



GOVAL ITALY S.R.L is a certified ISO 9001 company established in 2009, based in Milano Italy, specializes in the supply of industrial valves, pipes, and pipe fittings. Our products are conform to the latest editions of API, ASTM, ASME, EN Standards.

It is our policy to provide high quality products source from manufacturers whose products meet the EU standards, Furthermore, we operate internationally and exports products to customers overseas, We make sure that we provide a streamlined process for all of our clients. Our business model enables manufacturers to have full access to global trade, empowering them to focus on their core markets.



We provide our retail partners with high demand products and offer direct to customer fulfillment to help build their extended aisle assortments.

Having a relationship with us is a privilege because we keep all of our products in a warehouse located in Milano, Italy.

We are ready to ship and fulfill your immediate needs of valves, pipes and fittings, covering a wide range of corporate needs.

We are constantly revamping logistics and supply chain processes, so as to keep costs down and our prices competitive.

# **Brands**







Seamless Pipes Buttweld Fittings

**Valves** 

Flanges

# **Quality Assurance**

Goval meticulously evaluates its manufacturing sources for products, ensuring that each mill meets a set of established quality control criteria. All products provided by Goval adhere to applicable British Standards or international standards, with certification available upon request. The Goval service center implements a quality manual that aligns with UNI EN ISO9001/2015 standards. Numerous vendor approvals and customized quality control systems are managed through each Goval service center.





# **Product**

# Process of Steel Pipe

According to the manufacturing and processing methods, steel pipes are divided into seamless pipes and welded steel pipes. Seamless tubes are formed in one stage during rolling, but welded tubes need welding process after rolling. Due to the different shapes of the weld, it can be divided into spiral welding and straight seam welding. Seamless steel pipe and welded steel pipe manufacturers can produce steel pipes with high quality, reliability and corrosion resistance. In determining the type of pipeline, the main focus is on the application specifications and

## Seamless Steel Pipe:

Seamless steel pipes are usually manufactured in complex steps, starting with hollow holes drilled from the blank, through cold drawing and cold rolling processes. Compared with welded pipe, the size of seamless pipe is difficult to control, and cold working improves mechanical properties and tolerances. The most obvious advantage of seamless pipe is that it can produce thick wall seamless pipe, which has better mechanical properties and corrosion resistance than seamed pipe. In addition, the ovality or roundness of seamless pipe will be better. It is generally preferred to use under extreme environmental conditions such as high load, high pressure and high corrosivity.







### Welded Steel Pipe:

Welded steel pipes are formed by welding tubular steel plates rolled through seams or spiral seams. There are different manufacturing methods for welded pipes according to external dimensions, wall thickness and application. Each method starts with hot billets or flat bars, and then pipes are made by stretching the hot billets and pressing the edges together and sealing them with welds.









# **PRODUCT**

### ■ Product Standard and Standard No. of Carbon Steel Welded Pipe

Product Standards	.Standard No
ASTM	A53 A134 A135 A139 A178 A214 A333 A334 A381 A513 A523 A671 A672
ASTIVI	A691 A795
	EN 10208-1 EN 10208-2 EN 10217-1 EN 10217-2 EN 10217-4 EN 10217-5 EN
EN	10217-6 EN 10224 EN 10255 EN 10288 EN 10296-1 EN 10305-2 EN 10305-3 EN
	10305-6
API	API 5L
110	JIS G3442 G3443 G3444 G3445 G3452 G3454 G3456 G3460 G3461 G3464 G3469
JIS	G3475 G7217
ISO	ISO 3183

### Advantage:

Smelting process is relatively simple, low cost, good pressure processing performance, good cutting performance and good mechanical properties. Such as by changing the carbon content and for its proper heat treatment, many of the performance obtained on the industrial production requirements. Because of the low carbon steel prices, production easy, good processing performance, the industry is still the most widely used steel materials, steel products accounted for more than 80% of the total amount.

### > Application:

## TRANSPORTING WATER

Carbon steel pipes are the ideal choice for transporting water, sewage, and other compatible fluids. Being highly resistant to shock or vibration, the fluctuating water pressure or shock pressure from a water hammer have no ill effects on steel pipes, making carbon steel pipes the primary choice when laying water pipelines under roadways. INDUSTRIAL HEATING, CONDENSATION, STEAM

Carbon steel pipes are widely used in industrial processes involving high heat, extreme cold, or even transporting gases such as steam. Heating systems use thin-wall, straight bead, precision carbon steel pipes with a lower level of carbon content.

## **AUTOMOTIVE AND TRANSPORT**

Carbon steel pipes are widely used in the automotive industry. They are especially ideal for conveyor belt idlers and lancing pipes.



# **PRODUCT**

## Stainless Steel Tube

	.Standard No
ASTM	A213 A249 A269 A312 A358 A376 A409 A511 A554 A789 A790
EN	EN 10216-5 EN 10217-7 EN 10296-2 EN 10297-2
DIN	DIN 17455/17456 DIN 17457/17458 DIN 2462/2463
JIS	JIS 3446 JIS 3459 JIS 3463

### Material:

Austonitia Stainless Staal	TP201 TP202 TP304/L/H/N TP309S/H TP310S/H TP316/L/H/Ti/N TP317/L
Austenitic Stainless Steel	TP321/H TP347/H TP348/H
Ferritic and Martensitic Stainless	TP405 TP429 TP430 TP443 TP446-1 TP446-2
Steel	TP403 TP410 TP414 TP416 TP431 TP440A TP440B
Duplex Stainless Steel	S31200 S31500 S31803 S32205S32250 S32750 S32900

## Advantages:

The stainless steel tube has the following outstanding advantages: excellent mechanical properties, excellent wear resistance, good safety and health performance, good temperature resistance, good thermal insulation performance, smooth inner wall, small water resistance, beautiful appearance, clean, fashionable, 100% recyclable, conducive to saving water resources, wide range of use, long service life, low comprehensive cost, etc.

## > Application:

To fully grasp how integral stainless steel tubing is to our lives, it's important to consider that it has numerous uses in our homes, including within our appliances, water, heating, and plumbing systems, in our cars, and in the tools we use. Outside of our homes, stainless steel tube plays a role in nearly every industry we rely on, from food and beverage processing to transportation, construction, technology, automotive, and more.

As custom fabricators, we are always willing to work within our clients' specifications in order to bring their vision to life and create just one more incredible use for stainless steel tube.











## **U.S./METRIC**

NOMINAL PIPE SIZE	OD	SCI	HEDU			ALL (NESS	WEI	GHT	II	D
INCH MM	INCH MM		SME	<b>.</b>	INCH	мм	LBS/ FOOT	KG/ METER	INCH	ММ
1/8 6	0.405 10.3	10 STD XS	40 80	10S 40S 80S	0.049 0.068 0.095	1.24 1.73 2.41	0.19 0.24 0.31	0.28 0.37 0.47	0.307 0.269 0.215	7.82 6.84 5.84
1/4 8	0.540 13.7	10 STD XS	40 80	10S 40S 80S	0.065 0.088 0.119	1.65 2.24 3.02	0.33 0.43 0.54	0.49 0.63 0.80	0.410 0.364 0.302	10.40 9.22 7.66
3/8 10	0.675 17.1	10 STD XS	40 80	10S 40S 80S	0.065 0.091 0.126	1.65 2.31 3.20	0.42 0.57 0.74	0.63 0.84 1.10	0.545 0.493 0.423	13.80 12.48 10.70
1/2 15	0.840 21.3	5 10 STD XS 160 XX	40 80	5S 10S 40S 80S	0.065 0.083 0.109 0.147 0.188 0.294	1.65 2.11 2.77 3.73 4.78 7.47	0.54 0.67 0.85 1.09 1.31 1.72	0.80 1.00 1.27 1.62 1.95 2.55	0.710 0.674 0.622 0.546 0.464 0.252	18.00 17.08 15.76 13.84 11.74 6.36
3/4 20	1.050 26.7	5 10 STD XS 160 XX	40 80	5S 10S 40S 80S	0.065 0.083 0.113 0.154 0.219 0.308	1.65 2.11 2.87 3.91 5.56 7.82	0.69 0.86 1.13 1.48 1.95 2.44	1.03 1.28 1.69 2.20 2.90 3.64	0.920 0.884 0.824 0.742 0.612 0.434	23.40 22.48 20.96 18.88 15.58 11.06
1 25	1.315 33.4	5 10 STD XS 160 XX	40 80	5S 10S 40S 80S	0.065 0.109 0.133 0.179 0.250 0.358	1.65 2.77 3.38 4.55 6.35 9.09	0.87 1.41 1.68 2.17 2.85 3.66	1.29 2.09 2.50 3.24 4.24 5.45	1.185 1.097 1.049 0.957 0.815 0.599	30.10 27.86 26.64 24.30 20.70 15.22
1-1/4 32	1.660 42.2	5 10 STD XS 160 XX	40 80	5S 10S 40S 80S	0.065 0.109 0.140 0.191 0.250 0.382	1.65 2.77 3.56 4.85 6.35 9.70	1.11 1.81 2.27 3.00 3.77 5.22	1.65 2.69 3.39 4.47 5.61 7.77	1.530 1.442 1.380 1.278 1.160 0.896	38.90 36.66 35.08 32.50 29.50 22.80
1-1/2 40	1.900 48.3	5 10 STD XS 160 XX	40 80	5S 10S 40S 80S	0.065 0.109 0.145 0.200 0.281 0.400	1.65 2.77 3.68 5.08 7.14 10.15	1.28 2.09 2.72 3.63 4.86 6.41	1.90 3.11 4.05 5.41 7.25 9.55	1.770 1.682 1.610 1.500 1.338 1.100	45.00 42.76 40.94 38.14 34.02 28.00
2 50	2.375 60.3	5 10 STD XS 160 XX	40 80	5S 10S 40S 80S	0.065 0.109 0.154 0.218 0.344 0.436	1.65 2.77 3.91 5.54 8.74 11.07	1.61 2.64 3.66 5.03 7.47 9.04	2.39 3.93 5.44 7.48 11.11 13.44	2.245 2.157 2.067 1.939 1.687 1.503	57.00 54.76 52.48 49.22 42.82 38.16
2-1/2 65	2.875 73.0	5 10 STD XS 160 XX	40 80	5S 10S 40S 80S	0.083 0.120 0.203 0.276 0.375 0.552	2.11 3.05 5.16 7.01 9.53 14.02	2.48 3.53 5.80 7.67 10.02 13.71	3.69 5.26 8.63 11.41 14.92 20.39	2.709 2.635 2.469 2.323 2.125 1.771	68.78 66.90 62.68 58.98 53.94 44.96
3 80	3.500 88.9	5 10 STD XS 160 XX	40 80	5S 10S 40S 80S	0.083 0.120 0.216 0.300 0.438 0.600	2.11 3.05 5.49 7.62 11.13 15.24	3.03 4.34 7.58 10.26 14.34 18.60	4.52 6.46 11.29 15.27 21.35 27.68	3.334 3.260 3.068 2.900 2.624 2.300	84.68 82.80 77.92 73.66 66.64 58.42
3-1/2 90	4.000 101.6	5 10 STD XS XX	40 80	5S 10S 40S 80S	0.083 0.120 0.226 0.318 0.636	2.11 3.05 5.74 8.08 16.15	3.48 4.98 9.12 12.52 22.87	5.18 7.41 13.57 18.64 34.03	3.834 3.760 3.548 3.364 2.728	97.38 95.50 90.12 85.44 69.30
4 100	4.500 114.3	5 10 STD XS 120 160 XX	40 80	5S 10S 40S 80S	0.083 0.120 0.156 0.188 0.237 0.337 0.438 0.531 0.674	2.11 3.05 3.96 4.78 6.02 8.56 11.13 13.49	3.92 5.62 7.24 8.67 10.80 15.00 19.02 22.53 27.57	5.84 8.37 10.78 12.91 16.08 22.32 28.32 33.54 41.03	4.334 4.260 4.188 4.124 4.026 3.826 3.624 3.438 3.152	110.08 108.20 106.38 104.74 102.26 97.18 92.04 87.32 80.06
4-1/2 115	5.000 127.0	STD XS XX	40 80	40S 80S	0.247 0.355 0.710	6.27 9.02 18.03	12.55 17.63 32.56	18.67 26.24 48.45	4.506 4.290 3.580	114.46 108.96 90.94





# **U.S./METRIC**

NOMINAL PIPE SIZE	OD	SCI- DESIG	HEDU			ALL (NESS	WEI	GHT	ID		
INCH MM	INCH MM	Д	SME	<u> </u>	INCH	ММ	LBS/ FOOT	KG/ METER	INCH	мм	
5 125	5.563 141.3	5 10 STD XS 120 160 XX	40 80	5S 10S 40S 80S	0.109 0.134 0.258 0.375 0.500 0.625 0.750	2.77 3.40 6.55 9.53 12.70 15.88 19.05	6.36 7.78 14.63 20.80 27.06 32.99 38.59	9.46 11.56 21.77 30.97 40.28 49.12 57.43	5.345 5.295 5.047 4.813 4.563 4.313 4.063	135.76 134.50 128.20 122.24 115.90 109.54 103.20	
6 150	6.625 168.3	5 10 STD XS 120 160 XX	40 80	5S 10S 40S 80S	0.109 0.134 0.188 0.280 0.432 0.562 0.719 0.864	2.77 3.40 4.78 7.11 10.97 14.27 18.26 21.95	7.59 9.30 12.94 18.99 28.60 36.43 45.39 53.21	11.31 13.83 19.28 28.26 42.56 54.21 67.57 79.22	6.407 6.357 6.249 6.065 5.761 5.501 5.187 4.897	162.76 161.50 158.74 154.08 146.36 139.76 131.78 124.40	
7 175	7.625 193.7	STD XS XX	40 80	40S 80S	0.301 0.500 0.875	7.65 12.70 22.23	23.57 38.08 63.14	35.10 56.69 94.00	7.023 6.625 5.875	178.40 168.30 149.24	
8 200	8.625 219.1	10 20 30 STD 60 XS 100 120 140 XX 160	40 80	5S 10S 40S 80S	0.109 0.148 0.250 0.277 0.322 0.406 0.500 0.594 0.719 0.812 0.875 0.906	2.77 3.76 6.35 7.04 8.18 10.31 12.70 15.09 18.26 20.62 22.23 23.01	9.92 13.41 22.38 24.72 28.58 35.67 43.43 51.00 60.77 67.82 72.49 74.76	14.78 19.97 33.32 36.82 42.55 53.09 64.64 75.92 90.44 100.93 107.93 111.27	8.407 8.329 8.125 8.071 7.981 7.625 7.437 7.187 7.001 6.875 6.813	213.56 211.58 206.40 205.02 202.74 198.48 193.70 188.92 182.58 177.86 174.64 173.08	
9 225	9.625 244.5	STD XS XX	40 80	40S 80S	0.342 0.500 0.875	8.69 12.70 22.23	33.94 48.77 81.85	50.54 72.60 121.85	8.941 8.625 7.875	227.12 219.10 200.04	
10 250	10.750 273.0	20 30 STD XS 80 100 120 140 160	40 60 XX	5S 10S 40S 80S	0.134 0.165 0.188 0.250 0.307 0.365 0.500 0.594 0.719 0.844 1.000 1.125	3.40 4.19 4.78 6.35 7.80 9.27 12.70 15.09 18.26 21.44 25.40 28.58	15.21 18.67 21.23 28.06 34.27 40.52 54.79 64.49 77.10 89.38 104.23 115.75	22.61 27.78 31.62 41.76 51.01 60.29 81.53 95.98 114.71 133.01 155.10 172.27	10.482 10.420 10.374 10.250 10.136 10.020 9.750 9.562 9.312 9.062 8.750 8.500	266.20 264.62 263.44 260.30 257.40 254.46 247.60 242.82 236.48 230.12 222.20 215.84	
11 275	11.750 298.5	STD XS XX	40 80	40S 80S	0.375 0.500 0.875	9.53 12.70 22.23	45.60 60.13 101.72	67.91 89.51 151.46	11.000 10.750 10.000	279.44 273.10 254.04	
12 300	12.750 323.8	20 30 STD 40 XS 60 80 100 120 140 160	××	5S 10S 40S 80S	0.156 0.180 0.188 0.250 0.330 0.375 0.406 0.562 0.688 0.844 1.000 1.125 1.312	3.96 4.57 4.78 6.35 8.38 9.53 10.31 12.70 14.27 17.48 21.44 25.40 28.58 33.32	21.00 24.19 25.25 33.41 49.61 53.57 65.48 73.22 88.71 107.42 125.61 139.81	31.24 35.98 37.61 49.71 65.19 73.86 79.71 97.44 108.93 132.05 159.87 186.92 208.08 238.69	12.438 12.390 12.374 12.250 12.090 12.000 11.938 11.750 11.626 11.374 11.062 10.750 10.500	315.88 314.66 314.24 311.10 307.04 304.74 303.18 298.40 295.26 288.84 280.92 273.00 266.64 257.16	
14 350	14.000 355.6	10 20 STD 40 XS 60 80 100 120 140 160	30	10S 40S 80S	0.188 0.250 0.312 0.375 0.438 0.500 0.594 0.750 0.938 1.094 1.250 1.406	4.78 6.35 7.92 9.53 11.13 12.70 15.09 19.05 23.83 27.79 31.75 35.71	27.76 36.75 45.65 54.62 63.50 72.16 85.13 106.23 130.98 150.93 170.37 189.29	41.36 54.69 67.91 81.33 94.55 107.40 126.72 158.11 194.98 224.66 253.58 281.72	13.624 13.500 13.376 13.250 13.124 13.000 12.812 12.500 12.124 11.812 11.500 11.188	346.04 342.90 339.76 336.54 333.34 330.20 325.42 317.50 307.94 300.02 292.10 284.18	





## **U.S./METRIC**

NOMINAL PIPE SIZE	OD		IEDULE NATION	NS	THICK		WEI	GHT	II	D		
INCH MM	INCH MM	А	SME		INCH	MM	LBS/ FOOT	KG/ METER	INCH	ММ		
16 400	16.000 406.4	10 20 STD XS 60 80 100 120 140 160	30 4	0S 0S 0S	0.188 0.250 0.312 0.375 0.500 0.656 0.844 1.031 1.219 1.438 1.594	4.78 6.35 7.92 9.53 12.70 16.66 21.44 26.19 30.96 36.53 40.49	31.78 42.09 52.32 62.64 82.85 107.60 136.74 164.98 192.61 223.85 245.48	47.34 62.65 77.83 93.27 123.31 160.13 203.54 245.57 286.66 333.21 365.38	15.624 15.500 15.376 15.250 15.000 14.688 14.312 13.938 13.562 13.124 12.812	396.84 393.70 390.56 387.34 381.00 373.08 363.52 354.02 344.48 333.34 325.42		
18 450	18.000 457	10 20 STD 30 XS 40 60 80 100 120 140 160	4	0S 0S 0S	0.188 0.250 0.312 0.375 0.438 0.500 0.562 0.750 0.938 1.156 1.375 1.562 1.781	4.78 6.35 7.92 9.53 11.13 12.70 14.27 19.05 23.83 29.36 34.93 39.67 45.24	35.80 47.44 58.99 70.65 82.23 93.54 104.76 138.30 171.08 208.15 244.37 274.48 308.79	53.31 70.57 87.71 105.17 122.38 139.16 155.81 205.75 254.57 309.64 363.58 408.28 459.39	17.624 17.500 17.376 17.250 17.124 17.000 16.876 16.500 16.124 15.688 15.250 14.876 14.438	447.44 444.30 441.16 437.94 434.74 431.60 428.46 418.90 409.34 398.28 387.14 377.66 366.52		
20 500	20.000	10 STD XS 40 60 80 100 120 140 160	20 4	0S 0S 0S	0.218 0.250 0.375 0.500 0.594 0.812 1.031 1.281 1.500 1.750 1.969	5.54 6.35 9.53 12.70 15.09 20.62 26.19 32.54 38.10 44.45 50.01	46.10 52.78 78.67 104.23 123.23 166.56 209.06 256.34 296.65 341.41 379.53	68.61 78.56 117.15 155.13 183.43 247.84 311.19 381.55 441.52 508.15 564.85	19.564 19.500 19.250 19.000 18.812 18.376 17.938 17.438 17.000 16.500 16.062	496.92 495.30 488.94 482.60 477.82 466.76 455.62 442.92 431.80 419.10 407.98		
22 550	22.000 559	STD XS 60 80 100 120 140 160	10 20 4	0S 0S 0S	0.218 0.250 0.375 0.500 0.875 1.125 1.375 1.625 1.875 2.125	5.54 6.35 9.53 12.70 22.23 28.58 34.93 41.28 47.63 53.98	50.76 58.13 86.69 114.92 197.60 251.05 303.16 353.94 403.38 451.49	75.55 86.55 129.14 171.10 294.27 373.85 451.45 527.05 600.67 672.30	21.564 21.500 21.250 21.000 20.250 19.750 19.250 18.750 18.250 17.750	547.92 546.30 539.94 533.60 514.54 501.84 489.14 476.44 463.74 451.04		





## **U.S./METRIC**

NOMINAL PIPE SIZE	OD	SCI DESIG	HEDU		WA	ALL (NESS	WEI	GHT	ID		
INCH MM	INCH MM	Δ	SME		INCH	MM	LBS/ FOOT	KG/ METER	INCH	ММ	
24 600	24.000 610	10 STD XS 30 40 60 80 100 120 140 160	20	10S 40S 80S	0.250 0.375 0.500 0.562 0.688 0.969 1.219 1.531 1.812 2.062 2.344	6.35 9.53 12.70 14.27 17.48 24.61 30.96 38.89 46.02 52.37 59.54	63.47 94.71 125.61 140.81 171.45 238.57 296.86 367.74 429.79 483.57 542.64	94.53 141.12 187.07 209.65 255.43 355.28 442.11 547.74 640.07 720.19 808.27	23.500 23.250 23.000 22.876 22.624 22.062 21.562 20.938 20.376 19.876 19.312	597.30 590.94 584.60 581.46 575.04 560.78 548.08 532.22 517.96 505.26 490.92	
26 650	26.000 660	STD XS	10	40S 80S	0.312 0.375 0.500	7.92 9.53 12.70	85.68 102.72 136.30	127.36 152.88 202.74	25.376 25.250 25.000	644.16 640.94 634.60	
28 700	28.000 711	STD XS	10 20 30	40S 80S	0.312 0.375 0.500 0.625	7.92 9.53 12.70 15.88	92.35 110.74 146.99 182.90	137.32 164.86 218.71 272.23	27.376 27.250 27.000 26.750	695.16 691.94 685.60 679.24	
30 750	30.000 762	STD XS	10 20 30	40S 80S	0.312 0.375 0.500 0.625	7.92 9.53 12.70 15.88	99.02 118.76 157.68 196.26	147.29 176.85 234.68 292.20	29.376 29.250 29.000 28.750	746.16 742.94 736.60 730.24	
32 800	32.000 813	STD XS	10 20 30 40		0.312 0.375 0.500 0.625 0.688	7.92 9.53 12.70 15.88 17.48	105.69 126.78 168.37 209.62 230.29	157.25 188.83 250.65 312.17 342.94	31.376 31.250 31.000 30.750 30.624	797.16 793.94 787.60 781.24 778.04	
34 850	34.000 864	STD XS	10 20 30 40		0.312 0.375 0.500 0.625 0.688	7.92 9.53 12.70 15.88 17.48	112.36 134.79 179.06 222.99 245.00	167.21 200.82 266.63 332.14 364.92	33.376 33.250 33.000 32.750 32.624	848.16 844.94 838.60 832.24 829.04	
36 900	36.000 914	STD XS	10		0.312 0.375 0.500	7.92 9.53 12.70	119.03 142.81 189.75	176.97 212.57 282.29	35.376 35.250 35.000	898.16 894.94 888.60	
42 1050	42.000 1067	STD XS			0.375 0.500 0.625 0.750	9.53 12.70 15.88 19.05	166.86 221.82 276.44 330.72	248.53 330.21 411.64 492.33	41.250 41.000 40.750 40.500	1047.94 1041.60 1035.24 1028.90	
48 1200	48.000 1219	STD XS			0.375 0.500	9.53 12.70	190.92 253.89	284.25 377.81	47.250 47.000	1199.94 1193.60	

# Stainless Steel Butt-Weld Fittings







# Stainless Steel Buttweld Fittings Material A403 / SA403

Trade Name	Grade	UNS #	Butt Weld Fittings
304	WP304	S30400	A403* / SA403*
304L	WP304L	S30403	A403* / SA403*
304H	WP304H	S30409	A403* / SA403*
316	WP316	S31600	A403* / SA403*
316L	WP316L	S31603	A403* / SA403*
316H	WP316H	S31609	A403* / SA403*
321	WP321	S32100	A403* / SA403*
321H	WP321H	S32109	A403* / SA403*
347	WP347	S34700	A403* / SA403*
347H	WP347H	S34709	A403* / SA403*
317L	WP317L	S31703	A403* / SA403*

<sup>\*</sup> Materials in industry standard designations: 5S, 10S, 40S, 80S per B36.19

# Fitting Classes for WP Grades

CR Corrosion resistant grade. S through WU Classes do not apply.

WP- SSeamless.

WP-W Welded, RT or UT all pipe starting material welds made with filler metal. All fitting manufacturer welds except as

excluded in A/SA403 paragraph 5.4.3. If UT is substituted for RT, all welds must be examined 100% for their

length as required by A/SA403 paragraph 5.6.

WP-WXRT all welds with or without filler metal.

WP-WUUT all welds with or without filler metal.

WPgrade-grade-class Insert grades (304-304L) and class (S,W,WX, or WU). Applies to fittings meeting all chemical and physical

requirements of both grades.

\* ON REQUEST Duplex & Super Duplex A815 UNS S31803, S32205, UNS S32750, S32760

<sup>\*</sup> Several grades of austenitic stainless steel alloys are included in this specification.

Grades are designated with a prefix, based on the applicable ASTM/ASME or MSS standards.

For each of the WP stainless grades

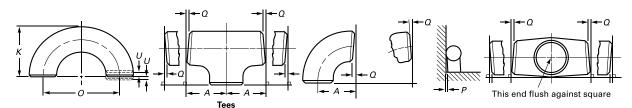




# **Tolerances for Butt-Welding Fittings**

Nama-in al	Di Ci		All Fittings		90°45°Elbows, Tees,Crosses	Reducer ,Lap joint stub Ends	Caps	180° Return Elbows			
Nominai	Pipe Size	Outside Diameter at Bevel	Inside Diameter at Bevel	Thickness	Center-to-End Dinmension,±	Overall Length	Overall Length	Center- to-Center Dimension	Back-to-Face Dimension	Alignment of Ends	
DN	NPS	OD,D1,D2	ID	Т	A,B,C,M	H,F	E,EI	0	К	U	
15-65	1/2-2.1/2	+1.6,-0.8	0.8		2	2	3	6	6	I	
80-90	3-3.1/2	1.6	1.6		2	2	3	6	6	I	
100	4	1.6	1.6		2	2	3	6	6	I	
125-200	5-8	+2.4,-1.6	1.6		2	2	6	6	6	ı	
250-450	10-18	+4.0,-3.2	3.2		2	2	6	10	6	2	
500-600	20-24	+6.4,-4.8	4.8	Not less than 87.5% of nominal thickness	2	2	6	10	6	2	
650-750	26-30	+6.4,-4.8	4.8	UllCKITESS	3	5	10	=	-	-	
800-1200	32-48	+6.4,-4.8	4.8		5	5	10	-	-	-	
1300-1500	52-60	+9.5,-6.4	6.4		9.5	-	-	-	-	-	
1600-1700	64-68	+12,-9.5	9.5		12	-	-	-	-	-	
1800-2000	72-80	+16,-12	12.0		16	-	-	-	-	-	

Note: tAls. dimensions are in mm. If you could not find the size, please \_\_\_\_\_

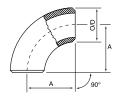


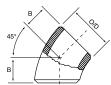
# **Angularity Tolerance of Butt-Welding Fittings**

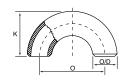
Nomin	Nominal Size		15-100	125-200	250-300	350-400	450-600	650-750	800-1050	1100-1200	1300-1500
14011111	iai Size	NPS	1/2 - 4	5-8	10-12	14-16	18-24	26-30	32-42	44-48	52-60
Angularity	Off Angle	Q	ı	2	3	3	4	5	5	5	6.4
Tolerance	Off Plain	Р	2	4	5	6	10	10	13	19	20

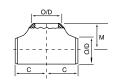


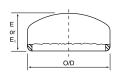












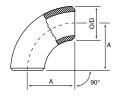
Nomina	al Size	WT SCH		LR BOW	45° LR ELBOW			SR BOW	180	180° LR ELBOW			al Tee		Caps			
mm	inch		Α	Weight	В	Weight	A	Weight	0	K	Weight	C and M	Weight	Ε <sup>†</sup>	Limiting Wall	E,‡	Weight	
		5S		0.05		0.03		-			0.11		0.09				0.04	
		10S		0.06		0.03		-			0.12		0.10				0.04	
15	1/2	40S	38	0.08	16	0.04		-	76	48	0.15	25	0.10	25	4.57	25	0.05	
		80S		0.10		0.05		-	, ,		0.19		0.14				0.05	
		160		0.13		0.07		-			0.24		0.17				0.06	
		XXS		0.21		0.11		-			0.34		0.27				0.10	
		5S		0.06		0.03		-			0.14		0.10				0.05	
		10S		0.07		0.03		-			0.18		0.13				0.05	
20*	3/4*	40S 80S	38	0.09	19	0.04		-	76	51	0.20	29	0.17	25	3.81	1 25	0.06	
		160		0.11		0.05		-			0.22		0.20				0.08	
		XXS		0.10		0.07					0.40		0.29				0.09	
		5S		0.09		0.05		0.08			0.40		0.18				0.08	
		10S		0.14		0.09		0.10			0.27		0.29				0.09	
		40S		0.16		0.11		0.12			0.30		0.30				0.13	
25	1	80S	38	0.22	22	0.14	25	0.17	76	56	0.42	38	0.39	38	4.57	38	0.13	
		160		0.30		0.20		0.24			0.60		0.54				0.18	
		XXS		0.44		0.28		0.35			0.78		0.77				0.26	
		5S		0.14		0.09	0.14				0.34		0.34			33 38	0.09	
l l		10S	48	0.23		0.11		0.17			0.45		0.50				0.13	
00	4 4 /4	40S		0.25	05	0.17	32	0.20	95 70	70	0.60	48	0.60	00	4.00		0.17	
32	1-1/4	80S		0.40	25	0.23	32	32 0.29			0.70		0.68	38	4.83		0.18	
		160		0.52		0.39		0.37				0.90		0.90				0.23
		XXS		0.80		0.45		0.57			1.28		1.36				0.35	
		5S		0.17		0.11		0.20			0.48		0.43				0.10	
		10S		0.31		0.17		0.22			0.60		0.68				0.14	
40	1-1/2	40S	57	0.40	29	0.23	38	0.29	114	83	0.81	57	0.86	38	5.08	38	0.23	
		80S		0.51		0.29		0.40			1.02		1.02				0.25	
		160		0.72		0.40		0.56			1.40		1.43				0.34	
		XXS		1.03		0.57		0.80			1.80		2.05				0.49	
		5S 10S		0.29		0.14		0.29			0.80		0.55				0.16	
		40S		0.51		0.25		0.57			1.05		0.85 1.29				0.17	
50	2	80S	76	0.71	35	0.40	51	0.70	152	106	1.92	64	1.59	38	5.59	44	0.27	
		160		1.43		0.80		1.10			2.80		2.50				0.53	
		XXS		1.82		1.03		1.41			3.40		3.18				0.68	
		5S		0.68		0.34		0.57			1.20		0.98				0.23	
		10S		0.85		0.48		0.62			1.59		1.41				0.25	
		40S		1.36		0.77		1.02			2.52		2.20				0.45	
65	2-1/2	80S	<del></del> 95 ⊦	1.82	44	1.00	64	1.31	190	132	3.42	76	3.14	38	7.11	51	0.51	
		160		2.47		1.34		1.76			4.60		4.26				0.67	
		XXS		3.64		1.99		2.62			6.20		6.27				1.02	

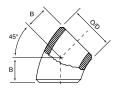
### Note

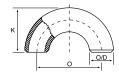
- 1. Weights and dimensions listed above are a guide only. Dimensions in mm. Weights in kg.
- 2. There are 2 possible dimensions for this size, refer to ANSI B16.9  $\,$
- 3.Length E applies for thickness not exceeding that given in column "Limiting Wall Thickness"
- 4.Length E1 applies for thickness greater than that given in column "Limiting Wall Thickness"

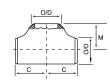


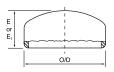










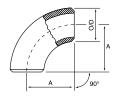


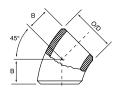
Nomin	al Size	WT SCH		LR		45° LR ELBOW		SR BOW	180°	LR ELE	вом	Equa	al Tee		Ca <sub>l</sub>	ps	
mm	inch		Α	Weight	В	Weight	Α	Weight	0	K	Weight	C and M	Weight	Ε <sup>†</sup>	Limiting Wall	E,‡	Weight
80	3	5S 10S 40S 80S 160	114	0.91 1.22 2.19 2.98 4.35 5.96	51	0.48 0.63 1.08 1.50 2.18 3.01	76	0.80 0.99 1.50 1.91 2.77 3.82	229	159	2.00 2.40 4.50 5.88 8.20 11.00	86	1.55 1.77 3.32 4.45 6.50 8.91	51	7.62	64	0.39 0.40 0.71 0.85 1.23 1.70
90	3 - 1/2	5S 10S 40S 80S 160	133	1.19 1.70 2.84 4.00 - 8.00	57	0.53 0.75 1.42 2.00 - 4.00	89	1.07 1.39 2.06 2.43 - 4.86	267	184	3.20 4.00 5.80 7.92 - WOR	95	2.50 2.67 4.09 5.45 - 10.91	64	8.13	76	0.55 0.57 1.02 1.14 - 2.27
100	4	5S 10S 40S 80S 160 XXS	152	1.50 2.16 4.18 6.20 9.79 12.39	64	0.75 1.08 2.09 3.10 4.94 6.20	102	1.42 1.72 3.13 4.12 6.46 8.24	305	210	3.68 4.44 6.00 12.36 19.80 24.80	105	3.27 3.47 5.29 7.73 12.21 15.45	64	8.64	76	0.57 0.65 1.22 1.61 2.52 3.22
127	5	5S 10S 40S 80S 160	190	2.95 3.64 6.88 9.60 16.04 19.21	79	1.48 1.82 3.44 4.80 7.96 9.60	127	2.25 2.78 5.29 7.32 12.15 14.64	381	262	7.60 8.52 15.00 18.90 30.00 37.00	124	5.91 6.11 9.43 11.36 18.98 22.73	76	9.65	89	0.91 1.02 1.85 2.56 4.26 5.12
150	6	5S 10S 40S 80S 160 XXS	229	4.55 5.45 10.91 16.36 27.16 32.73	95	2.27 2.73 5.45 8.18 9.49 16.36	152	3.52 4.16 7.95 11.82 19.62 23.64	457	313	980 12.00 18.00 33.60 52.00 60.00	143	7.82 8.09 11.02 13.64 22.64 27.27	89	10.92	102	1.25 1.36 3.24 4.55 7.27 9.09
200	8	5S 10S 40S 80S 160 XXS	305	7.86 10.68 21.59 33.18 60.00 57.73	127	3.93 5.34 10.80 16.59 29.20 29.03	203	7.02 8.01 17.09 24.91 45.08 49.55	610	414	16.00 21.48 40.80 71.40 118.00 122.00	178	14.09 15.68 20.95 28.18 50.91 49.09	102	12.70	127	2.05 2.50 5.68 7.45 13.47 10.35
250	10	5S 10S 40S 80S 160 XXS	381	14.55 19.55 38.64 51.82 116.36	159	7.27 9.77 19.32 25.91 57.73	254	12.45 15.91 28.64 45.36 101.82	762	518	36.00 51.28 79.80 104.00 220.00	216	25.00 26.82 35.45 50.00 112.27	127	12.70	152	4.32 4.91 9.23 12.41 27.92

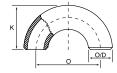
- 1. Weights and dimensions listed above are a guide only. Dimensions in mm. Weights in kg.
- 2. There are 2 possible dimensions for this size, refer to ANSI B16.9
- ${\it 3.} Length \ E \ applies \ for \ thickness \ not \ exceeding \ that \ given \ in \ column \ "Limiting \ Wall \ Thickness"$
- ${\it 4.} Length~{\it E1}~applies~for~thickness~greater~than~that~given~in~column~{\it ``Limiting~Wall~Thickness"}$

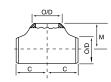


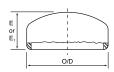










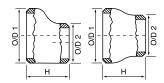


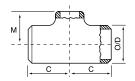
Nomin	al Size	WT SCH		LR BOW		LR BOW		SR	180	° LR ELE	вом	Equa	al Tee		Ca	ps	
mm	inch		Α	Weight	В	Weight	Α	Weight	0	K	Weight	C and M	Weight	Ε <sup>†</sup>	Limiting W II	E,‡	Weight
300	12	5S 10S 40S 80S 160 XXS	457	23.18 27.27 59.55 79.55 208.18	190	11.59 13.64 29.77 39.77 104.09	305	15.91 18.18 36.36 56.82 148.64	914	619	52.00 59.04 121.00 151.00 348.00	254	37.73 39.55 62.27 84.09 220.00	152	12.70	178	6.36 6.55 13.09 16.64 43.18
350	14	5S 10S 40S 80S 160	533	30.91 36.36 70.45 93.64	222	15.45 18.18 35.23 46.82 -	356	20.00 23.64 45.91 61.36	1067	711	72.00 81.00 164.00 264.00	279	40.45 48.64 79.55 95.45	165	12.70	191	7.73 8.18 16.23 21.82
400	16	5S 10S 40S 80S 160	610	45.45 47.73 91.82 122.27 -	254	22.73 23.86 45.91 60.91	406	29.55 30.91 59.55 79.55 -	1219	813	94.00 105.00 224.00 400.00 -	305	52.27 59.09 100.00 120.45 -	178	12.70	203	13.64 14.55 22.05 29.55 -
450	18	5S 10S 40S 80S 160 XXS	686	56.82 60.00 122.27 159.09	286	28.41 30.00 59.55 79.55	457	36.82 39.09 79.55 103.64 -	1372	914	WOR WOR WOR	343	67.73 76.82 130.00 156.36	203	12.70	229	17.27 18.00 27.00 36.00
500	20	5S 10S 40S 80S 160 XXS	762	75.00 100.00 150.00 199.55 -	318	37.50 50.00 75.00 99.55	508	48.64 65.00 97.73 129.55	1524	1016	WOR WOR WOR	381	77.73 103.64 162.73 195.45	229	12.70	254	25.00 27.27 34.09 40.00
550	22	5S 10S 40S 80S 160 XXS	838	99.40 163.03 163.03 210.83	343	49.70 81.13 81.13 104.87	559	61.06 73.02 120.83 156.29	1676	1118	WOR WOR WOR	419	84.72 101.35 170.07 217.46	254	12.70	254	WOR WOR WOR
600	24	5S 10S 40S 80S 160 XXS	919	127.27 140.91 210.91 280.45 -	381	63.64 70.45 105.45 140.00 -	610	82.73 91.82 137.27 182.27 -	1829	1219	WOR WOR WOR	432	135.45 155.91 226.36 272.73 -	267	12.70	305	34.09 34.55 44.55 61.36

- 1. Weights and dimensions listed above are a guide only. Dimensions in mm. Weights in kg.
- 2. There are 2 possible dimensions for this size, refer to ANSI B16.9
- 3.Length E applies for thickness not exceeding that given in column "Limiting Wall Thickness"
- 4.Length E1 applies for thickness greater than that given in column "Limiting Wall Thickness"









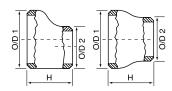
Nomir	al Size	WT SCH	and Ed	entric ccentric ucers	Red	ducing <sup>*</sup>	Tees	
mm OD1 X OD2	inch OD1 X OD2		н	Weight	С	М	Weight	
		5S		0.08			0.09	
		10S		0.10			0.11	
20 X 15	3/4 X 1/2	40S	00	0.14	00	00	0.15	
20 / 15	3/4 X 1/2	80S	38	0.18	29	29	0.18	
		160		0.25			0.26	
		XXS		0.36			0.37	
		5S		0.07			0.16	
		10S		0.12			0.25	
05 V 15	1 / 1/0	40S	51	0.15	38	00	0.26	
25 X 15	1 X 1/2	80S	01	0.20	38	38	0.34	
		160		0.26			0.47	
		XXS		0.40			0.68	
		5S		0.08			0.16	
	1 X 3/4	10S	- - 51	0.13	38	38	0.25	
05 V 00		40S		0.16			0.27	
25 X 20		80S		0.22			0.35	
		160		0.28			0.49	
		XXS		0.45			0.70	
		5S		0.30			0.10	
		10S		0.44			0.18	
00.1/.00	1 1/1 1/0 //	40S		0.52	40	40	0.22	
32 X 20	1-1/4 X 3/4	80S	51	0.60	48	48	0.25	
		160		0.79			0.33	
		XXS		1.20			0.51	
		5S		0.10			0.31	
		10S		0.18			0.45	
00.1/.05		40S		0.22	40	40	0.53	
32 X 25	1-1/4 X 1	80S	51	0.27	48	48	0.61	
		160		0.37			0.80	
		XXS		0.54			1.23	
		5S		0.11			0.37	
		10S		0.18			0.59	
40.1/.00		40S		0.24			0.74	
40 X 20	1-1/2 X 3/4	80S	64	0.32	57	57	0.88	
		160	-	0.45			1.23	
		XXS		0.65			1.76	

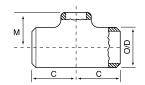
Nomin	nal Size	WT SCH	and Ed	entric centric ucers	Re	ducing '	Tees
mm OD1 X OD2	inch OD1 X OD2		Н	Weight	С	М	Weight
		5S		0.11			0.38
		10S		0.20			0.60
40 X 25	1-1/2 X 1	40S	64	0.26	57	57	0.76
40 / 23	1-1/2 / 1	80S	04	0.34	51	31	0.90
		160		0.47			1.26
		XXS		0.67			1.80
			5S 0.12			0.39	
		10S		0.21			0.61
40 X 32	1 1/0 V 1 1/4	40S	64	0.28	67	E 7	0.78
40 / 32	1-1/2 X 1-1/4	80S	64	0.36	57	57	0.92
		160		0.51			1.29
		XXS		0.73			1.84
		5S		0.15			0.46
		10S		0.25	64	44	0.72
50.1/.00	2 X 3/4	40S	76	0.36			1.09
50 X 20		80S		0.50			1.35
		160		0.79			2.12
		XXS		1.01			2.70
		5S		0.17			0.47
		10S		0.28			0.73
50 V 05	0.7.4	40S	70	0.40	0.4		1.10
50 X 25	2 X 1	80S	76	0.54	64	51	1.37
		160		0.84			2.15
		XXS		1.07			2.74
		5S		0.19			0.49
		10S		0.31			0.76
50.7/40	0 / 4 4 / 0	40S	70	0.45	0.4		1.15
50 X 40	2 X 1-1/2	80S	76	0.59	64	60	1.43
		160		0.93			2.25
		XXS		1.18			2.86
		5S		0.25			0.83
		108		0.38			1.20
05.14.05		40S		0.65	70	57	1.87
65 X 25	2-1/2 X 1	80S	89	0.87	76	5/	2.66
		160		1.18			3.62
		XXS		1.75			5.33

- 1. Weights and dimensions listed above are a guide only. Dimensions in mm. Weights in kg.
- 2. There are 2 possible dimensions for this size, refer to ANSI B16.9  $\,$









Nomir	nal Size	WT SCH	and Ed	entric ccentric ucers	Red	ducing '	Tees
mm OD1 X OD2	inch OD1 X OD2		Н	Weight	С	М	Weight
		5S		0.30			0.86
		108		0.45			1.24
65 X 40	2-1/2 X 1-1/2	40S	89	0.76	76	67	1.94
65 / 40	Z-1/2 X 1-1/2	80S	09	0.94	70	07	2.76
		160		1.27			3.75
		XXS		1.88			5.52
		5S		0.32			0.88
		10S		0.47			1.27
64 X 50	2-1/2 X 2	40S	89	0.80	76	70	1.98
64 A 50	2-1/2 / 2	80S	09	1.03	76	/0	2.82
		160		1.39			3.84
		XXS		2.05			5.65
		5S		0.35			1.33
		108		0.51			1.52
80 X 40	3 X 1-1/2	40S	89	0.94	86	73	2.85
		80S		1.21			3.83
		160		1.75			5.59
		XXS		2.42			7.66
		5S		0.38			1.36
		10S		0.55			1.56
80 X 50	3 X 2	40S	89	1.00	86	76	2.92
00 \ 30	3 / 2	80S	09	1.30	00	/6	3.92
		160		1.88			5.72
		XXS		2.59			7.84
		5S		0.41			1.39
		10S		0.59			1.60
80 X 65	3 X 2-1/2	40S	89	1.08	86	83	2.99
60 / 65	3 / 2-1/2	80S	09	1.49	00	00	4.01
		160		2.16			5.85
		XXS		2.98			8.02
		5S		0.48			2.75
		10S		0.68			2.91
100 X 65	4 X 1-1/2	40S	100	1.36	105	0.0	4.44
100 X 65	4 A 1-1/2	80S	102	1.90	105	86	6.49
100 / 03		160		2.98			10.25
		XXS		3.80			12.98

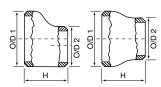
Nomir	nal Size	WT SCH	and Ed	entric centric ucers	Red	ducing <sup>-</sup>	Tees
mm OD1 X OD2	inch OD1 X OD2		н	Weight	С	М	Weight
		5S		0.55			2.78
		10S		0.79			2.95
100 X 50	4 X 2	40S	102	1.58	105	89	4.49
100 × 50	4 ^ 2	80S	102	1.96	105	09	6.57
		160		3.07			10.38
		XXS		3.92			13.14
		58		0.58			2.81
		10S		0.83			2.98
100 X 65	4 X 2-1/2	40S	102	1.66	105	95	4.55
100 x 65	4 / 2-1/2	80S	102	2.20	105	95	6.65
		160		3.45			10.50
		XXS		4.39			13.29
		5S		0.61			2.88
		10S		0.87			3.05
100 X 80	4 X 3	40S	102	1.75	105	98	4.65
100 x 80		80S		2.34			6.80
		160		3.67			10.74
		XXS		4.67			13.60
		5S		1.20			5.08
		10S		1.45			5.25
125 X 080	5 X 3	40S	127	2.86	124	111	8.11
123 / 000	3 / 3	80S	121	3.89	124	'''	9.77
		160		6.45			16.32
		XXS		7.77			19.55
		5S		1.25			5.32
		10S		1.50			5.50
125 X 100	5 X 4	40S	127	2.99	124	117	8.49
123 X 100	3 / 4	80S	121	4.14	124	117	10.23
		160		6.87			17.08
		XXS		8.28			20.45
		5S		1.51			6.65
150 X 80		10S		1.82			6.88
	6 X 3	40S	140	3.99	143	124	11.96
100 / 60	0 / 3	80S	140	5.52	143	124	11.59
		160		9.17			19.24
		XXS		11.05			23.18

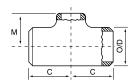
### Note

- 1. Weights and dimensions listed above are a guide only. Dimensions in mm. Weights in kg.
- 2. There are 2 possible dimensions for this size, refer to ANSI B16.9  $\,$









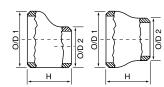
Nomir	nal Size	WT SCH	and E	centric ccentric ucers	Re	ducing <sup>*</sup>	Tees
mm OD1 X OD2	inch OD1 X OD2		Н	Weight	С	М	Weight
		5S		1.55			6.88
		10S		1.96		130	7.12
150 X 100	6 X 4	40S	140	4.09	143		9.70
130 × 100	0 / 4	80S	140	5.97	143	130	12.00
		160		9.91			19.92
		XXS		11.95			24.00
		5S		1.64			7.04
		10S		2.02			7.28
150 X 125	6 X 5	40S	140	4.31	143	137	9.92
150 × 125	0 / 3	80S	140	6.27	143	137	12.27
		160		10.40			20.37
		XXS		12.54			24.55
		5S		2.16			12.12
	8 X 4	10S	152	3.02	178	156	13.49
200 × 100		40S		6.56			18.02
200 X 100		80S		9.25		156	24.24
		160		16.75			43.77
		XXS		16.20			42.23
		5S		2.21			12.40
		10S		3.09			13.80
200 X 125	8 X 5	40S	152	6.72	178	162	18.44
200 X 125	0 0 0	80S	152	9.69	1/0	162	24.80
		160		17.50			44.77
		XXS		16.96			43.18
		5S		2.30			12.68
		10S		3.20			14.11
200 X 150	8 X 6	40S	152	6.96	178	168	18.86
200 X 150	0 / 0	80S	102	10.15	170	100	25.36
		160		18.32			45.91
		XXS		17.75			44.18
		5S		3.79			21.25
		10S		4.74			23.25
250 X 100	10 X 4	40S	178	10.54	016	101	30.14
	10 3 4	80S	1/8	12.58	216	184	42.50
		160		28.32			95.45
		XXS		-			-

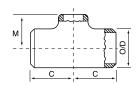
Nomir	ıal Size	WT SCH	and Ed	entric centric ucers	Re	ducing <sup>-</sup>	Tees
mm OD1 X OD2	inch OD1 X OD2		н	Weight	С	М	Weight
		5S		3.92			21.50
		108		4.90			23.06
050 V 405	40 V E	40S	470	10.89	040	404	30.49
250 X 125	10 X 5	80S	178	14.27	216	191	43.00
		160		32.09			96.36
		XXS		-			-
		5S		4.01			22.00
		10S		5.01			23.60
250 X 150	10 X 6	40S	178	11.15	216	194	31.20
250 X 150	10.76	80S	170	14.82	210	194	44.00
		160		33.32			98.64
		XXS		ı			-
		5S		4.17			22.50
		10S		5.21		194	24.14
250 x 200	10 x 8	40S	178	11.58	216		31.91
250 X 200		80S		15.61			45.00
		160		35.05			100.91
		XXS		ı			-
	12 X 6	5S		6.37	254		32.45
		10S		7.45		219	34.01
300 X 150		40S	203	15.51			53.64
300 X 130		80S	200	20.19	204		72.27
		160		52.73			189.09
		XXS		-			-
		5S		6.57			33.20
		10S		7.69			34.80
300 X 200	12 X 8	40S	203	16.02	254	229	54.55
000 X 200	12 / 0	80S	200	20.94	204	220	74.09
		160		54.55			193.64
		XXS		-			-
		5S		6.83			33.95
		10S		8.00			35.59
300 X 250	12 X 10	40S	203	16.67	254	241	55.91
000 / 200	12 / 10	80S	200	21.68	204	2+1	75.45
		160		56.36			197.73
		XXS		-			-

- 1. Weights and dimensions listed above are a guide only. Dimensions in mm. Weights in  $\ensuremath{\mathsf{kg}}$  .
- 2. There are 2 possible dimensions for this size, refer to ANSI B16.9  $\,$









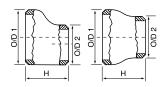
Nomir	nal Size	WT SCH	and Ed	entric ccentric ucers	Re	ducing <sup>*</sup>	Tees
mm OD1 X OD2	inch OD1 X OD2		Н	Weight	С	М	Weight
		5S		10.81			34.39
		10S		13.18			41.34
350 X 150	14 X 6	40S	330	26.36	279	220	67.27
350 × 150	14 / 0	80S	330	35.37	219	230	80.91
		160		-			-
		XXS		-		238 248 257 270 273	-
		5S		11.41			34.79
		10S		13.91			41.83
350 X 200	14 X 8	40S	330	27.83	279	248	68.18
000 / 200	117.0	80S	000	36.92	210	210	81.82
		160		-			-
		XXS		-			-
		5S		11.84			35.60
	14 X 10	10S	330	14.44	279	257	42.80
350 X 250		40S		28.89			70.00
000 / 200		80S		38.82			84.09
		160		-			-
		XXS		-			-
		5S		12.56			36.41
		10S		15.32			43.77
350 X 300	14 X 12	40S	330	30.65	279	270	71.36
000 / 000	147/12	80S	000	40.44	210	210	85.91
		160		-			-
		XXS		-			-
		5S		14.72			44.43
		108		16.73			50.00
400 X 200	16 X 8	40S	356	33.46	305	273	85.00
	10710	80S		44.31			102.27
		160		-			-
		XXS		-			-
		5S		15.62			44.95
		108		17.75			50.91
400 X 250	16 X 10	40S	356	35.51	305	283	85.91
.55 / 250	107.10	80S		46.36	000	200	103.64
		160		-			-
		XXS		-			-

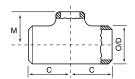
Nomin	nal Size	WT SCH	and Ed	entric centric ucers	Red	ducing <sup>-</sup>	Tees
mm OD1 X OD2	inch OD1 X OD2		н	Weight	С	М	Weight
		5S		16.18			45.91
400 1/ 000		10S		18.39			51.82
400 X 300	16 X 12	40S	356	36.78	305	295	87.73
400 \ 300	10 / 12	80S	330	47.73	300	290	105.91
		160		-			-
		XXS		-			-
		5S		16.58			46.82
		10S		18.85			53.18
400 X 350	16 X 14	40S	356	37.69	305	305	90.00
400 / 330	10 × 14	80S	356	49.09	303	303	108.18
		160		-			-
		XXS		-			-
		5S		18.54			57.27
		10S		21.06		308	65.00
450 X 250	18 X 10	40S	381	42.13	343		110.45
430 X 230		80S		54.55			132.73
		160		-			-
		XXS		-			-
		58		18.94			58.18
		10S		21.52		321	65.91
450 X 300	18 X 12	40S	381	43.05	343		111.82
100 / 000	10 % 12	80S		57.27	010	021	134.55
		160					-
		XXS		-			-
		5S		19.31			59.55
		10S		21.95			67.27
450 X 350	18 X 14	40S	381	43.89	343	330	114.09
10071000	10711	80S		57.73	0.0		137.73
		160		-			-
		XXS		-			-
		5S		19.84			60.91
		10S		22.55			69.09
450 X 400	18 X 16	40S	381	45.09	343	330	116.82
+50 X 400	10 / 10	80S	001	59.09	040	300	140.45
		160		-			]
		XXS		-			-

- ${\it 1.} Weights and dimensions \ listed \ above \ are \ a \ guide \ only. \ Dimensions \ in \ mm. \ Weights \ in \ kg.$
- 2. There are 2 possible dimensions for this size, refer to ANSI B16.9  $\,$









Nomir	nal Size	WT SCH	and E	centric ccentric ucers	Red	ducing '	Tees
mm OD1 X OD2	inch OD1 X OD2		н	Weight	С	М	Weight
		5S		32.50 32.50			65.91
		10S		32.50			87.73
500 V 000	20 X 12	40S	500	65.00	001	0.40	138.18
500 X 300	20 X 12	80S	508	85.91	381	340	165.91
		160		-			-
		XXS		-			-
		5S		32.95			66.82
		10S		38.23			89.09
500 1/ 050	00.77.4	40S		65.91		0.50	140.00
500 X 350	20 X 14	80S	508	87.27	381	356	168.18
		160		-			-
		XXS		-			-
		5S		33.18			68.18
		10S		38.49			90.91
		40S		66.36			143.18
500 X 400	20 X 16	80S	508	88.64	381	356	171.82
		160		-			-
		XXS		-			-
		5S		34.32			70.00
		10S		26.17			93.18
		40S		68.64		368	146.36
500 X 450	20 X 18	80S	508	90.00	381		175.91
		160		-			-
		XXS		-			-
		5S		WOR			WOR
		10S		36.01			WOR
		40S		59.08			WOR
550 X 350	22 X 14	80S	508	76.97	419	381	WOR
		160		-			-
		XXS		-			-
		5S		WOR			78.00
		108		38.01			130.23
		40S		62.40			130.23
550 X 400	22 X 16	80S	508	81.25	419	381	169.22
		160		-			-
		XXS		_			_

Nomir	al Size	WT SCH	and Ed	entric centric ucers	Red	ducing 1	Tees
mm OD1 X OD2	inch OD1 X OD2		н	Weight	С	М	Weight
		5S		WOR			78.47
		108		WOR			131.14
550 X 450	22 X 18	40S	508	WOR	419	394	131.14
550 X 450	22 / 10	80S	500	WOR	419	394	170.74
		160		-			-
		XXS		-			-
		5S		WOR			78.94
		10S		42.01			132.06
550 X 500	22 X 20	40S	508	68.94	419	406	132.06
000 X 000	22 / 20	80S	300	89.80	410	400	172.88
		160		-			-
		XXS		-			-
		5S	508	44.55		406	116.36
		108		44.55	432		134.09
600 X 400	24 X 16	40S		76.82			194.55
000 X 400		80S		102.73		400	234.55
		160		-			-
		XXS		-			-
		5S		45.45			119.09
		108		45.45		419	137.27
600 X 450	24 X 18	40S	508	78.64	432		199.09
000 % 100	217/10	80S	000	104.55	102		240.00
		160		-			-
		XXS		-			-
		5S		46.82			121.82
		108		46.82			140.00
600 X 500	24 X 20	40S	508	81.36	432	432	203.64
000 / 000	217/20	80S	000	106.36	102	102	245.45
		160		-			-
		XXS		-			-
		5S		WOR			98.59
600 X 550		108		52.91			141.16
	24 X 22	40S	508	75.53	432	432	141.16
000 X 000	24 / 22	80S	300	98.36	402	402	184.53
		160		-			
		XXS		-			-

### Note

- 1. Weights and dimensions listed above are a guide only. Dimensions in mm. Weights in kg.
- 2.There are 2 possible dimensions for this size, refer to ANSI B16.9

The manufacturer does not accept any responsibility for any typing or printing errors in this catalog. It also reserves the right to make any alterations or modifications deemed necessary at any time, without altering or interfering with the basic functions of the apparatus.

