,4 1	190,5 7 1/2	13,2 29
4"	292,1 11 1/2	44,5 1 3/4	157,2 6 3/16	8	31,7 1 1/4	234,9 9 1/4	24,5 54
5"	349,2 13 3/4	50,8 2	185,7 7 5/16	8	34,9 1 3/8	279,4 11	39,5 87
6"	381,0 15	55,6 2 3/16	215,9 8 1/2	12	31,7 1 1/4	317,5 12 1/2	52,2 115
8"	469,9 18 1/2	63,5 2 1/2	269,9 10 5/8	12	38,1 1 1/2	393,7 15 1/2	93,7 200
10"	546,1 21 1/2	69,9 2 3/4	323,8 12 3/4	16	38,1 1 1/2	469,9 18 1/2	132 290
12"	609,6 24	79,4 3 1/8	381,0 15	20	38,1 1 1/2	533,4 21	188 415
14"	641,3 25 1/4	85,7 3 3/8	412,7 16 1/4	20	41,3 1 5/8	558,8 22	236 520
16"	704,8 27 3/4	88,9 3 1/2	469,9 18 1/2	20	44,4 1 3/4	615,9 24 1/4	273 600
18"	782,4 31	101,9 4	523,4 21	20	50,8 2	685,8 27	386 850
20"	857,2 33 3/4	107,9 4 1/4	584,2 23	20	54,0 2 1/8	749,3 29 1/2	488 1075
24"	1041,4 41	139,7 5 1/2	692,1 27 1/4	20	66,7 2 5/8	901,7 35 1/2	918 2025

BLIND

ANSI 1.500 Lb.

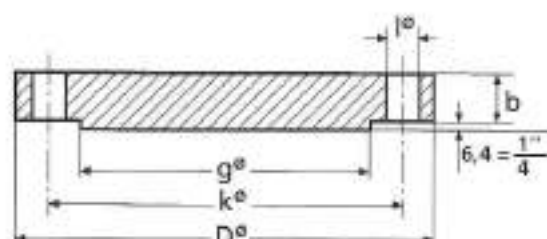


ASME/ANSI B 16.5

Nominal pipe size	Flange Brida		Raised face Resalte	Drilling template Taladros			Approx. weight Peso aprox.
	D mm. inches	b mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches	Kg. Pounds
1/2"	120,6 4 3/4	22,2 7/8	34,9 1 3/8	4	22,2 7/8	82,5 3 1/4	1,8 3,9
3/4"	130,2 5 1/8	25,4 1	42,9 1 11/16	4	22,2 7/8	88,9 3 1/2	2,7 6
1"	149,2 5 7/8	28,6 1 1/8	50,8 2	4	25,4 1	101,6 4	3,6 7,9
1 1/4"	158,7 6 1/4	28,6 1 1/8	63,5 2 1/2	4	25,4 1	111,1 4 3/8	4,1 9
1 1/2"	177,8 7	31,8 1 1/4	73,0 2 7/8	4	28,6 1 1/8	123,8 4 7/8	5,9 13
2"	215,9 8 1/2	38,1 1 1/2	92,1 3 5/8	8	25,4 1	165,1 6 1/2	11,3 25
2 1/2"	244,5 9 5/8	41,3 1 5/8	104,8 4 1/8	8	28,6 1 1/8	190,5 7 1/2	15,9 35
3"	265,7 10 1/2	47,6 1 7/8	127,0 5	8	31,7 1 1/4	203,2 8	21,8 48
4"	311,1 12 1/4	54,0 2 1/8	157,2 6 3/16	8	34,9 1 3/8	241,3 9 1/2	33,1 73
5"	374,6 14 3/4	73,0 2 7/8	185,7 7 5/16	8	41,3 1 5/8	292,1 11 1/2	63,5 140
6"	393,7 15 1/2	82,6 3 1/4	215,9 8 1/2	12	38,1 1 1/2	312,5 12 1/2	72,6 160
8"	482,6 19	92,1 3 1/4	269,9 10 5/8	12	44,4 1 3/4	363,7 15 1/2	136 300
10"	584,2 23	107,9 4 1/4	323,8 12 3/4	12	50,8 2	482,6 19	231 512
12"	673,1 26 1/2	123,8 4 7/8	381,0 15	16	54,0 2 1/8	571,5 22 1/2	315 684
14"	749,3 29 1/2	133,4 5 1/4	412,7 16 1/4	16	60,3 2 3/8	635,0 25	445 983
16"	825,5 32 1/2	146,1 5 3/4	469,9 18 1/2	16	66,7 2 5/8	704,8 27 3/4	590 1300
18"	914,4 36	161,9 6 3/8	533,4 21	16	73,0 2 7/8	774,7 30 1/2	794 1750
20"	984,2 38 3/4	177,8 7	584,2 23	16	79,4 3 1/8	831,8 32 3/4	1010 2225
24"	1168,4 46	203,2 8	692,1 27 1/4	16	92,1 3 5/8	990,6 39	1644 3625

BLIND

SI 2.500 Lb.

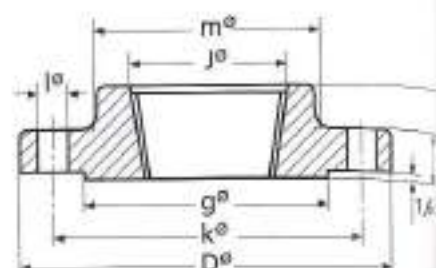


ANSI B 16.5

Nominal pipe size	Flange Brida		Raised face Resalte	Drilling template Taladros			Approx. weight Peso aprox. Kg. Pounds
	D mm. inches	b mm. inches		Number Número	l mm. inches	k mm. inches	
1/2"	133,35 5 1/8	30,2 1 3/16	34,9 1 3/8	4	22,2 7/8	88,9 3 1/2	3 7
3/4"	139,7 5 1/2	31,7 1 1/4	42,9 1 11/16	4	22,2 7/8	95,2 3 3/4	4,5 10
1"	158,75 6 1/4	34,9 1 3/8	50,8 2	4	25,4 1	107,95 4 1/4	5 12
1 1/4"	184,15 7 1/4	38,1 1 1/2	63,5 2 1/2	4	28,6 1 1/8	130,2 5 1/8	8 18
1 1/2"	203,2 8	44,4 1 3/4	73,0 2 7/8	4	31,7 1 1/4	146,05 5 3/4	11 25
2"	234,95 9 1/4	50,8 2	92,1 3 5/8	8	28,6 1 1/8	171,45 6 3/4	17 39
2 1/2"	266,7 10 1/2	57,1 2 1/4	104,8 4 1/8	8	31,7 1 1/4	196,85 7 3/4	25 56
3"	304,8 12	65,7 2 5/8	127,0 5	8	34,9 1 3/8	228,6 9	39 86
4"	355,6 14	76,2 3	157,2 6 3/16	8	41,3 1 5/8	273,05 10 3/4	60 133
5"	419 16 1/2	92,1 3 5/8	185,7 7 5/16	8	47,6 1 7/8	323,8 12 3/4	101 223
6"	482,6 19	107,95 4 1/4	215,9 8 1/2	8	54,0 2 1/8	368,1 14 1/2	156 345
8"	552,4 21 3/4	127,0 5	268,9 10 5/8	12	54,0 2 1/8	438,1 17 1/4	242 533
10"	673,1 26 1/2	165,1 6 1/2	323,8 12 3/4	12	66,7 2 5/8	539,7 21 1/4	465 1025
12"	762,0 30	184,15 7 1/4	381,0 15	12	73,0 2 7/8	619,1 24 3/8	590 1300

THREADED

ANSI 150 Lb.



ASME/ANSI B 16.5

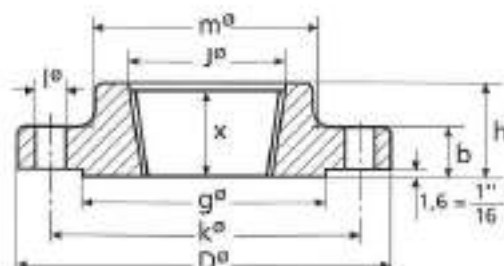
Nominal pipe size	Flange Breda				Hub Cuello	Raised face Resalte	Drilling template Taladros			Approx. weight Peso aprox.
Diámetro nominal	D mm. inches	J mm. inches	b mm. inches	h mm. inches	m mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches	Kg. Pounds
1/2"	88.9 3 1/2		11.1 7/16	15.9 5/8	30.2 1 3/16	34.9 1 3/8	4	15.9 5/8	66.3 2 3/8	0.5 1
3/4"	98.4 3 7/8		12.7 1/2	15.9 5/8	38.1 1 1/2	42.9 1 11/16	4	15.9 5/8	69.8 2 3/4	0.9 2
1"	107.9 4 1/4		14.3 9/16	17.5 11/16	49.2 1 15/16	50.8 2	4	15.9 5/8	79.4 3 1/8	0.9 2
1 1/4"	117.5 4 5/8		15.9 5/8	20.6 13/16	58.7 2 5/16	63.5 2 1/2	4	15.9 5/8	88.9 3 1/2	1.4 3
1 1/2"	127.0 5		17.5 11/16	22.2 7/8	65.1 2 9/16	73.0 2 7/8	4	15.9 5/8	98.4 3 7/8	1.5 3.3
2"	152.4 6		19.1 3/4	25.4 1	77.8 3 1/16	92.1 3 5/8	4	19.0 3/4	120.6 4 3/4	2.1 5.1
2 1/2"	177.8 7		22.3 7/8	28.6 1 1/8	90.5 3 9/16	104.8 4 1/8	4	19.0 3/4	139.7 5 1/2	3.7 8.1
3"	190.5 7 1/2		23.8 15/16	30.2 1 3/16	107.9 4 1/4	127.0 5	4	19.0 3/4	152.4 6	4.2 9.2
3 1/2"	215.9 8 1/2		23.8 15/16	31.7 1 1/4	122.2 4 13/16	139.7 5 1/2	8	19.0 3/4	177.8 7	5.3 11.7
4"	228.6 9		23.8 15/16	33.3 1 5/16	134.9 5 5/16	157.2 6 3/16	8	19.0 3/4	190.5 7 1/2	5.9 13
5"	254 10		23.8 15/16	36.5 1 7/16	163.5 6 7/16	185.7 7 5/16	8	22.2 7/8	215.9 8 1/2	7 15.4
6"	279.4 11		25.4 1	39.7 1 9/16	192.1 7 9/16	215.9 8 1/2	8	22.2 7/8	241.3 9 1/2	8.4 18.5
8"	342.9 13 1/2		28.6 1 1/8	44.4 1 3/4	246.1 9 11/16	269.9 10 5/8	8	22.2 7/8	298.4 11 3/4	13 28.8
10"	405.4 16		30.2 1 3/16	49.2 1 15/16	304.8 12	323.8 12 3/4	12	25.4 1	361.9 14 1/4	19.1 43
12"	482.6 19		31.8 1 1/4	55.6 2 3/16	365.1 14 3/8	381.0 15	12	25.4 1	431.8 17	23.5 51.9
14"	533.4 21		34.9 1 3/8	57.1 2 1/4	400.0 15 3/4	412.7 16 1/4	12	28.6 1 1/8	476.2 18 3/4	41 91
16"	596.9 23 1/2		36.5 1 7/16	63.5 2 1/2	457.2 18	468.9 18 1/2	16	28.6 1 1/8	539.7 21 1/4	47 103.4
18"	635.0 25		39.7 1 9/16	68.3 2 11/16	504.8 19 7/8	533.4 21	16	31.7 1 1/4	577.8 22 3/4	59 130
20"	698.5 27 1/2		42.9 1 11/16	73.0 2 7/8	558.8 22	584.2 23	20	31.7 1 1/4	635.0 25	75 165
24"	812.8 32		47.6 1 7/8	82.5 3 1/4	663.6 26 1/8	692.1 27 1/4	20	34.9 1 3/8	749.3 29 1/2	100 220

No counter bore required in 150 Lb. THREADED FLANGES
En las bridas THREADED 150 Lbs. no se requiere arandela de boca

THREADED

ANSI 300 Lb.

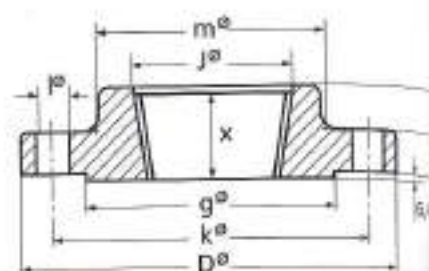
ASME/ANSI B 16.5



Nominal pipe size	Flange Brida					Hub Cuello	Raised face Resalte	Drilling template Taladros			Approx. weight Peso aprox.
Diameter nominal	D mm. inches	J mm. inches	b mm. inches	h mm. inches	x mm. inches	m mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches	Kg. Pounds
1/2"	95.2 3 3/4	23.6 0.93	14.3 9/16	22.2 7/8	15.9 5/8	38.1 1 1/2	34.9 1 3/8	4	15.9 5/8	56.7 2 5/8	0.9 2
3/4"	117.5 4 5/8	28.95 1.14	15.9 5/8	25.4 1	15.9 5/8	47.6 1 7/8	42.9 1 11/16	4	19.05 3/4	82.5 3 1/4	1.4 3
1"	123.8 4 7/8	35.8 1.41	17.5 11/16	27.0 1 1/16	17.5 11/16	54.0 2 1/8	50.8 2	4	19.05 3/4	88.9 3 1/2	1.4 3
1 1/4"	133.35 5 1/4	44.45 1.75	19.05 3/4	27.0 1 1/16	20.6 13/16	63.5 2 1/2	63.5 2 1/2	4	19.05 3/4	98.4 3 7/8	1.9 4.2
1 1/2"	155.6 6 1/8	50.5 1.99	20.6 13/16	30.2 1 3/16	22.2 7/8	69.8 2 3/4	73.0 2 7/8	4	22.2 7/8	114.3 4 1/2	2.8 6.2
2"	165.1 6 1/2	63.5 2.50	22.2 7/8	33.3 1 5/16	28.6 1 1/8	84.1 3 5/16	92.1 3 5/8	8	19.05 3/4	127.0 5	3.3 7.3
2 1/2"	190.5 7 1/2	76.2 3.00	25.4 1	38.1 1 1/2	31.7 1 1/4	100.0 3 15/16	104.8 4 1/8	8	22.2 7/8	149.2 5 7/8	4.6 10.1
3"	209.55 8 1/4	92.2 3.63	28.6 1 1/8	42.9 1 11/16	31.7 1 1/4	117.5 4 5/8	127 5	8	22.2 7/8	168.3 6 5/8	6.3 13.9
3 1/2"	228.6 9	104.9 4.13	30.2 1 3/16	44.4 1 3/4	36.5 1 7/16	133.35 5 1/4	139.7 5 1/2	8	22.2 7/8	184.15 7 1/4	7.8 17.2
4"	254.0 10	117.6 4.63	31.8 1 1/4	47.6 1 7/8	36.5 1 7/16	146.05 5 3/4	157.2 6 3/16	8	22.2 7/8	200.0 7 7/8	10.2 22.6
5"	279.4 11	144.5 5.69	34.9 1 3/8	50.8 2	42.9 1 11/16	177.8 7	185.7 7 5/16	8	22.2 7/8	234.95 9 1/4	12.9 28.4
6"	317.5 12 1/2	171.45 6.75	36.5 1 7/16	52.4 2 1/16	46 1 13/16	206.4 8 1/8	215.9 8 1/2	12	22.2 7/8	269.9 10 5/8	17.7 39
8"	381.0 15	222.25 8.75	41.3 1 5/8	61.9 2 7/16	50.8 2	280.35 10 1/4	289.9 10 5/8	12	25.4 1	330.2 13	26 57.2
10"	444.5 17 1/2	276.35 10.88	47.6 1 7/8	66.7 2 5/8	55.6 2 3/16	320.7 12 5/8	323.8 12 3/4	16	28.6 1 1/8	387.3 15 1/4	37.5 82.5
12"	520.7 20 1/2	328.7 12.94	50.8 2	73.0 2 7/8	60.3 2 3/8	374.6 14 3/4	381.0 15	16	31.7 1 1/4	450.8 17 3/4	52 114
14"	584.2 23	360.4 14.19	54.0 2 1/8	76.2 3	63.5 2 1/2	425.4 16 3/4	412.7 16 1/4	20	31.7 1 1/4	514.3 20 1/4	74.8 190
16"	647.7 25 1/2	411.2 16.19	57.2 2 1/4	82.5 3 1/4	68.3 2 11/16	482.6 19	469.9 18 1/2	20	34.9 1 3/8	571.5 22 1/2	86.2 165
18"	711.2 28	462.0 18.19	60.3 2 3/8	88.9 3 1/2	69.8 2 3/4	533.4 21	533.4 21	24	34.9 1 3/8	628.6 24 3/4	113 250
20"	774.7 30 1/2	512.8 20.19	63.5 2 1/2	95.2 3 3/4	73.0 2 7/8	587.4 23 1/8	584.2 23	24	34.9 1 3/8	685.8 27	143 315
24"	914.4 36	614.4 24.19	69.9 2 3/4	106.4 4 3/16	82.5 3 1/4	701.7 27 5/8	692.1 27 1/8	24	41.3 1 5/8	812.8 32	215 475

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ANSI 400 Lb.



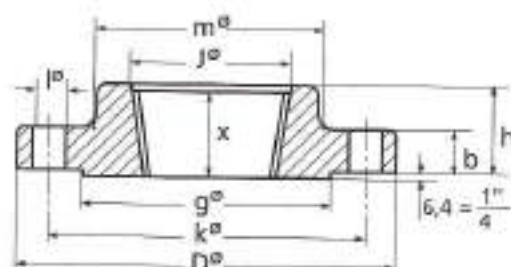
ASME/ANSI B 16.5

Nominal pipe size	Flange Brida					Hub Cuello	Raised face Resalte	Drilling template Taladros			Approx. weight Pesa aprox.
Diámetro nominal	D mm. inches	J mm. inches	b mm. inches	h mm. inches	x mm. inches	m mm. inches	g mm. inches	Number Número	I mm. inches	k mm. inches	Kg. Pounds
1/2"	95.2 3 3/4	23.6 0.93	14.3 9/16	22.2 7/8	15.9 5/8	38.1 1 1/2	34.9 1 3/8	4	15.9 5/8	65.7 2 5/8	1.6 2.2
3/4"	117.5 4 5/8	28.95 1.14	15.9 5/8	25.4 1	15.9 5/8	47.6 1 7/8	42.9 1 11/16	4	19.05 3/4	82.5 3 1/4	1.8 3.3
1"	123.8 4 7/8	35.8 1.41	17.5 11/16	27.0 1 1/16	17.5 11/16	54.0 2 1/8	50.8 2	4	19.05 3/4	88.9 3 1/2	1.8 4
1 1/4"	133.35 5 1/4	44.45 1.75	20.6 13/16	28.6 1 1/8	20.6 13/16	63.5 2 1/2	63.5 2 1/2	4	19.05 3/4	98.4 3 7/8	2.1 5.7
1 1/2"	155.6 6 1/8	50.5 1.99	22.2 7/8	31.7 1 1/4	22.2 7/8	69.8 2 3/4	73.0 2 7/8	4	22.2 7/8	114.3 4 1/2	3.2 7.3
2"	165.1 6 1/2	63.5 2.50	25.4 1	36.5 1 7/16	28.6 1 1/8	84.1 3 5/16	92.1 3 5/8	8	19.05 3/4	127.0 5	3.8 8.4
2 1/2"	190.5 7 1/2	76.2 3.00	28.6 1 1/8	41.3 1 5/8	31.7 1 1/4	100.0 3 15/16	104.8 4 1/8	8	22.2 7/8	149.2 5 7/8	6 13.2
3"	209.55 8 1/4	92.2 3.63	31.8 1 1/4	46.0 1 13/16	34.9 1 3/8	117.5 4 5/8	127.0 5	8	22.2 7/8	168.3 6 5/8	7.4 16.3
3 1/2"	228.6 9	104.9 4.13	34.9 1 3/8	49.2 1 15/16	39.7 1 9/16	133.35 5 1/4	139.7 5 1/2	8	25.4 1	186.15 7 1/4	18 20
4"	254 10	117.6 4.63	34.9 1 3/8	50.8 2	36.5 1 7/16	146.05 5 3/4	157.2 6 3/16	8	25.4 1	200.0 7 7/8	18.5 27.5
5"	279.4 11	144.5 5.69	38.1 1 1/2	54.0 2 1/8	42.9 1 11/16	177.8 7	185.7 7 5/16	8	25.4 1	234.95 9 1/4	15.5 34
6"	317.5 12 1/2	171.45 6.75	41.8 1 5/8	57.1 2 1/4	46 1 13/16	206.4 8 1/8	215.9 8 1/2	12	25.4 1	269.9 10 5/8	21 48
8"	381.0 15	222.25 8.75	47.6 1 7/8	68.3 2 11/16	50.8 2	260.35 10 1/4	269.9 10 5/8	12	28.6 1 1/8	330.2 13	31 68
10"	444.5 17 1/2	276.35 10.88	54.0 2 1/8	73.0 2 7/8	55.6 2 3/16	320.7 12 5/8	323.8 12 3/4	16	31.7 1 1/4	387.3 15 1/4	40 92
12"	520.7 20 1/2	328.7 12.94	57.2 2 1/4	79.4 3 1/8	60.3 2 3/8	374.6 14 3/8	381.0 15	16	34.9 1 3/8	450.8 17 3/4	41 134
14"	584.2 23	360.4 14.19	60.3 2 3/8	84.1 3 5/16	63.5 2 1/2	425.4 16 3/4	412.7 16 1/4	20	34.9 1 3/8	514.2 20 1/4	81 187
16"	647.7 25 1/2	411.2 16.19	63.5 2 1/2	93.7 3 11/16	66.3 2 11/16	482.6 19	469.9 18 1/2	20	38.1 1 1/2	571.5 22 1/2	110 247
18"	711.2 28	462.0 18.19	66.7 2 5/8	98.4 3 7/8	69.8 2 3/4	533.4 21	533.4 21	24	38.1 1 1/2	628.4 24 3/4	131 288
20"	774.7 30 1/2	512.8 20.19	69.9 2 3/4	101.6 4	73.0 2 7/8	587.4 23 1/8	584.2 23	24	41.3 1 5/8	685.8 27	157 346
24"	914.4 36	614.4 24.19	76.2 3	114.3 4 1/2	82.5 3 1/4	701.7 27 5/8	692.1 27 1/4	24	47.6 1 7/8	812.6 32	201 514

THREADED

NSI 600 Lb.

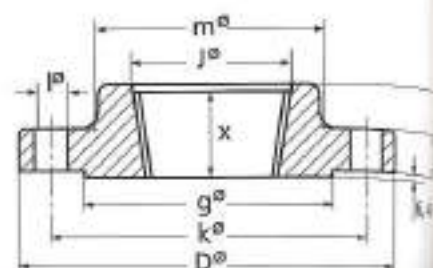
API/ANSI B 16.5



Nominal pipe size Diámetro nominal	Flange Brida					Hub Cuello	Raised face Resalte	Drilling template Taladros			Approx. weight Peso aprox.
	O mm. inches	J mm. inches	b mm. inches	h mm. inches	x mm. inches	m mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches	Kg. Pounds
1/2"	95.2 3 3/8	23.6 0.93	14.3 9/16	22.2 7/8	15.9 5/8	38.1 1 1/2	34.9 1 3/8	4	15.9 5/8	66.7 2 5/8	1 2.2
3/4"	117.5 4 5/8	28.95 1.14	15.9 5/8	25.4 1	15.9 5/8	47.6 1 7/8	42.9 1 11/16	4	19.05 3/4	82.5 3 1/4	1.6 3.5
1"	123.8 4 7/8	35.8 1.41	17.5 11/16	27.0 1 1/16	17.5 11/16	54.0 2 1/8	50.8 2	4	19.05 3/4	88.9 3 1/2	1.8 4
1 1/8"	133.35 5 1/4	44.45 1.75	20.6 13/16	28.6 1 1/8	20.6 13/16	63.5 2 1/2	63.5 2 1/2	4	19.05 3/4	98.4 3 7/8	2.6 5.7
1 1/2"	155.6 6 1/8	50.5 1.99	22.2 7/8	31.7 1 1/4	22.2 7/8	69.8 2 3/4	73.0 2 7/8	4	22.2 7/8	114.3 4 1/2	3.3 7.3
2"	165.1 6 1/2	63.5 2.50	25.4 1	36.5 1 7/16	28.6 1 1/8	84.1 3 5/16	92.1 3 5/8	8	19.05 3/4	127.0 5	3.9 8.6
2 1/2"	180.5 7 1/2	76.2 3.00	28.6 1 1/8	41.3 1 5/8	31.7 1 1/4	100.0 3 15/16	104.8 4 1/8	8	22.2 7/8	149.2 5 7/8	6 13.2
3"	201.55 8 1/4	92.2 3.63	31.8 1 1/4	46.0 1 13/16	34.9 1 3/8	117.5 4 5/8	127.0 5	8	22.2 7/8	168.3 6 5/8	7.4 16.3
3 1/2"	228.6 9	104.9 4.13	34.9 1 3/8	49.2 1 15/16	39.7 1 9/16	133.35 5 1/4	139.7 5 1/2	8	25.4 1	184.15 7 1/4	9.5 20.9
4"	273.05 10 3/4	117.6 4.63	38.1 1 1/2	54.0 2 1/8	41.3 1 5/8	152.4 6	157.2 6 3/16	8	25.4 1	215.9 8 1/2	17 37.4
5"	330.2 13	144.5 5.69	44.4 1 3/4	60.3 2 3/8	47.6 1 7/8	188.9 7 7/16	185.7 7 5/16	8	28.6 1 1/8	266.7 10 1/2	28.6 63
6"	355.6 14	171.45 6.75	47.6 1 7/8	66.7 2 5/8	50.8 2	222.25 8 3/4	215.9 8 1/2	12	28.6 1 1/8	292.1 11 1/2	36 80
8"	419.1 16 1/2	222.25 8.75	55.6 2 3/16	76.2 3	57.1 2 1/4	273.05 10 3/4	268.9 10 5/8	12	31.7 1 1/4	349.2 13 3/4	52 115
10"	508.0 20	276.35 10.88	63.5 2 1/2	85.7 3 3/8	65.1 2 9/16	342.9 13 1/2	323.8 12 3/4	16	34.9 1 3/8	431.8 17	77 170
12"	568.0 22	328.7 12.94	66.7 2 5/8	92.1 3 5/8	68.8 2 3/4	400.0 15 3/4	381.0 15	20	34.9 1 3/8	488.9 19 1/4	90 198
14"	603.2 23 3/4	360.4 14.19	69.9 2 3/4	93.7 3 11/16	73 2 7/8	431.8 17	412.7 16 1/4	20	38.1 1 1/2	527.0 20 3/4	108 238
16"	685.8 27	411.2 16.19	76.2 3	106.4 4 3/16	77.8 3 1/16	495.3 19 1/2	469.9 18 1/2	20	41.3 1 5/8	603.2 23 3/4	150 330
18"	742.9 29 1/4	462.0 18.19	82.6 3 1/4	117.5 4 5/8	79.4 3 1/8	546.1 21 1/2	533.4 21	20	44.4 1 3/4	654.0 25 3/4	188 414
20"	812.8 32	512.8 20.19	88.9 3 1/2	127 5	82.5 3 1/4	609.6 24	584.2 23	24	44.4 1 3/4	723.9 28 1/2	230 506
24"	932.8 37	614.4 24.19	101.6 4	139.7 5 1/2	92.1 3 5/8	712.5 28 1/4	692.1 27 1/4	24	50.8 2	838.2 33	331 730

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ANSI 900 Lb.



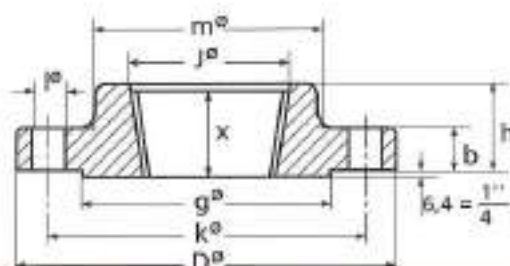
ASME/ANSI B 16.5

Nominal pipe size	Flange Breda					Hub Cuello	Raised face Resalte	Drilling template Taladros			Approx. weight Pesa aprox.
Diámetro nominal	D mm inches	J mm inches	b mm inches	h mm inches	x mm inches	m mm inches	g mm inches	Number Número	l mm inches	k mm inches	Kg Pounds
1/2"	120.65 4 3/4	23.6 0.93	22.2 7/8	31.7 1 1/8	22.2 7/8	38.1 1 1/2	34.9 1 3/8	4	22.2 7/8	82.5 3 1/4	1.8 4
3/4"	130.2 5 1/8	28.95 1.14	25.4 1	34.9 1 3/8	25.4 1	44.4 1 3/4	42.9 1 11/16	4	22.2 7/8	88.9 3 1/2	2.4 5.3
1"	149.2 5 7/8	35.8 1.41	28.6 1 1/8	41.3 1 5/8	28.6 1 1/8	52.4 2 1/16	50.8 2	4	25.4 1	101.6 4	3.6 8
1 1/4"	158.75 6 1/4	44.45 1.75	28.6 1 1/8	41.3 1 5/8	30.2 1 3/16	63.5 2 1/2	63.5 2 1/2	4	25.4 1	111.1 4 3/8	4 8.8
1 1/2"	177.8 7	50.5 1.99	31.8 1 1/4	44.4 1 3/4	31.7 1 1/4	69.8 2 3/4	73.0 2 7/8	4	28.6 1 1/8	121.8 4 7/8	5.5 12.1
2"	215.9 8 1/2	63.5 2.50	38.1 1 1/2	57.1 2 1/4	38.1 1 1/2	104.8 4 1/8	92.1 3 5/8	8	25.4 1	165.1 6 1/2	11.1 25
2 1/2"	244.5 9 5/8	76.2 3.00	41.3 1 5/8	63.5 2 1/2	47.6 1 7/8	123.8 4 7/8	104.8 4 1/8	8	28.6 1 1/8	190.5 7 1/2	16.1 36
3"	261.3 9 1/2	92.2 3.63	38.1 1 1/2	54.0 2 1/8	41.3 1 5/8	127.0 5	127 5	8	25.4 1	190.5 7 1/2	13.9 28.7
4"	292.1 11 1/2	117.6 4.63	44.5 1 3/4	69.8 2 3/4	47.6 1 7/8	158.75 6 1/4	157.2 6 3/16	8	31.7 1 1/4	234.95 9 1/4	24 53
5"	349.2 13 3/4	144.5 5.69	50.8 2	79.4 3 1/8	54 2 1/8	190.5 7 1/2	185.7 7 5/16	8	34.9 1 3/8	279.4 11	32.6 83
6"	381.0 15	171.45 6.75	55.6 2 3/16	85.7 3 3/8	57.1 2 1/4	234.95 9 1/4	215.9 8 1/2	12	31.7 1 1/4	317.5 12 1/2	45.9 101
8"	469.9 18 1/2	222.25 8.75	63.5 2 1/2	101.6 4	63.5 2 1/2	298.4 11 3/4	269.9 10 5/8	12	38.1 1 1/2	393.7 15 1/2	77.1 170
10"	546.1 21 1/2	276.35 10.89	69.9 2 3/4	107.95 4 1/4	71.4 2 13/16	368.3 14 1/2	323.8 12 3/4	16	38.1 1 1/2	469.9 18 1/2	111 245
12"	609.6 24	328.7 12.94	79.4 3 1/8	117.5 4 5/8	76.2 3	419.1 16 1/2	381.0 15	20	38.1 1 1/2	533.4 21	147 325
14"	641.3 25 1/4	360.4 14.19	85.7 3 3/8	130.2 5 1/8	82.5 3 1/4	450.8 17 3/4	412.7 16 1/8	20	41.3 1 5/8	558.8 22	181 400
16"	704.8 27 3/4	411.2 16.19	88.9 3 1/2	133.3 5 1/4	85.7 3 3/8	508.0 20	469.9 18 1/2	20	40.4 1 3/4	615.9 24 1/4	181 425
18"	787.4 31	462.0 18.19	101.6 4	152.4 6	88.9 3 1/2	565.1 22 1/8	533.4 21	20	50.8 2	685.8 27	232 480
20"	852.2 33 3/4	512.8 20.19	107.5 4 1/4	158.7 6 1/4	92.1 3 5/8	622.3 24 1/2	584.2 23	20	54.0 2 1/8	745.3 29 1/2	331 730
24"	1043.4 41	614.4 24.19	139.7 5 1/2	203.2 8	101.6 4	749.3 29 1/2	692.1 27 1/4	20	66.7 2 5/8	901.7 35 1/2	631 1400

THREADED

ANSI 1.500 Lb.

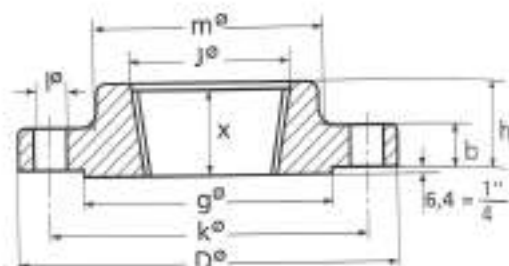
ASME/ANSI B 16.5



Nominal pipe size	Flange Brida					Hub Cuello	Raised face Resalte	Drilling template Taladros			Approx. weight Peso aprox.
	D mm. inches	J mm. inches	b mm. inches	h mm. inches	x mm. inches	m mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches	Kg. Pounds
1/2"	129.50 4 3/4	23.6 0.93	22.2 7/8	31.7 1 1/4	22.2 7/8	38.1 1 1/2	34.9 1 3/8	4	22.2 7/8	82.5 3 1/4	1.8 4
3/4"	130.2 5 1/8	28.95 1.14	25.4 1	34.9 1 3/8	25.4 1	44.4 1 3/4	42.9 1 11/16	4	22.2 7/8	88.9 3 1/2	2.4 5.3
1"	149.2 5 7/8	35.8 1.41	28.6 1 1/8	41.3 1 5/8	28.6 1 1/8	52.4 2 1/16	50.8 2	4	25.4 1	101.6 4	3.5 7.7
1 1/4"	158.75 6 1/4	44.45 1.75	28.6 1 1/8	41.3 1 5/8	30.2 1 3/16	63.5 2 1/2	63.5 2 1/2	4	25.4 1	111.1 4 3/8	4 8.8
1 1/2"	177.8 7	50.5 1.99	31.8 1 1/4	44.4 1 3/4	31.7 1 1/4	69.8 2 3/4	73.0 2 7/8	4	28.6 1 1/8	123.8 4 7/8	5.5 12.1
2"	215.9 8 1/2	63.5 2.50	38.1 1 1/2	57.1 2 1/4	38.1 1 1/2	104.8 4 1/8	92.1 3 5/8	8	25.4 1	165.1 6 1/2	11.3 25
2 1/2"	244.5 9 5/8	76.2 3.00	41.3 1 5/8	63.5 2 1/2	47.6 1 7/8	123.8 4 7/8	104.8 4 1/8	8	28.6 1 1/8	190.5 7 1/2	16 36
3"	266.7 10 1/2	92.2 3.63	47.6 1 7/8	73.0 2 7/8	50.8 2	133.35 5 1/4	127.0 5	8	31.7 1 1/4	203.2 8	22 48
4"	311.1 12 1/4	117.6 4.63	54.0 2 1/8	90.5 3 9/16	57.1 2 1/4	161.9 6 3/8	157.2 6 3/16	8	34.9 1 3/8	241.3 9 1/2	33 73
5"	374.5 14 3/4	144.5 5.69	73.0 2 7/8	104.8 4 1/8	63.5 2 1/2	196.85 7 3/4	185.7 7 5/16	8	41.3 1 5/8	292.1 11 1/2	59 130
6"	399.7 15 1/2	171.45 6.75	82.6 3 1/4	119.1 4 11/16	69.8 2 3/4	228.6 9	215.9 8 1/2	12	38.1 1 1/2	317.5 12 1/2	75 165
8"	482.6 19	222.25 8.75	92.1 3 5/8	142.9 5 5/8	76.2 3	292.1 11 1/2	269.9 10 5/8	12	44.4 1 3/4	393.7 15 1/2	118 260
10"	584.2 23	276.35 10.88	107.95 4 1/4	158.75 6 1/4	84.1 3 5/16	368.3 14 1/2	323.8 12 3/4	12	50.8 2	482.6 19	197 435
12"	673.1 26 1/2	328.7 12.94	123.8 4 7/8	181.0 7 1/8	92.1 3 5/8	450.8 17 3/4	381.0 15	16	54.0 2 1/8	571.5 22 1/2	266 586

THREADED

ANSI 2.500 Lb.



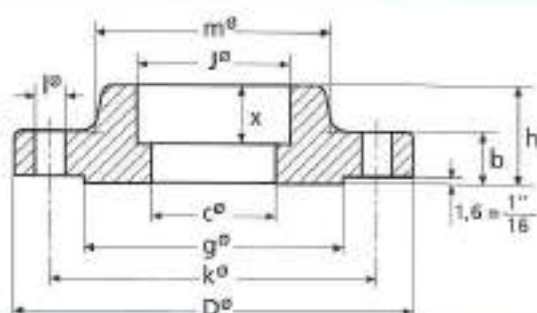
ASME/ANSI B 16.5

Nominal pipe size	Flange Brida					Hub Cuello	Raised face Resalte	Drilling template Taladros			Approx. weight Peso aprox.
Diámetro nominal	D mm. inches	j mm. inches	b mm. inches	h mm. inches	x mm. inches	m mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches	Kg. Pounds
1/2"	133.35 5 1/4	23.6 0.93	30.2 1 3/16	39.7 1 9/16	28.6 1 1/8	42.9 1 11/16	34.9 1 3/8	4	22.2 7/8	88.9 3 1/2	3 7
3/4"	139.7 5 1/2	28.95 1.14	31.7 1 1/4	42.9 1 11/16	31.7 1 1/4	50.8 2	42.9 1 11/16	4	22.2 7/8	95.2 3 3/4	4 9
1"	158.75 6 1/4	35.8 1.41	34.9 1 3/8	47.6 1 7/8	34.9 1 3/8	57.1 2 1/4	50.8 2	4	25.4 1	107.95 4 1/4	5 12
1 1/4"	184.15 7 1/4	44.45 1.75	38.1 1 1/2	52.4 2 1/16	38.1 1 1/2	73.0 2 7/8	63.5 2 1/2	4	28.6 1 1/8	130.2 5 1/8	8 18
1 1/2"	203.2 8	50.5 1.99	44.4 1 3/4	60.3 2 3/8	44.4 1 3/4	79.4 3 1/8	73.0 2 7/8	4	31.7 1 1/4	146.05 5 3/4	11 25
2"	234.95 9 1/4	63.5 2.50	50.8 2	69.8 2 3/4	50.8 2	95.2 3 3/4	92.1 3 5/8	8	28.6 1 1/8	171.45 6 3/4	17 38
2 1/2"	266.7 10 1/2	76.2 3.00	57.1 2 1/4	79.4 3 1/8	57.1 2 1/4	114.3 4 1/2	104.8 4 1/8	8	31.7 1 1/4	196.85 7 3/4	25 55
3"	304.8 12	92.2 3.63	66.7 2 5/8	92.1 3 5/8	63.5 2 1/2	133.35 5 1/4	127.0 5	8	34.9 1 3/8	228.6 9	38 83
4"	355.6 14	117.6 4.63	76.2 3	107.95 4 1/4	69.8 2 3/4	165.1 6 1/2	157.2 6 3/16	8	41.3 1 5/8	273.05 10 3/4	58 127
5"	419.1 16 1/2	144.5 5.69	92.1 3 5/8	130.2 5 1/8	76.2 3	203.2 8	185.7 7 5/16	8	47.6 1 7/8	323.8 12 3/4	95 210
6"	482.6 19	171.45 6.75	107.95 4 1/4	152.4 6	82.5 3 1/4	234.95 9 1/4	215.9 8 1/2	8	54.0 2 1/8	368.3 14 1/2	146 323
8"	552.4 21 3/4	222.25 8.75	127.0 5	177.8 7	95.2 3 3/4	304.8 12	269.9 10 5/8	12	54.0 2 1/8	438.1 17 1/4	220 485
10"	673.1 26 1/2	276.35 10.88	165.1 6 1/2	228.6 9	107.9 4 1/4	374.6 14 3/4	323.8 12 3/4	12	66.7 2 5/8	539.7 21 1/4	420 923
12"	762.0 30	328.7 12.94	184.15 7 1/4	254.0 10	120.6 4 3/4	441.3 17 3/8	381.0 15	12	73.0 2 7/8	619.1 24 3/8	499 1100

SOCKET WELDING

ANSI 150 Lb.

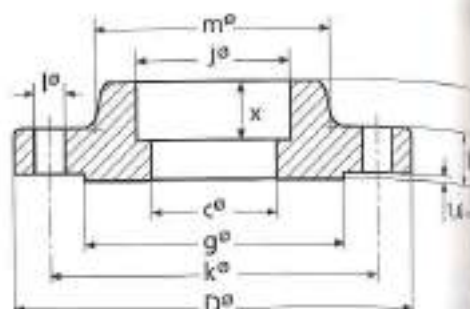
ASME/ANSI B 16.5



Nominal pipe size Tamaño nominal del tubo	Flange Brida						Hub Cuello	Raised face Resalte	Drilling template Talladros			Approx. weight Peso aprox.
	D mm. inches	C mm. inches	J mm. inches	x mm. inches	b mm. inches	h mm. inches	m mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches	Kg. Pounds
1/4"	88.9 3 1/2	9.1 0.36	14.7 0.58	9.5 3/8	11.1 7/16	15.9 5/8	30.2 1 3/16	34.9 1 3/8	4	15.9 5/8	60.3 2 3/8	0.3 0.7
1/2"	88.9 3 1/2	12.4 0.49	18.3 0.72	9.5 3/8	11.1 7/16	15.9 5/8	30.2 1 3/16	34.9 1 3/8	4	15.9 5/8	60.3 2 3/8	0.4 0.8
3/4"	88.9 3 1/2	15.7 0.62	22.35 0.88	9.5 3/8	11.1 7/16	15.9 5/8	30.2 1 3/16	34.9 1 3/8	4	15.9 5/8	60.3 2 3/8	0.4 0.9
1"	88.9 3 1/2	20.8 0.82	27.7 1.09	11.1 7/16	12.7 1/2	15.9 5/8	38.1 1 1/2	42.9 1 11/16	4	15.9 5/8	69.8 2 3/4	0.7 1.5
1 1/4"	107.9 4 1/4	26.7 1.05	34.5 1.36	12.7 1/2	14.3 9/16	17.5 11/16	49.2 1 15/16	50.8 2	4	15.9 5/8	79.4 3 1/8	0.9 2
1 1/2"	117.5 4 5/8	35.05 1.38	43.2 1.70	14.3 9/16	15.9 5/8	20.6 13/16	58.7 2 5/16	63.5 2 1/2	4	15.9 5/8	88.9 3 1/2	1.2 2.6
1 3/4"	127.0 5	40.9 1.61	49.5 1.95	15.9 5/8	17.5 11/16	22.2 7/8	65.1 2 9/16	73.0 2 7/8	4	15.9 5/8	98.4 3 7/8	1.5 3.3
2"	152.4 6	52.6 2.07	62.0 2.44	17.5 11/16	19.1 3/4	25.4 1	77.8 3 1/16	92.1 3 5/8	4	19.0 3/4	120.6 4 3/4	2.3 5.1
2 1/2"	177.8 7	62.7 2.47	74.7 2.94	19.05 3/4	22.3 7/8	28.6 1 1/8	90.5 3 9/16	104.8 4 1/8	4	19.0 3/4	139.7 5 1/2	3.7 8.1
3"	180.5 7 1/2	78.0 3.07	90.7 3.57	20.6 13/16	23.8 15/16	30.2 1 3/16	107.9 4 1/4	127.0 5	4	19.0 3/4	152.4 6	4.2 9.2
3 1/2"	215.9 8 1/2	90.2 3.55	103.4 4.07	22.2 7/8	23.8 15/16	31.7 1 1/4	122.2 4 13/16	139.7 5 1/2	8	19.0 3/4	177.8 7	5.3 11.7
4"	228.6 9	102.4 4.03	116.1 4.57	23.8 15/16	23.8 15/16	33.3 1 5/16	134.9 5 5/16	157.2 6 3/16	8	19.0 3/4	190.5 7 1/2	5.9 13
5"	254 10	128.3 5.05	143.8 5.66	23.8 15/16	23.8 15/16	36.5 1 7/16	163.5 6 7/16	185.7 7 5/16	8	22.2 7/8	215.9 8 1/2	7 15.4
6"	279.4 11	154.2 6.07	170.7 6.72	27.0 1 1/16	25.4 1	39.7 1 9/16	192.1 7 9/16	215.9 8 1/2	8	22.2 7/8	241.3 9 1/2	8.4 18.5
8"	343.9 13 1/2	202.7 7.98	221.5 8.72	31.7 1 1/4	28.6 1 1/8	44.4 1 3/4	246.1 9 11/16	269.9 10 5/8	8	22.2 7/8	298.4 11 3/4	13 28.6
10"	406.4 16	254.5 10.02	276.35 10.88	33.3 1 5/16	30.2 1 3/16	49.2 1 15/16	304.8 12	323.8 12 3/4	12	25.4 1	361.9 14 1/4	19.5 43
12"	482.4 19	304.8 12.00	327.15 12.88	39.7 1 9/16	31.8 1 1/4	55.6 2 3/16	365.1 14 3/8	381.0 15	12	25.4 1	431.8 17	29.5 64.9
14"	532.4 21	336.55 13.25	359.15 14.14	41.3 1 5/8	34.9 1 3/8	57.1 2 1/4	400.0 15 3/4	412.7 16 1/4	12	28.6 1 1/8	476.2 18 3/4	41 90
16"	584.5 23 1/2	387.35 15.25	410.5 16.16	44.4 1 3/4	36.5 1 7/16	63.5 2 1/2	457.2 18	480.9 18 1/2	16	28.6 1 1/8	539.7 21 1/4	46.5 98
20"	635.4 25	438.15 17.25	461.8 18.18	49.2 1 15/16	39.7 1 9/16	68.3 2 11/16	504.8 19 7/8	533.4 21	16	31.7 1 1/4	577.8 22 3/4	59 130
24"	688.5 27 1/2	488.95 19.25	513.1 20.20	54.0 2 1/8	42.9 1 15/16	73.0 2 7/8	558.8 22	584.2 23	20	31.7 1 1/4	635.0 25	75 165
30"	812.8 32	593.35 23.25	615.95 24.25	63.5 2 1/2	47.6 1 7/8	82.5 3 1/4	663.6 26 1/8	692.1 27 1/4	20	34.9 1 3/8	709.3 29 1/2	100 220

SOCKET WELDING

ANSI 300 Lb.

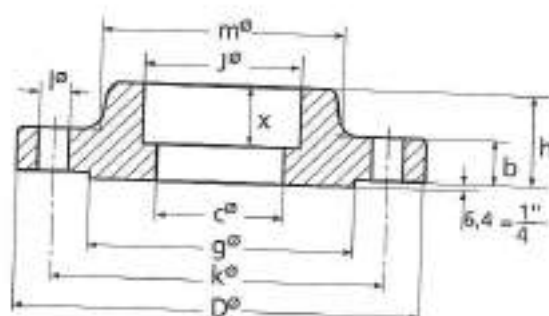


ASME/ANSI B 16.5

Nominal pipe size	Flange Breda						Hub Cuello	Raised face Rosalte	Drilling template Taladros			Approx weight Pese aprox
Diámetro nominal del tubo	D mm. inches	C mm. inches	J mm. inches	x mm. inches	b mm. inches	h mm. inches	m mm. inches	g mm. inches	Number Número	l mm. inches	l mm. inches	kg Pounds
1/8"	95.2 3 3/4	9.1 0.36	14.7 0.58	9.5 3/8	14.3 9/16	22.2 7/8	38.1 1 1/2	34.9 1 3/8	4	15.9 5/8	66.7 2 5/8	6.5 1.1
3/8"	95.2 3 3/4	12.4 0.49	18.3 0.72	9.5 3/8	14.3 9/16	22.2 7/8	38.1 1 1/2	34.9 1 3/8	4	15.9 5/8	66.7 2 5/8	8.8 1.2
1/2"	95.2 3 3/4	15.7 0.62	22.35 0.88	9.5 3/8	14.3 9/16	22.2 7/8	38.1 1 1/2	34.9 1 3/8	4	15.9 5/8	66.7 2 5/8	10.7 1.3
3/4"	117.5 4 5/8	20.8 0.82	27.7 1.09	11.1 7/16	15.9 5/8	25.4 1	47.6 1 7/8	42.9 1 11/16	4	19.05 3/4	82.5 3 1/4	12 2.6
1"	123.8 4 7/8	26.7 1.05	34.5 1.36	12.7 1/2	17.5 11/16	27.0 1 1/16	54.0 2 1/8	50.8 2	4	19.05 3/4	88.9 3 1/2	14 3.1
1 1/4"	133.35 5 1/4	35.05 1.38	43.2 1.70	14.3 9/16	19.05 3/4	27.0 1 1/16	63.5 2 1/2	63.5 2 1/2	4	19.05 3/4	98.4 3 7/8	18 4.1
1 1/2"	155.6 6 1/8	40.9 1.61	49.5 1.95	15.9 5/8	20.6 13/16	30.2 1 3/16	69.8 2 3/4	73.0 2 7/8	4	22.2 7/8	114.3 4 1/2	23 5.1
2"	165.1 6 1/2	52.6 2.07	62.0 2.44	17.5 11/16	22.2 7/8	33.3 1 5/16	84.1 3 5/16	92.1 3 5/8	6	19.05 3/4	127.0 5	33 7.3
2 1/2"	190.5 7 1/2	62.7 2.47	74.7 2.94	19.05 3/4	25.4 1	38.1 1 1/2	100.0 3 15/16	104.8 4 1/8	8	22.2 7/8	149.2 5 7/8	48 10.7
3"	209.55 8 1/4	78.0 3.07	90.7 3.57	20.6 13/16	28.6 1 1/8	42.9 1 11/16	117.5 4 5/8	127 5	8	22.2 7/8	168.3 6 5/8	63 13.9
3 1/2"	228.6 9	90.2 3.55	103.4 4.07	22.2 7/8	30.2 1 3/16	44.4 1 3/4	133.35 5 1/4	139.7 5 1/2	8	22.2 7/8	184.15 7 1/4	78 17.2
4"	254 10	102.4 4.03	116.1 4.57	23.8 15/16	31.8 1 1/4	47.6 1 7/8	146.05 5 3/4	157.2 6 3/16	8	22.2 7/8	200.0 7 7/8	102 22.4

SOCKET WELDING

ANSI 600 Lb.

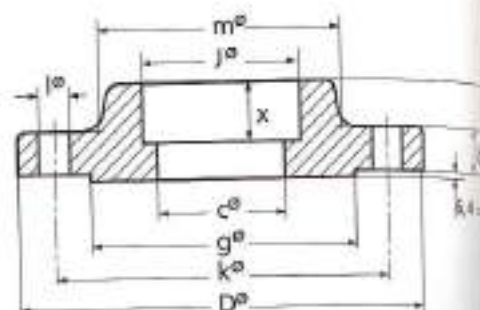


ASME/ANSI B 16.5

Nominal pipe size Tamaño nominal de tubo	Flange Brida						Hub Cuello	Raised face Resalte	Drilling template Taladros			Approx. weight Peso aprox.
	D mm. inches	C mm. inches	J mm. inches	X mm. inches	b mm. inches	h mm. inches	m mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches	Kg. Pounds
1/4"	95.2 3 3/4	7.6 0.30	14.7 0.58	9.5 3/8	14.3 9/16	22.2 7/8	38.1 1 1/2	34.9 1 3/8	4	15.9 5/8	66.7 2 5/8	0.6 1.4
1/2"	95.2 3 3/4	16.7 0.42	18.1 0.72	9.5 3/8	14.3 9/16	22.2 7/8	38.1 1 1/2	34.9 1 3/8	4	15.9 5/8	66.7 2 5/8	0.7 1.6
3/4"	95.2 3 3/4	14.0 0.55	22.35 0.88	9.5 3/8	14.3 9/16	22.2 7/8	38.1 1 1/2	34.9 1 3/8	4	15.9 5/8	66.7 2 5/8	1 2.2
1"	117.5 4 5/8	18.8 0.74	22.7 1.09	11.1 7/16	15.9 5/8	25.4 1	47.6 1 7/8	42.9 1 11/16	4	19.05 3/4	82.5 3 1/4	1.6 3.5
1 1/4"	123.8 4 7/8	24.4 0.96	34.5 1.36	12.7 1/2	17.5 11/16	27.0 1 1/16	54.0 2 1/8	50.8 2	4	19.05 3/4	88.9 3 1/2	1.8 4
1 1/2"	133.35 5 1/8	32.5 1.28	43.2 1.70	14.3 9/16	20.6 13/16	28.6 1 1/8	63.5 2 1/2	63.5 2 1/2	4	19.05 3/4	98.4 3 7/8	2.6 5.7
2"	155.5 6 1/8	38.1 1.50	49.5 1.95	15.9 5/8	22.2 7/8	31.7 1 1/4	69.8 2 3/4	73.0 2 7/8	4	22.2 7/8	114.3 4 1/2	3.3 7.3
2 1/2"	165.1 6 5/8	49.3 1.94	62.0 2.44	17.5 11/16	25.4 1	36.5 1 7/16	84.1 3 5/16	82.1 3 5/8	8	19.05 3/4	127.0 5	3.9 8.6
3"	190.5 7 1/2	58.9 2.32	74.7 2.94	19.05 3/4	28.6 1 1/8	41.3 1 5/8	100.0 3 15/16	104.8 4 1/8	8	22.2 7/8	149.2 5 7/8	6 13.2
3 1/2"	209.55 8 1/4	73.7 2.90	90.7 3.57	20.6 13/16	31.8 1 1/4	46.0 1 13/16	117.5 4 5/8	127 5	8	22.2 7/8	168.3 6 5/8	7.4 16.3
4"	228.6 9	85.3 3.36	103.4 4.07	22.2 7/8	34.9 1 3/8	49.2 1 15/16	133.35 5 1/4	139.7 5 1/2	8	25.4 1	184.15 7 1/4	9.5 20.9

SOCKET WELDING

ANSI 1.500 Lb.

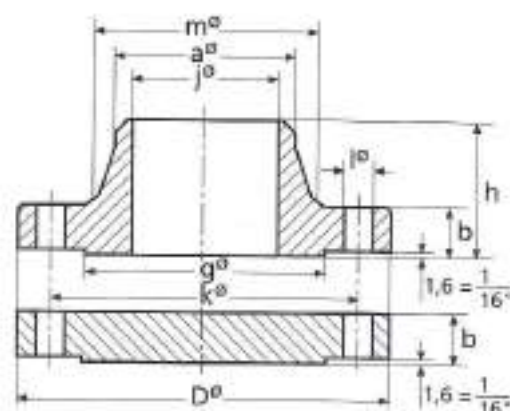


ASME/ANSI B 16.5

Nominal pipe size	Flange Brida						Hub Cuello	Raised face Resalte	Drilling template Taladros			Approx. weight Pese aprox.
Diámetro nominal	D mm, inches	C mm, inches	J mm, inches	k mm, inches	b mm, inches	h mm, inches	m mm, inches	g mm, inches	Number Número	l mm, inches	k mm, inches	Kg Pounds
1/2"	120,7 4 3/4	To be specified by purchaser Debe ser especificado por el comprador	22,4 0,88	9,5 3/8	22,2 7/8	31,8 1 1/4	38,1 1 1/2	34,9 1 3/8	4	22,2 7/8	82,6 3 1/4	1,8 4
3/4"	130,2 5 1/8		27,7 1,09	11,1 7/16	25,4 1	34,9 1 3/8	44,5 1 3/4	42,9 1 11/16	4	22,2 7/8	88,9 3 1/2	2,1 5
1"	149,2 5 7/8		34,5 1,36	12,7 1/2	28,6 1 1/8	41,3 1 5/8	52,4 2 1/16	50,8 2	4	25,4 1	101,6 4	3,6 8
1 1/4"	158,8 6 1/4		43,2 1,70	14,3 9/16	28,6 1 1/8	41,3 1 5/8	63,5 2 1/2	63,5 2 1/2	4	25,4 1	111,1 4 3/8	4,1 9
1 1/2"	177,8 7		49,53 1,95	15,9 5/8	31,8 1 1/4	44,5 1 3/4	69,9 2 3/4	73,0 2 7/8	4	28,6 1 1/8	123,8 4 7/8	5,1 12
2"	215,9 8 1/2		62 2,44	17,5 11/16	38,1 1 1/2	57,2 2 1/4	104,8 4 1/8	92,1 3 5/8	8	25,4 1	165,1 6 1/2	11,6 26
2 1/2"	244,5 9 5/8		74,7 2,94	19,1 3/4	41,3 1 5/8	63,5 2 1/2	123,8 4 7/8	104,8 4 1/8	8	28,6 1 1/8	195,3 7 1/2	16,1 36

MSS STANDARD PRACTISE SP-44 (26" ÷ 48")

150 Lb.



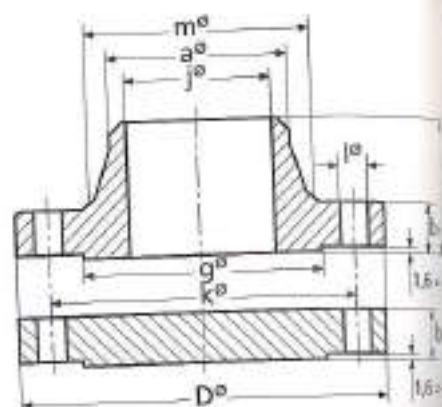
MSS SP - 44

Flange Bride	Hub Cuello	Raised face Resalte	Drilling template Taladros	Approx. weight Peso aprox. Kg Pounds							
D mm. inches	J mm. inches	b mm. inches	h mm. inches	a mm. inches	m mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches	Welding Neck	Blind
805.9 31 1/4	68.3 2 11/16	120.6 4 3/4	660.4 26	676.3 26 5/8	749.3 29 1/2	24	34.9 1 3/8	806.4 31 3/4	147 324	366 675	
927.1 36 1/2	71.4 2 13/16	125.4 4 15/16	711.2 28	727.1 28 5/8	800.1 31 1/2	28	34.9 1 3/8	863.6 34	163 360	363 800	
984.2 39 3/4	74.6 2 15/16	136.5 5 3/8	762 30	781 30 3/4	857.2 33 3/4	28	34.9 1 3/8	914.4 36	190 419	430 948	
1,060.4 41 3/4	81 3 3/16	144.5 5 11/16	812.8 32	831.8 32 3/4	914.4 36	28	41.3 1 5/8	977.8 38 1/2	238 525	537 1,184	
1,111.2 43 3/4	82.5 3 1/4	149.2 5 7/8	863.6 34	882.6 34 1/4	965.2 38	32	41.3 1 5/8	1,028.7 40 1/2	255 562	605 1,323	
1,188.4 46	90.5 3 9/16	157.2 6 3/16	914.4 36	931.4 36 3/4	1,022.3 40 1/4	32	41.3 1 5/8	1,085.8 42 3/4	302 665	790 1,609	
1,238.2 48 3/4	87.3 3 7/16	157.2 6 3/16	965.2 38	990.6 39	1,073.2 42 1/4	32	41.3 1 5/8	1,148.4 45 1/4	342 754	792 1,748	
1,289.0 50 3/4	90.5 3 9/16	163.5 6 7/16	1,016.0 40	1,041.4 41	1,124.0 44 1/4	36	41.3 1 5/8	1,205.1 47 1/4	366 807	893 1,968	
1,366.2 53	96.8 3 13/16	171.5 6 3/4	1,066.8 42	1,092.2 43	1,193.8 47	36	41.3 1 5/8	1,257.3 49 1/2	419 924	1,044 2,303	
1,403.4 55 1/4	101.6 4	177.8 7	1,117.6 44	1,143.0 45	1,244.6 49	40	41.3 1 5/8	1,314.5 51 3/4	459 1,012	1,190 2,623	
1,454.2 57 1/4	103.2 4 1/16	185.7 7 5/16	1,168.4 46	1,197.0 47 1/8	1,295.4 51	40	41.3 1 5/8	1,365.2 53 3/4	509 1,102	1,295 2,864	
1,511.3 59 1/2	108.0 4 1/4	192.1 7 9/16	1,219.2 48	1,247.8 49 1/8	1,358.9 53 1/2	44	41.3 1 5/8	1,422.4 56	552 1,217	1,470 3,240	
1,568.5 61 3/4	111.1 4 3/8	203.2 8	1,270.0 52	1,301.8 51 1/4	1,409.7 55 1/2	44	47.6 1 7/8	1,479.5 58 1/4	592 1,305	1,615 3,560	
1,625.6 64	115.9 4 9/16	209.6 8 1/4	1,320.8 52	1,352.6 53 1/4	1,460.5 57 1/2	44	47.6 1 7/8	1,536.7 60 1/2	660 1,455	1,817 4,006	
1,682.8 66 1/4	120.6 4 3/4	215.9 8 1/2	1,371.6 54	1,403.4 55 1/4	1,511.3 59 1/2	44	47.6 1 7/8	1,593.9 62 3/4	726 1,600	2,031 4,478	
1,746.2 68 3/4	123.8 4 7/8	228.6 9	1,422.4 56	1,457.8 57 3/8	1,574.8 62	48	47.6 1 7/8	1,651.0 65	805 1,775	2,244 4,947	
1,803.4 71	128.6 5 1/16	235.0 9 1/4	1,473.2 58	1,508.1 59 3/8	1,625.6 64	48	47.6 1 7/8	1,708.2 67 1/4	884 1,949	2,491 5,492	
1,854.2 73	131.8 5 3/16	239.7 9 7/16	1,524.0 60	1,559.0 61 3/8	1,676.4 66	52	47.6 1 7/8	1,759.0 69 1/4	936 2,050	2,697 5,946	

To be specified by purchaser.
Debe ser especificado por el comprador.

MSS STANDARD PRACTISE SP-44 (26" ÷ 60")

300 Lb.



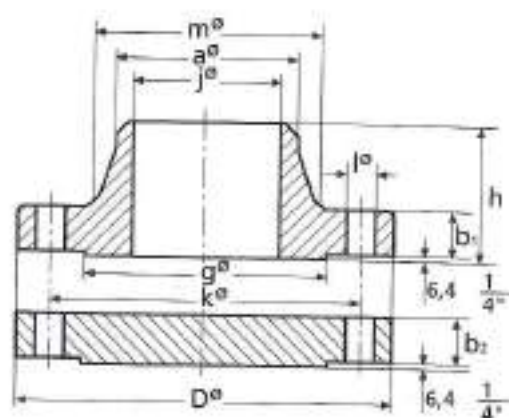
MSS SP - 44

Nominal pipe size	Flange Brida					Hub Cuello		Raised face Resalte	Drilling template Taladros			Approx weight Peso aprox Kg Pounds	
Diámetro nominal	D mm. inches	J mm. inches	Welding Neck bn mm. inches	Blind br mm. inches	h mm. inches	a mm. inches	m mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches	Welding Neck	Blind
26"	971.5 38 1/4		79.4 3 1/8	84.1 3 5/16	184.1 7 1/4	660.4 26	729.7 28 3/8	749.3 29 1/2	28	44.5 1 3/4	876.3 34 1/2	275 605	480 1075
28"	1,035 40 3/4		85.7 3 3/8	90.5 3 9/16	196.8 7 3/4	711.2 28	774.7 30 1/2	800.1 31 1/2	28	44.5 1 3/4	935.8 37	348 758	548 1248
30"	1,092.2 43		92.1 3 5/8	95.2 3 3/4	209.5 8 1/4	762 30	827.1 32 9/16	857.2 33 3/4	28	47.6 1 7/8	997 39 1/4	389 859	641 1431
32"	1,149.4 45 1/4		98.4 3 7/8	100 3 15/16	222.3 8 3/4	812.8 32	881.1 34 11/16	914.4 36	28	50.8 2	1,054.1 41 1/2	418 938	709 1577
34"	1,206.5 47 1/2		101.6 4	104.8 4 1/8	231.8 9 1/8	863.6 34	936.4 36 7/8	965.2 38	28	50.8 2	1,104.9 43 1/2	430 949	744 1657
36"	1,270 50		104.8 4 1/8	111.1 4 3/8	241.3 9 1/2	914.4 36	990.6 39	1,022.3 40 1/8	32	54 2 1/8	1,156.4 46	563 1,241	850 1,881
38"	1,352.5 53 1/8		108 4 1/4	108 4 1/4	181 7 1/8	965.2 38	1,038.7 39 1/8	1,068.7 40 1/2	32	41.3 1 5/8	1,092.2 43	307 677	510 1,120
40"	1,438.3 56 3/4		114.3 4 1/2	114.3 4 1/2	193.7 7 5/8	1,016 40	1,047.8 41 1/4	1,085.9 42 3/4	32	44.5 1 3/4	1,155.7 45 1/2	372 825	580 1,275
42"	1,489 59 1/4		119.1 4 11/16	119.1 4 11/16	200 7 7/8	1,066.8 42	1,096.5 43 1/4	1,096.7 43 3/4	32	44.5 1 3/4	1,206.5 47 1/2	408 907	610 1,350
44"	1,552.5 61 1/8		123.8 4 7/8	123.8 4 7/8	205.4 8 1/8	1,117.6 44	1,149.4 45 1/8	1,193.8 47	32	47.6 1 7/8	1,263.7 49 3/4	454 1,003	660 1,450
46"	1,616.1 63 3/4		128.6 5 1/16	128.6 5 1/16	215.9 8 1/2	1,168.4 46	1,203.3 47 3/8	1,244.6 49	28	50.8 2	1,320.8 51	544 1,199	744 1,650
48"	1,666.85 65 3/4		133.4 5 1/4	133.4 5 1/4	223.8 8 13/16	1,219.2 48	1,254.1 49 1/8	1,301.8 51 1/4	32	50.8 2	1,371.6 54	597 1,290	800 1,760
50"	1,730.3 68 1/4		138.7 5 1/2	138.7 5 1/2	231.8 9 1/8	1,270 50	1,304.9 51 3/8	1,358.9 53 1/2	32	54 2 1/8	1,428.8 56 1/4	643 1,417	850 1,880
52"	1,781 70 1/4		144.5 5 11/16	144.5 5 11/16	238.1 9 3/8	1,320.8 52	1,355.7 53 3/8	1,409.7 55 1/2	32	54 2 1/8	1,478.5 58 1/8	694 1,530	900 1,980
54"	1,837.4 72 3/4		152.4 6	152.4 6	254.4 10 1/16	1,371.6 54	1,409.7 55 1/2	1,466.8 57 3/4	28	60.3 2 3/8	1,540.4 61	744 1,650	1,000 2,200
56"	1,908.2 75 1/4		154 6 1/16	154 6 1/16	260.4 10 1/4	1,422.4 56	1,463.7 57 5/8	1,517.7 59 3/4	28	60.3 2 3/8	1,603.7 63	802 1,754	1,050 2,310
58"	1,958 77 1/4		158.7 6 1/4	158.7 6 1/4	265.7 10 1/2	1,471.2 58	1,514.5 59 5/8	1,574.8 62	32	60.3 2 3/8	1,651 65	828 1,844	1,070 2,350
60"	1,995.8 79 1/4		163.5 6 3/16	163.5 6 3/16	273.1 10 3/4	1,524 60	1,565.3 61 5/8	1,625.6 64	32	60.3 2 3/8	1,701.8 67	888 1,950	1,100 2,420

To be specified by purchaser:
Debe ser especificado por el comprador

MSS STANDARD PRACTISE SP-44 (26" ÷ 60")

00 Lb.



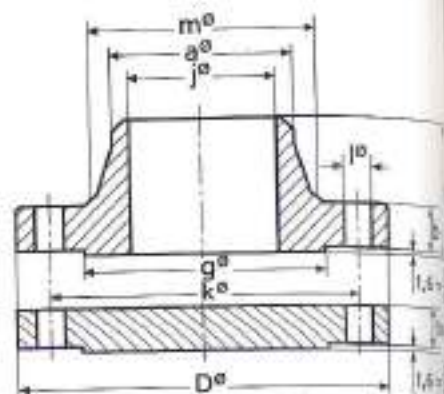
5 SP - 44

Flange Brida	Hub Cuello	Raised face Resalte	Drilling template Taladros	Approx weight Peso aprox. Kg. Pounds								
D mm. inches	J mm. inches	Welding Neck b1 mm. inches	Blind b2 mm. inches	h mm. inches	a mm. inches	m mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches	Welding Neck	Blind
971.5 39 1/4		88.9 3 1/2	98.4 3 7/8	193.6 7 5/8	660.4 26	727.1 28 5/8	749.3 29 1/2	28	47.6 1 7/8	876.3 34 1/2	304 630	534 1,177
1,035.1 40 3/4		95.3 3 3/4	104.8 4 1/8	206.4 8 1/8	711.2 28	782.6 30 13/16	800.1 31 1/2	28	50.8 2	939.8 37	362 796	645 1,423
1,092.2 43		101.6 4	111.1 4 3/8	219.1 8 5/8	762 30	836.6 32 15/16	857.2 33 3/4	28	54 2 1/8	997 39 1/4	415 915	760 1,675
1,149.4 45 1/4		108 4 1/4	115.9 4 9/16	231.8 9 1/8	812.8 32	889 35	914.4 36	28	54 2 1/8	1,054.1 41 1/2	478 1,054	885 1,951
1,206.5 47 1/2		111.1 4 3/8	122.2 4 13/16	241.3 9 1/2	863.6 34	944.5 37 3/16	965.2 38	28	54 2 1/8	1,104.9 43 1/2	538 1,186	1,035 2,282
1,271 50		114.3 4 1/2	128.6 5 1/16	250.8 9 7/8	916.4 36	1,000.1 39 3/8	1,022.3 40 1/4	32	54 2 1/8	1,168.4 46	604 1,331	1,205 2,656
1,296.5 47 1/2		123.8 4 7/8	129.8 4 7/8	206.4 8 1/8	965.2 38	1,003.3 39 3/2	1,035.1 40 3/4	32	47.6 1 7/8	1,117.6 44	405 895	1,065 2,326
1,320 50		130.2 5 1/8	130.2 5 1/8	215.9 8 1/2	1,016 40	1,054.1 41 1/2	1,082.2 43	32	50.8 2	1,174.8 46 1/4	473 1,041	1,229 2,709
1,320.6 52		133.3 5 1/4	133.3 5 1/4	223.8 8 13/16	1,066.8 42	1,108.1 43 5/8	1,143 45	32	50.8 2	1,225.5 48 1/4	513 1,131	1,366 3,011
1,384.3 54 1/2		139.7 5 1/2	139.7 5 1/2	233.3 9 3/16	1,117.6 44	1,158.9 45 5/8	1,200.1 47 1/4	32	54 2 1/8	1,282.7 50 1/2	586 1,292	1,569 3,459
1,441.5 56 3/4		146.1 5 3/4	146.1 5 3/4	244.5 9 5/8	1,168.4 46	1,212.9 47 3/4	1,257.3 49 1/2	36	54 2 1/8	1,339.9 52 3/4	648 1,429	1,776 3,915
1,515.3 58 1/2		152.4 6	152.4 6	257.2 10 1/8	1,219.2 48	1,266.8 49 7/8	1,308.1 51 1/2	28	60.3 2 3/8	1,403.4 55 1/4	768 1,693	2,063 4,504
1,584.5 61 3/4		157.2 6 3/16	158.8 6 1/4	268.3 10 9/16	1,270 52	1,320.8 52	1,362.1 53 5/8	32	60.3 2 3/8	1,460.5 57 1/2	832 1,834	2,294 5,057
1,619.3 63 3/4		161.9 6 3/8	163.5 6 7/16	276.2 10 7/8	1,320.8 52	1,371.6 54	1,412.9 55 5/8	32	60.3 2 3/8	1,511.3 59 1/2	897 1,977	2,500 5,511
1,701.8 67		169.8 6 11/16	171.5 6 3/4	288.9 11 3/8	1,371.6 54	1,425.6 56 1/8	1,470 57 7/8	28	66.7 2 5/8	1,581.2 62 1/4	1,086 2,394	2,900 6,393
1,752.6 69		176.6 6 7/8	176.2 6 15/16	298.5 11 3/4	1,422.4 56	1,476.5 58 1/4	1,527.2 60 1/8	32	66.7 2 5/8	1,632 64 1/4	1,139 2,511	3,174 6,997
1,800.4 71		177.8 7	181 7 1/8	306.6 12 1/16	1,473.2 58	1,530.4 60 1/4	1,578 62 1/8	32	66.7 2 5/8	1,682.8 66 1/4	1,208 2,663	3,462 7,632
1,888 74 3/4		185.7 7 5/16	188.3 7 7/16	319.5 12 5/16	1,524 60	1,584.3 62 3/8	1,635.1 64 3/8	32	73 2 7/8	1,752.6 69	1,408 3,105	3,940 8,687

To be specified by customer
Debe ser especificado por el comprador

MSS STANDARD PRACTISE SP-44 (26" ÷ 60")

600 Lb.



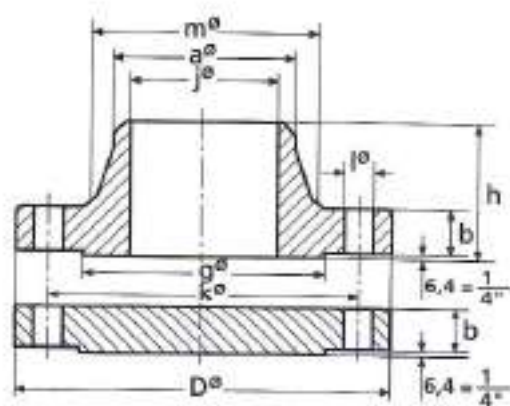
MSS SP - 44

Nominal pipe size	Flange Breda					Hub Cuello		Raised face Resalte	Drilling template Taladros			Approx weight Peso aprox. Kg. Pounds	
Díámetro nominal	D mm. inches	J mm. inches	Weiding Neck br mm. inches	Blind br mm. inches	h mm. inches	a mm. inches	m mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches	Welding Neck	Blind
26"	1,016 40		108 4 1/4	125,4 4 15/16	222,3 8 3/4	560,4 22	747,7 29 7/16	749,3 29 1/2	28	50,8 2	914,4 36	427 941	310 680
28"	1,073,2 42 1/4		111,1 4 3/8	131,7 5 3/16	235 9 1/4	711,2 28	803,3 31 5/8	800,1 31 1/2	28	54 2 1/8	955,2 38	479 1,056	660 1,450
30"	1,130,3 44 1/2		114,3 4 1/2	139,7 5 1/2	247,7 9 3/4	752 30	862 33 15/16	857,2 33 3/4	28	54 2 1/8	1,022,4 40 1/4	545 1,201	1,030 2,277
32"	1,193,8 47		117,5 4 5/8	147,6 5 13/16	260,3 10 1/4	812,8 32	917,6 36 1/8	914,4 36	28	60,3 2 3/8	1,079,5 42 1/2	610 1,345	1,240 2,730
34"	1,244,8 49		120,6 4 3/4	154 6 1/16	268,8 10 5/8	863,6 34	970 38 3/16	955,2 38	28	60,3 2 3/8	1,130,3 44 1/2	666 1,468	1,270 2,800
36"	1,314,5 51 3/4		123,8 4 7/8	161,9 6 3/8	282,6 11 1/8	914,4 36	1,031,9 40 5/8	1,022,3 40 1/4	28	66,7 2 5/8	1,193,8 47	755 1,664	1,600 3,527
38"	1,370 50		152,4 6	155,6 6 1/8	254 10	965,2 38	1,022,4 40 1/4	1,054,1 41 1/2	28	60,3 2 3/8	1,162,1 45 3/4	640 1,411	1,340 2,950
40"	1,320,8 52		158,8 6 1/4	161,9 6 3/8	263,5 10 3/8	1,016 40	1,073,2 42 1/4	1,111,3 43 3/4	32	60,3 2 3/8	1,212,9 47 3/4	681 1,504	1,370 3,020
42"	1,403 55 1/4		168,3 6 5/8	171,5 6 3/4	278,4 11	1,066,8 42	1,127,8 44 3/8	1,168,3 46	28	66,7 2 5/8	1,282,7 50 1/2	754 1,662	1,600 3,520
44"	1,454,2 57 1/4		173,3 6 13/16	177,8 7	288,9 11 3/8	1,117,6 44	1,181,1 46 1/2	1,225,5 48 1/4	32	66,7 2 5/8	1,333,5 52 1/2	801 1,760	1,650 3,630
46"	1,511,3 59 1/2		179,4 7 1/16	185,7 7 3/16	300 11 13/16	1,168,4 46	1,235,1 48 5/8	1,276,4 50 1/4	32	66,7 2 5/8	1,390,7 54 3/4	854 1,880	1,700 3,740
48"	1,593,9 62 3/4		188,9 7 3/16	195,3 7 11/16	315,9 12 2/16	1,215,2 48	1,289,1 50 3/4	1,333,5 52 1/2	32	73 2 7/8	1,468,5 57 1/2	1,280 2,845	1,800 3,960
50"	1,670,9 65 3/4		196,9 7 3/4	203,2 8	328,6 12 13/16	1,270 50	1,343 52 7/8	1,384,3 54 1/2	28	79,4 3 1/8	1,524 60	1,363 3,005	1,900 4,190
52"	1,720,9 67 3/4		203,2 8	209,55 8 1/4	336,5 13 1/4	1,320,8 52	1,393,8 54 7/8	1,435,1 56 1/2	32	79,4 3 1/8	1,574,8 62	1,466 3,232	2,000 4,400
54"	1,778 70		209,5 8 1/4	217,5 8 9/16	348,2 13 3/4	1,371,6 54	1,447,8 57	1,492,3 58 3/4	32	79,4 3 1/8	1,632 64 1/4	1,505 3,328	2,050 4,510
56"	1,854,2 73		217,5 8 9/16	225,4 8 7/8	362 14 1/4	1,422,4 56	1,501,8 59 1/8	1,543,1 60 3/4	32	85,7 3 3/8	1,695,5 66 3/4	1,789 3,977	2,100 4,630
58"	1,935 75		222,3 8 3/4	231,8 9 1/8	369,9 14 9/16	1,473,2 58	1,522,6 61 1/8	1,600,2 63	32	85,7 3 3/8	1,748,3 68 3/4	1,914 4,214	2,150 4,730
60"	1,993,9 78 1/2		233,3 9 3/16	242,9 9 9/16	389 15 3/16	1,524 60	1,609,7 63 3/8	1,657,3 65 1/4	28	92,1 3 5/8	1,822,5 71 3/4	2,300 5,070	2,500 5,510

To be specified by purchaser
Debe ser especificado por el comprador

MSS STANDARD PRACTISE SP-44 (26" ÷ 48")

900 Lb.



MSS SP - 44

Nominal pipe size Tamaño nominal	Flange Brida					Hub Cuello		Raised face Resalte	Drilling template Talladros			Approx weight Peso aprox. Kg. Pounds	
	D mm. inches	C mm. inches	Welding Neck br mm. inches	Blind br mm. inches	h mm. inches	a mm. inches	m mm. inches	g mm. inches	Number Número	l mm. inches	k mm. inches	Welding Neck	Blind
26"	1,985.9 42 3/4		139.7 5 1/2	160.3 6 5/16	285.8 11 1/4	660.6 26	774.7 30 1/2	749.3 29 1/2	20	73 2 7/8	952.5 37 1/2	645 1,465	1,060 2,337
28"	1,168.4 46		142.8 5 5/8	171.5 6 3/4	298.5 11 3/4	711.2 28	831.8 32 3/4	808.1 31 1/2	20	79.4 3 1/8	1,022.4 40 1/4	783 1,726	1,306 2,879
30"	1,231.9 48 1/2		149.2 5 7/8	182.5 7 1/16	311.2 12 1/4	762 30	889 35	857.3 33 3/4	20	79.4 3 1/8	1,085.9 42 3/4	903 1,990	1,565 3,450
32"	1,314.5 51 3/4		158.8 6 1/4	193.7 7 5/8	330.2 13	812.8 32	946.2 37 1/4	914.4 36	20	85.7 3 3/8	1,155.7 45 1/2	1,056 2,328	1,885 4,156
34"	1,397 55		165.1 6 1/2	204.8 8 1/16	349.3 13 3/4	863.16 34	1,006.5 39 5/8	965.2 38	20	92.1 3 5/8	1,225.5 48 1/4	1,276 2,813	2,250 4,960
36"	1,490.5 57 1/2		171.5 6 3/4	214.3 8 7/16	362 14 1/4	914.4 36	1,063.6 41 7/8	1,022.4 40 1/4	20	92.1 3 5/8	1,289.1 50 3/4	1,439 3,172	2,595 5,721
38"	1,400.5 57 1/2		190.5 7 1/2	215.9 8 1/2	352.4 13 7/8	965.2 38	1,073.2 42 1/4	1,098.5 43 1/8	20	92.1 3 5/8	1,289.1 50 3/4	1,400 3,086	2,610 5,754
40"	1,511.2 59 1/2		196.8 7 3/4	223.8 8 13/16	363.5 14 5/16	1,014 40	1,127.1 44 3/8	1,162.1 45 3/4	24	92.1 3 5/8	1,339.9 52 3/4	1,481 3,265	2,870 6,327
42"	1,562.1 61 1/2		206.4 8 1/8	231.8 9 1/8	371.5 14 5/8	1,066.8 42	1,176.3 46 5/16	1,212.9 47 3/4	24	92.1 3 5/8	1,390.7 54 3/4	1,620 3,571	3,195 7,044
44"	1,647.8 64 7/8		214.3 8 7/16	242.9 9 9/16	390.5 15 3/8	1,117.6 44	1,235.1 48 5/8	1,270 50	24	98.4 3 7/8	1,463.7 57 5/8	1,780 3,924	3,720 8,201
46"	1,733.5 68 1/4		225.4 8 7/8	255.6 10 1/16	411.2 16 3/16	1,168.4 46	1,292.2 50 7/8	1,333.5 52 1/2	24	104.8 4 1/8	1,536.7 60 1/2	2,200 4,850	4,579 10,095
48"	1,784.4 70 1/4		233.4 9 3/16	263.5 10 3/8	419.1 16 1/2	1,219.2 48	1,343 52 7/8	1,384.3 54 1/2	24	104.8 4 1/8	1,587.5 62 1/2	2,364 5,212	4,730 10,428

To be specified by purchaser.
Debe ser especificado por el comprador.

FITTINGS ACCESORIOS





72	MATERIALS SPECIFICATION ESPECIFICACION DE MATERIALES
73	SCHEDULES CHART TABLA DE SCHEDULES
74	TAPER THREAD STANDARD ROSCADO CONICO PARA TUBOS
75	ELBOW 90° CODO
76	ELBOW 45° CODO
77	TEE TE
78	CROSS CRUCETA
79	UNION TUERCA DE UNION
80	COUPLING MANGUITO
81	HALF COUPLING MEDIO MANGUITO
82	CAPS
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85	REDUCING INSERTS INJERTOS DE REDUCCION
86	SWAGES NIPPLES
87	WELDINSERT
88	THREADINSERT
89	SOCKINSERT

MATERIALS SPECIFICATION

ESPECIFICACION DE MATERIALES

MECHANICAL PROPERTIES PROPIEDADES MECANICAS						CHEMICAL COMPOSITION COMPOSICION QUIMICA												
MATERIAL	Tensile Strength Resistencia tensil	Yield Strength Resistencia a la tracción	Elongation % Alargamiento %	Hardness Brinell Dureza Brinell	Impact Toughness Resistencia al impacto	C	Mn	S	Si	P	Cr	Ni	Mo	Ti	Cu	V	Nb	
A-105	485 min.	268 min.	22 min.	30 min.	—	0.25 max.	0.06-1.06	0.10-0.35	0.028 max.	0.008 max.	0.30 max.	0.40 max.	0.12 max.	—	0.40 max.	0.03 max.	0.02 max.	
A106 Gr B	415 min.	248 min.	22 min.	—	—	0.38 max.	0.29-1.06	0.70 max.	0.025 max.	0.025 max.	0.48 max.	0.40 max.	0.15 max.	—	0.48 max.	0.03 max.	—	
A350 LF 2	485-505	268 min.	22 min.	18 min.	28 min.	0.20 max.	1.35 max.	0.10-0.40	0.040 max.	0.025 max.	0.38 max.	0.48 max.	0.12 max.	—	0.48 max.	0.03 max.	0.02 max.	
A350 LF 3	485-505	268 min.	22 min.	35 min.	25 min.	0.20 max.	0.30 max.	0.20-0.35	0.040 max.	0.025 max.	0.30 max.	0.25-0.75	0.12 max.	—	0.48 max.	0.03 max.	0.02 max.	
A182 F 1	485 min.	275 min.	20 min.	30 min.	—	0.28 max.	0.00-0.90	0.15-0.13	0.045 max.	0.045 max.	—	—	0.44-0.45	—	—	—	—	
A182 F 5	485 min.	275 min.	20 min.	35 min.	—	0.15 max.	0.30-0.90	0.30 max.	0.038 max.	0.038 max.	4.0-6.0	0.50 max.	0.40-0.45	—	—	—	—	
A182 F 6	485 min.	275 min.	18 min.	35 min.	—	0.15 max.	1.0 max.	1.0 max.	0.030 max.	0.040 max.	11.5-13.5	0.50 max.	—	—	—	—	—	
A182 F 9	505 min.	380 min.	28 min.	38 min.	—	0.15 max.	0.30-0.60	0.55-1.0	0.030 max.	0.030 max.	8.0-11.0	—	0.9-1.10	—	—	—	—	
A182 F 11	485 min.	275 min.	20 min.	30 min.	—	0.15-0.20	0.30-0.60	0.50-1.0	0.040 max.	0.040 max.	1.0-1.5	—	0.44-0.65	—	—	—	—	
A182 F 22	515 min.	370 min.	20 min.	30 min.	—	0.05-0.15	0.30-0.60	0.50 max.	0.040 max.	0.040 max.	2.0-2.5	—	0.27-1.13	—	—	—	—	
A182 F 304	515 min.	385 min.	30 min.	50 min.	—	0.08 max.	2.0 max.	1.0 max.	0.030 max.	0.040 max.	18.0-20.0	8.0-11.0	—	—	—	—	—	
A182 F 304 L	485 min.	370 min.	38 min.	58 min.	—	0.035 max.	2.0 max.	1.0 max.	0.030 max.	0.040 max.	18.0-20.0	8.0-13.0	—	—	—	—	—	
A182 F 316	515 min.	385 min.	38 min.	58 min.	—	0.08 max.	2.0 max.	1.0 max.	0.030 max.	0.040 max.	14.0-16.0	10.0-14.0	2.0-3.0	—	—	—	—	
A182 F 316 L	485 min.	370 min.	38 min.	58 min.	—	0.035 max.	2.0 max.	1.0 max.	0.030 max.	0.040 max.	14.0-16.0	10.0-15.0	2.0-3.0	—	—	—	—	
A182 F 321	515 min.	385 min.	30 min.	50 min.	—	0.08 max.	2.0 max.	1.0 max.	0.030 max.	0.040 max.	7.0-10.0	8.0-12.0	—	≥ 50% C + 0.20	—	—	—	

SCHEDULES CHART

TABLA DE SCHEDULES

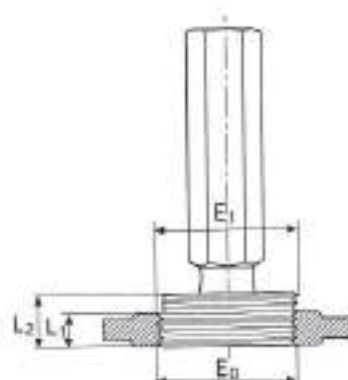
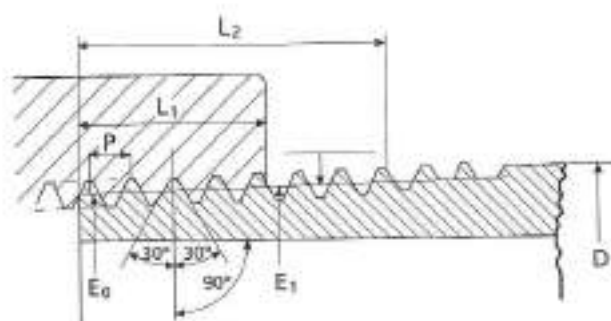
Nominal pipe size Tubo nominal	Outside Ø Ø exterior del tubo	Sch. 40		Sch. 80		Sch. 160	
		Thickness Espesor	Inside Ø interior	Thickness Espesor	Inside Ø interior	Thickness Espesor	Inside Ø interior
1/8"	13.75	2.23	9.24	3.00	7.66	—	—
1/4"	17.10	2.30	12.54	3.18	10.74	—	—
3/8"	21.30	2.80	15.70	3.65	14.00	4.73	11.84
1/2"	26.75	2.95	20.80	3.95	18.80	5.55	15.80
3/4"	33.50	3.40	26.70	4.35	24.40	6.35	20.80
1"	42.20	3.55	35.10	4.85	32.50	6.35	28.50
1 1/8"	48.75	3.70	40.50	5.10	38.10	7.15	34.00
1 1/2"	60.40	3.90	52.60	5.55	49.30	8.75	42.00
2"	73.10	5.20	62.70	7.10	58.90	8.55	54.00
2 1/2"	88.90	5.45	78.00	7.60	73.70	11.15	66.60
3"	101.60	5.70	90.20	8.15	85.30	—	—
4"	134.30	5.95	102.40	8.50	97.30	13.50	87.30
6"	141.20	6.45	128.30	9.50	122.20	15.80	106.60
8"	188.40	7.50	154.30	11.05	146.30	18.30	131.00
10"	219.20	8.25	202.70	12.70	193.60	22.05	173.10
12"	273.00	9.25	254.50	15.05	242.90	28.65	215.00
14"	323.30	10.30	302.20	17.40	289.00	33.80	257.20
16"	355.00	11.15	333.20	18.65	317.50	35.70	284.20
18"	406.40	12.70	381.00	21.40	363.60	40.45	325.50
20"	457.20	14.25	408.70	23.80	409.60	45.25	395.70
24"	548.00	15.85	477.90	26.20	455.60	50.00	438.00
30"	646.60	17.45	574.30	30.95	547.70	58.50	490.60

Nominal pipe size Tubo nominal	Outside Ø Ø exterior del tubo	Standard		Extra strong		Double extra strong	
		Thickness Espesor	Inside Ø interior	Thickness Espesor	Inside Ø interior	Thickness Espesor	Inside Ø interior
1/8"	13.75	2.23	9.24	3.00	7.66	—	—
1/4"	17.10	2.30	12.54	3.18	10.74	—	—
3/8"	21.30	2.80	15.70	3.65	14.00	7.41	6.40
1/2"	26.75	2.95	20.80	3.95	18.80	7.25	11.00
3/4"	33.50	3.40	26.70	4.35	24.40	9.15	15.00
1"	42.20	3.55	35.10	4.85	32.50	9.70	22.80
1 1/8"	48.75	3.70	40.50	5.10	38.10	10.20	27.90
1 1/2"	60.40	3.90	52.60	5.55	49.30	11.10	38.20
2"	73.10	5.20	62.70	7.10	58.90	14.05	45.00
2 1/2"	88.90	5.45	78.00	7.60	73.70	15.25	58.40
3"	101.60	5.70	90.20	8.15	85.30	—	—
4"	134.30	5.95	102.40	8.50	97.30	17.30	80.10
6"	141.20	6.45	128.30	9.50	122.20	19.00	103.20
8"	188.40	7.15	154.30	11.05	146.30	22.00	124.40
10"	219.20	8.25	202.70	12.70	193.60	22.30	174.60
12"	273.00	9.25	254.50	15.05	247.60	—	—
14"	323.30	9.50	304.80	17.40	288.40	—	—
16"	355.00	9.55	335.50	17.70	330.20	—	—
18"	406.40	9.55	387.30	17.70	381.00	—	—
20"	457.20	9.55	438.10	17.70	431.80	—	—
24"	548.00	9.55	489.90	17.70	482.60	—	—
30"	646.60	9.55	590.50	17.70	584.20	—	—

TAPER THREAD STANDARD

ROSCADO CONICO PARA TUBOS

ASME/ANSI B1.20.1



N.P.S. Dimensión nominal del tubo	O.D. of pipe Diámetro exterior del tubo		O.D. of pipe Núm. de hilos por pulgada	Pitch Paso		Pitch diameter at beginning of external thread Diámetro de paso en el extremo exterior del roscado		Pitch diameter at gaging notch Diámetro de paso en el extremo interior del roscado		Effective external thread Longitud efectiva del roscado		Hand tight engagement Longitud de apriete a mano	
	D			P		E ₀		E ₁		L ₂		L ₁	
	mm.	inch		mm.	inch	mm.	inch	mm.	inch	mm.	inch	mm.	inch
1/8	10.29	.405	27	0.940	.03704	9.212	.36351	9.409	.37360	6.703	.2639	4.102	.1611
1/4	13.72	.540	18	1.411	.05556	12.126	.47739	12.487	.49163	10.205	.4018	5.786	.228
3/8	17.14	.675	18	1.411	.05556	15.545	.61201	15.926	.62701	10.358	.4078	6.096	.240
1/2	21.34	.840	14	1.814	.07143	19.264	.75843	19.772	.77843	13.556	.5337	8.128	.320
3/4	26.67	1.050	14	1.814	.07143	24.579	.96788	25.117	.98897	13.860	.5457	8.610	.339
1	33.40	1.315	11 1/2	2.209	.08696	30.826	1.21363	31.461	1.23863	17.343	.6828	10.160	.399
1 1/4	42.16	1.660	11 1/2	2.209	.08696	36.551	1.55713	40.218	1.58338	17.952	.7068	10.668	.420
1 1/2	48.26	1.900	11 1/2	2.209	.08696	45.621	1.79605	46.287	1.82234	18.377	.7235	10.668	.420
2	60.32	2.375	11 1/2	2.209	.08696	57.633	2.26902	58.325	2.29527	19.215	.7565	11.074	.436
2 1/2	75.02	2.975	8	3.175	.12500	69.076	2.71953	70.159	2.76216	28.892	1.1375	17.322	.681
3	88.90	3.500	8	3.175	.12500	84.852	3.34062	86.068	3.38850	30.480	1.2000	19.456	.769
3 1/2	101.60	4.000	8	3.175	.12500	97.472	3.83750	98.776	3.88881	31.750	1.2500	20.853	.821
4	114.30	4.500	8	3.175	.12500	110.093	4.33438	111.433	4.38712	33.020	1.3000	23.437	.924

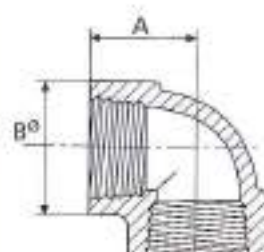
ELBOW CODO 90°

ASME/ANSI B16.11



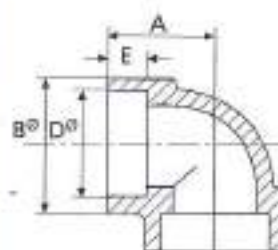
ROSCADO THREADED

NOM	2.000 Lb			3.000 Lb			6.000 Lb		
	A	BO	Weight Pesa =	A	BO	Weight Pesa =	A	BO	Weight Pesa =
Pulg	mm	mm	kg/lb	mm	mm	kg/lb	mm	mm	kg/lb
1/4	24,5	25,5	14	24,5	25,5	14	28,5	33,5	30
3/8	24,5	25,5	12,5	28,5	33,5	27	33,5	38	45,5
1/2	28,5	33,5	22	33,5	38	41,5	38	46	72
3/4	33,5	38	32	38	46	65	44,5	55,5	115,5
1	38	46	47	44,5	55,5	103,5	51	62	161,5
1 1/4	44,5	55,5	74	51	62	130,5	60,5	75,5	267
1 1/2	51	62	92,5	60,5	75,5	221,5	63,5	84	320,5
2	60,5	75,5	153,5	63,5	84	247	86	110	794
2 1/2	76	92	298	86	110	734	95,5	120,5	985
3	86	110	454	95,5	120,5	778	114,5	152,5	1.800
4	114,5	152,5	1.328	114,5	152,5	1.328	—	—	—



S.W. - ENCHUFE Y SOLDADURA

NOM	3.000 Lb					6.000 Lb				
	A	BO	DO	E	Weight Pesa =	A	BO	DO	E	Weight Pesa =
Pulg	mm	mm	mm	mm	kg/lb	mm	mm	mm	mm	kg/lb
1/4	24,5	25,5	14	13,5	12	—	—	—	—	—
3/8	24,5	25,5	17,5	11	10,4	—	—	—	—	—
1/2	28,5	33,5	21,7	12,5	21,8	33,5	38	21,7	14,5	40
3/4	33,5	38	27,1	14,5	30,8	38	46	27,1	16	62,1
1	38	46	33,8	16	46,7	44,5	55,5	33,8	17,5	102,1
1 1/4	44,5	55,5	42,6	17,5	67,1	51	62	42,6	19	132,1
1 1/2	51	62	48,7	19	90,2	60,5	75,5	48,7	22	237
2	60,5	75,5	61,1	22	136,1	63,5	84	61,1	22	272,4
2 1/2	76	92	73,8	34,5	280	86	110	73,8	30	580
3	86	110	89,8	29	440	95,5	120,5	89,8	32	840
4	114,5	152,5	115,4	48	1.330	114,5	152,5	115,4	35	1.580



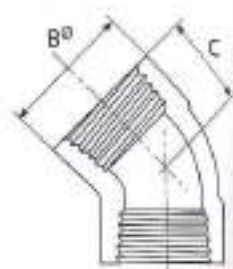
ELBOW CODO 45°

ASME/ANSI B16.11



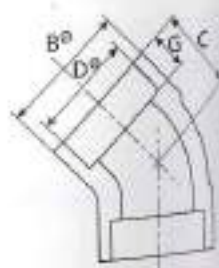
ROSCADO THREADED

NW	2.000 Lb			3.000 Lb			6.000 Lb		
	ØD	C	Weight Peso	ØD	C	Weight Peso	ØD	C	Weight Peso
	mm	mm	kg/lb	mm	mm	kg/lb	mm	mm	kg/lb
1/4	25,5	19	11,5	25,5	19	11,5	38	25,5	40,5
3/8	25,5	19	10,5	38	25,5	36,5	38	25,5	38,5
1/2	38	25,5	30	38	25,5	34	46	28,5	61
3/4	38	25,5	26,8	46	28,5	53,5	55,5	33,5	102
1	46	28,5	40,8	55,5	33,5	92	62	35	117,5
1 1/4	55,5	33,5	63,5	62	35	96,5	75,5	43	207
1 1/2	62	35	74,8	75,5	43	183,5	84	43,5	261
2	75,5	43	119,3	84	43,5	193	101,5	52,5	437
2 1/2	101,5	52,5	346	101,5	52,5	346	120,5	63,5	700
3	118	63,5	545	120,5	63,5	545	152,5	79,5	1.416
4	146	79,5	950	152,5	79,5	950	—	—	—



S.W. - ENCHUFE Y SOLDADURA

NW	3.000 Lb					6.000 Lb				
	ØD	C	DØ	G	Weight Peso	ØD	C	DØ	G	Weight Peso
	mm	mm	mm	mm	kg/lb	mm	mm	mm	mm	kg/lb
1/4	25,5	19	14	9,5	9,5	—	—	—	—	—
3/8	25,5	19	17,5	11	9	—	—	—	—	—
1/2	38	25,5	21,7	11	26	38	25,5	21,7	12,5	31
3/4	38	25,5	27,1	12,5	25	46	28,5	27,1	14,5	52
1	46	28,5	33,8	14,5	38,1	55,5	33,5	33,8	16	92
1 1/4	55,5	33,5	42,6	16	60,8	62	35	42,6	14,5	102
1 1/2	62	35	48,7	16	70,8	75,5	43	48,7	17,5	191,5
2	75,5	43	61,1	17,5	113,5	84	43,5	61,1	15	228,5
2 1/2	101,5	52,5	73,8	24	336	101,5	52,5	73,8	20,5	404
3	118	63,5	89,8	32	470	118	63,5	89,8	28,5	580
4	146	79,5	115,4	38	900	146	79,5	115,4	38	1.065



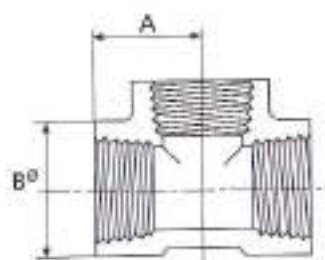
TEE TE

ASME/ANSI B16.11



ROSCADO THREADED

NW	2.000 Lb			3.000 Lb			6.000 Lb		
	A	BØ	Weight Peso	A	BØ	Weight Peso	A	BØ	Weight Peso
Pulg.	mm	mm	kg %	mm	mm	kg %	mm	mm	kg %
1/4	24,5	25,5	17	24,5	25,5	19,5	28,5	33,5	41,5
3/8	24,5	25,5	15,5	28,5	33,5	38	33,5	38	62,5
1/2	28,5	33,5	31,5	33,5	38	56	38	46	98
3/4	33,5	38	43	38	46	84	44,5	55,5	164,5
1	38	46	61	44,5	55,5	136	51	62	219
1 1/4	44,5	55,5	95,5	51	62	164,5	60,5	75,5	331,5
1 1/2	51	62	124,5	60,5	75,5	310	63,5	84	442,5
2	60,5	75,5	193	63,5	84	317,5	86	110	850
2 1/2	76	92	411	86	110	890	95,5	120,5	1.310
3	86	110	613	95,5	120,5	950	114,5	152,5	2.400
4	114,5	152,5	1.720	114,5	152,5	1.720	—	—	—



S.W. - ENCHUFE Y SOLDADURA

NW	3.000 Lb					6.000 Lb				
	A	BØ	DØ	E	Weight Peso	A	BØ	DØ	E	Weight Peso
Pulg.	mm	mm	mm	mm	kg %	mm	mm	mm	mm	kg %
1/4	24,5	25,5	14	13,5	15,5	—	—	—	—	—
3/8	24,5	25,5	17,5	11	14,1	—	—	—	—	—
1/2	28,5	33,5	21,7	12,5	30,8	33,5	38	21,7	14,5	52,6
3/4	33,5	38	27,1	14,5	38,6	38	46	27,1	16	88,1
1	38	46	33,8	16	60,8	44,5	55,5	33,8	17,5	144
1 1/4	44,5	55,5	42,6	17,5	93,1	51	62	42,6	19	179,3
1 1/2	51	62	48,7	19	123,8	60,5	75,5	48,7	22	324
2	60,5	75,5	61,1	22	191,1	63,5	84	61,1	22	350,5
2 1/2	76	92	73,8	34,5	370	86	110	73,8	30	880
3	86	110	89,8	29	550	95,5	120,5	89,8	32	1.050
4	114,5	152,5	115,4	48	1.900	114,5	152,5	115,4	35	2.220



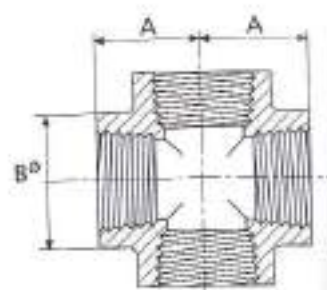
CROSS CRUCETA



ASME/ANSI B16.11

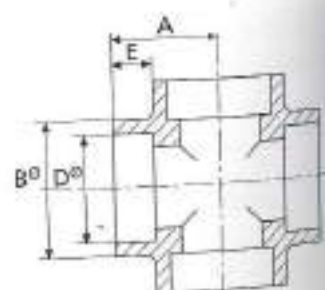
ROSCADO THREADED

NW	2,000 Lb			3,000 Lb			6,000 Lb		
	A	BØ	Weight Peso	A	BØ	Weight Peso	A	BØ	Weight Peso
Pulg	mm	mm	kg %	mm	mm	kg %	mm	mm	kg %
1/4	24,5	25,5	20,5	24,5	25,5	20,5	28,5	33,5	50,8
3/8	24,5	25,5	18	28,5	33,5	43,5	33,5	38	70,3
1/2	28,5	33,5	36,5	33,5	38	65,9	38	46	117,5
3/4	33,5	38	47,5	38	46	104,5	44,5	55,5	191
1	38	46	75	44,5	55,5	169	51	62	255,8
1 1/4	44,5	55,5	106,5	51	62	199,5	60,5	75,5	434,5
1 1/2	51	62	149	60,5	75,5	369	63,5	84	516,6
2	60,5	75,5	227	63,5	84	377	86	110	1.200
2 1/2	76	92	530	86	110	950	95,5	120,5	1.650
3	86	110	820	95,5	120,5	1.300	114,5	152,5	2.800
4	114,5	152,5	1.900	114,5	152,5	1.900	—	—	—



S.W. - ENCHUFE Y SOLDADURA

NW	3,000 Lb					6,000 Lb				
	A	BØ	DØ	E	Weight Peso	A	BØ	DØ	E	Weight Peso
Pulg	mm	mm	mm	mm	kg %	mm	mm	mm	mm	kg %
1/4	24,5	25,5	14	13,5	18,1	—	—	—	—	—
3/8	24,5	25,5	17,5	11	14,5	—	—	—	—	—
1/2	28,5	33,5	21,7	12,5	36,3	33,5	38	21,7	14,5	62,5
3/4	33,5	38	27,1	14,5	44,9	38	46	27,1	16	104
1	38	46	33,8	16	75,8	44,5	55,5	33,8	17,5	170,5
1 1/4	44,5	55,5	42,6	17,5	109	51	62	42,6	19	211,1
1 1/2	51	62	48,7	19	145,3	60,5	75,5	48,7	22	395
2	60,5	75,5	61,1	22	235,2	63,5	84	61,1	22	422,2
2 1/2	76	92	73,8	34,5	450	86	110	73,8	30	1.180
3	86	110	89,8	29	780	95,5	120,5	89,8	32	1.320
4	114,5	152,5	115,4	48	2.150	114,5	152,5	115,4	35	2.600



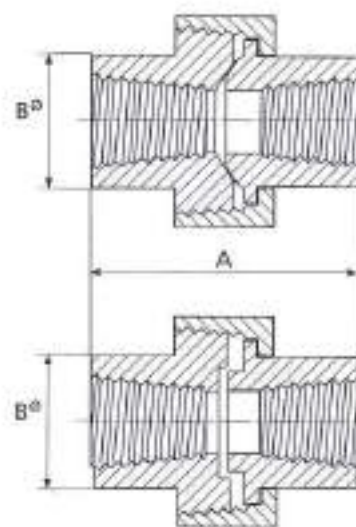
UNION TUERCA DE UNION

3799/MSS-SP83



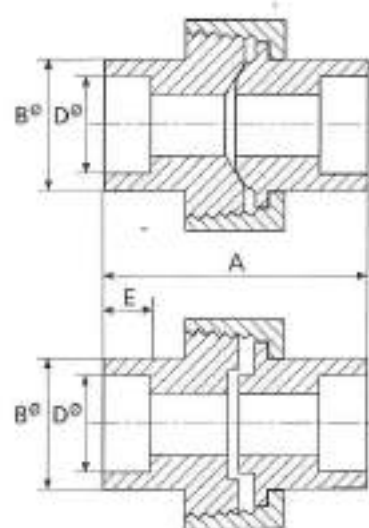
ROSCADO THREADED

		1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
3.000 Lb	A/mm	45	45	51	57	64	71	79	90
	B Oct/mm	26*	26*	30	36,5	44,6	55*	60,5	73,6
	Weight kg %	14	20	35	42,5	65	97,5	125,5	201



S. W. - ENCHUFE Y SOLDADURA

		1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
3.000 Lb	A/mm	45	45	47,5	57	64	71	79	90
	B Oct/mm	26*	26*	30,7*	36,5	44,6	55*	60,5	73,6
	DB/mm	17,5	17,5	21,7	27,4	34,1	42,6	49	61,1
	E/mm	11	11	13	14,5	16	17,5	19	22,2
	Weight kg %	22,5	34	39	48	65	115	142	245



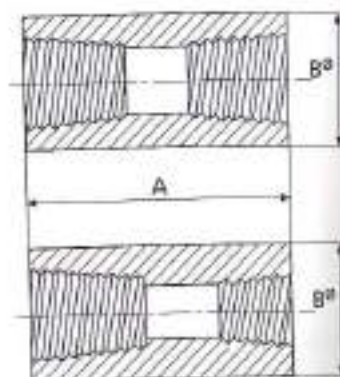
COUPLING MANGUITO

ASME/ANSI B16.11



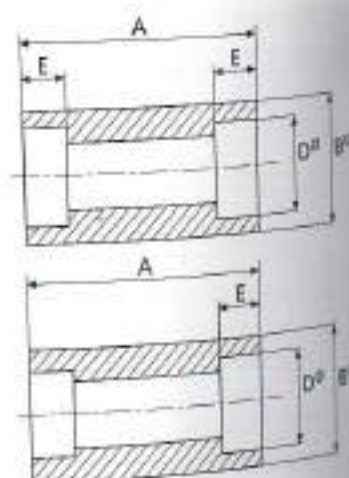
ROSCADO THREADED

NW	Pulg.	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
3,000 Lb	A/mm	35	38	47,5	51	60,5	66,5	79,5	85,5	92	108	120,5
	BØ/mm	19	22	29	35	44,5	57	63,5	76	92	108	140
	Weight Peso	4,5	5,9	12,7	19,1	38,6	68	99,3	137	207	308	544
6,000 Lb	A/mm	35	38	47,5	51	60,5	66,5	79,5	85,5	92	108	120,5
	BØ/mm	25,5	32	38	44,5	57	63,5	76	92	108	127	159
	Weight Peso	6,3	18,1	31,2	40,8	85,2	105	181	340	419	610	1.030



S.W. - ENCHUFE Y SOLDADURA

NW	3,000 Lb					6,000 Lb				
	A	BØ	DØ	E	Weight Peso	A	BØ	DØ	E	Weight Peso
Pulg.	mm	mm	mm	mm	kg %	mm	mm	mm	mm	kg %
1/4	26,6	22	14	10	5	—	—	—	—	—
3/8	24,9	25,5	17,5	10	6,4	—	—	—	—	—
1/2	28,2	31,5	21,7	10	12,7	28,2	38	21,7	10	23,2
3/4	34,2	38	27,1	13	18,6	34,2	44,5	27,1	13	32
1	36,2	44,5	33,8	13	26,3	36,2	57	33,8	13	63,6
1 1/4	36,2	57	42,6	13	47,7	36,2	63,5	42,6	13	72,2
1 1/2	36,2	63,5	48,7	13	56,8	36,2	76	48,7	13	117,2
2	48,6	76	61,1	16	92,2	48,6	92	61,1	16	207,9
2 1/2	47,6	92	73,8	16	140	47,6	108	73,8	16	280
3	47,6	108	89,8	16	180	47,6	127	89,8	16	323
4	53,8	140	115,4	19,1	323	53,8	159	115,4	19,1	622



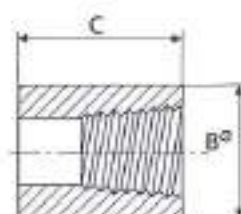
HALF COUPLING MEDIO MANGUITO

ASME/ANSI B16.11



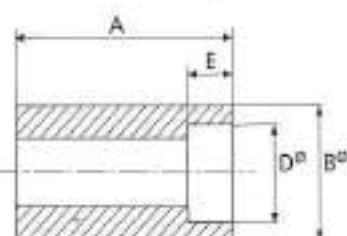
ROSCADO THREADED

NW	Pulg.	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
5.000 Lb	Ømm	17,5	19	24	25,5	30	33,5	39,5	43	46	54	60
	BØmm	19	22	29	35	44,5	57	63,5	76	92	108	140
	Weight Peso	2,3	3,2	6,4	9,5	20	34	49,9	68,5	103,5	154	273
6.000 Lb	Ømm	17,5	19	24	25,5	30	33,5	39,5	43	46	54	60
	BØmm	25,5	32	38	44,5	57	63,5	76	92	108	127	159
	Weight Peso	3,1	9,1	15,8	20,4	42,6	52,6	90,7	170	210	305	503



S.W. - ENCHUFE Y SOLDADURA

NW	3.000 Lb					6.000 Lb				
	A	BØ	DØ	E	Weight Peso	A	BØ	DØ	E	Weight Peso
Pulg.	mm	mm	mm	mm	kg/A	mm	mm	mm	mm	kg/A
1/4	25,5	22	14	10	5	—	—	—	—	—
3/8	27	25,5	17,5	10	6,4	—	—	—	—	—
1/2	32	31,5	21,7	10	12,7	32	38	21,7	10	23,2
3/4	36,5	38	27,1	13	18,6	36,5	44,5	27,1	13	31,8
1	40,5	44,5	33,8	13	26,3	40,5	57	33,8	13	63,6
1 1/4	42,3	57	42,6	13	47,2	42,3	63,5	42,6	13	72,2
1 1/2	43,8	63,5	48,7	13	56,8	43,8	76	48,7	13	117,2
2	56,3	76	61,1	16	92,2	56,3	92	61,1	16	207,9
2 1/2	57,3	92	73,8	16	140	57,3	108	73,8	16	280
3	58,8	108	89,8	16	180	58,8	127	89,8	16	323
4	65,5	140	115,4	19,1	323	65,5	159	115,4	19,1	622



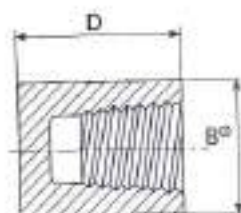
CAPS

ASME/ANSI B16.11



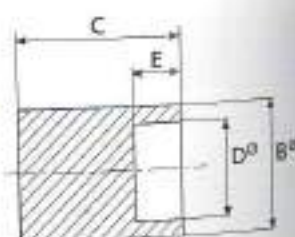
ROSCADO THREADED

NW	Pulg.	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
3,000 Lb	D/mm	25,5	25,5	32	36,5	41,5	44,5	44,5	47,5	60,5	65	68
	BØ/mm	19	22	29	35	44,5	57	63,5	76	92	108	140
	Weight kg % Peso	4,1	5	10,9	17,7	32,7	59,9	69,8	106	184	165	457
6,000 Lb	D/mm	25,5	30	35	38	46	47,5	47,5	51	63,5	68	74,5
	BØ/mm	25,5	32	38	44,5	57	63,5	76	92	108	127	159
	Weight kg % Peso	5,9	8,6	14	20	34	59,4	76,6	147	210	200	630



S.W. - ENCHUFE Y SOLDADURA

NW	3,000 Lb					6,000 Lb				
	C	BØ	DØ	E	Weight Peso	C	BØ	DØ	E	Weight Peso
Pulg.	mm	mm	mm	mm	kg %	mm	mm	mm	mm	kg %
1/4	17	22	14	10	4,1	—	—	—	—	—
3/8	17	25,5	17,5	10	5,4	—	—	—	—	—
1/2	18	31,5	21,7	10	10	21	38	21,7	10	19,1
3/4	23	38	27,1	13	16,3	26	44,5	27,1	13	26,5
1	24	44,5	33,8	13	21,8	27	57	33,8	13	52,7
1 1/4	26	57	42,6	13	41,3	31	63,5	42,6	13	63,6
1 1/2	27	63,5	48,7	13	50,8	32	76	48,7	13	97,2
2	34	76	61,1	16	85,4	40	92	61,1	16	164,3
2 1/2	37	92	73,8	16	125	45	108	73,8	16	223
3	40	108	89,8	16	195	50	127	89,8	16	345
4	44,1	140	115,4	19,1	336	54	159	115,4	19,1	604

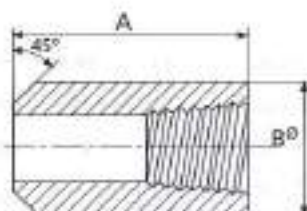


BOSSES



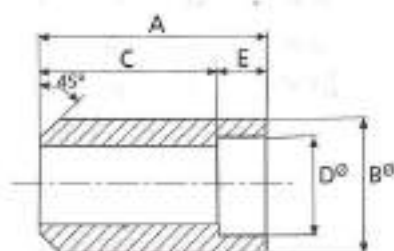
3799

ROSCADO THREADED



3.000 Lb	Pulg.	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
	A/mm	41	45	51	51	51	51	51	51
	B/mm	19	23	29	35	45	57	64	76
	Weight = kg%	13	18	23	30	48	63	90	125
6.000 Lb	A/mm	41	45	51	51	51	51	51	51
	B/mm	26	32	38	45	60	65	76	95
	Weight = kg%	23,5	29,5	37,5	50	80	90	129	178

S.W. - ENCHUFE Y SOLDADURA



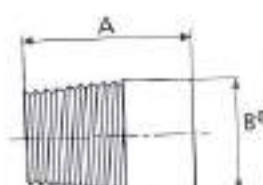
3.000 Lb	Pulg.	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
	A/mm	42	45	51	51	51	51	51	51
	B/mm	23	26	32	38	45	57	65	76
	C/mm	32	34	38	38	35	35	32	29
	D/mm	14,1	17,6	21,8	27,4	34,1	42,9	49	61
	E/mm	10	11	13	13	16	16	19	22
	Weight = kg%	22,5	29	35,5	48	76,5	84	120,5	171
6.000 Lb	A/mm	—	—	51	51	51	51	51	51
	B/mm	—	—	35	45	50	60	65	90
	C/mm	—	—	38	38	35	35	32	29
	D/mm	—	—	21,8	27,4	34,1	42,9	49	61
	E/mm	—	—	13	13	16	16	19	22
	Weight = kg%	—	—	38	52,5	82,5	92	130,5	186



ASME/ANSI B16.11

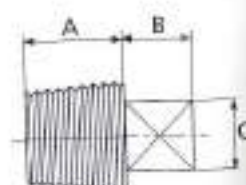
ROUND HEAD PLUG
TAPON CABEZA REDONDA

Pulg.	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
A/mm	41,5	44,5	44,5	44,5	51	51	51	63,5	70	70	76
B/mm	13,5	17,5	21,5	27	33,5	43	48,5	60,5	73	89	114
P _W = /K%	4,5	7,3	11,8	19,5	33,6	56,9	71,7	141,1	220	326	602



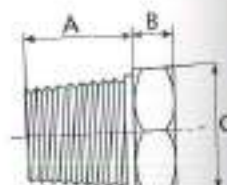
SQUARE HEAD PLUG
TAPON CABEZA CUADRADA

Pulg.	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
A/mm	11	12,5	14,5	16	19	20,5	20,5	22	27	29	38
B/mm	6,5	8	9,5	11	12,5	14,5	16	17,5	19	20,5	31,5
C/mm	9,5	11	14,5	16	20,5	24	28,5	33,5	38	42	63,5
P _W = /K%	1,4	2,7	4,9	8,6	16,3	27,2	38,1	62,6	95,1	154	305



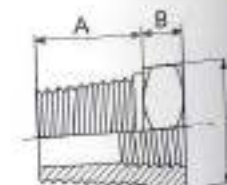
HEXAGON HEAD PLUG
TAPON CABEZA EXAGONAL

Pulg.	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
A/mm	16	17,5	19	24	25,5	25,5	25,5	27	40	42	49
B/mm	6,5	8	8	9,5	9,5	14,5	16	17,5	19	20,5	25,5
C/mm	16	17,5	22	27	36,5	46	51	63,5	76	94	118
P _W = /K%	2,6	4,8	7,3	12,9	26,7	44,5	59,5	115,8	175	250	600



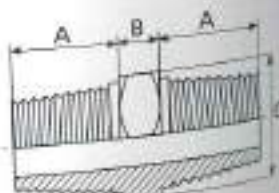
HEXAGON
BUSSING EXAGONAL

Pulg.	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
A/mm	12,5	14,5	17,5	19	20,5	22	24	25,5	30	38	45
B/mm	5	5	5	6,5	6,5	9,5	9,5	11	12,5	17,5	25,5
C/mm	16	17,5	22	27	36,5	46	51	63,5	76	94	118
P _W = /K%	0,9	1,3	2,7	5	8,6	17,7	16,3	38,1	54	117	315



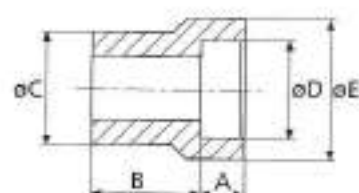
HEXAGON NIPPLE
NIPPLE EXAGONAL

Pulg.	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
A/mm	12,5	14,5	17,5	19	20,5	22	24	25,5	30	38	45
B/mm	6,5	8	8	9,5	9,5	12,5	14,5	16	19	20,5	25,5
C/mm	16	17,5	22	27	36,5	46	51	63,5	76	94	118
P _W = /K%	1,8	2,7	5,5	9,5	16,7	34	32,7	72,7	110	130	240

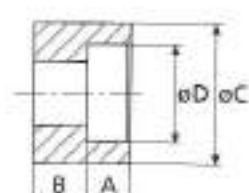


REDUCING INSERTS

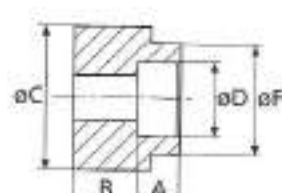
INJERTOS DE REDUCCION



Type 1
Tipo 1



Type 2
Tipo 2



Type 3
Tipo 3

3,000 Lb

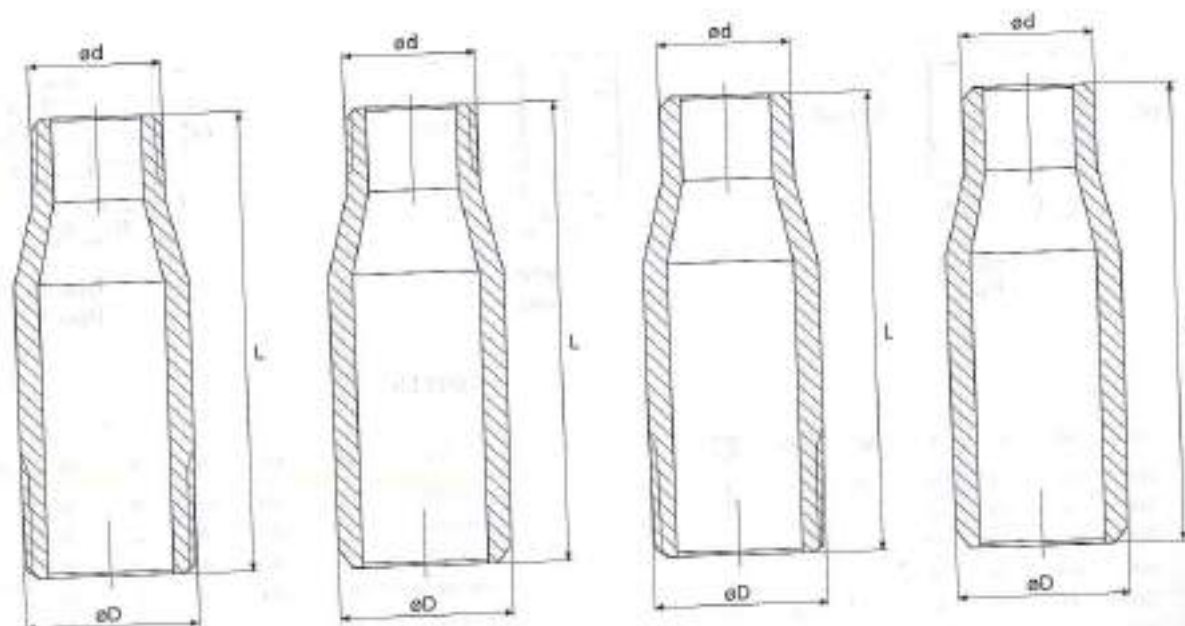
NW	OD	ID	A	B	ID	FD	Type
							Tipo
1/2 x 3/8	21.6	17.5	11	24	26	—	1
1/2 x 1/4	21.6	14	9.5	16	—	—	2
3/4 x 1/2	26.9	21.7	12.5	25.5	32	—	1
3/4 x 3/8	26.9	17.5	11	14	—	—	2
3/4 x 1/4	26.9	14	8.5	16	—	22	3
1 x 3/4	33.6	27.1	14.5	28.5	38	—	1
1 x 1/2	33.6	21.7	12.5	20.5	—	—	2
1 x 3/8	33.6	17.5	11	22	—	26	3
1 x 1/4	33.6	14	9.5	24	—	22	3
1 1/4 x 1	42.4	33.8	16	32	45	—	1
1 1/4 x 3/4	42.4	27.1	14.5	20.5	—	—	2
1 1/4 x 1/2	42.4	21.7	12.5	22	—	32	3
1 1/2 x 1 1/4	48.5	42.6	17.5	33	57	—	1
1 1/2 x 1	48.5	33.8	16	28.5	—	—	2
1 1/2 x 3/4	48.5	27.1	14.5	22	—	38	3
1 1/2 x 1/2	48.5	21.7	12.5	24	—	32	3
2 x 1 1/2	60.9	48.7	19	20.5	—	—	2
2 x 1 1/4	60.9	42.6	17.5	22	—	57	3
2 x 1	60.9	33.8	16	24	—	45	3
2 x 3/4	60.9	27.1	14.5	25.5	—	38	3
2 x 1/2	60.9	21.7	12.5	27	—	32	3
2 1/2 x 2	73.6	61.1	22	41	76	—	1
2 1/2 x 1 1/2	73.6	48.7	19	25.5	—	63.5	3
2 1/2 x 1 1/4	73.6	42.6	17.5	27	—	57	3
2 1/2 x 1	73.6	33.8	16	28.5	—	45	3
2 1/2 x 1/2	73.6	21.7	12.5	27	—	32	3
3 x 2 1/2	89.6	73.8	23.5	45	92	—	1
3 x 2	89.6	61.1	22	41	—	76	3
3 x 1 1/2	89.6	48.7	19	28.5	—	63.5	3
3 x 1 1/4	89.6	42.6	17.5	28.5	—	57	3
3 x 1	89.6	33.8	16	38	—	45	3

6,000 Lb

NW	OD	ID	A	B	ID	FD	Type
							Tipo
1/2 x 3/8	21.6	17.5	12.5	30	32	—	1
3/4 x 1/2	26.9	21.7	14.5	33	38	—	1
3/4 x 3/8	26.9	17.5	12.5	38	32	—	1
1 x 3/4	33.6	27.1	16	41	45	—	1
1 x 1/2	33.6	21.7	14.5	40	38	—	1
1 x 3/8	33.6	17.5	12.5	25.5	—	—	2
1 1/4 x 1	42.4	33.8	17.5	43	57	—	1
1 1/4 x 3/4	42.4	27.1	16	43	45	—	1
1 1/4 x 1/2	42.4	21.7	14.5	30	—	38	3
1 1/4 x 3/8	42.4	17.5	12.5	30	—	32	3
1 1/2 x 1 1/4	48.5	42.6	19	51	63.5	—	1
1 1/2 x 1	48.5	33.8	17.5	33	57	—	1
1 1/2 x 3/4	48.5	27.1	16	35	—	45	3
1 1/2 x 1/2	48.5	21.7	14.5	36.5	—	38	3
2 x 1 1/2	60.9	48.7	22	40	76	—	1
2 x 1 1/4	60.9	42.6	19	47.5	63.5	—	1
2 x 1	60.9	33.8	17.5	33	—	57	3
2 x 3/4	60.9	27.1	16	35	—	45	3
2 x 1/2	60.9	21.7	14.5	36.5	—	38	3
2 1/2 x 2	73.6	61.1	22.5	54	92	—	1
2 1/2 x 1 1/2	73.6	48.7	22	38	—	—	2
2 1/2 x 1 1/4	73.6	42.6	19	40	—	63.5	3
2 1/2 x 1	73.6	33.8	17.5	41.5	—	57	3
2 1/2 x 3/4	73.6	27.1	16	40	—	45	3
2 1/2 x 1/2	73.6	21.7	14.5	44.5	—	38	3
3 x 2 1/2	89.6	73.8	23.5	63.5	108	—	1
3 x 2	89.6	61.1	22.5	47.5	—	—	2
3 x 1 1/2	89.6	48.7	22	47.5	—	76	3
3 x 1 1/4	89.6	42.6	19	47.5	—	63.5	3
3 x 1	89.6	33.8	17.5	46	—	57	2

SWAGES NIPPLES

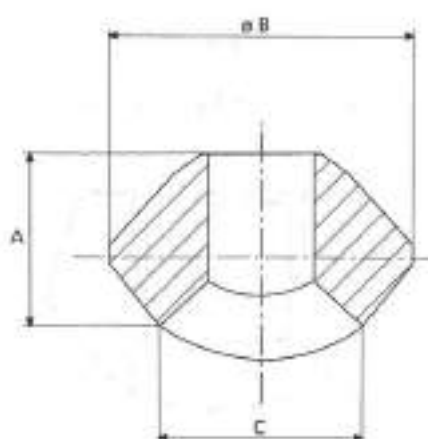
BS 3799



Ø NOMINAL	D	d	L
3/8" x 1/4"	17,1	13,7	76
1/2" x 1/8"	21,3	13,7	89
1/2" x 3/8"	21,3	17,1	89
3/4" x 1/4"	26,7	13,7	95
3/8" x 3/8"	26,7	17,1	95
3/4" x 1/2"	26,7	21,3	95
1" x 1/4"	33,4	13,7	102
1" x 3/8"	33,4	17,1	102
1" x 1/2"	33,4	21,3	102
1" x 3/4"	33,4	26,7	102
1 1/4" x 3/8"	42,2	17,1	110
1 1/4" x 1/2"	42,2	21,3	110

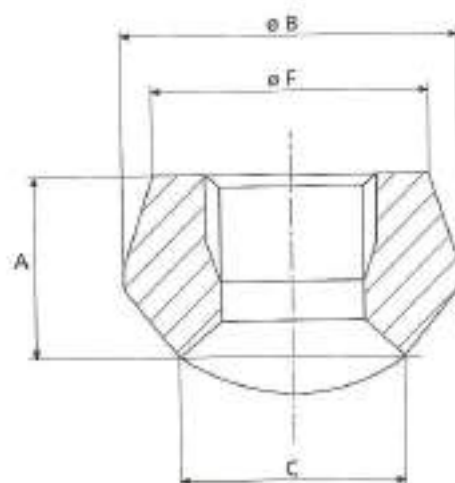
Ø NOMINAL	D	d	L
1 1/4" x 3/4"	42,2	26,7	110
1 1/4" x 1"	42,2	33,4	110
1 1/2" x 1/2"	48,3	21,3	114
1 1/2" x 3/4"	48,3	26,7	114
1 1/2" x 1"	48,3	33,4	114
1 1/2" x 1 1/4"	48,3	42,2	114
2" x 1/2"	60,3	21,3	165
2" x 3/4"	60,3	26,7	165
2" x 1"	60,3	33,4	165
2" x 1 1/4"	60,3	42,2	165
2" x 1 1/2"	60,3	48,3	165

WELDINSERT



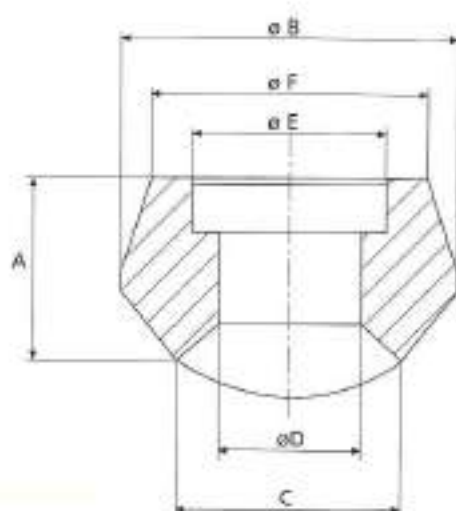
	WELDINSERT STD				WELDINSERT 80				WELDINSERT 160			
	A	B	C	Weight Peso kg.	A	B	C	Weight Peso kg.	A	B	C	Weight Peso kg.
1/2	19,05	35	23,8	0,08	19,05	35	23,8	0,09	28,6	35	23,8	0,11
3/4	22,2	44,5	30,1	0,11	22,2	44,5	30,1	0,14	31,7	44,5	30,1	0,32
1	27	54	36,5	0,23	27	54	36,5	0,21	38,1	54	36,5	0,38
1 1/4	31,8	65	44,5	0,36	31,8	65	44,5	0,41	44,4	65	44,5	0,57
1 1/2	33,3	73	50,8	0,45	33,3	73	50,8	0,50	50,8	73	50,8	0,79
2	38,1	89	65	0,79	38,1	89	65	0,79	55,6	89	65	0,97
2 1/2	41,3	103	76,2	1,13	41,3	103	76,2	1,18	61,9	103	76,2	1,53
3	44,5	122	93,6	1,81	44,5	122	93,6	1,86	73	122	93,6	2,87
3 1/2	47,6	143	112,7	2,50	47,6	143	112,7	2,54	—	—	—	—
4	50,8	152	120,6	2,86	50,8	152	120,6	2,90	84,1	152	120,6	4,76
6	66,7	225	169,8	5,45	77,8	225	169,8	10,43	104,7	225	169,8	12,70
8	69,8	284	220,6	10,45	98,4	284	220,6	16,78	111,1	284	220,6	20,41

THREADINSERT



	THREADINSERT 3000 Lb					THREADINSERT 6000 Lb					
	A	B	C	F	Weight Peso kg.	A	B	C	D	F	Weight Peso kg.
1/2	25,5	35	23,3	32	0,11	31,8	44,5	30,1	11,8	39,7	0,20
3/4	27	44,5	30	36,5	0,16	36,5	54	36,5	15,6	46	0,34
1	33,3	54	36,5	46	0,28	39,6	65	44,5	20,7	57,2	0,56
1 1/4	33,3	65	44,5	56	0,41	41,2	73	50,8	29,7	65	0,71
1 1/2	35	73	50,8	62	0,45	42,8	89	65	34	76,2	0,89
2	38,1	89	65	75	0,79	52	103	76,2	43	92	2,30
2 1/2	46	103	76,2	87,3	1,36						
3	50,8	122	93,6	104,7	1,97						
3 1/2	53,9	143	112,7	122,2	2,61						
4	57,2	152	120,6	130	3,22						

SOCKINSERT



	SOCKINSERT 3000 Lb							SOCKINSERT 6000 Lb					
	A	B	C	D	E	F	Weight Peso kg.	A	B	C	D	F	Weight Peso kg.
1/2	25,5	35	23,8	15,5	21,7	32	0,14	31,8	44,5	30,1	11,8	39,7	0,23
3/4	27	44,5	30	21,5	27,1	36,5	0,15	36,5	54	36,5	15,6	46	0,36
1	33,3	54	36,5	26,5	33,8	46	0,27	39,6	65	44,5	20,7	57,2	0,59
1 1/4	33,3	65	44,5	35	42,6	56	0,39	41,2	73	50,8	29,7	65	0,73
1 1/2	35	73	50,8	41	48,7	62	0,47	42,8	89	65	34	76,2	0,91
2	38,1	89	65	52,5	61,1	75	0,73	52	103	76,2	43	92	2,33
2 1/2	46	103	76,2	62,7	73,8	87,3	1,25						
3	50,8	122	93,6	78	89,8	104,7	1,72						
3 1/2	54	143	112,7	90	102,6	122,2	1,95						
4	57,2	152	120,6	102,2	115,4	130	3,29						



AD 7/00/00



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