

Buttweld Fittings



**BUTT-WELD PIPE FITTINGS B16.9 & B16.28**  
**Standard ANSI B16.9, ANSI B16.28, MSS-SP-43**

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# Butt Weld Fittings Introduction

Butt Weld Fittings are a family of fittings used for forming circumferential butt weld joints in pipework systems

They are used only in conjunction with ANSI Pipe and are available in the same size range. They are used in areas where pipe-work is permanent and are designed to provide good flow characteristics.

## Manufacture

**Materials.** Refer to chemical composition table ASTM A240 on page 1-6. Fittings may be made from forgings, bars, plates, or seamless or welded tubular products, provided the materials conform to the chemical composition table.

**The steel** may be melted by electric-furnace, or vacuum-furnace, or by either of these followed by vacuum or electroslag-consumable remelting.

**Forming.** Fittings may be formed by hammering, pressing, piercing, extruding, upsetting, rolling, bending, fusion welding, machining or any combination of these processes.

**Heat Treatment.** All fittings are heat treated in accordance with the heat treatment table. All welding must be done prior to heat treatment.

## Manufacturing standards

Wrought pipe fittings are manufactured to dimensions and tolerances in ANSI B16.9 with the exception of short radius elbows and return bends which are made to ANSI B16.28. Light-weight corrosion resistant fittings are made to MSS SP43.

- Butt Weld Fittings are available to ASTM A403, ASTM A815 and MSS SP43. These standards require the fittings to be manufactured as follows:
- Seamless austenitic fittings are made from seamless pipe to ASTM A312.
- Welded fittings in austenitic grades are manufactured from welded pipe to ASTM A312 or plate to ASTM A240. Note that welded fittings manufactured from plate may have two-welds.
- Duplex (ferritic/austenitic) grades are manufactured from pipe to ASTM A790 or plate to ASTM A240

ASTM A403/A815 Butt Weld Fittings are sub-divided into four classes:

**WP-S:** Made from seamless pipe to ASTM A312 (Austenitic) or ASTM A790 (Duplex).

**WP-W:** Manufactured from welded pipe to ASTM A312 (Austenitic) or ASTM A790 (Duplex). There is no requirement for radiography unless a manufacturer's weld has been introduced or there are welds made with the addition of filler metal.

**WP-WX:** Of welded construction. All welds must be 100% radiographed in accordance with Paragraph UW-51 of Section VIII, Division 1 of the ASME Boiler and Pressure Vessel Code.

**WP-WU:** Of welded construction. All welds must be 100% examined ultrasonically in accordance with Paragraph UW-51 of Section VIII, Division 1 of the ASME Boiler and Pressure Vessel Code. Note that this Class only applies to austenitic fittings made to ASTM A403.

**CR Fittings** are manufactured to the requirements of MSS SP43. These are light-weight fittings and do not require radiography.

## Notes:

WP: Means Wrought Pipe

CR: Means Corrosion Resistant

## Markings on tube and fittings

The full identification of the fitting should be marked on it including:

- Nominal Pipe Size (Nominal Bore)
- Schedule (Wall Thickness)
- Specification
- Grade
- Method of Manufacture (Seamless or Welded)
- Heat Number
- Manufacturer's Name or Symbol



# Buttweld Fittings

A pipe fitting is defined as a part used in a piping system, to change direction or function, which is mechanically joined to the system.

Probably the simplest way to achieve this would be to bend the pipe in the direction required, but this process will stretch and thin the outer wall whilst thickening and wrinkling the inner wall. This results in flow resistance and accelerated wall erosion.

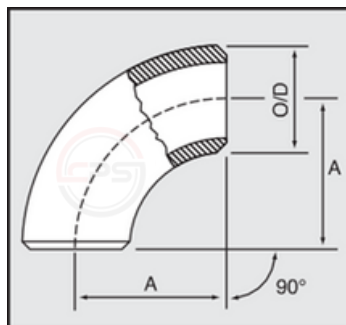
A second method sometimes used is a mitre joint, where pipes are cut to the correct angle and welded together to achieve the desired change. Whilst the cross-sectional area and wall thickness are maintained, a great deal of efficiency is lost due to friction and turbulence resulting from the severe changes in direction. For example, a single-mitre bend offers about six times the resistance of a swept elbow. For these reasons swept fittings are preferred on most piping systems, particularly where internal pressure, flow and corrosion are of major consideration.

## TYPES AND APPLICATIONS OF BUTTWELD FITTINGS

A piping system using buttweld fittings has many inherent advantages over other forms.

- Welding a fitting to the pipe means it is permanently leakproof.
- The continuous metal structure formed between pipe and fitting adds strength to the system.
- Smooth inner surface and gradual directional changes reduce pressure losses and turbulence and minimise the action of corrosion and erosion.
- A welded system utilises a minimum of space.

## 90° ELBOWS



The function of a 90° elbow is to change direction or flow in a piping system. Elbows are split into three groups which define the distance over which they change direction, expressed as a function of the distance from the centre line of one end to the opposite face. This is known as the centre to face distance and is equivalent to the radius through which the elbow is bent.

### Long Radius Elbow

The most common is the long radius (LR) elbow where the centre to face dimension is always 1½ times the nominal pipe size of the elbow.

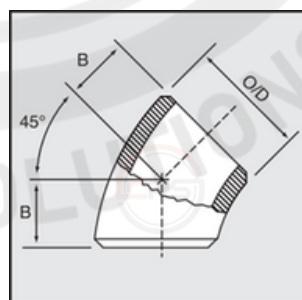
### Short Radius Elbow

In this case the centre to face dimension is the same as the nominal pipe size of the elbow.

### Extra Long Radius

This is where the centre to face dimension is longer than the standard long radius type. The most common of these is where the centre to face dimension is three times the nominal size. i.e. 3D.

## 45° ELBOWS

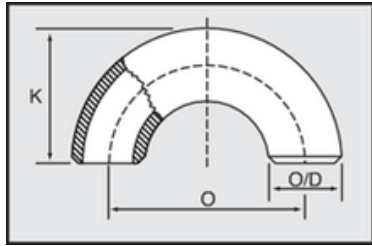


The function of a 45° elbow is the same as a 90° elbow, but the measurement of dimensions, however, is different to that of the 90° elbow. The radius of a 45° elbow is the same as the radius of the 90° LR elbow where 'R' equals 1½ x D.

However, the centre to face dimension is not equivalent to the radius as in 90° LR elbows. This is measured from each face to the point of intersection of the centre lines perpendicular to each other. This is due to the smaller degree of bend.

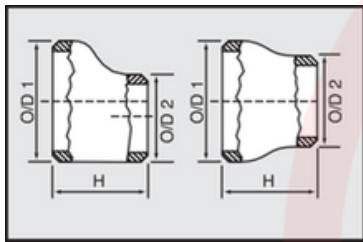


## 180° RETURN BENDS



The function of a 180° return bend is to change direction of flow through 180° and there are two basic types, long radius and short radius. Both types have a centre to centre dimension double the matching 90° elbows. The primary application for these fittings is in heater coils and heat exchangers, boilers etc.

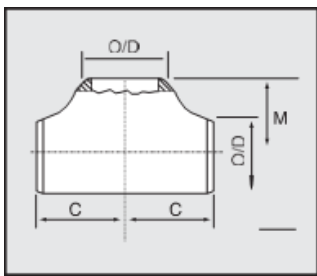
## ECCENTRIC AND CONCENTRIC REDUCERS



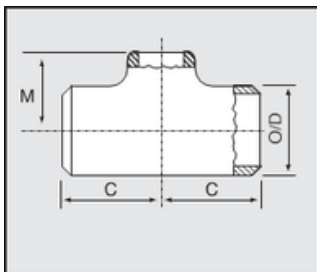
The function of both types of reducer is to reduce the line from a larger to a smaller pipe size, this obviously results in an increased flow pressure. With the eccentric reducer the smaller outlet end is off centre to the larger end enabling it to line up with one side of the inlet and not with the other.

The concentric reducer is so manufactured that both inlet and outlet ends are on a common centre line. The concentric reducer is easier and less expensive to produce but does not allow quite the same versatility as the eccentric reducer. The lengths of both types are fixed by manufacturing standards.

## EQUAL AND REDUCING TEES

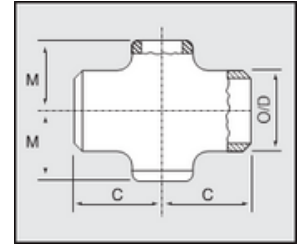
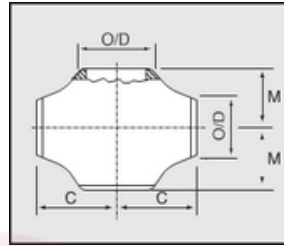


The function of a tee is to permit flow at 90° to the main direction of flow. The main flow passes through the 'run' whilst the 90° outlet is known as the 'branch'. The equal tee is manufactured with all three outlets being the same size.



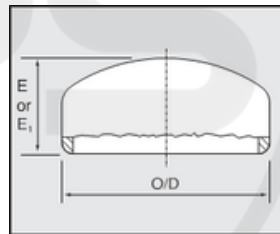
The reducing tee is manufactured with the branch outlet smaller than the run to obtain the desired flow and pressure through the system.

## EQUAL AND REDUCING CROSSES



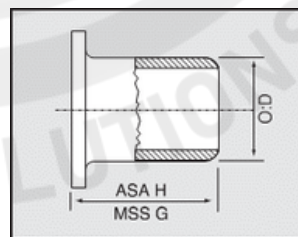
The function of a cross is similar to that of a tee with the exception of providing two 90° outlets opposite each other. Equal crosses have all four outlets of equal size. Reducing crosses have branches that are smaller in size to that of the run to obtain the desired flow and pressure through the system.

## CAPS



The function of an end cap is to block off the end of a line in piping systems. This is achieved by placing the end cap over the open line and welding around the joint.

## STUB ENDS



A stub end and its associated slip-on flange allows quick disconnection of the particular section involved as well as easy alignment of mating flanges. Stub ends are installed in pairs and mated together with two slip-on flanges. The surface of the stub end has a phonographic serrated gasket surface which prevents leakage at the joint.

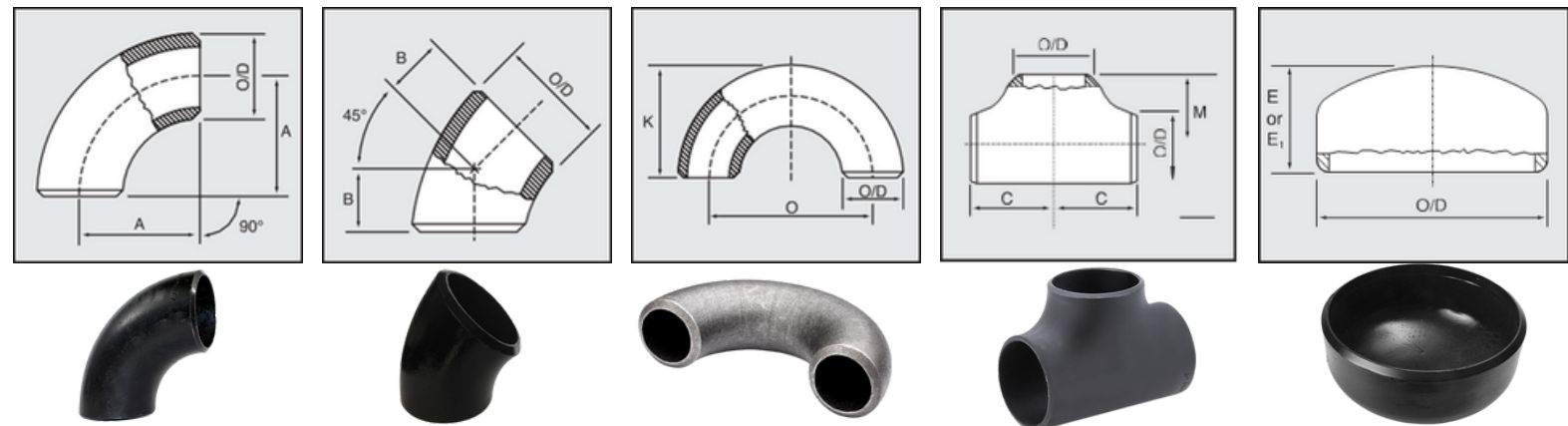
There are two basic types of stub end, ANSI types A & B long barrel, and M.S.S. types short barrel. Under certain design criteria such as temperature or pressure, it is not acceptable to have the joint between stub end and pipe in close proximity with the flange joint, in these applications ANSI types are used.

Type A stub ends are used with lap joint flanges. Type B stub ends are used with slip-on flanges.





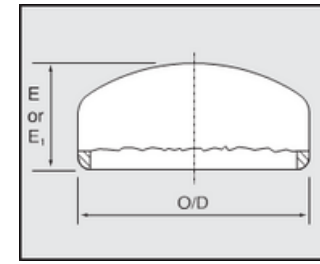
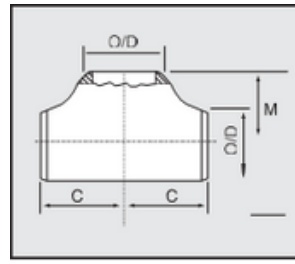
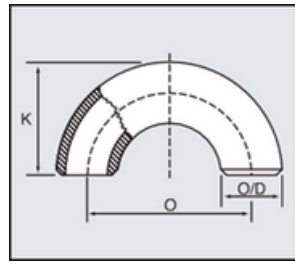
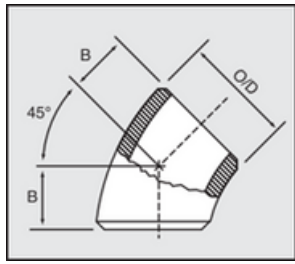
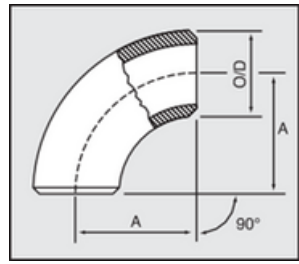
# BUTTWELD FITTINGS WEIGHTS & DIMENSIONS



**BUTT-WELD FITTINGS** Standard ANSI B16.9, ANSI B16.28, MSS-SP-43

**CREATIVE PIPING SOLUTIONS PRIVATE LIMITED** ([www.creativeforged.com](http://www.creativeforged.com))

Nominal Size		WT SCH	90° LR ELBOW		45° LR ELBOW		90° SR ELBOW		180° LR ELBOW			Equal Tee		Caps					
mm	inch		A	Weight	B	Weight	A	Weight	O	K	Weight	C and M	Weight	E†	Limiting Wall	E1‡	Weight		
15	1/2	5S	38	0.05	16	0.03	-	-	76	48	0.11	25	0.09	25	4.57	25	0.04		
		10S		0.06		0.03					-		0.12					0.10	0.04
		40S		0.08		0.04					-		0.15					0.10	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
20*	3/4*	5S	38	0.06	19	0.03	-	-	76	51	0.14	29	0.10	25	3.81	25	0.05		
		10S		0.07		0.03					-		0.18					0.13	0.05
		40S		0.09		0.04					-		0.20					0.17	0.06
		80S		0.11		0.05					-		0.22					0.20	0.06
		160		0.16		0.07					-		0.30					0.29	0.09
		XXS		0.23		0.11					-		0.40					0.41	0.13
25	1	5S	38	0.09	22	0.05	25	0.08	76	56	0.22	38	0.18	38	4.57	38	0.08		
		10S		0.14		0.09		-			0.27		0.29					0.09	
		40S		0.16		0.11		-			0.30		0.30					0.13	
		80S		0.22		0.14		-			0.42		0.39					0.13	
		160		0.30		0.20		-			0.60		0.54					0.18	
		XXS		0.44		0.28		-			0.78		0.77					0.26	
32	1-1/4	5S	48	0.14	25	0.09	32	0.14	95	70	0.34	48	0.34	38	4.83	38	0.09		
		10S		0.23		0.11		-			0.45		0.50					0.13	
		40S		0.25		0.17		-			0.60		0.60					0.13	
		80S		0.40		0.23		-			0.70		0.68					0.18	
		160		0.52		0.39		-			0.90		0.90					0.23	
		XXS		0.80		0.45		-			1.28		1.36					0.35	
40	1-1/2	5S	57	0.17	29	0.11	38	0.20	114	83	0.48	57	0.43	38	5.08	38	0.10		
		10S		0.31		0.17		-			0.60		0.68					0.14	
		40S		0.40		0.23		-			0.81		0.86					0.23	
		80S		0.51		0.29		-			1.02		1.02					0.25	
		160		0.72		0.40		-			1.40		1.43					0.34	
		XXS		1.03		0.57		-			1.80		2.05					0.49	
50	2	5S	76	0.29	35	0.14	51	0.29	152	106	0.80	64	0.55	38	5.59	44	0.16		
		10S		0.51		0.25		-			1.05		0.85					0.17	
		40S		0.71		0.40		-			1.32		1.29					0.27	
		80S		0.91		0.51		-			1.92		1.59					0.34	
		160		1.43		0.80		-			2.80		2.50					0.53	
		XXS		1.82		1.03		-			3.40		3.18					0.68	
60	2-1/2	5S	95	0.68	44	0.34	64	0.57	190	132	1.20	76	0.98	38	7.11	51	0.23		
		10S		0.85		0.48		-			1.59		1.41					0.25	
		40S		1.36		0.77		-			2.52		2.20					0.45	
		80S		1.82		1.00		-			3.42		3.14					0.51	
		160		2.47		1.34		-			4.60		4.26					0.67	
		XXS		3.64		1.99		-			6.20		6.27					1.02	



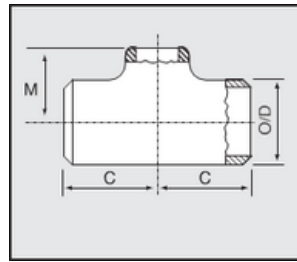
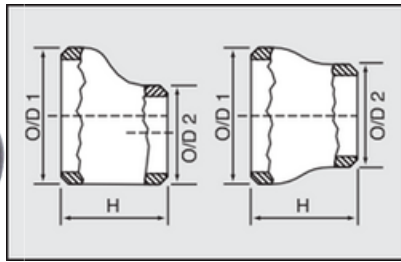
BUTT-WELD FITTINGS

Standard ANSI B16.9, ANSI B16.28, MSS-SP-43

CREATIVE PIPING SOLUTIONS PRIVATE LIMITED

(www.creativeforged.com)

Nominal Size		WT SCH	90° LR ELBOW		45° LR ELBOW		90° SR ELBOW		180° LR ELBOW			Equal Tee		Caps			
m	inch		A	Weight	B	Weight	A	Weight	O	K	Weight	C and M	Weight	E†	Limiting Wall	E1‡	Weight
80	3	5S	114	0.91	51	0.48	76	0.80	229	159	2.00	86	1.55	51	7.62	64	0.39
		10S		1.22		0.63		0.99			2.40		1.77				0.40
		40S		2.19		1.08		1.50			4.50		3.32				0.71
		80S		2.98		1.50		1.91			5.88		4.45				0.85
		160		4.35		2.18		2.77			8.20		6.50				1.23
		XXS		5.96		3.01		3.82			11.00		8.91				1.70
90	3-1/2	5S	133	1.19	57	0.53	89	1.07	267	184	3.20	95	2.50	64	8.13	76	0.55
		10S		1.70		0.75		1.39			4.00		2.67				0.57
		40S		2.84		1.42		2.06			5.80		4.09				1.02
		80S		4.00		2.00		2.43			7.92		5.45				1.14
		160		-		-		-			-		-				-
		XXS		8.00		4.00		4.86			WOR		10.91				2.27
100	4	5S	152	1.50	64	0.75	102	1.42	305	210	3.68	105	3.27	64	8.64	76	0.57
		10S		2.16		1.08		1.72			4.44		3.47				0.65
		40S		4.18		2.09		3.13			6.00		5.29				1.22
		80S		6.20		3.10		4.12			12.36		7.73				1.61
		160		9.79		4.94		6.46			19.80		12.21				2.52
		XXS		12.39		6.20		8.24			24.80		15.45				3.22
127	5	5S	190	2.95	79	1.48	127	2.25	381	262	7.60	124	5.91	76	9.65	89	0.91
		10S		3.64		1.82		2.78			8.52		6.11				1.02
		40S		6.88		3.44		5.29			15.00		9.43				1.85
		80S		9.60		4.80		7.32			18.90		11.36				2.56
		160		16.04		7.96		12.15			30.00		18.98				4.26
		XXS		19.21		9.60		14.64			37.00		22.73				5.12
150	6	5S	229	4.55	95	2.27	152	3.52	457	313	9.80	143	7.82	89	10.92	102	1.25
		10S		5.45		2.73		4.16			12.00		8.09				1.36
		40S		10.91		5.45		7.95			18.00		11.02				3.24
		80S		16.36		8.18		11.82			33.60		13.64				4.55
		160		27.16		9.49		19.62			52.00		22.64				7.27
		XXS		32.73		16.36		23.64			60.00		27.27				9.09
200	8	5S	305	7.86	127	3.93	203	7.02	152	106	16.00	178	14.09	102	12.70	127	2.05
		10S		10.68		5.34		8.01			21.48		15.68				2.50
		40S		21.59		10.80		17.09			40.80		20.95				5.68
		80S		33.18		16.59		24.91			71.40		28.18				7.45
		160		60.00		29.20		45.08			118.00		50.91				13.47
		XXS		57.73		29.03		49.55			122.00		49.09				10.35
250	10	5S	381	14.55	159	7.27	254	12.45	762	518	36.00	216	25.00	127	12.70	152	4.32
		10S		19.55		9.77		15.91			51.28		26.82				4.91
		40S		38.64		19.32		28.64			79.80		35.45				9.23
		80S		51.82		25.91		45.36			104.00		50.00				12.41
		160		116.36		57.73		101.82			220.00		112.27				27.92
		XXS		-		-		-			-		-				-



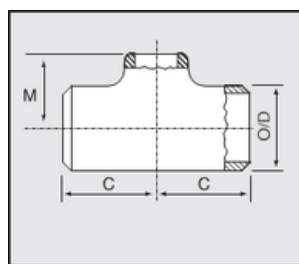
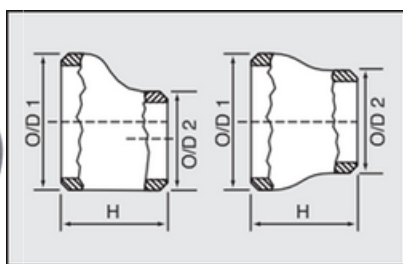
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CREATIVE PIPING SOLUTIONS PRIVATE LIMITED							
Nominal Size		WT SCH	Concentric and Eccentric Reducers		Reducing Tees		
mm OD1 X OD2	inch OD1 X OD2		H	Weight	C	M	Weight
20 X 15	3/4 X 1/2	5S	38	0.08	29	29	0.09
		10S		0.10			0.11
		40S		0.14			0.15
		80S		0.18			0.18
		160		0.25			0.26
		XXS		0.36			0.37
25 X 15	1 X 1/2	5S	51	0.07	38	38	0.16
		10S		0.12			0.25
		40S		0.15			0.26
		80S		0.20			0.34
		160		0.26			0.47
		XXS		0.40			0.68
25 X 20	1 X 3/4	5S	51	0.08	38	38	0.16
		10S		0.13			0.25
		40S		0.16			0.27
		80S		0.22			0.35
		160		0.28			0.49
		XXS		0.45			0.70
32 X 20	1-1/4 X 3/4	5S	51	0.30	48	48	0.10
		10S		0.44			0.18
		40S		0.52			0.22
		80S		0.60			0.25
		160		0.79			0.33
		XXS		1.20			0.51
32 X 25	1-1/4 X 1	5S	51	0.10	48	48	0.31
		10S		0.18			0.45
		40S		0.22			0.53
		80S		0.27			0.61
		160		0.37			0.80
		XXS		0.54			1.23
40 X 20	1-1/2 X 3/4	5S	64	0.11	57	57	0.37
		10S		0.18			0.59
		40S		0.24			0.74
		80S		0.32			0.88
		160		0.45			1.23
		XXS		0.65			1.76

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CREATIVE PIPING SOLUTIONS PRIVATE LIMITED							
Nominal Size		WT SCH	Concentric and Eccentric Reducers		Reducing Tees		
mm OD1 X OD2	inch OD1 X OD2		H	Weight	C	M	Weight
40 X 25	1-1/2 X 1	5S	64	0.11	57	57	0.38
		10S		0.20			0.60
		40S		0.26			0.76
		80S		0.34			0.90
		160		0.47			1.26
		XXS		0.67			1.80
40 X 32	1-1/2 X 1-1/4	5S	64	0.12	57	57	0.39
		10S		0.21			0.61
		40S		0.28			0.78
		80S		0.36			0.92
		160		0.51			1.29
		XXS		0.73			1.84
50 X 20	2 X 3/4	5S	76	0.15	64	44	0.46
		10S		0.25			0.72
		40S		0.36			1.09
		80S		0.50			1.35
		160		0.79			2.12
		XXS		1.01			2.70
50 X 25	2 X 1	5S	76	0.17	64	51	0.47
		10S		0.28			0.73
		40S		0.40			1.10
		80S		0.54			1.37
		160		0.84			2.15
		XXS		1.07			2.74
50 X 40	2 X 1-1/2	5S	76	0.19	64	60	0.49
		10S		0.31			0.76
		40S		0.45			1.15
		80S		0.59			1.43
		160		0.93			2.25
		XXS		1.18			2.86
65 X 25	2-1/2 X 1	5S	89	0.25	76	57	0.83
		10S		0.38			1.20
		40S		0.65			1.87
		80S		0.87			2.66
		160		1.18			3.62
		XXS		1.75			5.33





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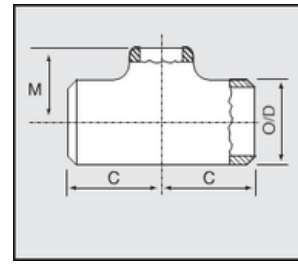
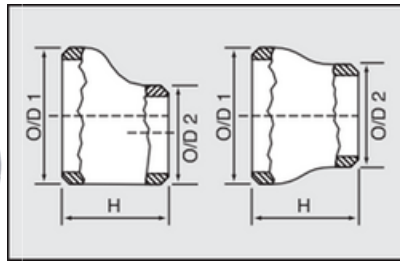
CREATIVE PIPING SOLUTIONS PRIVATE LIMITED

Nominal Size		WT SCH	Concentric and Eccentric Reducers		Reducing Tees		
mm OD1 X OD2	inch OD1 X OD2		H	Weight	C	M	Weight
65 X 40	2-1/2 X 1-1/2	5S	89	0.30	76	67	0.86
		10S		0.45			1.24
		40S		0.76			1.94
		80S		0.94			2.76
		160		1.27			3.75
		XXS		1.88			5.52
64 X 50	2-1/2 X 2	5S	89	0.32	76	70	0.88
		10S		0.47			1.27
		40S		0.80			1.98
		80S		1.03			2.82
		160		1.39			3.84
		XXS		2.05			5.65
80 X 40	3 X 1-1/2	5S	89	0.35	86	73	1.33
		10S		0.51			1.52
		40S		0.94			2.85
		80S		1.21			3.83
		160		1.75			5.59
		XXS		2.42			7.66
80 X 50	3 X 2	5S	89	0.38	86	76	1.36
		10S		0.55			1.56
		40S		1.00			2.92
		80S		1.30			3.92
		160		1.88			5.72
		XXS		2.59			7.84
80 X 65	3 X 2-1/2	5S	89	0.41	86	83	1.39
		10S		0.59			1.60
		40S		1.08			2.99
		80S		1.49			4.01
		160		2.16			5.85
		XXS		2.98			8.02
100 X 65	4 X 1-1/2	5S	102	0.48	105	86	2.75
		10S		0.68			2.91
		40S		1.36			4.44
		80S		1.90			6.49
		160		2.98			10.25
		XXS		3.80			12.98

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CREATIVE PIPING SOLUTIONS PRIVATE LIMITED

Nominal Size		WT SCH	Concentric and Eccentric Reducers		Reducing Tees		
mm OD1 X OD2	inch OD1 X OD2		H	Weight	C	M	Weight
100 X 50	4 X 2	5S	102	0.55	105	89	2.78
		10S		0.79			2.95
		40S		1.58			4.49
		80S		1.96			6.57
		160		3.07			10.38
		XXS		3.92			13.14
100 X 65	4 X 2-1/2	5S	102	0.58	105	95	2.81
		10S		0.83			2.98
		40S		1.66			4.55
		80S		2.20			6.65
		160		3.45			10.50
		XXS		4.39			13.29
100 X 80	4 X 3	5S	102	0.61	105	98	2.88
		10S		0.87			3.05
		40S		1.75			4.65
		80S		2.34			6.80
		160		3.67			10.74
		XXS		4.67			13.60
125 X 080	5 X 3	5S	127	1.20	124	111	5.08
		10S		1.45			5.25
		40S		2.86			8.11
		80S		3.89			9.77
		160		6.45			16.32
		XXS		7.77			19.55
125 X 100	5 X 4	5S	127	1.25	124	117	5.32
		10S		1.50			5.50
		40S		2.99			8.49
		80S		4.14			10.23
		160		6.87			17.08
		XXS		8.28			20.45
150 X 80	6 X 3	5S	140	1.51	143	124	6.65
		10S		1.82			6.88
		40S		3.99			11.96
		80S		5.52			11.59
		160		9.17			19.24
		XXS		11.05			23.18



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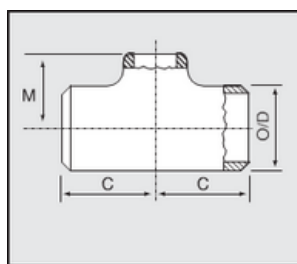
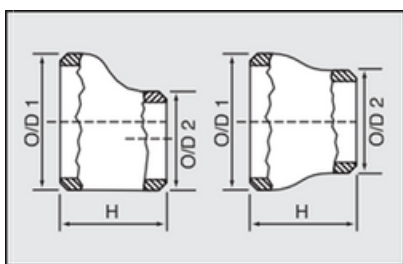
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Nominal Size	WT SCH	Concentric and Eccentric Reducers		Reducing Tees			
		H	Weight	C	M	Weight	
mm OD1 X OD2	inch OD1 X OD2						
150 X 100	6 X 4	140	143	130	5S	1.55	6.88
					10S	1.96	7.12
					40S	4.09	9.70
					80S	5.97	12.00
					160	9.91	19.92
					XXS	11.95	24.00
150 X 125	6 X 5	140	143	137	5S	1.64	7.04
					10S	2.02	7.28
					40S	4.31	9.92
					80S	6.27	12.27
					160	10.40	20.37
					XXS	12.54	24.55
200 X 100	8 X 4	152	178	156	5S	2.16	12.12
					10S	3.02	13.49
					40S	6.56	18.02
					80S	9.25	24.24
					160	16.75	43.77
					XXS	16.20	42.23
200 X 125	8 X 5	152	178	162	5S	2.21	12.40
					10S	3.09	13.80
					40S	6.72	18.44
					80S	9.69	24.80
					160	17.50	44.77
					XXS	16.96	43.18
200 X 150	8 X 6	152	178	168	5S	2.30	12.68
					10S	3.20	14.11
					40S	6.96	18.86
					80S	10.15	25.36
					160	18.32	45.91
					XXS	17.75	44.18
250 X 100	10 X 4	178	216	184	5S	3.79	21.25
					10S	4.74	23.25
					40S	10.54	30.14
					80S	12.58	42.50
					160	28.32	95.45
					XXS	-	-

Nominal Size	WT SCH	Concentric and Eccentric Reducers		Reducing Tees			
		H	Weight	C	M	Weight	
mm OD1 X OD2	inch OD1 X OD2						
250 X 125	10 X 5	178	216	191	5S	3.92	21.50
					10S	4.90	23.06
					40S	10.89	30.49
					80S	14.27	43.00
					160	32.09	96.36
					XXS	-	-
250 X 150	10 X 6	178	216	194	5S	4.01	22.00
					10S	5.01	23.60
					40S	11.15	31.20
					80S	14.82	44.00
					160	33.32	98.64
					XXS	-	-
250 X 200	10 X 8	178	216	194	5S	4.17	22.50
					10S	5.21	24.14
					40S	11.58	31.91
					80S	15.61	45.00
					160	35.05	100.91
					XXS	-	-
300 X 150	12 X 6	203	254	219	5S	6.37	32.45
					10S	7.45	34.01
					40S	15.51	53.64
					80S	20.19	72.27
					160	52.73	189.09
					XXS	-	-
300 X 200	12 X 8	203	254	229	5S	6.57	33.20
					10S	7.69	34.80
					40S	16.02	54.55
					80S	20.94	74.09
					160	54.55	193.64
					XXS	-	-
300 X 250	12 X 10	203	254	241	5S	6.83	33.95
					10S	8.00	35.59
					40S	16.67	55.91
					80S	21.68	75.45
					160	56.36	197.73
					XXS	-	-



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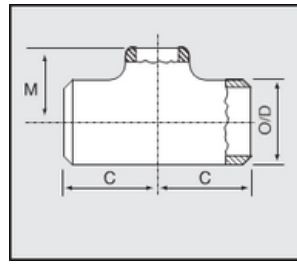
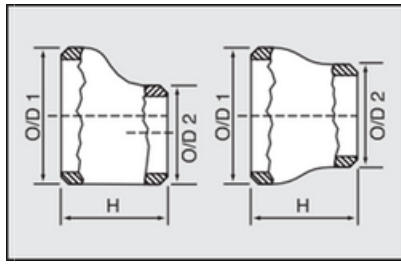
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Nominal Size		WT SCH	Concentric and Eccentric Reducers		Reducing Tees		
mm OD1 X OD2	inch OD1 X OD2		H	Weight	C	M	Weight
350 X 150	14 X 6	5S	330	10.81	279	238	34.39
		10S		13.18			41.34
		40S		26.36			67.27
		80S		35.37			80.91
		160		-			-
		XXS		-			-
350 X 200	14 X 8	5S	330	11.41	279	248	7.04
		10S		13.91			7.28
		40S		27.89			9.92
		80S		36.92			12.27
		160		-			20.37
		XXS		-			24.55
350 X 250	14 X 10	5S	330	11.84	279	257	35.60
		10S		14.44			72.80
		40S		28.89			70.00
		80S		38.82			84.09
		160		-			-
		XXS		-			-
350 X 300	14 X 12	5S	330	12.56	279	270	36.41
		10S		15.32			43.77
		40S		30.65			71.36
		80S		40.44			85.91
		160		-			-
		XXS		-			-
400 X 200	16 X 8	5S	356	14.72	305	273	44.43
		10S		16.73			50.00
		40S		33.46			85.00
		80S		44.31			102.27
		160		-			-
		XXS		-			-
400 X 250	16 X 10	5S	356	15.62	305	283	44.95
		10S		17.75			50.91
		40S		35.51			85.91
		80S		46.36			103.64
		160		-			-
		XXS		-			-

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CREATIVE PIPING SOLUTIONS PRIVATE LIMITED

Nominal Size		WT SCH	Concentric and Eccentric Reducers		Reducing Tees		
mm OD1 X OD2	inch OD1 X OD2		H	Weight	C	M	Weight
400 X 300	16 X 12	5S	356	16.18	305	295	45.91
		10S		18.39			51.82
		40S		36.78			87.73
		80S		47.73			105.91
		160		-			-
		XXS		-			-
400 X 350	16 X 14	5S	356	16.58	305	305	46.82
		10S		18.85			53.18
		40S		37.69			90.00
		80S		49.09			108.18
		160		-			-
		XXS		-			-
450 X 250	18 X 10	5S	381	18.54	343	308	27.27
		10S		21.06			65.00
		40S		42.13			110.45
		80S		54.55			132.73
		160		-			-
		XXS		-			-
450 X 300	18 X 12	5S	381	18.94	343	321	58.18
		10S		21.52			65.91
		40S		43.05			111.82
		80S		57.27			134.55
		160		-			-
		XXS		-			-
450 X 350	18 X 14	5S	381	19.31	343	330	59.55
		10S		21.95			67.27
		40S		43.89			114.09
		80S		57.73			137.73
		160		-			-
		XXS		-			-
450 X 400	18 X 16	5S	381	19.84	343	330	60.91
		10S		22.55			69.09
		40S		45.09			116.82
		80S		59.09			140.45
		160		-			-
		XXS		-			-



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Nominal Size		WT SCH	Concentric and Eccentric Reducers		Reducing Tees		
mm OD1 X OD2	inch OD1 X OD2		H	Weight	C	M	Weight
500 X 300	20 X 12	5S	508	32.50	381	346	65.91
		10S		32.50			87.73
		40S		65.00			138.18
		80S		85.91			165.91
		160		-			-
		XXS		-			-
500 X 350	20 X 14	5S	508	32.95	381	356	66.82
		10S		38.23			89.09
		40S		65.91			140.00
		80S		87.21			168.18
		160		-			-
		XXS		-			-
500 X 400	20 X 16	5S	508	33.18	381	356	68.18
		10S		38.49			90.91
		40S		66.36			143.18
		80S		88.64			171.82
		160		-			-
		XXS		-			-
500 X 450	20 X 18	5S	508	34.32	381	368	70.00
		10S		26.17			93.18
		40S		68.64			146.36
		80S		90.00			175.91
		160		-			-
		XXS		-			-
550 X 350	22 X 14	5S	508	WOR	419	381	WOR
		10S		36.01			WOR
		40S		59.08			WOR
		80S		76.97			WOR
		160		-			-
		XXS		-			-
550 X 400	22 X 16	5S	508	WOR	419	381	78.00
		10S		38.01			130.23
		40S		62.40			130.23
		80S		81.25			169.22
		160		-			-
		XXS		-			-

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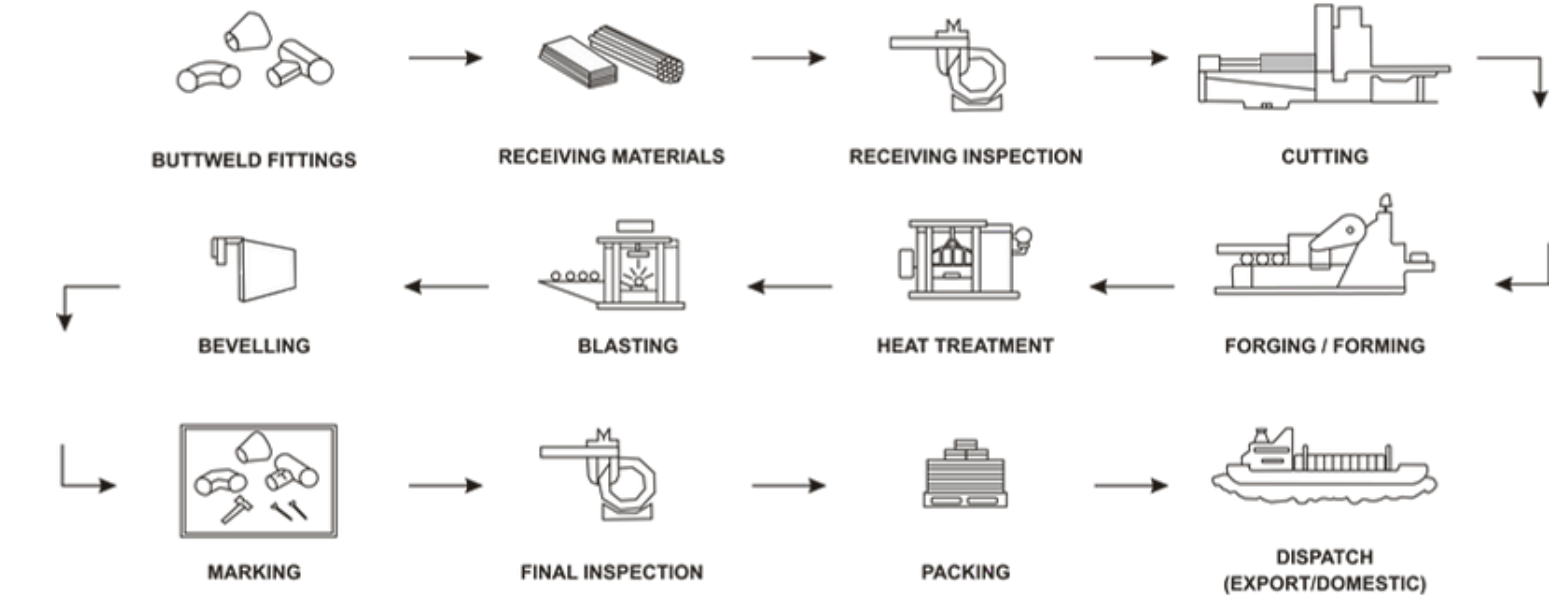
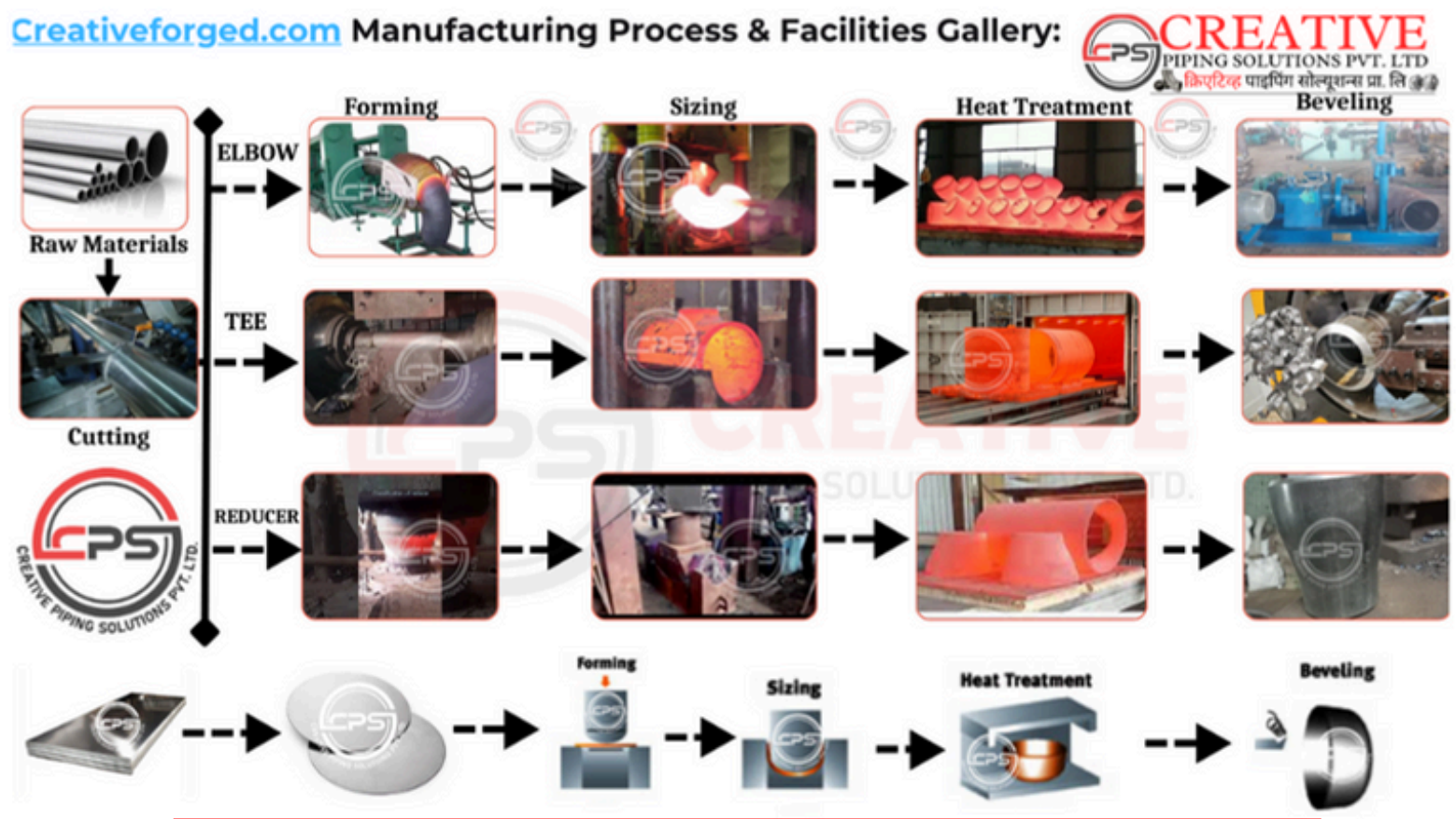
CREATIVE PIPING SOLUTIONS PRIVATE LIMITED

Nominal Size		WT SCH	Concentric and Eccentric Reducers		Reducing Tees		
mm OD1 X OD2	inch OD1 X OD2		H	Weight	C	M	Weight
550 X 450	22 X 18	5S	508	WOR	419	394	78.47
		10S		WOR			131.14
		40S		WOR			131.14
		80S		WOR			170.74
		160		-			-
		XXS		-			-
550 X 500	22 X 20	5S	508	WOR	419	406	78.94
		10S		42.01			132.06
		40S		68.94			132.06
		80S		89.80			172.88
		160		-			-
		XXS		-			-
600 X 400	24 X 16	5S	508	44.55	432	406	116.36
		10S		44.55			134.09
		40S		76.82			194.55
		80S		102.73			234.55
		160		-			-
		XXS		-			-
600 X 450	24 X 18	5S	508	45.45	432	406	119.09
		10S		45.45			137.27
		40S		78.64			199.09
		80S		104.55			240.00
		160		-			-
		XXS		-			-
600 X 500	24 X 20	5S	508	46.82	432	432	121.82
		10S		46.82			140.00
		40S		81.36			203.64
		80S		106.36			245.45
		160		-			-
		XXS		-			-
600 X 550	24 X 22	5S	508	WOR	432	432	98.56
		10S		52.91			141.16
		40S		75.53			141.16
		80S		98.36			184.53
		160		-			-
		XXS		-			-

**NOTE:** Weights and dimensions listed above are a guide only. Dimensions in mm. Weights in kg.

\* There are 2 possible dimensions for this size, refer to ANSI B16.9  
 Weights and dimensions of larger Butt weld Fittings are available from your local Creative Piping office.

**WOR:** Weight on request



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