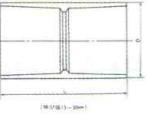
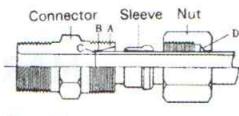
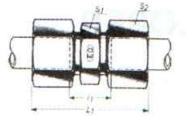
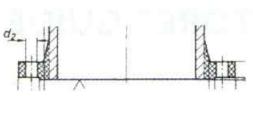


73

Pipe & Tube Fittings

Malleable Cast Iron Pipe Fittings  P. 73-1 ~ 3	Steel Butt-Welding Pipe Fittings for Ordinary Pipe (FSGP)  P. 73-3 ~ 5	Steel Butt-Welding Pipe Fittings for Pressure Service and High Pressure Service (Schedule)  P. 73-5 ~ 7
Steel High Pressure Pipe Fittings Threaded Type  P. 73-7 ~ 8	Brass Pipe Fittings Threaded Type  P. 73-8 ~ 10	Stainless Steel Pipe Fittings Threaded Type  P. 73-10 ~ 11
PVC Plastic Pipe Fittings for Drain  P. 73-11 ~ 13	PVC Plastic Pipe Fittings for Water Supply  P. 73-13 ~ 14	Steel Compression Tube Fittings for High Pressure Service  P. 73-15 ~ 17
Brass Flared Tube Fittings  P. 73-17 ~ 19	Brass Flareless Compression Tube Fittings  P. 73-19 ~ 21	Stainless Steel Flareless Tube Fittings  P. 73-21 ~ 23
Ermeto High Pressure Steel Couplings  P. 73-23	Flanges  P. 73-24 ~ 30	Flexible Pipe Couplings  P. 73-30 ~ 34

Screwed Type Malleable Cast Iron Pipe Fittings

Accesorios de Tubería de Hierro Maleable Negro
ねじ込み式可鍛鉄製継手 铸铁螺纹接头

Standard malleable cast iron fittings used for low pressure water, oil, steam, air and gas line fabrication.

Pressure Rating	
Fluid Condition	Maximum Working Pressure
Steam, air, gas, and oil of 300°C or less	1.0 MPa (10.2 kgf/cm ²)
Steam, air, gas, oil and pulsation water of 220°C or less	1.4 MPa (14.3 kgf/cm ²)
Non shock water of 120°C or less	1.0 MPa (20.4 kgf/cm ²)

The screw thread for these fittings conforms to the Taper Pipe Threads of JIS B 0203 equal to the ISO 7/1 (Pipe Thread where pressure tight joints are made on the threads), details are shown in the following table.

Screw Thread Table

Nominal Pipe Size	Nominal Thread Size	Threads Per 25.4 mm	Pitch	Male Thread O.D.	Applicable Carbon Steel Pipe	
					O.D.	Thick
6A	1/8	PT(R)1/8	28	0.9071	9.728	10.5
8A	1/4	" 1/4	19	1.3368	13.157	13.8
10A	3/8	" 3/8	19	1.3368	16.662	17.3
15A	1/2	" 1/2	14	1.8143	20.955	21.7
20A	3/4	" 3/4	14	1.8143	26.441	27.2
25A	1	" 1	11	2.3091	33.249	34.0
32A	1-1/4	" 1-1/4	11	2.3091	41.910	42.7
40A	1-1/2	" 1-1/2	11	2.3091	47.803	48.6
50A	2	" 2	11	2.3091	59.614	60.5
65A	2-1/2	" 2-1/2	11	2.3091	75.184	76.3
80A	3	" 3	11	2.3091	87.884	89.1

Available in galvanized or black (ungalvanized), when ordering specify which type is required.

Elbows, 45° Malleable Cast Iron

Codos, Hembra 45°/Hierro Maleable Negro
可鍛鉄 45° エルボ 45 度弯管



Unit Per Pcs.

Galv. CODE	Nom. Size	Black CODE	Galv. CODE	Nom. Size	Black CODE
					Black CODE
73 01 01	1/8	73 01 16	73 01 07	1-1/4	73 01 22
02	1/4	17	08	1-1/2	23
03	3/8	18	09	2	24
04	1/2	19	10	2-1/2	25
05	3/4	20	11	3	26
73 01 06	1	73 01 21			

Street Elbows, Male & Female 45° Malleable Cast Iron

Codos, Macho y Hembra 45°/Hierro Maleable Negro
可鍛鉄ストリートエルボ 45 度内外螺絲弯管接头



Unit Per Pcs.

Galv. CODE	Nom. Size	Black CODE	Galv. CODE	Nom. Size	Black CODE
					Black CODE
73 01 31	1/8	73 01 46	73 01 37	1-1/4	73 01 52
32	1/4	47	38	1-1/2	53
33	3/8	48	39	2	54
34	1/2	49	40	2-1/2	55
35	3/4	50	41	3	56
73 01 36	1	73 01 51			

The thread size is the same for male and female pieces.

Elbows, 90°

Malleable Cast Iron

Codos, Hembra 90°/Hierro Maleable Negro
可鍛鉄 90° エルボ 90 度弯管



Unit Per Pcs.

Galv. CODE	Nom. Size	Black CODE	Galv. CODE	Nom. Size	Black CODE
73 01 61	1/8	73 01 76	73 01 67	1-1/4	73 01 82
62	1/4	77	68	1-1/2	83
63	3/8	78	69	2	84
64	1/2	79	70	2-1/2	85
65	3/4	80	71	3	86
73 01 66	1	73 01 81			

Reducing Elbows, 90°

Malleable Cast Iron

Codos Reducidos, Hembra 90°/Hierro Maleable Negro
可鍛鉄 90° 違径エルボ 90 度异径弯管接头



The sizes of the reducing elbows below are listed with the size of the larger opening first and the smaller opening second.

Unit Per Pcs.

Galv. CODE	Size	Black CODE	Galv. CODE	Size	Black CODE
73 02 01	1 1/4 x 1/8	73 02 16	73 02 06	1-1/4 x 1	73 02 21
02	3/8 x 1/4	17	07	1-1/2 x 1-1/4	22
03	1/2 x 3/8	18	08	2 x 1-1/2	23
04	3/4 x 1/2	19	09	2-1/2 x 2	24
05	1 x 3/4	20	10	3 x 2-1/2	25

Street Elbows, Male & Female 90°

Malleable Cast Iron

Codos, Macho y Hembra 90°/Hierro Maleable Negro
可鍛鉄 90° ストリートエルボ 90 度内外螺絲弯管接头



The thread sizes are the same for both male and female elbows.

Unit Per Pcs.

Galv. CODE	Size	Black CODE	Galv. CODE	Size	Black CODE
73 02 31	1/8	73 02 46	73 02 37	1-1/4	73 02 52
32	1/4	47	38	1-1/2	53
33	3/8	48	39	2	54
34	1/2	49	40	2-1/2	55
35	3/4	50	41	3	56
73 02 36	1	73 02 51			

Tees

Malleable Cast Iron

Tes/Hierro Maleable Negro

可鍛鉄チーズ T 形管



Unit Per Pcs.

Galv. CODE	Size	Black CODE	Galv. CODE	Size	Black CODE
73 03 01	1/8	73 03 16	73 03 07	1-1/4	73 03 22
02	1/4	17	08	1-1/2	23
03	3/8	18	09	2	24
04	1/2	19	10	2-1/2	25
05	3/4	20	11	3	26
73 03 06	1	73 03 21			

Service Tees, Male & Female

Malleable Cast Iron

Tes, Macho y Hembra/Hierro Maleable Negro

可鍛鉄サービスチーズ 内外螺紋三通管



The thread sizes are the same for both male and female service tees.

Unit Per Pc.					
Galv. CODE	Size	Black CODE	Galv. CODE	Size	Black CODE
73 03 31	1/8	73 03 46	73 03 37	1-1/4	73 03 52
32	1/4	47	38	1-1/2	53
33	3/8	48	39	2	54
34	1/2	49	40	2-1/2	55
35	3/4	50	41	3	56

73 03 36 1 73 03 51

Reducing Tees

Malleable Cast Iron

Tes Reducidas/Hierro Maleable Negro

可鍛鉄鋳造径チーズ 异径三通接头



The sizes of the reducing tees are listed below in the order of the left side opening size, the right hand opening size, and the center opening size.

Unit Per Pc.

Galv. CODE	Size	Black CODE	Galv. CODE	Size	Black CODE
73 03 61	1/4x1/4x1/8	73 03 76	73 03 66	1-1/4x1-1/4x1	73 03 81
62	3/8x3/8x1/4	77	67	1-1/2x1-1/2x1-1/4	82
63	1/2x1/2x3/8	78	68	2x2x1-1/2	83
64	3/4x3/4x1/2	79	69	2-1/2x2-1/2x2	84
65	1x1x3/4	80	70	3x3x2-1/2	85

Reducing Service Tees

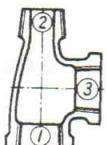
Male & Female

Malleable Cast Iron

Tes Reducidas, Macho y Hembra/Hierro Maleable Negro

可鍛鉄鋳造径違いサービスチーズ

异径内外螺纹三通接头



When referring to the sizes, please list them as they are shown in the illustration and as they are listed in the table below.

Unit Per Pc.

Galv. CODE	Size (1)x(2)x(3)	Black CODE	Galv. CODE	Size (1)x(2)x(3)	Black CODE
73 04 01	3/4x1/2x3/4	73 04 16	73 04 08	2x3/4x2	73 04 23
02	1x1/2x1	17	09	2x1-1/4x2	24
03	1x3/4x1	18	10	2x1-1/2x2	25
04	1-1/4x3/4x1-1/4	19	11	2-1/2x1x2-1/2	26
05	1-1/4x1x1-1/4	20	12	2-1/2x2x2-1/2	27
73 04 06	1-1/2x1x1-1/2	73 04 21	73 04 13	3x2x3	73 04 28
07	1-1/2x1-1/4x1-1/2	22			

Crosses

Malleable Cast Iron

Cruces/Hierro Maleable Negro

可鍛鉄鋳造クロス 十字管



Unit Per Pc.

Galv. CODE	Size	Black CODE	Galv. CODE	Size	Black CODE
73 04 31	1/8	73 04 46	73 04 37	1-1/4	73 04 52
32	1/4	47	38	1-1/2	53
33	3/8	48	39	2	54
34	1/2	49	40	2-1/2	55
35	3/4	50	41	3	56

Caps

Malleable Cast Iron

Tapones Hembra/Hierro Maleable Negro

可鍛鉄鋳造キャップ 管帽



Galv. CODE	Size	Black CODE	Galv. CODE	Size	Black CODE
73 04 36	1	73 04 51			

Unit Per Pc.

Galv. CODE	Size	Black CODE	Galv. CODE	Size	Black CODE
73 05 01	1/8	73 05 16	73 05 07	1-1/4	73 05 22
02	1/4	17	08	1-1/2	23
03	3/8	18	09	2	24
04	1/2	19	10	2-1/2	25
05	3/4	20	11	3	26



Unit Per Pc.

Galv. CODE	Size	Black CODE	Galv. CODE	Size	Black CODE
73 05 31	1/8	73 05 46	73 05 37	1-1/4	73 05 52
32	1/4	47	38	1-1/2	53
33	3/8	48	39	2	54
34	1/2	49	40	2-1/2	55
35	3/4	50	41	3	56



Unit Per Pc.

Galv. CODE	Size	Black CODE	Galv. CODE	Size	Black CODE
73 05 61	1/4x1/8	73 05 76	73 05 66	1-1/4x1	73 05 81
62	3/8x1/4	77	67	1-1/2x1-1/4	82
63	1/2x3/8	78	68	2x1-1/2	83
64	3/4x1/2	79	69	2-1/2x2	84
65	1x3/4	80	70	3x2-1/2	85



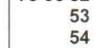
Unit Per Pc.

Galv. CODE	Size	Black CODE	Galv. CODE	Size	Black CODE
73 06 01	1/4x1/8	73 06 16	73 06 06	1-1/4x1	73 06 21
02	3/8x1/4	17	07	1-1/2x1-1/4	22
03	1/2x3/8	18	08	2x1-1/2	23
04	3/4x1/2	19	09	2-1/2x2	24
05	1x3/4	20	10	3x2-1/2	25



Unit Per Pc.

Galv. CODE	Size	Black CODE	Galv. CODE	Size	Black CODE
73 06 31	1/8	73 06 46	73 06 37	1-1/4	73 06 52
32	1/4	47	38	1-1/2	53
33	3/8	48	39	2	54
34	1/2	49	40	2-1/2	55
35	3/4	50	41	3	56



Unit Per Pc.

Galv. CODE	Size	Black CODE	Galv. CODE	Size	Black CODE
73 06 36	1	73 06 51			

Lock Nuts

Malleable Cast Iron

Tueras de Presion/Hierro Maleable Negro
可鍛鉄止めナット 鎌紧螺母



Galvanized or black malleable cast iron lock nuts.

Unit Per Pcs.

Galv. CODE	Size	Black CODE	Galv. CODE	Size	Black CODE
73 06 61	1/4	73 06 76	73 06 66	1-1/4	73 06 81
62	3/8	77	67	1-1/2	82
63	1/2	78	68	2	83
64	3/4	79	69	2-1/2	84
65	1	80	70	3	85

Unions

Malleable Cast Iron

Uniones/Hierro Maleable Negro
可鍛鉄ユニオン 連管節



Galvanized and black malleable cast iron unions.

Unit Per Pcs.

Galv. CODE	Size	Black CODE	Galv. CODE	Size	Black CODE
73 07 01	1/8	73 07 16	73 07 07	1-1/4	73 07 22
02	1/4	17	08	1-1/2	23
03	3/8	18	09	2	24
04	1/2	19	10	2-1/2	25
05	3/4	20	11	3	26
73 07 06	1	73 07 21			

Short Nipples

Carbon Steel

Machones Cortos/Acero al Carbono

炭素鋼ショートニップル 短螺紋接套



Galvanized and black carbon steel short nipples.

Unit Per Pcs.

Galv. CODE	Size	Black CODE	Galv. CODE	Size	Black CODE
73 07 71	1/8	73 07 86	73 07 77	1-1/4	73 07 92
72	1/4	87	78	1-1/2	93
73	3/8	88	79	2	94
74	1/2	89	80	2-1/2	95
75	3/4	90	81	3	96
73 07 76	1	73 07 91			

Long Nipples

Carbon Steel

Machones largos/Acero al Carbono Tipo Bobina

炭素鋼ロングニップル 長螺紋接头



When ordering, specify the required length. Available from 2 to 6 inches.

Unit Per Pcs.

Galv. CODE	Size	Black CODE	Galv. CODE	Size	Black CODE
73 08 01	1/8x2"	73 08 51	73 08 21	1x2-1/2"	73 08 71
02	3"	52	22	3"	72
03	4"	53	23	4"	73
04	6"	54	24	6"	74
73 08 05	1/4x2"	73 08 55	73 08 25	1-1/4x3"	73 08 75
06	3"	56	26	4"	76
07	4"	57	27	6"	77
08	6"	58	73 08 28	1-1/2x3"	73 08 78
73 08 09	3/8x2"	73 08 59	29	4"	79
10	3"	60	30	6"	80
11	4"	61	73 08 31	2x3"	73 08 81
12	6"	62	32	4"	82
73 08 13	1/2x2"	73 08 63	33	6"	83
14	3"	64	73 08 34	2-1/2x3"	73 08 84
15	4"	65	35	4"	85
16	6"	66	36	6"	86
73 08 17	3/4x2"	73 08 67	73 08 37	3x3"	73 08 87
18	3"	68	38	4"	88
19	4"	69	39	6"	89
20	6"	70			

Hexagon Nipples

Malleable Cast Iron

Machones Hexagonales/Hierro Maleable Negro
可鍛鉄六角ニップル 六角螺母外螺紋接头



Galvanized and black malleable cast iron hexagon nipples.

Unit Per Pcs.

Galv. CODE	Size	Black CODE	Galv. CODE	Size	Black CODE
73 09 01	1/8	73 09 16	73 09 07	1-1/4	73 09 22
02	1/4	17	17	1-1/2	23
03	3/8	18	18	2	24
04	1/2	19	19	2-1/2	25
05	3/4	20	20	3	26
73 09 06	1	73 09 21			

Reducing Hexagon Nipples

Malleable Cast Iron

Machones Reducidos Hexagonales Hierro Maleable Negro
可鍛鉄六角違径ニップル 异径六角螺紋接套



Galvanized and black malleable cast iron reducing hexagon nipples.

Sizes listed with the large opening first and the small opening second.

Unit Per Pcs.

Galv. CODE	Size	Black CODE	Galv. CODE	Size	Black CODE
73 09 31	3/8x1/4	73 09 41	73 09 36	1-1/2x1-1/4	73 09 46
32	1/2x3/8	42	37	2x1-1/2	47
33	3/4x1/2	43	38	2-1/2x2	48
34	1x3/4	44	39	3x2-1/2	49
35	1-1/4x1	45			

Flanges

Malleable Cast Iron

Bridas/Hierro Maleable Negro
可鍛鉄組フランジ 法兰



Galvanized and black malleable cast iron flanges.

Unit Per Pcs.

Galv. CODE	Size	Black CODE	Galv. CODE	Size	Black CODE
73 09 51	1/2	73 09 61	73 09 55	1-1/2	73 09 65
52	3/4	62	56	2	66
53	1	63	57	2-1/2	67
54	1-1/4	64	58	3	68

Steel Butt-Welding Pipe Fittings

For Ordinary Use

Accesorios de Tubería de Acero para Soldar a Tope para Usoordinario
一般配管用鉄製突合せ溶接式管継手 钢制对焊管件普通用途

Butt-Welding Pipe Fittings used for the fabrication of ordinary carbon steel pipe (SGP) of comparatively low pressure steam, water, oil, gas and air. Ends are machine faced and bevelled. Available in galvanized or black (ungalvanized) but usually black ones are supplied unless otherwise specified. Their maximum working pressure is 2.5 MPa (25 kgf/cm²) .

General Specification of Fittings (FSGP)

Nominal Size		Outside Diam. mm	Inside Diam. mm	Wall Thickness mm
A	B			
15A	1/2	21.7	16.1	2.8
20A	3/4	27.2	21.6	2.8
25A	1	34	27.6	3.2
32A	1-1/4	42.7	35.7	3.5
40A	1-1/2	48.6	41.6	3.5
50A	2	60.5	52.9	3.8
65A	2-1/2	76.3	67.9	4.2
80A	3	89.1	80.7	4.2
90A	3-1/2	101.6	93.2	4.2
100A	4	114.3	105.3	4.5

(to be continued)

Nominal Size		Outside Diam. mm	Inside Diam. mm	Wall Thickness mm	Unit Per Pcs.
A	B				
125A	5	139.8	130.8	4.5	
150A	6	165.2	155.2	5	
200A	8	216.3	204.7	5.8	
250A	10	267.4	254.2	6.6	
300A	12	318.5	304.7	6.9	

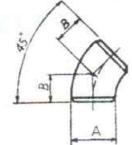
Specified sizes are up to 300A but larger sizes are also available on request.

Steel Butt-Welding Elbows

45° Long Radius for Ordinary Pipe

Codes de Acero soldable/45° Radio largo para Tuberia Ordinaria

一般配管用突合せ溶接式ロングエルボ 普通对接焊 45° 弯头



Unit Per Pcs.

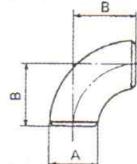
CODE	Nominal Size A	Distance Center to End mm (B)	CODE	Nominal Size A	Distance Center to End mm (B)	Unit Per Pcs.
73 11 01	15	15.8	73 11 09	90	55.3	
02	20	15.8	10	100	63.1	
03	25	15.8	11	125	78.9	
04	32	19.7	12	150	94.7	
05	40	23.7	13	200	126.3	
73 11 06	50	31.6	73 11 14	250	157.8	
07	65	39.5	15	300	189.4	
08	80	47.3				

Steel Butt-Welding Elbows

90° Long Radius for Ordinary Pipe

Codes de Acero soldable/45° Radio largo para Tuberia Ordinaria

一般配管用突合せ溶接式ロングエルボ 普通对接焊 45° 弯头



Unit Per Pcs.

CODE	Nominal Size A	Distance Center to End mm (B)	CODE	Nominal Size A	Distance Center to End mm (B)	Unit Per Pcs.
73 11 21	15	38.1	73 11 29	90	133.4	
22	20	38.1	30	100	152.4	
23	25	38.1	31	125	190.5	
24	32	47.6	32	150	228.6	
25	40	57.2	33	200	304.8	
73 11 26	50	76.2	73 11 34	250	381	
27	65	95.3	35	300	457.2	
28	80	114.3				

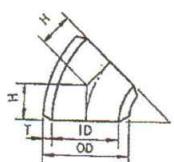
Steel Butt-Welding Elbows

45° Short Radius for Ordinary Pipe

Tubo acodado de 45° de acero de soldadura a tope, radio corto

一般配管用突合せ溶接式ショートエルボ

一般管道用对焊 45° 短半径弯头



CODE	Nominal Size A	Distance Center to End mm (B)	CODE	Nominal Size A	Distance Center to End mm (B)	Unit Per Pcs.
73 11 16	32	13.2	73 11 37	100	42.1	
	17	15.8	38	125	52.6	
	18	21.0	39	150	63.1	
	19	26.3	40	200	84.2	
	20	31.6	54	250	105.2	
73 11 36	90	36.8	73 11 55	300	126.2	

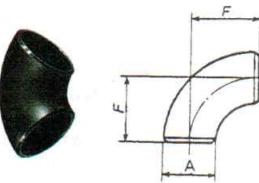
Steel Butt-Welding Elbows

90° Short Radius for Ordinary Pipe

Tubo acodado de 90° de acero de soldadura a tope, radio corto

一般配管用突合せ溶接式ショートエルボ

一般管道用对焊 90° 短半径弯头



Unit Per Pcs.

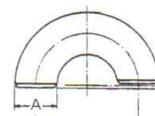
CODE	Nominal Size A	Distance Center to End mm (B)	CODE	Nominal Size A	Distance Center to End mm (B)	Unit Per Pcs.
73 11 41	25	25.4	73 11 48	100	101.6	
42	32	31.8	49	125	127	
43	40	38.1	50	150	152.4	
44	50	50.8	51	200	203.2	
45	65	63.5	52	250	254	
73 11 46	80	76.2	73 11 53	300	304.8	
47	90	88.9				

Steel Butt-Welding Return Bends

180° Radius for Ordinary Pipe

Curva de Acero Soldable/180° Radio Largo para tuberia Ordinaria

一般配管用突合せ溶接式 180° ベント 对接焊式 180° 长颈弯头



Unit Per Pcs.

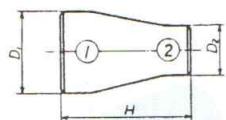
CODE	Nominal Size A	Distance Center to End mm (B)	CODE	Nominal Size A	Distance Center to End mm (B)	Unit Per Pcs.
73 11 61	15	76.2	73 11 69	90	266.8	
62	20	76.2	70	100	304.8	
63	25	76.2	71	125	381	
64	32	95.2	72	150	457.2	
65	40	114.4	73	200	609.6	
73 11 66	50	152.4	73 11 74	250	762	
67	65	190.6	75	300	914.4	
68	80	228.6				

180° Short Radius

CODE	Nominal Size A	Distance Center to End mm (B)	CODE	Nominal Size A	Distance Center to End mm (B)	Unit Per Pcs.
73 11 81	25	50.8	73 11 88	100	203.2	
82	32	63.6	89	125	254	
83	40	76.2	90	150	304.8	
84	50	101.6	91	200	406.4	
85	65	127	92	250	508	
73 11 86	80	152.4	73 11 93	300	609.6	
87	90	177.8				

Steel Butt-Welding Concentric Radius Reducers for Ordinary Pipe

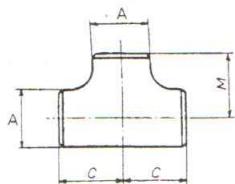
Reducción Concéntrica de Acero Soldable para Tubería Ordinaria
一般配管用突合せ溶接式同心レデューサー 对接焊式异径接管



CODE	Nominal Size A (D1×D2)	Length Overall mm (H)	CODE	Nominal Size A (D1×D2)	Length Overall mm (H)
73 12 01	20 × 15	38.1	73 12 28	40	
73 12 02	25 × 15		29	50	
03	25 × 20		30	100 × 65	101.6
73 12 04	15		31	80	
05	32 × 20	50.8	32	90	
06	25		73 12 33	50	
73 12 07	15		34	65	
08	40 × 20		35	125 × 80	139.8
09	25		36	90	
10	32		37	100	
73 12 11	20		73 12 38	65	
12	25		39	80	
13	32		40	150 × 90	165.2
14	40		41	100	
73 12 15	25		42	125	
16	65 × 32		73 12 43	90	
17	40		44	100	
18	50		45	200 × 125	216.3
73 12 19	32		46	150	
20	80 × 40		73 12 47	100	
21	50		48	125	
22	65		49	250 × 150	267.4
73 12 23	32		50	200	
24	40		73 12 51	125	
25	90 × 50	88.9	52	300 × 150	318.5
26	65		53	200	
27	80		54	250	
101.6					

Steel Butt-Welding Tees for Ordinary Pipe

Tes de Acero Soldble para Tuberia Ordinaria
一般配管用突合せ溶接式チーズ 对接焊式三通



Unit Per Pcs.

CODE	Nominal Size A	Distance Center to End mm (C)	CODE	Nominal Size A	Distance Center to End mm (C)
73 12 61	15	25.4	73 12 69	90	95.3
62	20	28.6	70	100	104.8
63	25	38.1	71	125	123.8
64	32	47.6	72	150	142.9
65	40	57.2	73	200	177.8
73 12 66	50	63.5	73 12 74	250	215.9
67	65	76.2	75	300	254
68	80	85.7			

Besides above list Reducing Tees are also available on request.

Steel Butt-Welding Pipe Fittings For Pressure Service & High Pressure Service

Conexión de Acero Soldable para Tubería de Presión y de Servicio de Alta Presión

高压配管用鋼製突合せ溶接式管継手 高压管路弯头

Steel Butt-Welding ungalvanized (Black) Pipe Fittings used for the fabrication of

1. Carbon Steel Pipe for Pressure Service (STPG).
2. Carbon Steel Pipe for High Pressure Service (STS).
3. Carbon Steel Pipe for High Temperature Service (STPT).
4. Steel Pipe for Low Temperature Service (STPL).

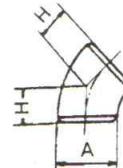
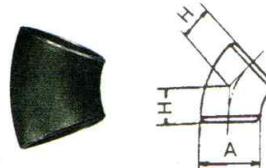
General Specifications of Fittings

Nominal Size		Outside Diam. mm	Schedule 40		Schedule 80	
A	B		ID	T	ID	T
15	1/2	21.7	16.1	2.8	14.3	3.7
20	3/4	27.2	21.4	2.9	19.4	3.9
25	1	34	27.2	3.4	25	4.5
32	1-1/4	42.7	35.5	3.6	32.9	4.9
40	1-1/2	48.6	41.2	3.7	38.4	5.1
50	2	60.5	52.7	3.9	49.5	5.5
65	2-1/2	76.3	65.9	5.2	62.3	7
80	3	89.1	78.1	5.5	73.9	7.6
90	3-1/2	101.6	90.2	5.7	85.4	8.1
100	4	114.3	102.3	6	97.1	8.6
125	5	139.8	126.6	6.6	120.8	9.5
150	6	165.2	151	7.1	143.2	11
200	8	216.3	199.9	8.2	190.9	12.7
250	10	267.4	248.8	9.3	237.2	15.1
300	12	318.5	297.9	10.3	283.7	17.4

Schedule 120 and 160 pipe fittings and fittings of sizes larger than 300A are also available upon request.

Steel Butt-Welding Elbows 45° Long Radius for HP Service Pipe

Codos de Acero Soldable 45° para Tubería de Servicio de Alta Presión
高压配管用突合せ溶接式 45° エルボ 45° 对焊式长径高压弯头



How to order: CODE

Steel butt-welding elbow, 45° long radius, for high pressure service pipe, SCHEDULE NO., NOMINAL SIZE

Unit Per Pcs.

Sched. 40	Sched. 80	Nominal Size A	Distance Center to End mm (H)
CODE	CODE		

45° Long Radius

73 14 01	73 14 21	15	15.8
02	22	20	15.8
03	23	25	15.8
04	24	32	19.7
05	25	40	23.7
73 14 06	73 14 26	50	31.6
07	27	65	39.5
08	28	80	47.3
09	29	90	55.3
10	30	100	63.1
73 14 11	73 14 31	125	78.9
12	32	150	94.7
13	33	200	126.3
14	34	250	157.8
15	35	300	189.4

(to be continued)

Unit Per Pcs.			
Sched. 40	Sched. 80	Nominal Size A	Distance Center to End mm (H)
CODE	CODE		

45° Short Radius

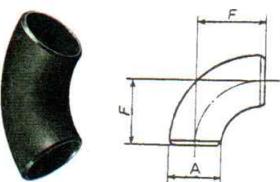
73 14 16	73 14 43	32	13.2
17	44	40	15.8
18	45	50	21.0
19	46	65	26.3
20	47	80	31.6
73 14 36	73 14 48	90	36.8
37	49	100	42.1
38	50	125	52.6
39	66	150	63.1
40	67	200	84.2
73 14 41	73 14 68	250	105.2
42	69	300	126.2

Steel Butt-Welding Elbows**90° for HP Service Pipe**

Codos de Acero Soldable 90° para Tubería de Servicio de Alta Presión

高压配管用突合せ溶接式 90°エルボ

90° 对焊式长径高压弯头

**How to order: CODE**

Steel butt-welding elbow, 90° long radius, for high pressure service pipe, SCHEDULE NO., NOMINAL SIZE

Unit Per Pcs.			
Sched. 40	Sched. 80	Nominal Size A	Distance Center to End mm (F)
CODE	CODE		

90° Long Radius

73 14 51	73 14 71	15	38.1
52	72	20	38.1
53	73	25	38.1
54	74	32	47.6
55	75	40	57.2
73 14 56	73 14 76	50	76.2
57	77	65	95.3
58	78	80	114.3
59	79	90	133.4
60	80	100	152.4
73 14 61	73 14 81	125	190.5
62	82	150	228.6
63	83	200	304.8
64	84	250	381
65	85	300	457.2

90° Short Radius

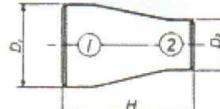
73 15 01	73 15 16	25	25.4
02	17	32	31.8
03	18	40	38.1
04	19	50	50.8
05	20	65	63.5
73 15 06	73 15 21	80	76.2
07	22	90	88.9
08	23	100	101.6
09	24	125	127
10	25	150	152.4
73 15 11	73 15 26	200	203.2
12	27	250	254
13	28	300	304.8

Steel Butt-Welding Concentric Radius Reducers for HP Service Pipe

Reducer de radios concéntricos para soldadura a tope de acero para tuberías de servicio de HP

高压配管用突合せ溶接式同心レデューサー

高压管道用对焊同心异径管



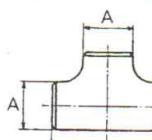
Unit Per Pcs.

Sched. 40	Sched. 80	Nominal Size A (D1×D2)	Length Overall mm (H)	Sched. 40	Sched. 80	Nominal Size A (D1×D2)	Length Overall mm (H)
CODE	CODE			CODE	CODE		
73 15 14	73 16 11	20× 15	38.1	73 15 69	73 16 38	40	
73 15 15	73 16 12	15		70	39	50	
	29	13	20	86	40	100× 65	101.6
73 15 30	73 16 14	15	50.8	87	41	80	
	31	15	32× 20	88	42	90	
	32	16	25	73 15 89	73 16 43	50	
73 15 33	73 16 17	15		90	44	65	
	34	18	40× 20	91	45	80	127.0
	35	19	25	92	46	90	
	36	20	32	93	47	100	
73 15 37	73 16 21	20		73 15 94	73 16 48	65	
	38	22	25	95	49	80	
	39	23	32	96	50	150× 90	139.7
	40	24	40	97	51	100	
73 15 41	73 16 25	25		98	52	125	
	42	26	32	73 15 99	73 16 53	90	
	43	27	40	73 16 00	54	100	
	44	28	50	01	55	125	152.4
73 15 45	73 16 29	32		02	56	150	
	46	30	40	73 16 03	73 16 57	100	
	47	31	50	04	58	125	
	48	32	65	05	59	150	177.8
73 15 49	73 16 33	32		06	60	200	
	50	34	40	73 16 07	73 16 61	125	
	66	35	90× 50	08	62	150	
	67	36	65	09	63	200	203.2
	68	37	80	10	64	250	

Steel Butt-Welding Tees for HP Service Pipe

Tés de Acero Soldble para Tubería de Servicio de Alta Presión

高压配管用突合せ溶接式チーズ T形HP管用焊接接管

**How to order: CODE**

Steel butt-welding tee, for high pressure service pipe, SCHEDULE NO., NOMINAL SIZE

Sched. 40	Sched. 80	Nominal Size	Distance Center to End mm (C)	Unit Per Pcs.
CODE	CODE	A		
73 15 51	73 15 71	15	25.4	
52	72	20	28.6	
53	73	25	38.1	
54	74	32	47.6	
55	75	40	57.2	
73 15 56	73 15 76	50	63.5	
57	77	65	76.2	
58	78	80	85.7	
59	79	90	95.3	
60	80	100	104.8	
73 15 61	73 15 81	125	123.8	
62	82	150	142.9	
63	83	200	177.8	
64	84	250	215.9	
65	85	300	254	

* Besides the above enumerated fittings, the following items are also available: Return Bends, Cap, Concentric Reducer, Eccentric Reducer, Reducing Tee, etc. Please specify separately what kind of part you require along with the necessary nominal size.

Steel High Pressure Pipe Fittings Threaded Type

Conexión de Aire para Tubería de Alta Presión Tipo Roscado
高压鋼製ねじ込み継手 高压螺纹接头

High pressure, drop forged steel, ungalvanized (black) pipe fittings with a pressure rating of 210 kgf/cm² at 120°C.
Threads conform to the Taper Pipe Threads standards of JIS B 0203 and the ISO 7/1. Larger sizes and types of fittings not listed below are also available.

Steel Threaded Elbows, 45° for High Pressure Pipe Fitting

Codos Rosados de Acero, 45° para Conexión de Tubería de Alta Presión

高压鋼製 45° エルボ
45° 钢质丝扣高压弯头



CODE	Nom. Size	CODE	Nom. Size	CODE	Nom. Size	Unit Per Pcs.
73 17 01	1/8	73 17 05	3/4	73 17 09	2	
02	1/4	06	1	10	2-1/2	
03	3/8	07	1-1/4	11	3	
04	1/2	08	1-1/2			

Steel Threaded Elbows, 90° for High Pressure Pipe Fitting

Codos Rosados de Acero, 90° para Conexión de Tubería de Alta Presión

高压鋼製 90° エルボ
90° 钢质丝扣高压弯头



CODE	Nom. Size	CODE	Nom. Size	CODE	Nom. Size	Unit Per Pcs.
73 17 16	1/8	73 17 20	3/4	73 17 24	2	
17	1/4	21	1	25	2-1/2	
18	3/8	22	1-1/4	26	3	
19	1/2	23	1-1/2			

Steel Threaded Street Elbows, 90° for High Pressure Pipe Fitting

Codos Rosados de Acero, 90° para Conexión de Tubería de Alta Presión

高压鋼製 90° ストリートエルボ
90° 钢质内外丝扣高压弯头



CODE	Nom. Size	CODE	Nom. Size	CODE	Nom. Size	Unit Per Pcs.
73 17 31	1/8	73 17 34	1/2	73 17 37	1-1/4	
32	1/4	35	3/4	38	1-1/2	
33	3/8	36	1	39	2	

Steel Threaded Tees

for High Pressure Pipe Fitting

Tes Roscadas de Acero para Conexión de Tubería de Alta Presión

高压鋼製チーズ 钢质高压三通



CODE	Nom. Size	CODE	Nom. Size	CODE	Nom. Size	Unit Per Pcs.
73 17 46	1/8	73 17 50	3/4	73 17 54	2	
47	1/4	51	1	55	2-1/2	
48	3/8	52	1-1/4	56	3	
49	1/2	53	1-1/2			

Steel Threaded Crosses for High Pressure Pipe Fitting

Cruces roscadas de Acero para Conexión de Tubería de Alta Presión

高压鋼製クロス 高压钢四通



CODE	Nom. Size	CODE	Nom. Size	CODE	Nom. Size	Unit Per Pcs.
73 17 61	1/8	73 17 65	3/4	73 17 69	2	
62	1/4	66	1	70	2-1/2	
63	3/8	67	1-1/4	71	3	
64	1/2	68	1-1/2			

Square Head Steel Threaded Plugs

for High Pressure Pipe Fitting

Tapones Macho Roscados de Acero para Conexión de Tubería de Alta presión

高压鋼製プラグ 高压方头钢管塞



CODE	Nom. Size	CODE	Nom. Size	CODE	Nom. Size	Unit Per Pcs.
73 17 76	1/8	73 17 80	3/4	73 17 84	2	
77	1/4	81	1	85	2-1/2	
78	3/8	82	1-1/4	86	3	
79	1/2	83	1-1/2			

Steel Threaded Hexagon Bushings for High Pressure Pipe Fitting

Tueras Reducción de Acero para Conexión de Tubería de Alta Presión

高压鋼製ブッシング 钢螺纹六角衬套



CODE	Nom. Size	CODE	Nom. Size	Unit Per Pcs.
73 18 01	1/4 x 1/8	73 18 13	1-1/4 x 1	
02	3/8 x 1/4	14	1-1/2 x 1/2	
03	1/2 x 1/4	15	1-1/2 x 3/4	
04	1/2 x 3/8	16	1-1/2 x 1	
05	3/4 x 1/4	17	1-1/2 x 1-1/4	
73 18 06	3/4 x 3/8	73 18 18	2 x 3/4	
07	3/4 x 1/2	19	2 x 1	
08	1 x 3/8	20	2 x 1-1/4	
09	1 x 1/2	21	2 x 1-1/2	
10	1 x 3/4	22	2-1/2 x 2	
73 18 11	1-1/4 x 1/2	73 18 23	3 x 2-1/2	
12	1-1/4 x 3/4			

Steel Threaded Unions for High Pressure Pipe Fitting

Uniones Roscadas de Acero para Conexión de Tubería de Alta Presión

高压鋼製ユニオン 钢螺纹连管节



73

Pipe & Tee Fittings

Steel Threaded Sockets for High Pressure Pipe Fitting

Manguitos Roscados de Acero para Conexión de Tubería de Alta Presión

高压鋼製ソケット 钢螺纹套筒



Unit Per Pcs.					
CODE	Nom. Size	CODE	Nom. Size	CODE	Nom. Size
73 18 26	1/8	73 18 30	3/4	73 18 34	2
27	1/4	31	1	35	2-1/2
28	3/8	32	1-1/4	36	3
29	1/2	33	1-1/2		

Steel Threaded Reducing Sockets

for High Pressure Pipe Fitting

Mangos Reducidos Roscados de Acero para Conexión de Tubería de Alta Presión

高压鋼製違径ソケット 钢螺纹异径管接头



Unit Per Pcs.			
CODE	Size	CODE	Nom. Size
73 18 56	1/4 x 1/8	73 18 63	1 x 3/4
57	3/8 x 1/4	64	1-1/4 x 3/4
58	1/2 x 1/4	65	1-1/4 x 1
59	1/2 x 3/8	66	1-1/2 x 1
60	3/4 x 3/8	67	1-1/2 x 1-1/4
73 18 61	3/4 x 1/2	73 18 68	2 x 1-1/4
62	1 x 1/2	69	2 x 1-1/2

Steel Threaded Long Nipples for High Pressure Pipe Fitting

Machones Tipo Bobina Largos Roscados de Acero para Conexión de Tubería de Alta Presión

高压鋼製ロングニップル 长螺纹钢接头



When ordering, specify the required length. Available in 2, 4, or 6" lengths.

Unit Per Pcs.					
CODE	Nom. Size	CODE	Nom. Size	CODE	Nom. Size
73 18 71	1/8 x 2"	73 18 79	3/4 x 2"	73 18 87	2 x 4"
72	1/8 x 4"	80	3/4 x 4"	88	2 x 6"
73 18 73	1/4 x 2"	73 18 81	1 x 2"	73 18 89	2-1/2 x 4"
74	1/4 x 4"	82	1 x 4"	90	2-1/2 x 6"
73 18 75	3/8 x 2"	73 18 83	1-1/4 x 4"	73 18 91	3 x 4"
76	3/8 x 4"	84	1-1/4 x 6"	92	3 x 6"
73 18 77	1/2 x 2"	73 18 85	1-1/2 x 4"		
78	1/2 x 4"	86	1-1/2 x 6"		

Steel Threaded Hexagon Nipples for High Pressure Pipe Fitting

Machones Hexagonales Roscados de Acero para Conexión de Tubería de Alta Presión

高压鋼製六角ニップル 六角螺纹钢接头



Unit Per Pcs.					
CODE	Nom. Size	CODE	Nom. Size	CODE	Nom. Size
73 19 01	1/8	73 19 04	1/2	73 19 07	1-1/4
02	1/4	05	3/4	08	1-1/2
03	3/8	06	1	09	2

Steel Threaded Hexagon Reducing Nipples for High Pressure Pipe Fitting

Machones Reducidos Roscados de Acero para Conexión de Tubería de Alta Presión

高压鋼製違径六角ニップル 六角异径螺纹钢接套



Unit Per Pcs.			
CODE	Nom. Size	CODE	Nom. Size
73 19 21	1/4 x 1/8	73 19 31	1-1/4 x 1/2
22	3/8 x 1/4	32	1-1/4 x 3/4
23	1/2 x 1/4	33	1-1/4 x 1
24	1/2 x 3/8	34	1-1/2 x 3/4
25	3/4 x 1/4	35	1-1/2 x 1
73 19 26	3/4 x 3/8	73 19 36	1-1/2 x 1-1/4
27	3/4 x 1/2	37	2 x 3/4
28	1 x 3/8	38	2 x 1
29	1 x 1/2	39	2 x 1-1/4
30	1 x 3/4	40	2 x 1-1/2

Brass Pipe Fittings Threaded Type

Codos roscados de Latón, Tipo rosado

真鍮（黄銅）製ねじ込み継手 黄铜螺纹接头

Made from high quality seamless brass tubing for use with the fabrication of copper or brass tubes.

The threads conform to the Taper Pipe Threads of JIS B 0203 and the ISO 7/1.

Larger sized fittings and types other than those listed below are also available upon request.

Brass Threaded Elbows, 45°

Codos Roscados de Latón, 45° (Hembra)

真鍮 45° エルボ 45 度黄铜螺纹肘管



Unit Per Pcs.					
CODE	Size	CODE	Size	CODE	Size
73 21 01	1/8	73 21 04	1/2	73 21 07	1-1/4
02	1/4	05	3/4	08	1-1/2
03	3/8	06	1	09	2

Brass Threaded Elbows, 90°

Codos Roscados de Latón, 90° (Hembra)

真鍮 90° エルボ 90 度黄铜螺纹肘管



CODE	Size	CODE	Size	CODE	Size	Unit Per Pcs.
73 21 16	1/8	73 21 19	1/2	73 21 22	1-1/4	
17	1/4	20	3/4	23	1-1/2	
18	3/8	21	1	24	2	

Brass Threaded Tees

Tes Roscadas de Latón

真鍮チーズ 黄銅螺紋 T形管



Unit Per Pcs.

CODE	Size	CODE	Size	CODE	Size	Unit Per Pcs.
73 21 31	1/8	73 21 34	1/2	73 21 37	1-1/4	
32	1/4	35	3/4	38	1-1/2	
33	3/8	36	1	39	2	

Brass Threaded Reducing Tees

Tes Reducidas Roscadas de Latón

真鍮違径チーズ 黄銅螺紋異径 三通接头



Unit Per Pcs.

CODE	Size	CODE	Size
73 21 46	1/4 x 1/8	73 21 50	1 x 3/4
47	3/8 x 1/4	51	1-1/4 x 1
48	1/2 x 1/4	52	1-1/2 x 1-1/4
49	3/4 x 1/2	53	2 x 1-1/2

Brass Threaded Crosses

Cruces Roscadas de Latón

真鍮クロス

黄銅螺紋十字管



Unit Per Pcs.

CODE	Size	CODE	Size	CODE	Nom. Size
73 21 61	1/8	73 21 64	1/2	73 21 67	1-1/4
62	1/4	65	3/4	68	1-1/2
63	3/8	66	1	69	2

Brass Threaded Caps

Tapones Roscados de Latón

真鍮キャップ 黄銅螺紋帽



Unit Per Pcs.

CODE	Size	CODE	Size
73 21 76	1/8	73 21 81	1
77	1/4	82	1-1/4
78	3/8	83	1-1/2
79	1/2	84	2
80	3/4	85	2-1/2

Brass Threaded Sockets

Manguitos Roscadas de Latón

真鍮ソケット 黄銅螺紋套筒



Unit Per Pcs.

CODE	Size	CODE	Size	CODE	Size
73 21 91	1/8	73 21 94	1/2	73 21 97	1-1/4
92	1/4	95	3/4	98	1-1/2
93	3/8	96	1	99	2

Brass Threaded Reducing Sockets

Manguitos Reducidos Roscadas de Latón

真鍮違径ソケット 黄銅螺紋异径管节



Unit Per Pcs.

CODE	Size	CODE	Size
73 22 01	1/4 x 1/8	73 22 05	1 x 3/4
02	3/8 x 1/4	06	1-1/4 x 1
03	1/2 x 1/4	07	1-1/2 x 1-1/4
04	3/4 x 1/2	08	2 x 1-1/2

Brass Threaded Hexagon Bushings

Tueras Reducción de Latón

真鍮ブッキング 黄銅螺紋六角衬套



Unit Per Pcs.

CODE	Size	CODE	Size
73 22 16	1/4 x 1/8	73 22 21	1-1/4 x 1
17	3/8 x 1/4	22	1-1/2 x 1-1/4
18	1/2 x 3/8	24	2 x 1-1/4
19	3/4 x 1/2	23	2 x 1-1/2
20	1 x 3/4		

Brass Threaded Square Head Plugs

Tapones Macho Roscados de Latón

真鍮プラグ

黄銅螺紋方头插塞



Unit Per Pcs.

CODE	Size	CODE	Size	CODE	Size
73 22 31	1/8	73 22 34	1/2	73 22 37	1-1/4
32	1/4	35	3/4	38	1-1/2
33	3/8	36	1	39	2

Brass Threaded Lock Nuts

Tueras de Presión Roscadas

真鍮止めナット 黄銅螺紋锁紧螺母



Unit Per Pcs.

CODE	Size	CODE	Size	CODE	Size
73 22 46	1/8	73 22 49	1/2	73 22 52	1-1/4
47	1/4	50	3/4	53	1-1/2
48	3/8	51	1	54	2

Brass Threaded Unions

Uniones Roscadas de Latón

真鍮ユニオン

黄銅螺紋管节



Unit Per Pcs.

CODE	Size	CODE	Size	CODE	Size
73 22 61	1/8	73 22 64	1/2	73 22 67	1-1/4
62	1/4	65	3/4	68	1-1/2
63	3/8	66	1	69	2

Brass Threaded Short Nipples

Machones Cortos Roscados de Latón

真鍮ニップル 黄銅螺紋接套



		Unit Per Pc.			
CODE	Size	CODE	Size	CODE	Size
73 22 76	1/8	73 22 79	1/2	73 22 82	1-1/4
77	1/4	80	3/4	83	1-1/2
78	3/8	81	1	84	2

Brass Threaded Long Nipples

Machones Largos Roscados de Latón Tipo Bobina
真鍮ロングニップル 黄铜长螺纹接套

When ordering, specify the required length. Available in lengths of 2 - 6 inches.



Unit Per Pc.					
CODE	Nom. Size	CODE	Nom. Size	CODE	Nom. Size
73 23 01	2"	73 23 14	3"	73 23 27	1-1/2 x 4"
	02	15	1/2 x 4"	73 23 28	3"
	03	16	6"	29	1-1/2 x 4"
	04	6"		30	6"
73 23 05	2"	73 23 17	2"	73 23 31	3"
	06	18	3"	32	2 x 4"
	07	19	3/4 x 4"	33	6"
	08	20	6"		
73 23 09	2"	73 23 21	2"	73 23 34	3"
	10	22	3"	35	2-1/2 x 4"
	11	23	1 x 4"	36	6"
	12	24	6"	73 23 37	3"
73 23 13	6"	73 23 25	1-1/4 x 3"	38	3 x 4"
	1/2 x 2"	26	1-1/4 x 4"	39	6"

Brass Threaded Hexagon Nipples

Machones Hexagonales Roscados de Latón
真鍮六角ニップル 黄铜螺纹六角接套



Unit Per Pc.					
CODE	Nom. Size	CODE	Nom. Size	CODE	Nom. Size
73 23 51	1/8	73 23 54	1/2	73 23 57	1-1/4
52	1/4	55	3/4	58	1-1/2
53	3/8	56	1	59	2

Brass Threaded Reducing Hexagon Nipples

Machones Hexagonales Reducidos Roscados de Latón
真鍮逕六角ニップル 黄铜螺纹逕六角接套



Unit Per Pc.			
CODE	Size	CODE	Size
73 23 66	1/4 x 1/8	73 23 70	1 x 3/4
67	3/8 x 1/4	71	1-1/4 x 1
68	1/2 x 3/8	72	1-1/2 x 1-1/4
69	3/4 x 1/2	73	2 x 1-1/2

Brass Threaded Reducing Nipples

Female and Male End

Machones reducidos roscados de latón



Unit Per Pc.			
CODE	Size BSP	CODE	Size BSP
73 23 76	1/2" (Female) x 3/8" (Male)	73 23 77	3/4" (Female) x 1/2" (Male)

Stainless Steel Pipe Fittings

Threaded Type

Accesorios de Acero-inoxidable para Tubería Tipo Roscado
ステンレス製ねじ込み継手 不锈钢管件 螺纹型

Stainless steel SUS 304 conforms to a working pressure of 10 kgf/cm² in saturated steam. These fittings have high corrosion and thermal resistance and are mainly used in the petroleum refinery, petrochemical, thermal and nuclear power industries. They are all threaded for use in general service lines.

The threads for these fittings are Taper Pipe Thread Standards (JIS B 0203) compliant with ISO 7/1 standards. Other types of fittings, and sizes larger than those listed below are also available upon request.



Stainless Steel Threaded Elbows, 90°

Codos Roscados de Acero-inoxidable 90°
ステンレス 90° エルボー 90 度不锈钢螺纹弯管

Unit Per Pc.

CODE	Size	CODE	Size	CODE	Size
73 25 01	1/8	73 25 04	1/2	73 25 07	1-1/4
02	1/4	05	3/4	08	1-1/2
03	3/8	06	1	09	2

Stainless Steel Threaded Tees

Tes Roscadas de Acero-inoxidable

ステンレスチーズ

不锈钢螺纹 T 形管



Unit Per Pc.

CODE	Size	CODE	Size	CODE	Size
73 25 21	1/8	73 25 24	1/2	73 25 27	1-1/4
22	1/4	25	3/4	28	1-1/2
23	3/8	26	1	29	2

Stainless Steel Threaded Round Caps

Tapones Redondos Roscados de Acero-inoxidable

ステンレス丸キャップ 圆形不锈钢螺纹帽



Unit Per Pc.

CODE	Size	CODE	Size	CODE	Size
73 25 36	1/8	73 25 39	1/2	73 25 42	1-1/4
37	1/4	40	3/4	43	1-1/2
38	3/8	41	1	44	2

Stainless Steel Threaded Hexagon Caps

Tapones Hexagonales Roscados de Acero-inoxidable

ステンレス六角キャップ 不锈钢六角螺纹帽



Unit Per Pc.

CODE	Size	CODE	Size	CODE	Size
73 25 51	1/8	73 25 54	1/2	73 25 57	1-1/4
52	1/4	55	3/4	58	1-1/2
53	3/8	56	1	59	2

Stainless Steel Threaded Sockets

Manguitos Roscados de Acero-inoxidable

ステンレスソケット 不锈钢螺纹管套



				Unit Per Pc.	
CODE	Size	CODE	Size	CODE	Size
73 25 66	1/8	73 25 69	1/2	73 25 72	1-1/4
67	1/4	70	3/4	73	1-1/2
68	3/8	71	1	74	2

Stainless Steel Threaded Reducing Sockets



Llaves de tubos reducidos roscados de acero inoxidable
ステンレス異径ソケット 不锈钢外螺纹异径管箍

73 25 76	Socket, reducing, threaded, Stainless steel, 2 x 1-1/2	Pc.
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Stainless Steel Threaded Hexagon Bushings



Tueras Reducción Roscadas de acero-noxidable
ステンレスブッシング 不锈钢六角螺纹衬套

CODE	Size	CODE	Size	CODE	Size
73 25 81	1/4 x 1/8	73 25 84	3/4 x 1/2	73 25 87	1-1/2 x 1-1/4
82	3/8 x 1/4	85	1 x 3/4	88	2 x 1-1/2
83	1/2 x 3/8	86	1-1/4 x 1		

Stainless Steel Threaded Square Head Plugs



Tapones Macho Roscados de Acero-inoxidable
ステンレスプラグ 不锈钢螺纹方头插塞

CODE	Size	CODE	Size	CODE	Size
73 26 01	1/8	73 26 04	1/2	73 26 07	1-1/4
02	1/4	05	3/4	08	1-1/2
03	3/8	06	1	09	2

Stainless Steel Threaded Unions



Uniones Roscadas de Acero-inoxidable
ステンレスユニオン 不锈钢螺纹管节

CODE	Size	CODE	Size	CODE	Size
73 26 16	1/8	73 26 19	1/2	73 26 22	1-1/4
17	1/4	20	3/4	23	1-1/2
18	3/8	21	1	24	2

Stainless Steel Threaded Round Nipples



Machones Tipo Bobina Roscados de Acero-inoxidable
ステンレス丸ニップル 不锈钢螺纹圆形接套

CODE	Size	CODE	Size	CODE	Size
73 26 31	1/8	73 26 34	1/2	73 26 37	1-1/4
32	1/4	35	3/4	38	1-1/2
33	3/8	36	1	39	2

Stainless Steel Threaded Hexagon Nipples



Machones Hexagonales Roscados de Acero-inoxidable
ステンレス六角ニップル 不锈钢六角接套

Unit Per Pc.

CODE	Size	CODE	Size	CODE	Size
73 26 46	1/8	73 26 49	1/2	73 26 52	1-1/4
47	1/4	50	3/4	53	1-1/2
48	3/8	51	1	54	2

73

Pipe & Tite Fittings

Stainless Steel Threaded Reducing Nipples



Machones reducidos roscados de acero inoxidable

ステンレス異径ニップル 不锈钢外螺纹异径接头

Unit Per Pc.

CODE	Size	CODE	Size
73 26 56	3/8 x 1/4	73 26 60	1-1/4 x 1
57	1/2 x 3/8	61	1-1/2 x 1-1/4
58	3/4 x 1/2	62	2 x 1-1/2
59	1 x 3/4		

PVC Plastic Pipe Fittings for Drain

Accesorios para Tubería de Plástico P.V.C. Para Drenaje
排水用硬質塩化ビニル管継手 P. V. C. 塑料排水管配件

These PVC plastic fittings are used for the fabrication of PVC plastic drain pipes.

General Specifications of Fittings

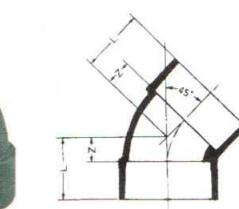
Nominal Size	Diameter mm		Wall Thickness mm	Applicable Pipe O.D. mm
	O.D.	I.D.		
30	44	38.25	2.7	38
40	54	48.30	2.7	48
50	67	60.35	3.1	60
65	83	76.40	3.1	76
75	97	89.45	3.6	89
100	124	114.55	4.9	114

Sizes larger and smaller than those listed below are also available upon request.

PVC Elbows, 45° for Drain

Codos P.V.C., 45° para Drenaje

排水用 PVC 45° エルボ 45 度排水用 PVC 弯管



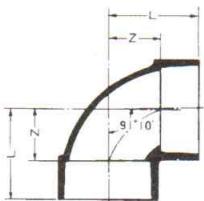
CODE	Nom. Size	Size mm		CODE	Nom. Size	Size mm	
		Z	L			Z	L
73 28 01	30	12	30	73 28 04	65	22	57
02	40	14	36	05	75	25	65
03	50	18	43	06	100	30	80

PVC Elbows, 90°

Short Radius for Drain

Codos P.V.C., 90° - Radio Corto para Drenaje

排水用 PVC 90° ショートエルボ 90 度排水用 PVC 弯管



Unit Per Pcs.

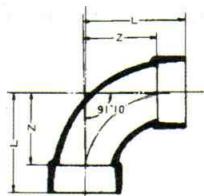
CODE	Nom. Size	Size mm		CODE	Nom. Size	Size mm	
		Z	L			Z	L
73 28 11	30	22	40	73 28 14	65	42	77
12	40	27	49	15	75	48	88
13	50	33	58	16	100	62	112

PVC Elbows, 90°

Long Radius for Drain

Codos P.V.C., 90° - Radio Grande para Drenaje

排水用 PVC 90° 大曲りエルボ 90 度排水用 PVC 弯管



Unit Per Pcs.

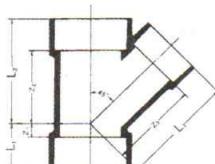
CODE	Nom. Size	Size mm		CODE	Nom. Size	Size mm	
		Z	L			Z	L
73 28 21	30	37	55	73 28 24	65	90	125
22	40	52	74	25	75	100	140
23	50	66	91	26	100	128	178

PVC Y-Pieces, 45°

for Drain

Partes-Y Reducidas de P.V.C., 45° para Drenaje

排水用 PVC 45° 道径 Y ピース 45° PVC Y 型接头



Unit Per Pcs.

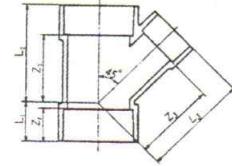
CODE	Nom. Size	Size mm		CODE	Nom. Size	Size mm	
		L ₁	L ₂			L ₁	L ₂
73 28 31	30	30	63	73 28 34	65	55	127
32	40	34	80	35	75	66	146
33	50	45	97	36	100	82	184

PVC Reducing Y-Pieces, 45°

for Drain

Pieza en Y de P.V.C., 45° para Drenaje

排水用 PVC 45° Y ピース 90 度 PVC Y- 件



Unit Per Pcs.

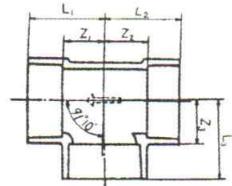
CODE	Nom. Size	Size mm		CODE	Nom. Size	Size mm	
		L ₁	L ₂			L ₁	L ₂
73 28 41	40 × 30	28	72	73 28 47	75 × 50	43	126
42	50 × 30	25	81	48	75 × 65	54	138
43	50 × 40	33	87	49	100 × 40	36	146
44	65 × 40	34	107	50	100 × 50	42	148
45	65 × 50	43	115	51	100 × 65	53	160

PVC Tees

for Drain

Tes P.V.C. Para Drenaje 排水用 PVC チーズ

排水用 PVCT 形管



Unit Per Pcs.

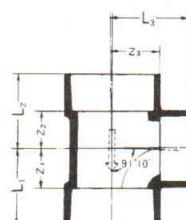
CODE	Nom. Size	Size mm		CODE	Nom. Size	Size mm	
		L ₁	L ₃			L ₁	L ₃
73 28 61	30	40	40	73 28 64	65	77	77
62	40	49	49	65	75	88	88
63	50	59	59	66	100	112	112

PVC Reducing Tees

for Drain

Tes Reducidas de P.V.C. Para Drenaje

排水用 PVC 道径チーズ PVC 异径三通接头



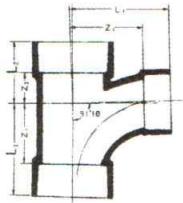
Unit Per Pcs.

CODE	Nom. Size	Size mm		CODE	Nom. Size	Size mm	
		L ₁	L ₂			L ₁	L ₂
73 28 71	40 × 30	44	45	73 28 79	75 × 50	74	73
72	50 × 30	47	51	80	75 × 65	82	83
73	50 × 40	52	55	81	100 × 30	72	80
74	65 × 30	57	60	82	100 × 40	77	84
75	65 × 40	62	64	83	100 × 50	84	87

CODE	Nom. Size	Size mm		CODE	Nom. Size	Size mm	
		L ₁	L ₂			L ₁	L ₂
73 28 76	75 × 50	69	67	73 28 84	100 × 65	92	97
77	75 × 30	62	66	85	100 × 75	98	102
78	75 × 40	67	70				

PVC Reducing Y-Pieces, 90° Long Radius for Drain

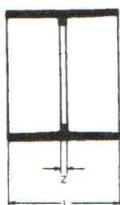
Pieza en Y Reducidas de P.V.C., 90° Radio Largo para Drenaje
排水用 PVC 90° 大曲異径 Y ピース 90 度 PVC 异径 Y-件



CODE	Nom. Size	Size mm		CODE	Nom. Size	Size mm		Unit Per Pcs.
		L ₁	L ₂			L ₁	L ₂	
73 29 01	40 × 30	59	42	73 29 07	75 × 50	106	69	
02	50 × 30	62	46	08	75 × 65	130	72	
03	50 × 40	77	48	09	100 × 40	102	78	
04	65 × 40	87	59	10	100 × 50	116	82	
05	65 × 50	101	62	11	100 × 65	140	86	
73 29 06	75 × 40	92	65	73 29 12	100 × 75	150	83	

PVC Sockets for Drain

Manguitos P.V.C. Para Drenaje 排水用 PVC ソケット PVC 管套



CODE	Nom. Size	Size mm		CODE	Nom. Size	Size mm		Unit Per Pcs.
		Z	L			Z	L	
73 29 21	30	3	39	73 29 24	65	3	73	
22	40	3	47	25	75	4	84	
23	50	3	53	26	100	4	104	

PVC Increases for Drain

Incrementadores P.V.C. Para Drenaje
排水用 PVC インクリーザー PVC 异径接头管



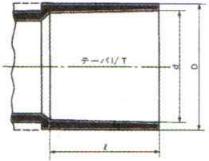
CODE	Nom. Size	Size mm		CODE	Nom. Size	Size mm		Unit Per Pcs.
		Z	L			Z	L	
73 29 31	40 × 30	20	60	73 29 37	75 × 50	25	90	
32	50 × 30	20	63	38	75 × 65	25	100	
33	50 × 40	20	67	39	100 × 40	30	102	
34	65 × 40	20	77	40	100 × 50	30	105	
35	65 × 50	20	80	41	100 × 65	30	115	
73 29 36	75 × 40	25	87	73 29 42	100 × 75	30	120	

PVC Plastic Pipe Fittings for Water Supply

Accesorios de Tubería Plástica de P.V.C.

水道用硬質塩化ビニル管継手 供水管 PVC 接头

PVC pipe fittings for normal water pressure and temperature.
Not recommended using for compressed air or gas system.



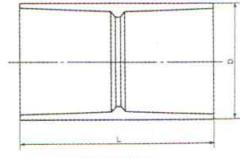
General Specification of Fitting Sizes

Nominal Size	Size mm		
	D	d	l
13	24	18.40	26
16	29	22.40	30
20	33	26.45	35
25	40	32.55	40
30	46	38.60	44
40	57	48.70	55
50	70	60.80	63
65	87	76.60	61
75	102	89.60	64
100	130	114.70	84
125	157	140.85	104
150	186	166.00	132

PVC Sockets for Water Supply

Manguitos P.V.C. para Distribución de Agua o Suministro de Agua

水道用 PVC ソケット
供水用 PVC 管套



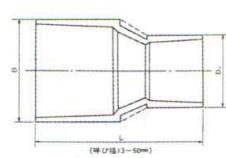
(呼び径13~50mm)

CODE	Nom. Size	Size mm		Unit Per Pcs.
		D	L	
73 29 51	13	24	57	
52	16	29	67	
53	20	33	77	
54	25	40	87	
55	30	46	95	
73 29 56	40	57	117	
57	50	70	133	
58	65	87	145	
59	75	102	155	
60	100	130	200	
73 29 61	125	157	231	
62	150	186	300	

PVC Reducing Sockets for Water Supply

Manguitos Reducidos de P.V.C.

水道用 PVC 遷径ソケット
水管用 PVC 塑料异径套管



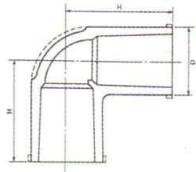
(呼び径13~50mm)

CODE	Nom. Size	Size mm			Unit Per Pcs.
		D	D1	L	
73 29 71	16 × 13	29	24	61	
72	20 × 13	33	24	68	
73	20 × 16	33	29	71	
74	25 × 13	40	24	86	
75	25 × 16	40	29	85	

(to be continued)

CODE	Nom. Size	Size mm			Unit Per Pc.
		D	D1	L	
73 29 76	25 × 20	40	33	84	
77	30 × 20	46	33	93	
78	30 × 25	46	40	93	
79	40 × 20	57	33	113	
80	40 × 25	57	40	114	
73 29 81	40 × 30	57	46	114	
82	50 × 25	70	40	140	
83	50 × 30	70	46	136	
84	50 × 40	70	57	136	
85	65 × 50	87	70	149	
73 29 86	75 × 50	102	70	165	
87	75 × 65	102	87	159	
88	100 × 75	130	102	190	
89	125 × 100	157	130	229	
90	150 × 100	186	130	295	
73 29 91	150 × 125	186	157	272	

CODE	Nom. Size	Size mm			Unit Per Pc.
		D	H	D1	
73 30 21	13 × 13	24	36	24	36
22	16 × 13	29	41	24	38
23	16 × 16	29	43	29	43
24	20 × 13	33	46	24	40
25	20 × 16	33	48	29	45
73 30 26	20 × 20	33	50	33	50
27	25 × 13	40	51	24	43
28	25 × 16	40	53	29	48
29	25 × 20	40	55	33	53
30	25 × 25	40	58	40	58
73 30 31	30 × 13	46	55	24	46
32	30 × 16	46	57	29	51
33	30 × 20	46	59	33	56
34	30 × 25	46	62	40	61
35	30 × 30	46	65	46	65
73 30 36	40 × 13	57	66	24	52
37	40 × 16	57	68	29	57
38	40 × 20	57	70	33	62
39	40 × 25	57	73	40	67
40	40 × 30	57	76	46	71
73 30 41	40 × 40	57	82	57	82
42	50 × 13	70	74	24	58
43	50 × 16	70	76	29	63
44	50 × 20	70	78	33	68
45	50 × 25	70	81	40	73
73 30 46	50 × 30	70	84	46	77
47	50 × 40	70	90	57	88
48	50 × 50	70	96	70	96
49	65 × 50	87	101	70	104
50	65 × 65	87	110	87	110
73 30 51	75 × 25	102	81	40	88
52	75 × 40	102	100	57	102
53	75 × 50	102	105	70	110
54	75 × 65	102	113	87	117
55	75 × 75	102	120	102	120
73 30 56	100 × 50	130	125	70	122
57	100 × 75	130	140	102	132
58	100 × 100	130	152	130	152
59	125 × 75	157	160	102	147
60	125 × 100	157	173	130	167
73 30 61	125 × 125	157	187	157	187
62	150 × 75	186	195	102	158
63	150 × 100	186	208	130	182
64	150 × 125	186	217	157	201
65	150 × 150	186	230	186	230



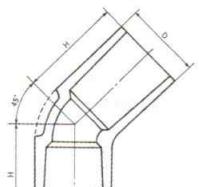
Unit Per Pc.

PVC Elbows, 90° for Water Supply

Codos P.V.C. 90° Para Distribución

水道用 PVC90° エルボ 90 度 PVC 弯管

CODE	Nom. Size	Size mm		Unit Per Pc.
		D	L	
73 30 01	13	24	36	
02	16	29	43	
03	20	33	50	
04	25	40	58	
05	30	46	65	
73 30 06	40	57	82	
07	50	70	96	
08	65	87	110	
09	75	102	120	
10	100	130	155	
73 30 11	125	157	187	
12	150	186	230	



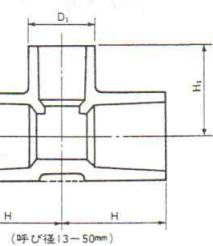
Unit Per Pc.

PVC Elbows, 45° for Water Supply

Codos P.V.C. 45° Para Distribución

水道用 PVC45° エルボ 45 度 PVC 弯管

CODE	Nom. Size	Size mm		Unit Per Pc.
		D	L	
73 30 15	13	24	33	
16	20	33	44	



(呼び径13~50mm)

PVC Tees for Water Supply

Tee P.V.C. Para Distribución

de Agua o Suministro de Agua

水道用 PVC チーズ

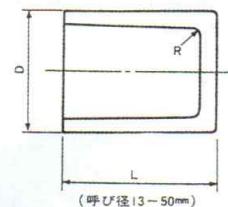
PVC T 形管

PVC Caps for Water Supply

Tapones P.V.C. para Distribución

水道用 PVC キャップ

水管用 PVC 三通



Unit Per Pc.

CODE	Nom. Size	Size mm		Unit Per Pc.
		D	L	
73 30 71	13	24	29.0	
72	16	29	33.5	
73	20	33	38.5	
74	25	40	44.0	
75	30	46	48.0	
73 30 76	40	57	59.5	
77	50	70	68.0	
78	75	102	105.0	
79	100	130	138.0	
80	125	157	171.0	
73 30 81	150	186	205.0	

Steel Compression Tube Fittings

For High Pressure Service

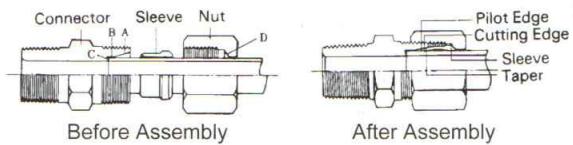
250 kgf/cm² – 400 kgf/cm²

Accesoos para Tubería de Alta Presión de (Acero) Compresión
鋼製高压配管用継手 钢制管接头

These fittings are used for pneumatic, chemical and most other fluids without flaring-welding.

Threads of these pipe fittings conform to the Taper Pipe Threads of JIS B 0203 and ISO 7/1 standards.

Types with a rated pressure of 100 kgf/cm² are also available upon request.

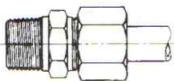


Steel Compression Connectors

Conexión de Compresión de Acero Unión

Macho

ニップル型継手 压缩钢管接头



How to order: CODE

Steel compression connector, RATED PRESSURE, TUBE O.D. mm, THREAD END SIZE

Unit Per P.C.					
CODE	Tube O.D. mm	Thread End PT	CODE	Tube O.D. mm	Thread End PT

Rated Pressure 400 kgf/cm²

For Millimeter Size Tube O.D.					
73 31 01	4	1/8	73 31 11	15	1/2
02	6	1/8	12	16	3/8
03	6	1/4	13	16	1/2
04	8	1/8	14	18	3/8
05	8	1/4	15	18	1/2
73 31 06	10	1/4	73 31 16	20	1/2
07	10	3/8	17	20	3/4
08	12	1/4	18	22	1/2
09	12	3/8	19	22	3/4
10	15	3/8			

For Inch Size Tube O.D.					
73 31 21	10.5	1/8	73 31 25	17.3	3/8
22	10.5	1/4	26	17.3	1/2
23	13.8	1/4	27	21.7	1/2
24	13.8	3/8	28	21.7	3/4

Rated Pressure 350 kgf/cm²

For Millimeter Size Tube O.D.					
73 31 31	25	1	73 31 32	28	1

For Inch Size Tube O.D.

73 31 36	27.2	3/4	73 31 37	27.2	1
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Rated Pressure 250 kgf/cm²

For Millimeter Size Tube O.D.					
73 31 41	30	1-1/4	73 31 43	38	1-1/2
42	35	1-1/4	44	42	1-1/2

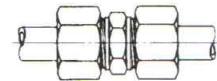
For Inch Size Tube O.D.

73 31 46	34	1	73 31 48	42.7	1-1/4
47	34	1-1/4	49	42.7	1-1/2

Steel Compression Unions

Uniones de Compresión de Acero

ユニオン型継手



How to order: CODE

Steel compression union, RATED PRESSURE, TUBE O.D. mm

Unit Per P.C.

CODE	Tube O.D. mm	CODE	Tube O.D. mm
------	--------------	------	--------------

Rated Pressure 400 kgf/cm²

For Millimeter Size Tube O.D.			
73 31 51	4	73 31 56	15
52	6	57	16
53	8	58	18
54	10	59	20
55	12	60	22

For Inch Size Tube O.D.

73 31 66	10.5	73 31 68	17.3
67	13.8	69	21.7

Rated Pressure 350 kgf/cm²

For Millimeter Size Tube O.D.			
73 31 71	25	73 31 72	28

For Inch Size Tube O.D.

73 31 76	27.2		
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Rated Pressure 250 kgf/cm²

For Millimeter Size Tube O.D.			
73 31 81	30	73 31 83	38
82	35	84	42

For Inch Size Tube O.D.

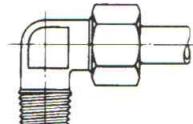
73 31 86	34.0	73 31 87	42.7
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Steel Compression Elbows

with Male End

Codos de Macho de Compresión de Acero

エルボ型ねじ込み継手



How to order: CODE

Steel compression elbow with male end, RATED PRESSURE, TUBE O.D. mm, THREAD END SIZE

Unit Per P.C.

CODE	Tube O.D. mm	Thread End PT	CODE	Tube O.D. mm	Thread End PT
------	--------------	---------------	------	--------------	---------------

Rated Pressure 400 kgf/cm²

For Millimeter Size Tube O.D.					
73 32 01	4	1/8	73 32 11	15	1/2
02	6	1/8	12	16	3/8
03	6	1/4	13	16	1/2
04	8	1/8	14	18	3/8
05	8	1/4	15	18	1/2

73 32 06	10	1/4	73 32 16	20	1/2
07	10	3/8	17	20	3/4
08	12	1/4	18	22	1/2
09	12	3/8	19	22	3/4
10	15	3/8			

For Inch Size Tube O.D.

73 32 21	10.5	1/8	73 32 25	17.3	3/8
22	10.5	1/4	26	17.3	1/2
23	13.8	1/4	27	21.7	1/2
24	13.8	3/8	28	21.7	3/4

For Inch Size Tube O.D.					
73 32 21	10.5	1/8	73 32 25	17.3	3/8
22	10.5	1/4	26	17.3	1/2
23	13.8	1/4	27	21.7	1/2
24	13.8	3/8	28	21.7	3/4

(to be continued)

CODE	Tube O.D. mm	Thread End PT	CODE	Tube O.D. mm	Thread End PT
------	--------------	---------------	------	--------------	---------------

Rated Pressure 350 kgf/cm²

For Millimeter Size Tube O.D.

73 32 31	25	1	73 32 32	28	1
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For Inch Size Tube O.D.

73 32 36	27.2	3/4	73 32 37	27.2	1
----------	------	-----	----------	------	---

Rated Pressure 250 kgf/cm²

For Millimeter Size Tube O.D.

73 32 41	30	1-1/4	73 32 43	38	1-1/2
42	35	1-1/4	44	42	1-1/2

For Inch Size Tube O.D.

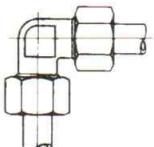
73 32 46	34	1	73 32 48	42.7	1-1/4
47	34	1-1/4	49	42.7	1-1/2

Steel Compression Elbows

Codos de Compresión de Acero

エルボ型管継手

压缩钢弯管接头

**How to order: CODE**

Steel compression elbow, RATED PRESSURE, TUBE O.D. mm

CODE	Tube O.D. mm	CODE	Tube O.D. mm
------	--------------	------	--------------

Rated Pressure 400 kgf/cm²

For Millimeter Size Tube O.D.

73 32 51	4	73 32 56	15
52	6	57	16
53	8	58	18
54	10	59	20
55	12	60	22

For Inch Size Tube O.D.

73 32 66	10.5	73 32 68	17.3
67	13.8	69	21.7

Rated Pressure 350 kgf/cm²

For Millimeter Size Tube O.D.

73 32 71	25	73 32 72	28
----------	----	----------	----

For Inch Size Tube O.D.

73 32 76	27.2		
----------	------	--	--

Rated Pressure 250 kgf/cm²

For Millimeter Size Tube O.D.

73 32 81	30	73 32 83	38
82	35	84	42

For Inch Size Tube O.D.

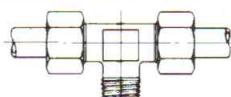
73 32 86	34.0	73 32 87	42.7
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Steel Compression Male Branch Tees

Tes de Compresión de Acero Macho

T型ねじ込み継手

压缩钢阳极 T形管接头

**How to order: CODE**

Steel compression male branch tee, RATED PRESSURE, TUBE O.D. mm, THREAD END SIZE

CODE	Tube O.D. mm	Thread End PT	CODE	Tube O.D. mm	Thread End PT
------	--------------	---------------	------	--------------	---------------

Rated Pressure 400 kgf/cm²

For Millimeter Size Tube O.D.

73 33 01	4	1/8	73 33 09	12	3/8
02	6	1/8	10	15	3/8
03	6	1/4	11	15	1/2
04	8	1/8	12	16	1/2
05	8	1/4	13	18	1/2

73 33 06	10	1/4	73 33 14	20	3/4
07	10	3/8	15	22	3/4
08	12	1/4			

For Inch Size Tube O.D.

73 33 21	10.5	1/4	73 33 24	17.3	1/2
22	13.8	3/8	25	21.7	1/2
23	17.3	3/8	26	21.7	3/4

Rated Pressure 350 kgf/cm²

For Millimeter Size Tube O.D.

73 33 31	25	1	73 33 32	28	1
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For Inch Size Tube O.D.

73 33 36	27.2	3/4	73 33 37	27.2	1
----------	------	-----	----------	------	---

Rated Pressure 250 kgf/cm²

For Millimeter Size Tube O.D.

73 33 41	30	1-1/4	73 33 43	38	1-1/2
42	35	1-1/4	44	42	1-1/2

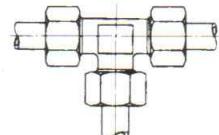
For Inch Size Tube O.D.

73 33 46	34	1	73 33 48	42.7	1-1/2
47	34	1-1/4			

Steel Compression Tees

Tes de Compresión de Acero

T型管継手

**How to order: CODE**

Steel compression tee, RATED PRESSURE, TUBE O.D. mm

CODE	Tube O.D. mm	CODE	Tube O.D. mm
------	--------------	------	--------------

Rated Pressure 400 kgf/cm²

For Millimeter Size Tube O.D.

73 33 51	4	73 33 56	15
52	6	57	16
53	8	58	18
54	10	59	20
55	12	60	22

For Inch Size Tube O.D.

73 33 66	10.5	73 33 68	17.3
67	13.8	69	21.7

Rated Pressure 350 kgf/cm²

For Millimeter Size Tube O.D.

73 33 71	25	73 33 72	28
----------	----	----------	----

For Inch Size Tube O.D.

73 33 76	27.2		
----------	------	--	--

Rated Pressure 250 kgf/cm²

For Millimeter Size Tube O.D.

73 33 81	30	73 33 83	38
82	35	84	42

For Inch Size Tube O.D.

73 33 86	34.0	73 33 87	42.7
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Steel Compression Male Run Tees

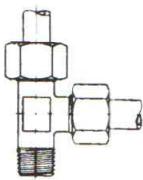
Tes Machos Laterales de Compresión de Acero

サービス T 型管継手

高压管外丝三通接头(公制)

How to order: CODE

Steel compression male run tee, RATED PRESSURE, TUBE O.D. mm, THREAD END SIZE



Unit Per Pcs.

CODE	Tube O.D. mm	Thread End PT	CODE	Tube O.D. mm	Thread End PT
------	--------------	---------------	------	--------------	---------------

Rated Pressure 400 kgf/cm²

For Millimeter Size Tube O.D.

73 34 01	4	1/8	73 34 09	12	3/8
02	6	1/8	10	15	3/8
03	6	1/4	11	15	1/2
04	8	1/8	12	16	1/2
05	8	1/4	13	18	1/2
73 34 06	10	1/4	73 34 14	20	3/4
07	10	3/8	15	22	3/4
08	12	1/4			

For Inch Size Tube O.D.

73 34 21	10.5	1/4	73 34 24	17.3	1/2
22	13.8	3/8	25	21.7	1/2
23	17.3	3/8	26	21.7	3/4

Rated Pressure 350 kgf/cm²

For Millimeter Size Tube O.D.

73 34 31	25	1	73 34 32	28	1
----------	----	---	----------	----	---

For Inch Size Tube O.D.

73 34 36	27.2	3/4	73 34 37	27.2	1
----------	------	-----	----------	------	---

Rated Pressure 250 kgf/cm²

For Millimeter Size Tube O.D.

73 34 41	30	1-1/4	73 34 43	38	1-1/2
42	35	1-1/4	44	42	1-1/2

For Inch Size Tube O.D.

73 34 46	34	1	73 34 48	42.7	1-1/2
47	34	1-1/4			

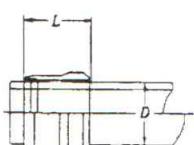
Steel Sleeves

For Steel Compression Tube Fitting

Ovalillos Acero para Conexión de Tubería de Compresión de Acero

鋼製コンプレッション管継手用スチールスリーブ

用于钢制压缩管接头 钢套管



How to order: CODE

Steel sleeve for compression tube fitting, RATED PRESSURE, TUBE O.D. mm

Unit Per Pcs.

CODE	Tube O.D. mm	L mm	CODE	Tube O.D. mm	L mm
------	--------------	------	------	--------------	------

Rated Pressure 400 kgf/cm²

For Millimeter Size Tube O.D.

73 34 51	4	8	73 34 56	15	10
52	6	9.5	57	16	10.5
53	8	9.5	58	18	10.5
54	10	10	59	20	11.5
55	12	10	60	22	11.5

For Inch Size Tube O.D.

73 34 66	10.5	10	73 34 68	17.3	10.5
67	13.8	10	69	21.7	11.5

(to be continued)

Rated Pressure 350 kgf/cm²

For Millimeter Size Tube O.D.

73 34 71	25	12	73 34 72	28	12
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For Inch Size Tube O.D.

73 34 76	27.2	12			
----------	------	----	--	--	--

Rated Pressure 250 kgf/cm²

For Millimeter Size Tube O.D.

73 34 81	30	13	73 34 83	38	13.5
82	35	13	84	42	13.5

For Inch Size Tube O.D.

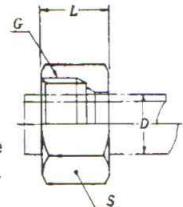
73 34 86	34	13	73 34 87	42.7	14
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Steel Nuts

For Steel Compression Fitting

Tuercas de Acero para Conexión de Compresión de Acero

スチール圧縮フィッティング用スチールナット
用于钢制压缩接头 钢螺母



The threads conform with the metric fine series outlined by JIS B 0207 standards.
The pitch sizes are listed as follows.

How to order : CODE

Steel nut for compression tube fitting, RATED PRESSURE, TUBE O.D. mm

CODE	Tube O.D. mm	Thread MF I.D. Pitch	CODE	Tube O.D. mm	Thread MF I.D. Pitch
------	--------------	----------------------	------	--------------	----------------------

Rated Pressure 400 kgf/cm²

For Millimeter Size Tube O.D.

73 35 01	4	M10×1.25	73 35 06	15	M22×1.5
02	6	M10×1.5	07	16	M24×1.5
03	8	M14×1.5	08	18	M26×1.5
04	10	M16×1.5	09	20	M28×1.5
05	10	M18×1.5	10	22	M30×1.5

For Inch Size Tube O.D.

73 35 16	10.5	M16×1.5	73 35 18	17.3	M26×1.5
17	13.8	M20×1.5	19	21.7	M30×1.5

Rated Pressure 350 kgf/cm²

For Millimeter Size Tube O.D.

73 35 21	25	M34×1.5	73 35 22	28	M36×1.5
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For Inch Size Tube O.D.

73 35 26	27.2	M36×1.5			
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Rated Pressure 250 kgf/cm²

For Millimeter Size Tube O.D.

73 35 31	30	M40×1.5	73 35 33	38	M48×1.5
32	35	M45×1.5	34	42	M52×2

For Inch Size Tube O.D.

73 35 36	34.0	M45×1.5	73 35 37	42.7	M56×2
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Brass 45° Flared Tube Fittings

Conexión de Tubería Abocardada 45° de Latón

45° フレア一型真鍮継手 45° 扩口黄铜接头

For use with copper, brass, aluminium and steel tubings. Working Temperature: -20°C - 150°C.



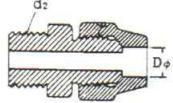
Working Pressure

Tube Size O.D. mm	Rated Pressure	Bursting Pressure
6	250 kgf/cm ²	1,000 kgf/cm ² & Over
8	250 "	1,000 "
10	180 "	700 "
12	150 "	650 "

Brass Flared Half Unions

Straight Thread End

Media Uniones Abocardada Macho de Latón - Rosca Recta
ストレートハーフ真鍮ユニオン 黄銅接管器, 直管丝端 (公制)



How to order: CODE

Brass flared half union, straight thread end, TUBE O.D. mm, THREAD END SIZE

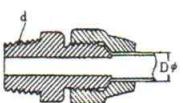
Unit Per Pcs.

For Millimeter Size Tube O.D.			For Inch Size Tube O.D.		
CODE	Tube O.D. D mm	Thread End d _{PF}	CODE	Tube O.D. D Inch	Thread End d _{PF}
73 36 01 02 03	6	1/8	73 36 16	1/4	1/8
		1/4	17	1/4	1/4
		3/8	18		3/8
73 36 04 05 06	8	1/8	73 36 19	1/4	
		1/4	20	3/8	3/8
		3/8	21		1/2
73 36 07 08 09	10	1/4	73 36 22	1/2	3/8
		3/8	23	1/2	1/2
		1/2	73 36 24		5/8
73 36 10 11	12	3/8			1/2
		1/2			

Brass Flared Half Unions

Taper Thread End

Media Uniones Abocardada Macho de Latón - Rosca Cónica
テーパー真鍮ハーフユニオン 黄銅接管器, 锥管丝端 (公制)



How to order: CODE

Brass flared half union, taper thread end, TUBE O.D. mm, THREAD END SIZE

Unit Per Pcs.

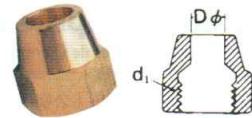
For Millimeter Size Tube O.D.			For Inch Size Tube O.D.		
CODE	Tube O.D. D mm	Thread End d PT	CODE	Tube O.D. D Inch	Thread End d PT
73 36 31 32 33	6	1/8	73 36 46	1/4	1/8
		1/4	47	1/4	1/4
		3/8	48		3/8
73 36 34 35 36	8	1/8	73 36 49	3/8	1/4
		1/4	50	3/8	3/8
		3/8	51		1/2
73 36 37 38 39	10	1/4	73 36 52	1/2	3/8
		3/8	53	1/2	1/2
		1/2	73 36 54		5/8
73 36 40 41	12	3/8			1/2
		1/2			

Brass Flared Nuts

Tuercas Abocardadas de Latón

真鍮フレアーナット

黄銅接管螺母 (公制)



How to order: CODE

Brass flared nut, TUBE O.D. mm, THREAD SIZE

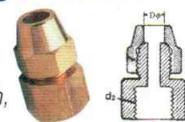
Unit Per Pcs.

For Millimeter Size Tube O.D.			For Inch Size Tube O.D.		
CODE	Tube O.D. D mm	Unf Thread Size x Nos. d ₁	CODE	Tube O.D. D Inch	Unf Thread Size x Nos. d ₁
73 36 61 62	6	7/16x20s 1/2x20s	73 36 71 72	1/4	7/16x20s 1/2x20s
73 36 63 64	8	1/2x20s 5/8x18s	73 36 73 74	3/8	5/8x18s 3/4x16s
73 36 65 66	10	5/8x18s 3/4x16s	73 36 75	1/2	3/4x16s
73 36 67	12	3/4x16s	73 36 76	5/8	7/8x14s

Brass Flared Reducing Unions

Uniones Reducidas Abocardadas de Latón

真鍮ゲージヒッティング 黄銅扩口异径接头



Unit Per Pcs.

How to order: CODE

Brass flared reducing union, TUBE O.D. mm, or inch

For Millimeter Size Tube O.D.			For Inch Size Tube O.D.		
CODE	Tube O.D. D mm	Thread Female d _{PF}	CODE	Tube O.D. D mm	Thread Female d _{PF}
73 36 91 92 93 94	6 8 10 12	1/4	73 36 96	1/4	1/4
		1/4	97	3/8	3/8
		3/8	98	1/2	1/2
		1/2			

Brass Flared Union Couplings

Uniones Abocardadas de Latón

真鍮ユニオン 黄銅扩口管接头



Unit Per Pcs.

How to order: CODE

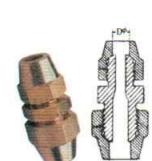
Brass flared union coupling, TUBE O.D. mm, or inch

For Millimeter Size Tube O.D.		For Inch Size Tube O.D.	
CODE	Tube O.D. D mm	CODE	Tube O.D. D Inch
73 37 01	6 x 6	73 37 06	1/4 x 1/4
02	8 x 8	07	3/8 x 3/8
03	10 x 10	08	1/2 x 1/2
04	12 x 12	09	5/8 x 5/8

Brass Flared Reducing Union Couplings

Uniones Reducidas Abocardadas de Latón

真鍮達径ユニオン 黄銅异径扩口管接头



Unit Per Pcs.

How to order: CODE

Brass flared reducing union coupling, TUBE O.D. mm, or inch

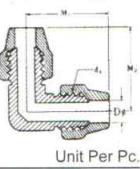
CODE	Tube O.D. D mm	Tube O.D. D'Inch	CODE	Tube O.D. D Inch	Tube O.D. D'Inch
73 37 11 12 13 14	6	3/8	73 37 15 16	1/4	3/8
		10 mm	17	10 mm	10 mm
		12 mm	18	12 mm	12 mm
		1/2		1/2	1/2

Brass Flared Elbows, 90°

Codos Abocardados de Latón 90° 真鍮エルボ 90 度黄铜扩口弯管接头

How to order: CODE

Brass flared elbow 90°,
TUBE O.D.



Unit Per Pc.

For Millimeter Size Tube O.D.		For Inch Size Tube O.D.	
CODE	Tube O.D. D mm	CODE	Tube O.D. D Inch
73 37 41	6 × 6	73 37 46	1/4 × 1/4
42	8 × 8	47	3/8 × 3/8
43	10 × 10	48	1/2 × 1/2
44	12 × 12	49	5/8 × 5/8

Unit Per Pc.

Brass Flared Elbows, 90°

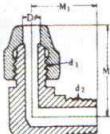
with Male End

Codos Abocardados de Latón, 90° Macho

真鍮ねじ込みエルボ

90 度黄铜扩口弯管接头

Tapered pipe thread on male end.



Unit Per Pc.

How to order: CODE

Brass flared elbow, 90° with male end, TUBE O.D.,
MALE THREAD SIZE

CODE	Tube O.D. D Inch	Male Thread d ₂ PT	CODE	Tube O.D. D Inch	Male Thread d ₂ PT
73 37 51	6 mm	1/8	73 37 58	10 mm	1/4
52		1/4	59		3/8
73 37 53	1/4	1/8	73 37 60	12 mm	3/8
54		1/4	61		1/2
73 37 55	8 mm	1/4	73 37 62	1/2	3/8
73 37 56	3/8	1/4	63		1/2
57		3/8	73 37 64	5/8	1/2

Unit Per Pc.

Brass Flared Tees

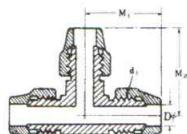
Tes Abocardadas de Latón 真鍮チーズ

T 形黄铜扩口管

Equal O.D. tube size tees.

How to order: CODE

Brass flared tee, TUBE O.D.



Unit Per Pc.

For Millimeter Size Tube O.D.		For Inch Size Tube O.D.	
CODE	Tube O.D. D mm	CODE	Tube O.D. D Inch
73 37 71	6	73 37 76	1/4
72	8	77	3/8
73	10	78	1/2
74	12	79	5/8

Unit Per Pc.

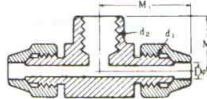
Brass Flared Tees

with Male Thread End

Tes Abocardadas de Latón con Rosca Macho

真鍮ねじ込みチーズ T 形黄铜扩口管

The male end has tapered pipe thread.



How to order: CODE

Brass flared tee with male thread end, TUBE O.D.,
MALE THREAD SIZE

Unit Per Pc.

For Millimeter Size Tube O.D.			For Inch Size Tube O.D.		
CODE	Tube O.D. D mm	Male Thread d ₂ PT	CODE	Tube O.D. D Inch	Male Thread d ₂ PT
73 37 81	6	1/8	73 37 91	1/8	1/8
73 37 82		1/4	73 37 92		1/4
73 37 83	8	1/4	73 37 93	3/8	1/4
73 37 84		1/4	73 37 94		3/8
73 37 85	10	3/8	73 37 95	1/2	3/8
73 37 86		3/8	73 37 96		1/2
73 37 87	12	1/2			

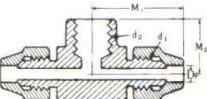
Unit Per Pc.

Brass Flared Tees

with Female Thread End

Tes Abocardadas de Latón con Rosca Hembra

真鍮ねじねじチーズ T 形黄铜扩口管



How to order: CODE

Brass flared tee with female thread end, TUBE O.D. mm,
FEMALE THREAD SIZE

Unit Per Pc.

For Millimeter Size Tube O.D.			For Inch Size Tube O.D.		
CODE	Tube O.D. D mm	Female Thread d ₂ PT	CODE	Tube O.D. D mm	Female Thread d ₂ PT
73 38 01	6	1/8	73 38 11	1/4	1/8
73 38 02		1/4	73 38 12		1/4
73 38 03	8	1/4	73 38 13	3/8	1/4
73 38 04		1/4	73 38 14		3/8
73 38 05	10	3/8	73 38 15	1/2	3/8
73 38 06		3/8	73 38 16		1/2
73 38 07	12	1/2			

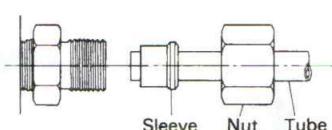
Unit Per Pc.

Brass Flareless Compression Tube Fittings

Tueras de Latón para Conexión de Tubería sin Abocardar

真鍮くい込み継手 管附件的黄銅螺母

Used for connecting copper tubing. No soldering or flaring is required. Pipes and fittings are tightly connected by sleeves as illustrated.

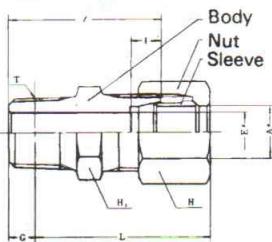


Working Pressure

Copper Tube O.D. mm	Rated Pressure kgf/cm ²
4 - 15	140
20, 25	105

Brass Flareless Male Connectors

Uniones Macho sin Abocardar de Latón
真鍮オスコネクター 黄铜阳性接头



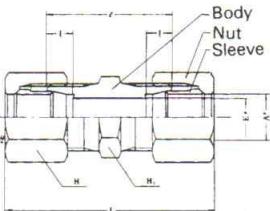
How to order: CODE

Brass flareless male connector, TUBE O.D.,
THREAD END SIZE

				Unit Per Pcs.	
CODE	Tube O.D. mm	Thread End PT	CODE	Tube O.D. mm	Thread End PT
73 40 01	4	1/8	73 40 09	12	3/8
02	6	1/8	10	15	3/8
03	6	1/4	11	15	1/2
04	8	1/8	12	20	1/2
05	8	1/4	13	20	3/4
73 40 06	10	1/4	73 40 14	25	3/4
07	10	3/8	15	25	1
08	12	1/4			

Brass Flareless Unions

Uniones sin Abocardar de Latón 真鍮ユニオン 黄铜连接管



How to order: CODE

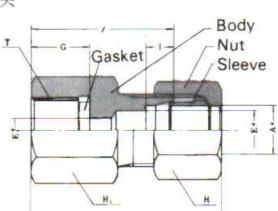
Brass flareless union, TUBE O.D.

				Unit Per Pcs.	
CODE	Tube O.D. mm	Thread Nut PF	CODE	Tube O.D. mm	Thread Nut PF
73 40 21	4	1/8	73 40 25	12	1/2
29	6	1/8	26	15	5/8
22	6	1/4	27	20	3/4
23	8	1/4	28	25	1
24	10	3/8			

Brass Flareless Female Couplings

Uniones Hembra sin Abocardar de Latón

真鍮ソケット 黄铜阴性管接头



How to order: CODE

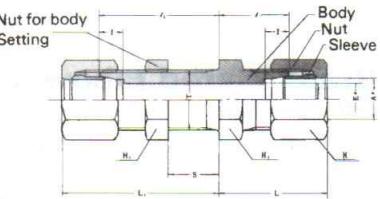
Brass flareless female coupling, TUBE O.D.,
FEMALE THREAD SIZE

		Unit Per Pcs.			
CODE	Tube O.D. mm	Thread Female PT	CODE	Tube O.D. mm	Thread Female PT
73 40 31	4	1/4	73 40 38	8	1/2
32		3/8	73 40 39		1/4
73 40 33	6	1/4	40	10	3/8
34		3/8	41		1/2
35	8	1/2	73 40 42	12	1/4
37		1/4	43		3/8
73 40 36	8	1/4	44		1/2
37		3/8			

Brass Flareless Bulkhead Unions

Uniones Pasatabiques sin Abocardar de Latón

隔壁ユニオン 黄铜壁舱接头



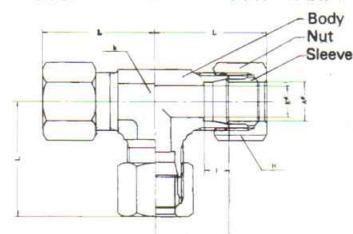
How to order: CODE

Brass flareless bulkhead union, TUBE O.D., NUT THREAD SIZE

		Unit Per Pcs.			
CODE	Tube O.D. mm	Nut Thread PF	CODE	Tube O.D. mm	Nut Thread PF
73 40 51	4	1/8	73 40 55	12	1/2
52	6	1/4	56	15	5/8
53	8	1/4	57	20	3/4
54	10	3/8	58	25	1

Brass Flareless Union Tees

Tes sin Abocardar de Latón 真鍮ユニオンチーズ 黄铜T形接头



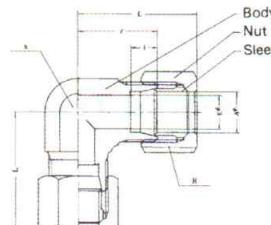
How to order: CODE

Brass flareless union tee, TUBE O.D., NUT THREAD SIZE

		Unit Per Pcs.			
CODE	Tube O.D. mm	Nut Thread PF	CODE	Tube O.D. mm	Nut Thread PF
73 40 61	4	1/8	73 40 65	12	1/2
62	6	1/4	66	15	5/8
63	8	1/4	67	20	3/4
64	10	3/8	68	25	1

Brass Flareless Union Elbows

Codos sin Abordar de Latón 真鍮ユニオンエルボ 黄铜弯管接头



How to order: CODE

Brass flareless female coupling, TUBE O.D.,
FEMALE THREAD SIZE

How to order: CODE

Brass flareless union elbow, TUBE O.D., NUT THREAD SIZE

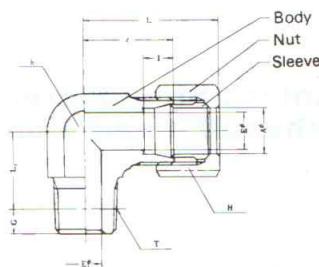
Unit Per Pcs.

CODE	Tube O.D. mm	Nut Thread PF	CODE	Tube O.D. mm	Nut Thread PF
73 40 71	4	1/8	73 40 75	12	1/2
72	6	1/4	76	15	5/8
73	8	1/4	77	20	3/4
74	10	3/8	78	25	1

Brass Flareless Male Elbows

Codos Machos sin Abocardar de Latón

真鍮雄ねじエルボ 黄铜阳性弯管接头

**How to order: CODE**

Brass flareless male elbow, TUBE O.D., THREAD END SIZE

Unit Per Pcs.

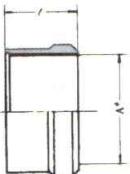
CODE	Tube O.D. mm	Thread End PT	CODE	Tube O.D. mm	Thread End PT
73 40 81	4	1/8	73 40 89	12	3/8
82	6	1/8	90	15	3/8
83	6	1/4	91	15	1/2
84	8	1/8	92	20	1/2
85	8	1/4	93	20	3/4
73 40 86	10	1/4	73 40 94	25	3/4
87	10	3/8	95	25	1
88	12	1/4			

Brass Sleeves

for Flareless Tube Fitting

Ovalillos de Latón para Conexión

真鍮圧着継手スリーブ 管附件的黄铜衬套



Unit Per Pcs.

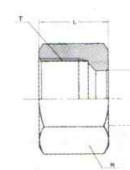
CODE	Tube O.D. mm	Length mm	CODE	Tube O.D. mm	Length mm
73 41 01	4	7	73 41 05	12	10
02	6	9	06	15	10
03	8	9	07	20	10
04	10	10	08	25	11

Brass Nuts

for Flareless Tube Fitting

Tueras de latón para racores sin abocardar

真鍮圧着継手ナット 管附件的黄铜螺母



Unit Per Pcs.

CODE	Tube O.D. mm	Nut Thread	CODE	Tube O.D. mm	Nut Thread
73 41 11	4	M10×1.25	73 41 15	12	M18×1.5
12	6	M12×1.5	16	15	M22×1.5
13	8	M14×1.5	17	20	M28×1.5
14	10	M16×1.5	18	25	M34×1.5

Stainless Steel Flareless Tube Fittings

Conexión de Tubería sin Abocardar de Acero-inoxidable

ステンレスチューブ継手 不锈钢管接头

These stainless steel flareless tube fittings have the following characteristics and specifications.

- Applicable for extreme high and low temperatures.
- Applicable for high pressure.
- May be used for vacuum lines.
- May be used for gas analyzer lines when high accuracy is required.

How to assemble**Specifications**

Material	Stainless Steel SUS 316	
Test Pressure	850 Kgf/cm ²	
Working Pressure	210 "	
Thread	JIS PT (Taper Pipe Thread) and JIS PF for union of pressure gauge	

Stainless Steel Flareless Male Connectors

Uniones Machos sin Abocardar de acero-inoxidable

ステンレス雄ねじコネクター 不锈钢管接头

**How to order: CODE**

Stainless steel flareless male connector, TUBE O.D., MALE THREAD SIZE

Unit Per Pcs.

CODE	Tube O.D.	Thread Male End	CODE	Tube O.D.	Thread Male End
73 43 01	6 mm	PT 1/8	73 43 09	10 mm	PT 1/4
		" 1/4			" 3/8
		" 3/8			" 1/2
		" 1/2			
73 43 05	8 mm	PT 1/8	73 43 12	12 mm	PT 1/4
		" 1/4			" 3/8
		" 3/8			" 1/2
		" 1/2			

Stainless Steel Flareless Male Elbows

Codos Machos sin Abocardar de Acero-inoxidable

ステンレス雄ねじエルボ 不锈钢管头

**How to order: CODE**

Stainless steel flareless male elbow, TUBE O.D., MALE THREAD SIZE

Unit Per Pcs.

CODE	Tube O.D.	Thread Male End	CODE	Tube O.D.	Thread Male End
73 43 21	6 mm	PT 1/8	73 43 29	10 mm	PT 1/4
		" 1/4			" 3/8
		" 3/8			" 1/2
		" 1/2			
73 43 25	8 mm	PT 1/8	73 43 32	12 mm	PT 1/4
		" 1/4			" 3/8
		" 3/8			" 1/2
		" 1/2			

Stainless Steel Flareless Bulkhead Male Connectors

Uniones Macho Pasatabiques sin Abocardar de Acero-inoxidable
ステンレス雄ねじバルクヘッドコネクター 不锈钢管舱壁接头

How to order: CODE

Stainless steel flareless bulkhead male connector, TUBE O.D., MALE THREAD SIZE



Unit Per Pc.

CODE	Tube O.D.	Thread Male End	CODE	Tube O.D.	Thread Male End
73 43 41	6 mm	PT 1/8 " 1/4	73 43 44	10 mm	PT 1/4
42			73 43 45	12 mm	PT 3/8

Stainless Steel Flareless Male Run Tees

Tes Macho lateral sin Abocardar de Acero-inoxidable
ステンレス雄ねじランチーズ 不锈钢外丝支路T型管

How to order: CODE

Stainless steel flareless male run tee, TUBE O.D., MALE THREAD SIZE



Unit Per Pc.

CODE	Tube O.D.	Thread Male End	CODE	Tube O.D.	Thread Male End
73 43 51	6 mm	PT 1/8 " 1/4	73 43 54	8 mm	PT 1/4
52			73 43 55	10 mm	" 1/4

CODE	Tube O.D.	Thread Male End	CODE	Tube O.D.	Thread Male End
73 43 53	8 mm	PT 1/8	73 43 56	12 mm	PT 3/8

Stainless Steel Flareless Male Branch Tees

Tes Macho sin Abocardar de Acero-inoxidable

ステンレス雄ねじブランチチーズ 不锈钢外丝支路T型管

How to order: CODE

Stainless steel flareless male branch tee, TUBE O.D., MALE THREAD SIZE



Unit Per Pc.

CODE	Tube O.D.	Thread Male End	CODE	Tube O.D.	Thread Male End
73 43 61	6 mm	PT 1/8 " 1/4	73 43 64	8 mm	PT 1/4
62			73 43 65	10 mm	" 1/4

CODE	Tube O.D.	Thread Male End	CODE	Tube O.D.	Thread Male End
73 43 63	8 mm	PT 1/8	73 43 66	12 mm	PT 3/8

Stainless Steel Flareless Female Connectors

Uniones Hembra sin Abocardar de Acero-inoxidable

ステンレス雌ねじコネクター 不锈钢内丝接头

How to order : CODE

Stainless steel flareless female connector, TUBE O.D., FEMALE THREAD SIZE



Unit Per Pc.

CODE	Tube O.D.	Thread Female End	CODE	Tube O.D.	Thread Female End
73 43 71		PF 1/8 " 1/4 " 3/8 " 1/2	73 43 78	10 mm	PF 1/4 " 3/8 " 1/2
72	6 mm		79		
73			80		
74					
73 43 75	8 mm	PF 1/4 " 3/8 " 1/2	73 43 81	12 mm	PF 1/4 " 3/8 " 1/2
76			82		
77			83		

Only this type thread is PF.

Stainless Steel Flareless Female Branch Tees

Tes Hembra sin Abocardar de Acero-inoxidable

ステンレス雌ねじブランチチーズ 不锈钢支路T型管

How to order: CODE

Stainless steel flareless female branch tee, TUBE O.D., FEMALE THREAD SIZE



Unit Per Pc.

CODE	Tube O.D.	Thread Female End	CODE	Tube O.D.	Thread Female End
73 43 86	6 mm	PT 1/8 " 1/4	73 43 89	10 mm	PT 1/4
87					

Stainless Steel Flareless Bulkhead Female Connectors

Uniones Hembra de Pasatabique sin Abocardar de Acero-inoxidable

ステンレス雌ねじバルクヘッドコネクター 不锈钢管舱壁接头



Unit Per Pc.

CODE	Tube O.D.	Thread Female End	CODE	Tube O.D.	Thread Female End
73 43 94	6 mm	PT 1/8 " 1/4	73 43 97	10 mm	PT 1/4
95					

Stainless Steel Flareless Unions

Uniones sin Abocardar de Acero-inoxidable

ステンレスユニオン 不锈钢活管接



Unit Per Pc.

CODE	Tube O.D.	CODE	Tube O.D.
73 44 01	6 mm	73 44 03	10 mm
02	8 mm	04	12 mm

Stainless Steel Flareless Reducing Unions

Uniones Reducidas sin Abocardar de Acero-inoxidable

ステンレス違径ユニオン 不锈钢异径接头



Unit Per Pc.

CODE	Tube O.D.	CODE	Tube O.D.
73 44 06	6 x 8 mm	73 44 08	10 x 12 mm
07	8 x 10 mm		

Stainless Steel Flareless Bulkhead Unions



Unit Per Pc.

CODE	Tube O.D.	CODE	Tube O.D.
73 44 11	6 mm	73 44 13	10 mm
12	8 mm	14	12 mm

Stainless Steel Flareless Tee Unions

Tes sin Abocardar de Acero-inoxidable
ステンレスチーユニオン 不锈钢 T 形管接头



Unit Per Pc.

CODE	Tube O.D.	CODE	Tube O.D.
73 44 16	6 mm	73 44 18	10 mm
17	8 mm	19	12 mm

Stainless Steel Flareless Elbow Unions

Codos sin Abocardar de Acero-noxidable
ステンレスエルボユニオン 不锈钢弯管接头



Unit Per Pc.

CODE	Tube O.D.	CODE	Tube O.D.
73 44 21	6 mm	73 44 23	10 mm
22	8 mm	24	12 mm

Tube Fitting Accessories for Stainless Steel Flareless Tube Fittings

Accesorios para Conexión de Tubería sin Abocardar de Acero-inoxidable
チューブ 繰手付属品 管接头附属品

Following items are for use with the tube fittings.

Stainless Steel Nut, Ferrule Front & Rear

Tuerca de Acero-inoxidable, Frente y Atrás de Casquillo
ステンレスナット締輪（前後） 不锈钢管螺帽

	73 44 31	Stainless steel nut for tube O.D.		
	32	"	6 mm	Pc.
	33	"	8 mm	"
	34	"	10 mm	"
		"	12 mm	"
	73 44 36	Stainless steel ferrule front for tube O.D.		
	37	"	6 mm	Pc.
	38	"	8 mm	"
	39	"	10 mm	"
		"	12 mm	"
	73 44 41	Stainless steel ferrule rear for tube O.D.		
	42	"	6 mm	Pc.
	43	"	8 mm	"
	44	"	10 mm	"
		"	12 mm	"

Ermeto High Pressure Steel Couplings

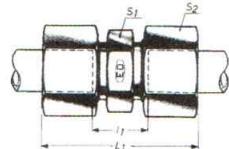
Acoplamientos de acero Tipo Ermeto, de Alta Presión
エルメト高压食い込み継ぎ手 高压防蚀钢接头

Ermeto high pressure steel couplings are available in steel, stainless steel, and brass with working temperature ranges varying based upon the material of the cast. When ordering, specify the type of material the coupling should be supplied in. Unless specified otherwise, steel couplings will be provided.

Steel Unions

How to order: CODE

Ermeto steel union, NOMINAL PRESSURE, TUBE O.D., PART NO.



Unit Per Pc.

CODE	Tube O.D.	Pressure Rating	Part No.	Length L ₁
Nominal Pressure: 100 kgf/cm ²				
73 44 51	4 mm		G4 - LL	31 mm
52	6		G6 - LL	32
53	8	PN 100	G8 - LL	35
54	10		G10 - LL	35
55	12		G12 - LL	35

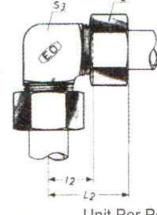
Nominal Pressure: 315 kgf/cm²

73 44 56	6 mm		G6 - PL	39 mm
57	8		G8 - PL	40
58	10	PN 315	G10 - PL	42
59	12		G12 - PL	43
60	15		G15 - PL	46
61	18		G18 - PL	48

Steel Elbows

How to order: CODE

Ermeto steel elbow, NOMINAL PRESSURE, TUBE O.D., PART NO.



Unit Per Pc.

CODE	Tube O.D.	Pressure Rating	Part No.	Length L ₂
Nominal Pressure: 100 kgf/cm ²				
73 44 65	4 mm		W4 - LL	21 mm
66	6		W6 - LL	21
67	8	PN 100	W8 - LL	23
68	10		W10 - LL	24
69	12		W12 - LL	25

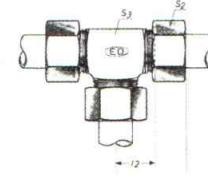
Nominal Pressure: 315 kgf/cm²

73 44 71	6 mm		W6 - PL	27 mm
72	8		W8 - PL	29
73	10	PN 315	W10 - PL	30
74	12		W12 - PL	32
75	15		W15 - PL	36
76	18		W18 - PL	40

Steel Tees

How to order: CODE

Ermeto steel tee, NOMINAL PRESSURE, TUBE O.D., PART NO.



Unit Per Pc.

CODE	Tube O.D.	Pressure Rating	Part No.	Length L ₂
Nominal Pressure: 100 kgf/cm ²				
73 44 81	4 mm		T4 - LL	21 mm
82	6		T6 - LL	21
83	8	PN 100	T8 - LL	23
84	10		T10 - LL	24
85	12		T12 - LL	25

Nominal Pressure: 315 kgf/cm²

73 44 86	6 mm		T6 - PL	27 mm
87	8		T8 - PL	29
88	10	PN 315	T10 - PL	30
89	12		T12 - PL	32
90	15		T15 - PL	36
91	18		T18 - PL	40

Flanges

Bridas フランジ 法兰

Many types of flanges are produced according to various standards. The most common types are listed below.

DIN 2531 / 2532 / 2533 – Cast Iron Flanges

Nominal Pressure	DIN No.	Raised Face Type (Nominal Size)
PN 6	DIN 2531	10 - 3,600 mm
PN 10	DIN 2532	10 - 3,000 mm
PN 16	DIN 2533	10 - 1,000 mm

JIS B 2220 (1990) – Steel Welding Pipe Flanges

Nominal Pressure	Slip on Welding Type Flange		
	Plate Flange	Hub Flange	
	Flat Face	Without Groove on Hub Side	
5 kgf/cm ²	10 - 400 mm	450-1,000 mm	
10 kgf/cm ²	Thin Type	10 - 350 mm	400 mm
10 kgf/cm ²	Ordinary Type	10 - 225 mm	250-1,000 mm
16 kgf/cm ²	-	10 - 600 mm	600-1,200mm

ANSI B16.5

Nominal Pressure	Flange Type	
	Slip on	Socket welding
Class 150	1/2 - 24"	1/2 - 24"
Class 300	1/2 - 24"	1/2 - 24"

DIN 2531 / 2532 / 2533 – Raised Face Type Cast Iron Flanges



How to order: CODE

Flange, cast iron, raised face, DIN NO., NOMINAL PRESSURE, NOMINAL DIAM

DIN 2531 – Cast Iron Flanges, Nominal pressure PN 6

CODE	Nominal Diam. mm	Size mm			Bolt Size mm		
		O.D.	Thick	P.C.D.	No.	Thread	Diam.
73 45 01	10	75	12	50	4	M10	11
02	15	80	12	55	4	M10	11
03	20	90	14	65	4	M10	11
04	25	100	14	75	4	M10	11
05	32	120	16	90	4	M12	14
73 45 06	40	130	16	100	4	M12	14
07	50	140	16	110	4	M12	14
08	65	160	16	130	4	M12	14
09	80	190	18	150	4	M16	18
10	100	210	18	170	4	M16	18
73 45 11	125	240	20	200	8	M16	18
12	150	265	20	225	8	M16	18
13	200	320	22	280	8	M16	18
14	250	375	24	335	12	M16	18
15	300	440	24	395	12	M20	22

DIN 2532 – Cast Iron Flanges, Nominal pressure PN 10

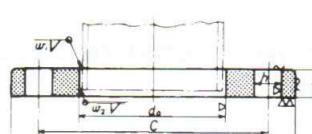
CODE	Nominal Diam. mm	Size mm			Bolt Size mm		
		O.D.	Thick	P.C.D.	No.	Thread	Diam.
73 45 21	10	90	14	60	4	M12	14
22	15	95	14	65	4	M12	14
23	20	105	16	75	4	M12	14
24	25	115	16	85	4	M12	14
25	32	140	18	100	4	M16	18
73 45 26	40	150	18	110	4	M16	18
27	50	165	20	125	4	M16	18
28	65	185	20	145	4	M16	18
29	80	200	22	160	8	M16	18
30	100	220	24	180	8	M16	18
73 45 31	125	250	26	210	8	M16	18
32	150	285	26	240	8	M20	22
33	175	315	28	270	8	M20	22
34	200	340	26	295	8	M20	22
35	250	395	28	350	12	M20	22
73 45 36	300	445	28	400	12	M20	22

DIN 2533 – Cast Iron Flanges, Nominal pressure PN 16

CODE	Nominal Diam. mm	Size mm			Bolt Size mm		
		O.D.	Thick	P.C.D.	No.	Thread	Diam.
73 45 41	10	90	14	60	4	M12	14
42	15	95	14	65	4	M12	14
43	20	105	16	75	4	M12	14
44	25	115	16	85	4	M12	14
45	32	140	18	100	4	M16	18
73 45 46	40	150	18	110	4	M16	18
47	50	165	20	125	4	M16	18
48	65	185	20	145	4	M16	18
49	80	200	22	160	8	M16	18
50	100	220	24	180	8	M16	18
73 45 51	125	250	26	210	8	M16	18
52	150	285	26	240	8	M20	22
53	175	315	28	270	8	M20	22
54	200	340	30	295	12	M20	22
55	250	405	32	355	12	M24	26
73 45 56	300	460	32	410	12	M24	26

Slip-on Welding Steel Pipe Flanges (Ref. JIS B 2220 – 90)

Bridas para Soldar 鋼管差し込み溶接フランジ 钢管焊接平面法兰



How to order: CODE

Flange, steel, slip-on welding, JIS B 2220, PRESSURE, NOMINAL SIZE

CODE	Nominal Size		Pipe O.D. mm	Flange Size mm						Unit Per Pcs.		
	A	B		Bore do	O.D. D	Thick t	Pitch C	Bolt No.	Hole hΦ			

5 kgf/cm² Ref. JIS B 2220

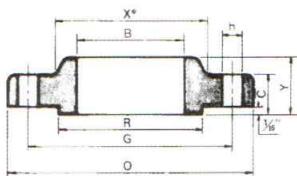
73 46 01	10	3/8	17.3	17.8	75	9	55	4	12		
02	15	1/2	21.7	22.2	80	9	60	4	12		
03	20	3/4	27.2	27.7	85	10	65	4	12		
04	25	1	34.0	34.5	95	10	75	4	12		
05	32	1-1/4	42.7	43.2	115	12	90	4	15		
73 46 06	40	1-1/2	48.6	49.1	120	12	95	4	15		
07	50	2	60.5	61.1	130	14	105	4	15		
08	65	2-1/2	76.3	77.1	155	14	130	4	15		
09	80	3	89.1	90.0	180	14	145	4	19		
10	100	4	114.3	115.4	200	16	165	8	19		
73 46 11	125	5	139.8	141.2	235	16	200	8	19		
12	150	6	165.2	166.6	265	18	230	8	19		
13	200	8	216.3	218	320	20	280	8	23		
14	250	10	267.4	269.5	385	22	345	12	23		
15	300	12	318.5	321	430	22	390	12	23		
73 46 16	350	14	355.6	358.1	480	24	435	12	25		
17	400	16	406.4	409.0	540	24	495	16	25		
18	450	18	457.2	460.0	605	24	555	16	25		
19	500	20	508.0	511.0	655	24	605	20	25		

10 kgf/cm² Ref. JIS B 2220

73 46 21	10	3/8	17.3	17.8	90	12	65	4	15		
22	15	1/2	21.7	22.2	95	12	70	4	15		
23	20	3/4	27.2	27.7	100	14	75	4	15		
24	25	1	34	34.5	125	14	90	4	19		
25	32	1-1/4	42.7	43.2	135	16	100	4	19		
73 46 26	40	1-1/2	48.6	49.1	140	16	105	4	19		
27	50	2	60.5	61.1	155	16	120	4	19		
28	65	2-1/2	76.3	77.1	175	18	140	4	19		
29	80	3	89.1	90	185	18	150	8	19		
30	100	4	114.3	115.4	210	18	175	8	19		
73 46 31	125	5	139.8	141.2	250	20	210	8	23		
32	150	6	165.2	166.6	280	22	240	8	23		
33	200	8	216.3	218	330	22	290	12	23		
34	250	10	267.4	269.5	400	24	355	12	25		
35	300	12	318.5	321	445	24	400	16	25		
73 46 36	350	14	355.6	358.1	490	26	445	16	25		
37	400	16	406.4	409.0	560	28	510	16	27		
38	450	18	457.2	460.0	620	30	565	20	27		
39	500	20	508.0	511.0	675	30	620	20	27		

Slip-on Welding Steel Pipe Flanges (Ref. ASME / ANSI B 16.5 - 1988)

Bridas para Soldar 鋼管差し込み溶接フランジ 钢管焊接平面法兰



How to order: CODE

Flange, steel, slip-on welding, ASME/ANSI B16.5, PRESSURE, NOMINAL SIZE

CODE	Nominal Size		Flange Size inch			Bolt Hole Inch			Unit Per Pcs.	
	A	B	O.D.	I.D.	Thick	Dia	No.	Circle		

Nominal Pressure 150 lbs

73 46 51	15	1/2	3.50	0.88	0.44	0.62	4	2.38		
52	20	3/4	3.88	1.09	0.50	0.62	4	2.75		
53	25	1	4.25	1.36	0.56	0.62	4	3.12		
54	32	1-1/4	4.62	1.70	0.62	0.62	4	3.50		
55	40	1-1/2	5.00	1.95	0.69	0.62	4	3.88		
73 46 56	50	2	6.00	2.44	0.75	0.75	4	4.75		
57	65	2-1/2	7.00	2.94	0.88	0.75	4	5.50		
58	80	3	7.50	3.57	0.94	0.75	4	6.00		
59	90	3-1/2	8.50	4.07	0.94	0.75	8	7.00		
60	100	4	9.00	4.57	0.94	0.75	8	7.50		
73 46 61	125	5	10.00	5.66	0.94	0.88	8	8.50		
62	150	6	11.00	6.72	1.00	0.88	8	9.50		
63	200	8	13.50	8.72	1.12	0.88	8	11.75		
64	250	10	16.00	10.88	1.19	1.00	12	14.25		
65	300	12	19.00	12.88	1.25	1.00	12	17.00		
73 46 66	350	14	21.00	14.14	1.38	1.12	12	18.75		
67	400	16	23.50	16.16	1.44	1.12	16	21.25		
68	450	18	25.00	18.18	1.56	1.25	16	22.75		
69	500	20	27.50	20.20	1.69	1.25	20	25.00		

Nominal Pressure 300 lbs

73 46 71	15	1/2	3.75	0.88	0.56	0.62	4	2.62		
72	20	3/4	4.62	1.09	0.62	0.75	4	3.25		
73	25	1	4.88	1.36	0.69	0.75	4	3.50		
74	32	1-1/4	5.25	1.70	0.75	0.75	4	3.88		
75	40	1-1/2	6.12	1.95	0.81	0.88	4	4.50		
73 46 76	50	2	6.50	2.44	0.88	0.75	8	5.00		
77	65	2-1/2	7.50	2.94	1.00	0.88	8	5.88		
78	80	3	8.25	3.57	1.12	0.88	8	6.62		
79	90	3-1/2	9.00	4.07	1.19	0.88	8	7.25		
80	100	4	10.00	4.57	1.25	0.88	8	7.88		
73 46 81	125	5	11.00	5.66	1.38	0.88	8	9.25		
82	150	6	12.50	6.72	1.44	0.88	12	10.62		
83	200	8	15.00	8.72	1.62	1.00	12	13.00		
84	250	10	17.50	10.88	1.88	1.12	16	15.25		
85	300	12	20.50	12.88	2.00	1.25	16	17.75		
73 46 86	350	14	23.00	14.14	2.13	1.25	20	20.25		
87	400	16	25.50	16.16	2.25	1.38	20	22.50		
88	450	18	28.00	18.18	2.38	1.38	24	24.75		
89	500	20	30.50	20.20	2.50	1.38	24	27.00		

Stainless Steel Flanges

Bridas de Aceroinoxidable ステンレスパイプフランジ 不锈钢法兰

Made of forged stainless steel SUS 304 with high corrosion and thermal resistance. Mainly used in petroleum, petrochemical, thermal and nuclear power industries.

Many types of flanges are produced according to various standards. The most common types are listed below.

Slip-on Welding Stainless Steel Pipe Flanges

(Ref. JIS B 2220 - 90)



How to order: CODE

Flange, stainless steel, slip-on welding, JIS B 2220, PRESSURE, NOMINAL SIZE

CODE	Unit Per Pcs.						
	Nominal Size		Flange Size inch		Bolt Hole Inch		
	mm(A)	Inch(B)	O.D.	I.D.	Thick	Dia	No.

JIS 5 kgf/cm² Forged Stainless Steel

Size: mm

73 47 01	10	3/8	75	17.8	9	12	4	55
02	15	1/2	80	22.2	9	12	4	60
03	20	3/4	85	27.7	10	12	4	65
04	25	1	95	34.5	10	12	4	75
05	32	1-1/4	115	43.2	12	15	4	90

73 47 06	40	1-1/2	120	49.1	12	15	4	95
07	50	2	130	61.1	14	15	4	105
08	65	2-1/2	155	77.1	14	15	4	130
09	80	3	180	90.0	14	19	4	145
10	100	4	200	115.4	16	19	8	165

73 47 11	125	5	235	141.2	16	19	8	200
12	150	6	265	166.6	18	19	8	230
13	200	8	320	218.0	20	23	8	280
14	250	10	385	269.5	22	23	12	345
15	300	12	430	321.0	22	23	12	390

JIS 10 kgf/cm² Forged Stainless Steel

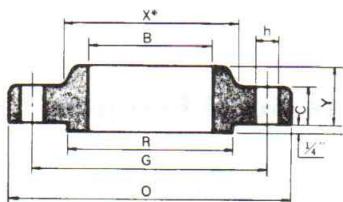
73 47 16	10	3/8	90	17.8	12	15	4	65
17	15	1/2	95	22.2	12	15	4	70
18	20	3/4	100	27.7	14	15	4	75
19	25	1	125	34.5	14	19	4	90
20	32	1-1/4	135	43.2	16	19	4	100

73 47 21	40	1-1/2	140	49.1	16	19	4	105
22	50	2	155	61.1	16	19	4	120
23	65	2-1/2	175	77.1	18	19	4	140
24	80	3	185	90.0	18	19	8	150
25	100	4	210	115.4	18	19	8	175

73 47 26	125	5	250	141.2	20	23	8	210
27	150	6	280	166.6	22	23	8	240
28	200	8	330	218.0	22	23	12	290
29	250	10	400	269.5	24	25	12	355
30	300	12	445	321.0	24	25	16	400

Slip-on Welding Stainless Steel Pipe Flanges

(Ref. ASME / ANSI B16.5 – 1988)



How to order: CODE

Flange, stainless steel, slip-on welding, ASME/ANSI B16.5
PRESSURE, NOMINAL SIZE

CODE	Unit Per Pcs.						
	Nominal Size	Flange Size inch	Bolt Hole Inch				
A	B	O.D.	I.D.	Thick	Dia	No.	Circle

Nominal Pressure 150 lbs

73 47 51	15	1/2	3.50	0.88	0.44	0.62	4	2.38
52	20	3/4	3.88	1.09	0.50	0.62	4	2.75
53	25	1	4.25	1.36	0.56	0.62	4	3.12
54	32	1-1/4	4.62	1.70	0.62	0.62	4	3.50
55	40	1-1/2	5.00	1.95	0.69	0.62	4	3.88

73 47 56	50	2	6.00	2.44	0.75	0.75	4	4.75
57	65	2-1/2	7.00	2.94	0.88	0.75	4	5.50
58	80	3	7.50	3.57	0.94	0.75	4	6.00
59	90	3-1/2	8.50	4.07	0.94	0.75	8	7.00
60	100	4	9.00	4.57	0.94	0.75	8	7.50

(to be continued)

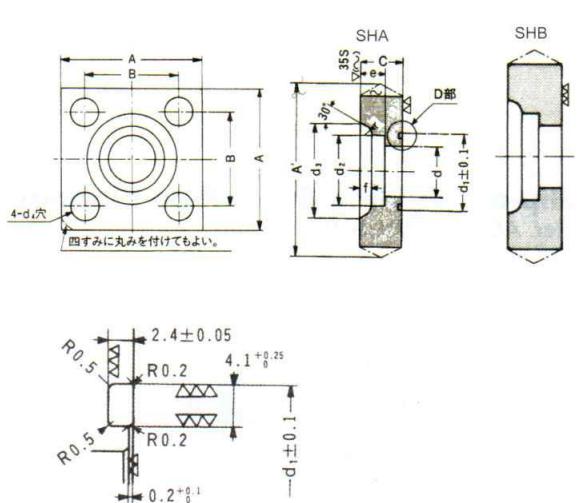
73 47 61	125	5	10.00	5.66	0.94	0.88	8	8.50
62	150	6	11.00	6.72	1.00	0.88	8	9.50
63	200	8	13.50	8.72	1.12	0.88	8	11.75
64	250	10	16.00	10.88	1.19	1.00	12	14.25
65	300	12	19.00	12.88	1.25	1.00	12	17.00

Nominal Pressure 300 lbs

73 47 66	15	1/2	3.75	0.88	0.56	0.62	4	2.62
67	20	3/4	4.62	1.09	0.62	0.75	4	3.25
68	25	1	4.88	1.36	0.69	0.75	4	3.50
69	32	1-1/4	5.25	1.70	0.75	0.75	4	3.88
70	40	1-1/2	6.12	1.95	0.81	0.88	4	4.50

73 47 71	50	2	6.50	2.44	0.88	0.75	8	5.00
72	65	2-1/2	7.50	2.94	1.00	0.88	8	5.88
73	80	3	8.25	3.57	1.12	0.88	8	6.62
74	90	3-1/2	9.00	4.07	1.19	0.88	8	7.25
75	100	4	10.00	4.57	1.25	0.88	8	7.88

73 47 76	125	5	11.00	5.66	1.38	0.88	8	9.25
77	150	6	12.50	6.72	1.44	0.88	12	10.62
78	200	8	15.00	8.72	1.62	1.00	12	13.00
79	250	10	17.50	10.88	1.88	1.12	16	15.25
80	300	12	20.50	12.88	2.00	1.25	16	17.75



SHA (Hexagon Bolt with Groove for O ring)

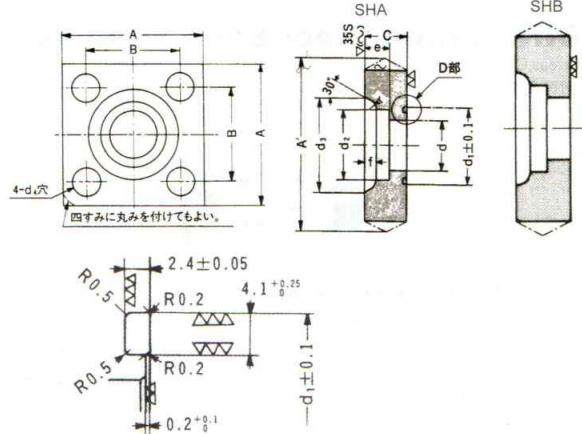
Unit Per Pcs.

CODE	Nom Size	A	B	C	d	d ₁	d ₂	d ₄	e	f
73 48 01	15	63	40	22	16.0	30	22.2	11	11	3.5
	02	68	45	22	20.0	35	27.7	11	12	4.0
	03	80	53	28	25.0	40	34.5	13	14	4.0
	04	90	63	28	31.5	45	43.2	13	16	6.0
	05	100	70	36	37.5	55	49.1	18	18	7.0
73 48 06	50	112	80	36	47.5	65	61.1	18	20	7.0
	07	140	100	45	60.0	80	77.1	22	22	9.5
	08	155	112	45	71.0	90	90.0	24	25	11.0

SHB (Hexagon Bolt without Groove)

Unit Per Pcs.

CODE	Nom Size	A	B	C	d	d ₁	d ₂	d ₄	e	f
73 48 11	15	63	40	22	16.0	30	22.2	11	11	3.5
	12	68	45	22	20.0	35	27.7	11	12	4.0
	13	80	53	28	25.0	40	34.5	13	14	4.0
	14	90	63	28	31.5	45	43.2	13	16	6.0
	15	100	70	36	37.5	55	49.1	18	18	7.0
73 48 16	50	112	80	36	47.5	65	61.1	18	20	7.0
	17	140	100	45	60.0	80	77.1	22	22	9.5
	18	155	112	45	71.0	90	90.0	24	25	11.0



SSA (Hexagon Socket Head Cap Screw with groove for O ring)

Unit Per Pcs.

CODE	Nom Size	A	B	C	d	d ₁	d ₂	d ₄	e	f
73 48 21	15	54	36	22	16.0	30	22.2	11	11	3.5
	22	58	40	22	20.0	35	27.7	11	12	4.0
	23	68	48	28	25.0	40	34.5	13	14	4.0
	24	76	56	28	31.5	45	43.2	13	16	6.0
	25	92	65	36	37.5	55	49.1	18	18	7.0
73 48 26	50	100	73	36	47.5	65	61.1	18	20	7.0
	27	128	92	45	60.0	80	77.1	22	22	9.5
	28	140	103	45	71.0	90	90.0	24	25	11.0

SSB (Hexagon Socket Head Cap Screw without groove)

Unit Per Pcs.

CODE	Nom Size	A	B	C	d	d ₁	d ₂	d ₄	e	f
73 48 31	15	54	36	22	16.0	30	22.2	11	11	3.5
	32	58	40	22	20.0	35	27.7	11	12	4.0
	33	68	48	28	25.0	40	34.5	13	14	4.0
	34	76	56	28	31.5	45	43.2	13	16	6.0
	35	92	65	36	37.5	55	49.1	18	18	7.0
73 48 36	50	100	73	36	47.5	65	61.1	18	20	7.0
	37	128	92	45	60.0	80	77.1	22	22	9.5
	38	140	103	45	71.0	90	90.0	24	25	11.0

JIS Steel Blind Flanges

Brida Ciega de Acero

鋼製ブラインドフランジ

鋼製盲法蘭



A blind Flange is which has no bore, and is used to close ends of piping systems.
Made from rolled steel (SS-400).

Unit Per Pcs.

CODE	Nom Size		For Pipe OD mm	Flange Size mm		
	A	B		O.D.	Thick	Pitch

5 kgf/cm² Ref. JIS B 2220

73 48 41	10	3/8	17.3	75	9	55	4	12
42	15	1/2	21.7	80	9	60	4	12
43	20	3/4	27.2	85	10	65	4	12
44	25	1	34	95	10	75	4	12
45	32	1-1/4	42.7	115	12	90	4	15
73 48 46	40	1-1/2	48.6	120	12	95	4	15
47	50	2	60.5	130	14	105	4	15
48	65	2-1/2	76.3	155	14	130	4	15
49	80	3	89.1	180	14	145	4	19
50	100	4	114.3	200	16	165	8	19

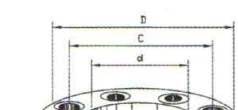
10 kgf/cm² Ref. JIS B 2220

73 48 61	10	3/8	17.3	90	12	65	4	15
62	15	1/2	21.7	95	12	70	4	15
63	20	3/4	27.2	100	14	75	4	15
64	25	1	34	125	14	90	4	19
65	32	1-1/4	42.7	135	16	100	4	19
73 48 66	40	1-1/2	48.6	140	16	105	4	19
67	50	2	60.5	155	16	120	4	19
68	65	2-1/2	76.3	175	18	140	4	19
69	80	3	89.1	185	18	150	8	19
70	100	4	114.3	210	18	175	8	19
73 48 71	125	5	139.8	250	20	210	8	23
72	150	6	165.2	280	22	240	8	23
73	200	8	216.3	330	22	290	12	23
74	250	10	267.4	400	24	355	12	25
75	300	12	318.5	445	24	400	16	25

DIN Carbon Steel Slip-on Flanges PN6

Bridas Postizas de Acero al Crbono, segn DIN

DIN 鋳鋼板フランジ DIN 铸钢法兰(滑动型)



CODE	Nominal Diam mm	Size mm			Bolt Hole		Weight kg
		d	D	C	t	No.	
73 55 01	10	17.7	75	50	12	4	14
02	15	22.2	80	55	12	4	14
03	20	27.6	90	65	14	4	14
04	25	34.4	100	75	14	4	14
05	32	43.1	120	90	16	4	14
73 55 06	40	49	130	100	16	4	14
07	50	61.1	140	110	16	4	14
08	65	77.1	160	130	16	4	14
09	80	90.3	190	150	18	4	18
10	100	115.9	210	170	18	4	18

(to be continued)

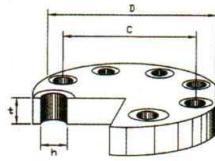
CODE	Nominal Diam mm	Size mm				Bolt Hole		Weight kg	Unit Per Pcs.	
		d	D	C	t	No.	h mm			
73 55 11	125	141.6	240	200	20	8	18	3.23		
	150	170.5	265	225	20	8	18	4.41		
	200	221.8	320	280	22	8	18	6.33		
	250	276.2	375	335	24	12	18	9.45		
	300	327.6	440	395	24	12	22	10.30		
73 55 16	350	359.7	490	445	26	12	22	14.00		
	400	423.7	540	495	28	16	22	16.90		
	450	462.3	595	550	30	16	22	21.60		
	500	513.6	645	600	30	20	22	23.10		

DIN 2576 (PN40) Slip-on Flanges PN40

CODE	Nominal Diam mm	Size mm				Bolt Hole		Weight kg	Unit Per Pcs.	
		d	D	C	t	No.	h mm			
73 55 71	10	17.7	90	60	14	4	14	0.60		
	15	22.2	95	65	14	4	14	0.70		
	20	27.6	105	75	18	4	14	0.80		
	25	34.4	115	85	16	4	14	1.30		
	32	43.1	140	100	16	4	18	1.60		
73 55 76	40	49	150	110	18	4	18	1.70		
	50	61.1	165	125	20	4	18	1.90		
	65	77.1	185	145	22	8	18	2.60		
	80	90.3	200	160	24	8	18	3.80		
	100	115.9	235	190	24	8	22	4.90		
73 55 81	125	141.6	270	220	26	8	26	7.80		
	150	170.5	300	250	28	8	26	10.10		
	175	196.1	350	295	28	12	30	11.35		
	200	221.8	375	320	30	12	30	12.60		
	250	276.2	450	385	32	12	33	21.90		
73 55 86	300	327.6	515	450	34	16	33	25.80		
	350	359.7	580	510	38	16	36	36.20		
	400	423.7	660	585	40	16	39	51.70		
	450	462.3	685	610	42	20	39	66.10		
	500	513.6	755	670	44	20	42	77.40		

DIN Carbon Steel Blind Flanges

Bridas Ciegas de Acero al Carbono, según DIN
DIN 鋳鋼盲法兰 DIN 铸钢法兰 (盲法兰)

**DIN 2527 Blind Flanges PN6**

CODE	Nominal Diam mm	Size mm			Bolt Hole		Weight kg	Unit Per Pcs.	
		D	C	t	No.	h mm			
73 56 01	10	75	50	12	4	14	0.30		
	15	80	55	12	4	14	0.40		
	20	90	65	14	4	14	0.50		
	25	100	75	14	4	14	0.60		
	32	120	90	16	4	14	0.90		
73 56 06	40	130	100	16	4	14	1.00		
	50	140	110	16	4	14	1.40		
	65	160	130	16	4	14	2.00		
	80	190	150	18	4	18	2.70		
	100	210	170	18	4	18	3.70		
73 56 11	125	240	200	20	8	18	5.20		
	150	265	225	20	8	18	7.50		
	200	320	280	22	8	18	12.20		
	250	375	335	24	12	18	19.30		
	300	440	395	24	12	22	24.30		
73 56 16	350	490	445	26	12	22	33.20		
	400	540	495	28	16	22	41.90		
	450	595	550	30	16	22	53.00		
	500	645	600	30	20	22	61.90		

DIN 2527 Blind Flanges PN10

CODE	Nominal Diam mm	Size mm			Bolt Hole		Weight kg	Unit Per Pcs.	
		D	C	t	No.	h mm			
73 56 21	10	90	60	14	4	14	0.54		
	15	95	65	14	4	14	0.61		
	20	105	75	16	4	14	0.79		
	25	115	85	16	4	14	1.24		
	32	140	100	16	4	18	1.66		

(to be continued)

CODE	Nominal Diam mm	Size mm			Bolt Hole		Weight kg	Unit Per Pcs.	
		D	C	t	No.	h mm			
73 56 26	40	150	110	16	4	18	1.81		
27	50	165	125	18	4	18	2.23		
28	65	185	145	18	4	18	3.24		
29	80	200	160	20	4	18	3.50		
30	100	220	180	20	8	18	4.60		
73 56 31	125	250	210	22	8	18	7.30		
32	150	285	240	22	8	22	10.10		
33	175	315	270	24	8	22	11.80		
34	200	340	295	24	8	22	14.00		
35	250	395	350	26	12	22	22.70		
73 56 36	300	445	400	26	12	22	29.50		
37	350	505	460	28	16	22	37.10		
38	400	565	515	32	16	26	52.50		
39	450	615	565	38	20	26	68.80		
40	500	670	620	38	20	26	82.10		

DIN 2527 Blind Flanges PN16

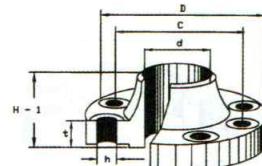
CODE	Nominal Diam mm	Size mm			Bolt Hole		Weight kg	Unit Per Pcs.	
		D	C	t	No.	h mm			
73 56 51	10	90	60	14	4	14	0.53		
52	15	95	65	14	4	14	0.60		
53	20	105	75	16	4	14	0.79		
54	25	115	85	16	4	14	1.23		
55	32	140	100	16	4	18	1.66		
73 56 56	40	150	110	16	4	18	1.81		
57	50	165	125	18	4	18	2.10		
58	65	185	145	18	4	18	3.10		
59	80	200	160	20	8	18	4.50		
60	100	220	180	20	8	18	6.30		
73 56 61	125	250	210	22	8	18	9.20		
62	150	285	240	22	8	22	12.80		
63	175	315	270	24	8	22	13.15		
64	200	340	295	24	12	22	18.60		
65	250	405	355	26	12	26	30.60		
73 56 66	300	460	410	28	12	26	40.70		
67	350	520	470	30	16	26	57.80		
68	400	580	525	32	16	30	82.20		
69	450	640	585	34	20	30	107.60		
70	500	715	650	34	20	33	133.10		

DIN 2527 Blind Flanges PN40

CODE	Nominal Diam mm	Size mm			Bolt Hole		Weight kg	Unit Per Pcs.	
		D	C	t	No.	h mm			
73 56 71	10	90	60	14	4	14	0.60		
72	15	95	65	16	4	14	0.70		
73	20	105	75	18	4	14	0.90		
74	25	115	85	18	4	14	1.50		
75	32	140	100	18	4	18	1.80		
73 56 76	40	150	110	18	4	18	2.00		
77	50	165	125	20	4	18	2.40		
78	65	185	145	22	8	18	3.40		
79	80	200	160	24	8	18	4.90		
80	100	235	190	24	8	22	6.90		
73 56 81	125	270	220	26	8	26	11.00		
82	150	300	250	28	8	26	14.90		
83	175	350	295	28	12	30	16.45		
84	200	375	320	30	12	30	21.40		
85	250	450	385	32	12	33	37.20		
73 56 86	300	515	450	34	16	33	48.80		
87	350	580	510	38	16	36	68.00		
88	400	660	585	40	16	39	99.40		
89	450	685	610	42	20	39	129.10		
90	500	755	670	44	20	42	158.40		

DIN Carbon Steel Weld-Neck Flanges

Bridas de Casquillo Soldado de Acero al Carbón, según DIN
DIN 鋳鋼突合せ溶接型フランジ DIN 铸钢法兰(凸口型)

**DIN 2633 Weld Neck Flanges PN16**

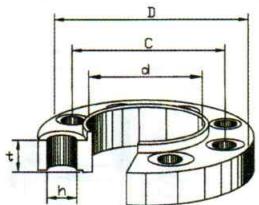
CODE	Nominal Diam mm	Size mm			Bolt Hole		Weight kg	Unit Per Pcs.	
		d	D	C	t	H-1		No.	h mm
73 57 01	10	17.2	90	60	14	35	4	14	0.58
02	15	21.3	95	65	14	35	4	14	0.65
03	20	26.9	105	75	16	38	4	14	0.95
04	25	33.7	115	85	16	38	4	14	1.14
05	32	42.4	140	100	16	40	4	18	1.69
73 57 06	40	48.3	150	110	16	42	4	18	1.86
07	50	60.3	165	125	18	45	4	18	2.53
08	65	76.1	185	145	18	45	4	18	3.06
09	80	88.9	200	160	20	50	8	18	3.70
10	100	114.3	220	180	20	52	8	18	4.62
73 57 11	125	139.7	250	210	22	55	8	18	6.30
12	150	168.3	285	240	22	55	8	22	7.75
13	175	193.7	315	270	24	60	8	22	9.85
14	200	219.1	340	295	24	62	12	22	11.00
15	250	273.0	405	355	26	70	12	26	15.60
73 57 16	300	323.9	460	410	28	78	12	26	22.00
17	350	355.6	520	470	30	82	16	26	31.20
18	400	406.4	580	525	32	85	16	30	39.30
19	500	508.0	715	650	34	90	20	33	61.00

DIN 2635 Weld Neck Flanges PN40

CODE	Nominal Diam mm	Size mm			Bolt Hole		Weight kg	Unit Per Pcs.	
		d	D	C	t	H-1		No.	h mm
73 57 21	10	17.2	90	60	16	35	4	14	0.66
22	15	21.3	95	65	16	38	4	14	0.75
23	20	26.9	105	75	18	40	4	14	1.06
24	25	33.7	115	85	18	40	4	14	1.29
25	32	42.4	140	100	18	42	4	18	1.88
73 57 26	40	48.3	150	110	18	45	4	18	2.33
27	50	60.3	165	125	20	48	4	18	2.82
28	65	76.1	185	145	22	52	8	18	3.74
29	80	88.9	200	160	24	58	8	18	4.75
30	100	114.3	235	190	24	65	8	22	6.52
73 57 31	125	139.7	270	220	26	68	8	26	9.07
32	150	168.3	300	250	28	75	8	26	11.80
33	175	193.7	350	295	32	82	12	30	18.20
34	200	219.1	375	320	34	88	12	30	21.50
35	250	273.0	450	385	38	105	12	33	34.90
73 57 36	300	323.9	515	450	42	115	16	33	49.70
37	350	355.6	580	510	46	125	16	33	68.10
38	400	406.4	660	585	50	135	16	39	96.50
39	500	508.0	755	670	52	140	20	42	117.00

DIN Carbon Steel Slip-on Raised Face Flanges

Bridas Positzas con Rebordes de Acero al Carbono, según DIN
DIN 鋳鋼差し込み溶接型フランジ DIN 铸钢法兰（插入型）



DIN 86029 Slip-on Raised Face Flanges PN10

Unit Per Pcs.

CODE	Nominal Diam mm	Size mm				Bolt Hole		Weight kg	
		d	D	C	t	H-1	No.		
73 57 51	10	17.7	90	60	14	20	4	14	0.56
52	15	22.0	95	65	14	20	4	14	0.64
53	20	27.6	105	75	16	24	4	14	0.98
54	25	34.4	115	85	16	24	4	14	1.12
55	32	43.1	140	100	16	26	4	18	1.58
73 57 56	40	49.0	150	110	16	26	4	18	1.77
57	50	61.1	165	125	18	28	4	18	2.40
58	65	77.1	185	145	18	32	4	18	3.10
59	80	90.3	200	160	20	34	8	18	3.80
60	100	115.9	220	180	20	38	8	18	4.30
73 57 61	125	141.6	250	210	22	40	8	18	5.80
62	150	170.5	285	240	22	44	8	22	7.10
63	175	196.1	315	270	24	44	8	22	9.10
64	200	222.0	340	295	24	44	8	22	9.90
65	250	276.0	395	350	26	46	12	22	12.70
73 57 66	300	327.0	445	400	26	46	12	22	14.40
67	350	359.0	505	460	26	53	16	22	22.30
68	400	410.0	565	515	26	57	16	26	26.70
69	500	512.0	670	620	28	67	20	26	37.30

DIN 86030 Slip-on Raised Face Flanges PN16

Unit Per Pcs.

CODE	Nominal Diam mm	Size mm				Bolt Hole		Weight kg	
		d	D	C	t	H-1	No.		
73 57 71	10	17.7	90	60	14	20	4	14	0.56
72	15	22.0	95	65	14	20	4	14	0.64
73	20	27.6	105	75	16	24	4	14	0.98
74	25	34.4	115	85	16	24	4	14	1.12
75	32	43.1	140	100	16	26	4	18	1.58
73 57 76	40	49.0	150	110	16	26	4	18	1.77
77	50	61.1	165	125	18	28	4	18	2.40
78	65	77.1	185	145	18	32	4	18	3.10
79	80	90.3	200	160	20	34	8	18	3.80
80	100	115.9	220	180	20	38	8	18	4.30
73 57 81	125	141.6	250	210	22	40	8	18	5.80
82	150	170.5	285	240	22	44	8	22	7.10
83	175	196.1	315	270	24	44	8	22	9.10
84	200	222.0	340	295	24	44	12	22	9.70
85	250	276.0	405	355	26	46	12	26	13.40
73 57 86	300	327.0	460	410	28	46	12	26	17.30
87	350	359.0	520	470	30	57	16	26	27.60
88	400	410.0	580	525	32	63	16	30	36.00
89	500	512.0	715	650	34	73	20	33	56.40

Flexible Pipe Couplings

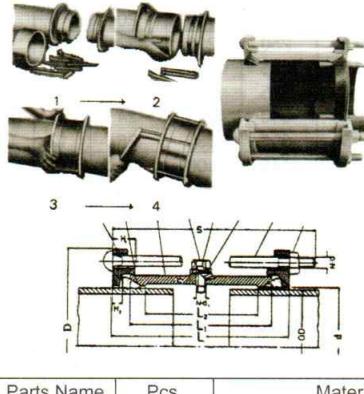
Acoplamientos Flexibles para Tubería 伸縮管継手 伸缩管接头

Coupling joints, because of their greater flexibility and economy, are steadily replacing flanged pipe joints in today's plant and marine applications. Unlike flanged joints, couplings not only eliminate the need for costly welding but also compensate for extreme degrees of pipe linear expansion,

vibration, and laying deflection. From chemical plants to mammoth tankers, these couplings are utilized extensively throughout plant and marine piping.

As a wide range of models is available, the most common models have been selected and described below.

General Construction & Features



No.	Parts Name	Pcs.	Materials
1	Middle Ring	1	Hot Rolled Steel (SS41) or Ductile Iron (FCD45)
2	Follower	2	Hot Rolled Steel (SS41) or Ductile Iron (FCD45)
3	Gasket	2	NBR, CR, Viton, etc.
4	Bolt & Nut	2 and over	Steel Galvanized (SS41)
5	Stop Bolt	2	Stainless Steel (SUS304)

1. Construction

As illustrated above, the most common models consist of a middle ring (1), two followers (2), two wedge gaskets (3), four bolts & nuts (4), and two stop bolts (5). Both the middle ring and the followers are made of hot rolled steel, and the wedge gaskets are made of natural or synthetic rubber.

When the bolts are tightened, the followers press the gaskets against the spherical surface of the pipes and the tapered surface of the middle rings providing a leak-tight connection. When the expansion force of the pipes exceeds the wedging force, the pipes slide and deflect within the gaps between the outer surface of the pipes and the inner surface of the middle ring and followers.

2. Features

The structural design of these flexible pipe couplings offers easy and economical pipe jointing. Pipes can be jointed easily with the use of a spanner. Centering of the pipes and finish-grinding of the pipe sections is not required.

Compared with flanged pipe joints, these pipe couplings assure economical pipe jointing without the need for costly welding or any other additional procedures.

Usually absorbs 65 – 135 mm of pipe linear expansion (speci ally available models absorb more than 200 mm of linear expansion) and a considerable degree of pipe vibration as well. Also, they allow for joint deflection up to 6 degrees and can join pipes of different material and/or diameter.

3. How to order

When ordering, please specify the following points.

- Kind of pipes to be connected (steel, cast iron, vinyl, etc.).
- Pipe outside diameter.....mm.
- Working pressure.....kgf/cm².
- Kind of liquid or gas of the line content.
(desired gasket material)
- Rust preventive treatments (paint).

Flexible Pipe Couplings for Plain End Pipes

Acoplamientos elásticos para tubos lisos

プレーンエンドパイプ用伸縮管継手

用于平头管道的柔性管接头

1. Hot Rolled Steel Middle Ring & Follower

These products are all formed from special section steel. As it is designed and built to withstand severe operating conditions on board, no special care is necessary for any applications.



Specifications

Amount of Expansion & Constriction	L = 134/160/180/210	
Angular Deflection	1° - 8°	
Working Pressure	20 - 50 kg/cm²	
Working Temperature	- 70° - 100°C - Standard -100° - 350°C - Special	
Manufacturing Dimensions	Nominal Diam. 40 - 4,000 mm	
Applications	Piping for ships, water and gas supply, plant etc.	

How to order: CODE

Flexible pipe coupling, hot rolled steel, MIDDLE RING LENGTH, STYLE NO., NOMINAL SIZE

Unit Per Set

CODE	Nominal Size		Pipe O.D. mm	Follower O.D. mm	Face to Face L mm	Test Press. kgf/cm²
	in	mm				
Middle Ring L 178 mm (Style 10)						
73 50 01	6	150	165.2	262	213	32
02	8	200	216.3	321	213	
03	10	250	267.4	373	214	
04	12	300	318.5	425	214	
05	14	350	355.6	473	214	
73 50 06	16	400	406.4	524	218	32
07	18	450	457.2	575	218	
08	20	500	508.0	626	218	
09	22	550	558.8	677	218	
10	24	600	609.6	728	220	
73 50 11	26	650	660.4	779	220	32
12	28	700	711.2	830	220	
13	30	750	762.0	881	223	
14	32	800	812.8	932	223	
Middle Ring L 204 mm (Style 11)						
73 49 41	6	150	165.2	262	239	32
42	8	200	216.3	321	239	
43	10	250	267.4	373	240	
44	12	300	318.5	425	240	
45	14	350	355.6	473	240	
73 49 46	16	400	406.4	524	244	32
47	18	450	457.2	575	244	
48	20	500	508.2	626	244	
49	22	550	558.8	677	244	
50	24	600	609.6	728	246	
73 49 51	26	650	660.4	779	246	32
52	28	700	711.2	830	246	
53	30	750	762.0	881	249	
54	32	800	812.8	932	249	

(to be continued)

Middle Ring L 224 mm (Style 11)

73 49 61	6	150	165.2	262	259	32
62	8	200	216.3	321	259	
63	10	250	267.4	373	260	
64	12	300	318.5	425	260	
65	14	350	355.6	473	260	
73 49 66	16	400	406.4	524	264	32
67	18	450	457.2	575	264	
68	20	500	508.2	626	264	
69	22	550	558.8	677	264	
70	24	600	609.6	728	266	
73 49 71	26	650	660.4	779	266	32
72	28	700	711.2	830	266	
73	30	750	762.0	881	269	
74	32	800	812.8	932	269	

Middle Ring L 254 mm (Style 11)

73 49 81	6	150	165.2	262	289	32
82	8	200	216.3	321	289	
83	10	250	267.4	373	290	
84	12	300	318.5	425	290	
85	14	350	355.6	473	290	
73 49 86	16	400	406.4	524	294	32
87	18	450	457.2	575	294	
88	20	500	508.2	626	294	
89	22	550	558.8	677	294	
90	24	600	609.6	728	296	
73 49 91	26	650	660.4	779	296	32
92	28	700	711.2	830	296	
93	30	750	762.0	881	299	
94	32	800	812.8	932	299	

Name of Mfr.: Daido Kinzoku Kogyo k.k.

Couplings of sizes other than those listed above are also available upon request.

Seawater resistant couplings made of a special alloy steel are also available upon request. The seawater couplings have the same dimensions and shape as those listed above.

When ordering, please specify the nominal size.

2. Ductile Cast Iron Middle Ring & Follower

These couplings are mainly used for oil loading pipes, ballast pipes, digester pipes and other conduits on board. These couplings are made of ductile cast iron. Couplings made of cast steel are also available upon request.



Specifications

Amount of Expansion & Contraction	L = 134
Working Pressure	20 kgf/cm²
Manufacturing Dimensions	Nominal Diam. 50 - 1,200 mm

How to order: CODE

Flexible pipe coupling, ductile cast iron, NOMINAL SIZE

CODE	Nominal Size mm	Pipe O.D. mm	Middle Ring L mm	Follower O.D. mm	Face to Face L mm	Test P kgf/cm ²	Unit Per Set
73 50 21	150	165.2	178	262	212	32	
	200	216.3		321	212		
	250	267.4		373	214		
	300	318.4		425	214		
	350	355.6		465	214		
73 50 26	400	406.4		516	222		
	450	457.2		573	222		
	500	508.0		626	222		
	550	558.8		673	228		
	600	609.6		731	228		

Couplings of sizes other than those listed above are also available upon request.

Slide (Sleeve) Type Expansion Joints for Flanged Pipes

Juntas de dilatación de tipo deslizante (manguito) para tuberías embridadas
スライド（スリーブ）式伸縮継手 フランジ管用
滑动（套筒）式膨胀节 用于法兰管道

These expansion joints are designed to absorb quick expansion and contraction of pipes resulting from the high temperature of fluids such as exhaust gas, high-temperature water, etc.



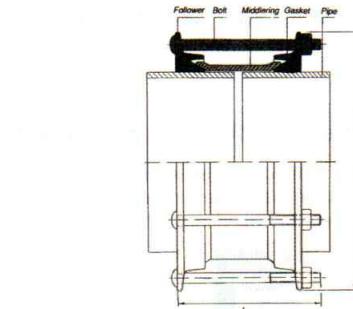
A variety of packing materials can be used based upon the temperature and the materials contained in the pipes.

Specifications

Working Pressure	Max. 30 kgf/cm ²
Working Temperature	Max. 450°C
Manufacturing Dimensions	Nominal Diam. 40 - 350 mm
Material	Sleeve: Stainless Steel SUS 304 Body: Grey Iron Casting FC20, Carbon Steel Casing SC46, or Ductile Cast Iron FCD45
Amount of Expansion- Contraction	120 - 160 mm

Guide of how to order

CODE 73 50 31
Name Slide type expansion joint
Material of Sleeve and Body.... Sleeve: Stainless Steel
Body: Grey iron casting
Size 40 mm
Working Pressure 30 kgf/cm²



For Steel or PVC Pipes

How to order: CODE

Pipe coupling, flexible, anti-corrosive coated, PIPE O.D. mm, Material of PIPE to be connected

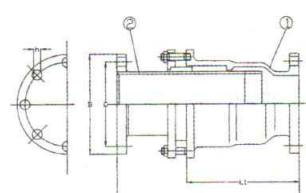
CODE	Pipe O.D. mm	H in mm	No. of Bolts	Working Pressure Bar	Weight kg
73 50 41	57.0	2.250	135	2	2.0
	60.3	2.375	138	2	2.1
	70.0	2.750	148	2	2.7
	76.1	3.000	154	2	2.9
	82.5	3.250	167	2	3.4
73 50 46	88.9	3.500	167	3	4.5
	101.6	4.000	179	3	4.0
	108.0	4.250	186	3	3.8
	114.3	4.500	192	3	3.9
	133.0	5.250	216	4	5.1
73 50 51	139.7	5.500	222	4	5.3
	159.0	6.250	254	4	7.9
	165.1	6.500	260	4	8.5
	168.3	6.625	264	4	8.5
	193.7	7.625	290	4	10.1
73 50 56	219.1	8.625	315	5	11.2
	244.5	9.625	341	5	12.6
	273.0	10.750	369	6	13.8
	323.9	12.750	420	6	15.9
	355.6	14.000	447	6	20.2
73 50 61	406.4	16.000	498	8	25.2
	457.2	18.000	549	8	25.7
	508.0	20.000	600	10	28.8
	558.8	22.000	651	10	33.8

Name of Mfr.: Helden Couplings B.V.

Sleeve Type Expansion Joints

JIS 5 kgf/cm² / 10 kgf/cm² or 16 kgf/cm²

Juntas de Expansión Tipo Camisa 伸縮管継手 伸缩管接头



Part No.	Material	Code
1. Body	Ductile Iron	FCD 45
2. Sleeve	Stainless Steel	SUS 304
Nominal Pressure kgf/cm ²		The Pressure MPa [kgf/cm ²]
5	0.98 [10]	0.78 [8]
10	1.96 [20]	1.57 [16]
16	3.92 [40]	3.14 [32]

Anti-corrosive Coated Flexible Pipe Couplings

Acoplamiento Flexible para Tubería Revestido con Anti-corosivo
防錆塗装型伸縮継手 防锈镀膜伸缩管接头

These couplings are also resistant, and will not be changed by mechanical vibration of the pipes.

Suitable for low and high pressure, and can be used on steel or PVC pipe materials that can withstand the gasket pressure. Couplings suitable for ductile iron pipes are also available if required.

JIS 5 kgf/cm²

Unit Per Pcs.

CODE	Size	Size mm					
		L	L1	D	C	No.	h
73 50 71	50	345	208	130	105	4	15
72	65	350	213	155	130	4	15
73	80	385	243	180	145	4	19
74	100	390	249	200	165	8	19
75	125	390	249	235	200	8	19
73 50 76	150	400	254	265	230	8	19
77	200	420	282	320	280	8	23
78	250	435	292	385	345	12	23
79	300	455	305	430	390	12	23
80	350	465	310	480	435	12	25

JIS 10 kgf/cm²

Unit Per Pcs.

CODE	Size	Size mm					
		L	L1	D	C	No.	h
73 50 81	50	368	229	155	120	4	19
82	65	382	236	175	140	4	19
83	80	415	277	185	150	8	19
84	100	415	277	210	175	8	19
85	125	432	282	250	210	8	23
73 50 86	150	439	287	280	240	8	23
87	200	458	306	330	290	12	23
88	250	475	311	400	355	12	25
89	300	510	338	445	400	16	25
90	350	517	343	490	445	16	25

JIS 16 kgf/cm²

Unit Per Pcs.

CODE	Size	Size mm					
		L	L1	D	C	No.	h
73 50 91	50	432	251	155	120	8	19
92	65	456	259	175	140	8	19
93	80	469	295	200	160	8	23
94	100	476	295	225	185	8	23
95	125	520	300	270	225	8	25
73 50 96	150	522	305	305	260	12	25
97	200	544	327	350	305	12	25
98	250	576	332	430	380	12	27
99	300	588	362	480	430	16	27
73 51 00	350	612	367	540	480	16	33

Gaskets for Flexible Pipe Coupling

Juntas para Acoplamiento Flexible de Tubería

伸縮継ぎ手用ガスケット 伸缩管接头用衬垫

When ordering spare gaskets for the flexible pipe couplings, please specify the manufacturer's name, model and the size of the flexible coupling currently in use, along with the name, temperature, and pressure of the line content, etc.

How to order: 73 - 50 - 36

Gasket for flexible pipe coupling, NAME, MODEL, SIZE of the flexible coupling, NAME, TEMPERATURE, PRESSURE of the line content

Rubber Expansion Joints

Compensadores de Dilatación

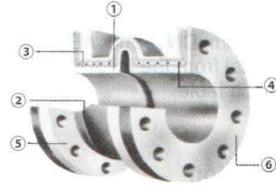
ゴム製エキスパンションジョイント 橡胶伸缩接头



Single Arch Spool Type



Double Arch Spool Type



1. Inner Lining Rubber

Acid and Chemical Proof Rubber (NR or Synthetic)

2. Outside Rubber

Oil Abrasion Heat Proof Rubber of Chloroprene Rubber

3. Insertion Cloth for Reinforcement

4. Iron Wire for Reinforcement

5. Retaining Ring

6. Flange

Single Arch Spool Rubber Expansion Joint

JIS 10 kgf/cm² Flanged

Specifications

CODE	Nominal Size mm	Flange mm			Amount. of mm		Max. working Pressure kgf/cm ²
		I.D.	O.D.	F to F	Expansion	Contraction	
73 51 01	50	51	155	150	6	12	12
02	65	64	175	150	6	12	12
03	75	76	185	150	6	12	10
04	100	102	210	150	6	12	9
05	125	127	250	150	6	12	8
73 51 06	150	152	280	200	8	18	8
07	175	178	305	200	8	18	7
08	200	203	330	200	8	18	7
09	225	225	350	200	8	18	6
10	250	253	400	200	8	18	6
73 51 11	300	303	445	200	9	20	6



Double Arch Spool Rubber Expansion Joint

JIS 10 kgf/cm² Flanged

Specifications

CODE	Nominal Size mm	Flange mm			Amount. of mm		Max. working Pressure kgf/cm ²
		I.D.	O.D.	F to F	Expansion	Contraction	
73 51 21	50	51	155	250	12	24	12
22	65	64	175	250	12	24	12
23	75	76	185	250	12	24	10
24	100	102	210	250	12	24	9
25	125	127	250	250	12	24	8
73 51 26	150	152	280	300	16	24	8
27	175	178	305	300	16	36	7
28	200	203	330	300	16	36	7
29	225	225	350	300	16	36	6
30	250	253	400	300	16	36	6
73 51 31	300	303	445	300	18	40	6

Rubber Bellow Expansion Joints with DIN Flanges

Junta de Dilatación de Goma con Brida DIN
DIN型ゴム製エキスパンションジョイント
橡膠伸縮接頭附 DIN 法蘭



Flexible expansion joints for absorbing thermal expansion, the reduction of vibrations and preventing stress in pipe systems. The expansion joints have a type approval from DNV and ABS. Bellows are optional from the following materials listed in the material information table.

Material Information

Color Code	DN	L	Below Material		Max.Temp. Deg. C
			mm	Internal	
Yellow	25-600	130-200	Nitrile	Chloroprene	90
Red	25-600	130-200	EPDM	EPDM	90
Green	25-600	130-200	Hypalon	Chloroprene	90
White	25-600	130-200	White nitrile	Chloroprene	90
Blue	25-600	130-200	SBR	Chloroprene	90
Double red	25-600	130-200	EPDM	EPDM	130

Remark: EPDM denotes Ethylene Propylene Diene Monomer, SBR denotes Styrene-butadiene Rubber.

Max. Operating Pressure and Temperature

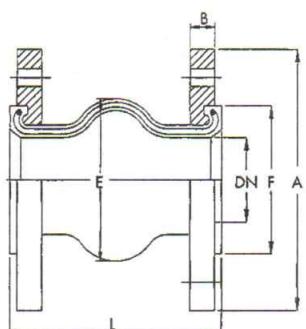
DN	Max. Pressure and Temperature		Model
25 thru 300	16 bar at 70 deg. C	10 bar at 90 deg. C	Yellow, Red, Green, White, Blue
350 thru 600	10 bar at 70 deg. C	8 bar at 90 deg. C	
25 thru 150	16 bar at 100 deg. C	10 bar at 130 deg. C	
200 thru 600	10 bar at 100 deg. C	6 bar at 130 deg. C	Double red

Among the various types of bellow materials, we introduce the specifications of the most standard type for your ordering guidance as follows.

How to order: CODE

Rubber bellow expansion joints with DIN flange, Internal/External bellow material, SIZE(DN), LENGTH

Bellow Material: Internal – Nitrile,
External – Chloroprene



CODE	ND	Size mm				Max. Permitted Movement mm	Unit Per Pcs. Weight kg
		L	A	F	B		
73 51 41	25	130	115	72		-30/+20	2.8
	42	32		140	72		2.8
	43	40		150	80		3.3
	44	50	130-150	165	90		3.7
	45	65		185	105		4.8
73 51 46	80		200	120	15	-30/+20	5.3
	47	100		220	140		6.2
	48	125	130-150	250	165		8.2
	49	150		285	190		11
	50	200		340	240		17
73 51 51	250		395	290	23	-30/+20	22
	52	300	445	340	27		30
	53	350		505	425		32
	54	400	200	565	470		45
	55	450		615	510		52
73 51 56	500		670	560	30	-30/+20	63
	57	600	780	655	30		95

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PIPE THREADS

BRITISH STANDARD THREADS

British Engineering Standard Association Reports No. 21-1938
Forms of British Standard Pipe Threads

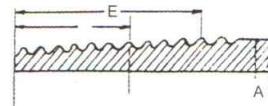
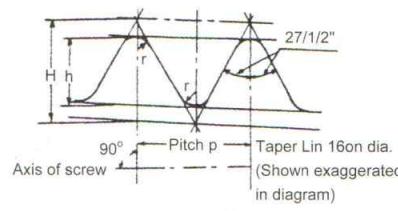
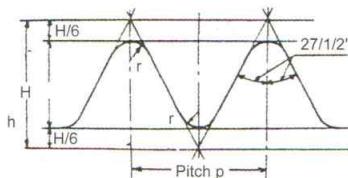
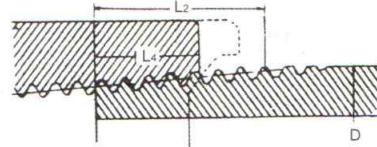
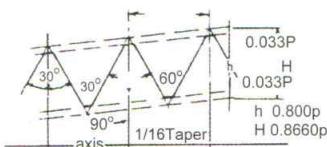


Table 1 Basic Sizes

Nominal Bore of Pipe	Approximate Outside Diameter of Black Pipe	Number of Threads per Inch	Pitch	Depth of Thread	Diameter at Gauge Plane (Gauge Dia.)	Distance of Gauge Diameter from End (Gauge Length)	Dimensions, in Inches
	A		p	h	B	F	E
1/8	0.400	28	0.03571	0.0229	0.383	0.1563	0.2545
1/4	0.538	19	0.05263	0.0337	0.518	0.2367	0.3814
3/8	0.676	19	0.05263	0.0337	0.656	0.2500	0.3947
1/2	0.847	14	0.07143	0.0457	0.825	0.3214	0.5178
5/8	1.063	14	0.07143	0.0457	1.041	0.3750	0.5714
1	1.336	11	0.09091	0.0582	1.309	0.4091	0.6591
1-1/4	1.677	11	0.09091	0.0582	1.650	0.5000	0.7500
1-1/2	1.909	11	0.09091	0.0582	1.882	0.5000	0.7500
2	2.381	11	0.09091	0.0582	2.347	0.6250	0.9204
2-1/2	2.996	11	0.09091	0.0582	2.960	0.6875	1.0511
3	3.499	11	0.09091	0.0582	3.460	0.8125	1.1761
3-1/2	3.991	11	0.09091	0.0582	3.950	0.8750	1.2386
4	4.494	11	0.09091	0.0582	4.450	1.0000	1.4091
5	5.493	11	0.09091	0.0582	5.450	1.1250	1.5795
6	6.501	11	0.09091	0.0582	6.450	1.1250	1.5795

AMERICAN STANDARD THREADS

Approved by American Standard Association B2.11945
Forms of American Standard Pipe Threads



Straight Pipe Threads : the pitch, angle, and depth of thread are the same as the corresponding dimensions of the taper pipe threads.

Table 2 Basic Sizes Dimensions

Nominal Pipe Size	Outside Diameter of Pipe	Threads per Inch	Pitch of Thread	Hand-Tight Engagement		Effective Thread Length External	Dimensions, in Inches
	D	n	p	L ₁	E ₁	L ₂	Depth of Thread
1/8	0.405	27	0.03704	0.180	0.37476	0.2639	0.02963
1/4	0.540	18	0.05556	0.200	0.48989	0.4018	0.04444
3/8	0.675	18	0.05556	0.240	0.62701	0.4078	0.04444
1/2	0.840	14	0.07143	0.320	0.77843	0.5337	0.05714
5/8	1.050	14	0.07143	0.339	0.98887	0.5457	0.05714
1	1.315	11-1/2	0.08696	0.400	1.23863	0.6828	0.06957
1-1/4	1.660	11-1/2	0.08696	0.420	1.58338	0.7068	0.06957
1-1/2	1.900	11-1/2	0.08696	0.420	1.82234	0.7235	0.06957
2	2.375	11-1/2	0.08696	0.436	2.29627	0.7565	0.06957
2-1/2	2.875	8	0.12500	0.682	2.76216	1.1375	0.10000
3	3.500	8	0.12500	0.766	3.38850	1.2000	0.10000
3-1/2	4.000	8	0.12500	0.821	3.88881	1.2500	0.10000
4	4.500	8	0.12500	0.844	4.38712	1.3000	0.10000
5	5.563	8	0.12500	0.937	5.44929	1.4063	0.10000
6	6.625	8	0.12500	0.958	6.50597	1.5121	0.10000

Conversion Table

[Length]	m	km	in	ft	yd	mile
m	1	1×10^{-3}	39.37	3.28	1.093	6.214×10^{-4}
km	1×10^3	1	3.937×10^4	3,280	1,093	0.621
in	0.0254	2.54×10^{-5}	1	1/12	1/36	1.58×10^{-5}
ft	0.305	3.048×10^{-4}	12	1	1/3	1.894×10^{-4}
yd	0.914	9.144×10^{-4}	36	3	1	5.682×10^{-4}
mile	1,609	1.609	63,360	5,280	1,760	1

[Mass (Weight)]	g	kg	t	lb	oz
g	1	1×10^{-3}	1×10^{-6}	2.204×10^{-3}	0.0352
kg	1×10^3	1	1×10^{-3}	2.204	35.27
t	1×10^6	1×10^3	1	2,204	35,270
lb	453.6	0.4536	4.536×10^{-4}	1	16
oz	28.35	0.02835	2.835×10^{-5}	1/16	1

[Volume]	cm ³ (cc or ml)	m ³	l	in ³	qt	pt	fl-oz	ft ³	gal
cm ³ (cc or ml)	1	0.000001	0.001	0.061	0.00088	0.0018	0.035	-	0.00022
m ³	1,000,000	1	1,000	61,024	880	1,760	35,195	35.314	220
l	1,000	0.001	1	61.024	0.880	1.760	35.195	0.035	0.220
in ³	16.387	0.000016	0.016	1	0.014	0.029	0.577	0.00058	0.0036
qt	1,136.52	0.0011	1.137	69.355	1	2	40	0.033	0.25
pt	568	0.00057	0.568	34.677	0.5	1	20	0.017	0.125
fl-oz	28.413	0.000028	0.028	1.734	0.025	0.05	1	0.0008	0.00625
ft ³	28,316	0.0283	28.316	1,728	29.922	59.844	958	1	7,481
gal	4,546	0.0045	4.546	277	4	8	160	0.134	1

[Pressure]	bar	kgf/cm ²	lbf/cm ²	mmHg (0°C)	Pa (SI)
bar	1	1.020	14.50	750.1	100,000
kgf/cm ²	0.9807	1	14.22	753.6	98,066
lbf/cm ²	0.0689	0.0703	1	51.72	6,895
mmHg (0°C)	0.00133	0.0013	0.0193	1	133.3
Pa (SI)	1×10^{-5}	1.02×10^{-5}	1.45×10^{-4}	10.2×10^{-4}	1

[Stress]	Pa (SI)	MPa	kgf/mm ²	kgf/cm ²
Pa (SI)	1	1×10^{-6}	1.01972×10^{-7}	1.01972×10^{-5}
MPa	1×10^6	1	1.01972×10^{-1}	1.01972×10
kgf/mm ²	9.80665×10^6	9.80665	1	1×10^2
kgf/cm ²	9.80665×10^4	9.80665×10^{-2}	1×10^{-2}	1

[Force]	kW	kgf · m/sec	HP
kW	1	102.0	1.341
kgf · m/sec	0.009807	1	0.01315
HP	0.7457	76.04	1