Duplex Stainless Steel Pipe Fittings UNS31803 32750 For Corrosion Critical

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: DEYE
- Certification: ISO9001: 2015
- Model Number: PF-EL-S-01
- Minimum Order Quantity: 10pcs
- Price: USD 2-100 dollars for SS36L Elbow
- Packaging Details: Ply-Wooden Cases, Pallets , cartons
- Delivery Time: 10 work days
- Supply Ability: 25 tons for one month

Product Specification

- Material: SS316/SS316L, SS304/SS304L, SS321, UNS31803, UNS32750
- Connection: Butt Welded BW
- Thickness: Sch5s, Sch10s, Sch40s, Sch80s, Sch160s, Xs, Xxs
- Surface: Pickling, Polish
- Highlight: **Duplex Stainless Steel Pipe Fittings**, **Stainless Steel Pipe Fittings UNS31803**, **32750 duplex steel pipe fittings**

More Images

Product Description

stainless steel straight Tee,This T-shaped pipe fitting used in the plumbing tee system has one inlet and two outlets arranged at an angle of 90 degrees to the main pipe. This kind of fitting is used to connect the two pipes and make their flow direction as one. If all the three sides of this fitting are same in size, it is called equal tee, otherwise unequal tee.

Products Information/Specification:

Products Name	duplex SS SDSS Butt-Welding Stainless steel seamless and welded Pipe Fitting
Types	LR Elbows, SR Elbow, 180deg Returns, Bends, Reducing Eblow, 22.5Ddeg Elbow, 45deg Elbow Straight Tee, Equal Tee, Reducing Tee, Y Tee Con. Reducers, Ecc. redcuers, concentric reducer, Eccentric Reducer caps, Stub Ends
Size	1/2"-72"
Wall Thickness	SCH5S,SCH10s,SCH20S,SCH30,STD,SCH40S,SCH60,XS,SCH80S,SCH100,SCH120, SCH160S,XXS, DIN, SGP JIS thickness
Standard	ASTMA312, WP403 A234WPB A420, ANSI B16.9/B16.28/B16.25
	JIS B2311-1997/2312, JIS B2311/B2312, DIN 2605-1/2617/2615,
	GB 12459-99,EN Standard etc.
Material	Stainless Steel304, 304L, 304H, 316, 316L, 316H, 310, SS321, SS321H, 347, 347H, 904L
	Duplex SS 2507, DSS2205, UNS31803 UNS32750
	1.4301,1.4306, 1.4401, 1.4435, 1.4406, 1.4404
	Carbon Steel A234 WPB, WP5, WP9,WP11, WP22, A420WPL6, A420WPL8
	ST37.0,ST35.8,ST37.2,ST35.4/8,ST42,ST45,ST52,ST52.4
	STP G38,STP G42,STPT42,STB42,STS42,STPT49,STS49
Surface	Sandblast , acid pickling, Polished

Material chemcial Analysis and Mechanical Properities

Stainless steel is the abbreviation for stainless and acid resistant steel. Steel that is resistant to weak corrosive media such as air, steam, water, or has rust resistance is called stainless steel; And the steel grade that is resistant to chemical corrosion media (such as acid, alkali, salt, etc.) corrosion is called acid resistant steel.

The most common used material is SS304/304L, SS316/316L, DUPLEX SAF2507, SAF2205,
Detail's specification of the Duplex ss material as below:

SAF2205 (UNS31803)
Chemical Composition%

C≤	Si ≤	Mn≤	P ≤	S ≤	Cr	Ni	Mo	Cu	N
0.03	1.0	2.0	0.03	0.02	22-23	4.5-6.5	3.0-3.50	/	0.14-0.2

Mechanical Performance

Test Items	Test Temp.	Performance	Standard Data
Tensile Strength	Room Temp.	Yield Strength s≥	450 Mpa
		Tensile Strength h ≥	620 Mpa
		Elongation % >	25
		Reduction of Area=>	/
Impact Value KV(J)	Room Temp.	**Lateral**	/
Brinell hardness	Room Temp.	≤	290
Rockwell hardness	Room Temp.	≥	/

SAF2507(UNS32750)
Chemical Composition%

c ≤	Si≤	Mn≤	P≤	S≤	Cr	Ni	Mo	Cu≤	N
0.03	0.8	1.2	0.03	0.015	24-26	6.0-8.0	3.0-5.0	0.5	0.24-0.32

Mechanical Performance

Test Items	Test Temp.	Performance		Standard Data
Tensile	Room Temp.	Yield Strength	Ø≤55 Rm≥	550 Mpa
			Ø >55 Rm≥	515 Mpa
		Tensile Strength	Ø≤55 R0.002 ≥	800 Mpa
			Ø >55 R0.002≥	760 Mpa
		Elongation A% (4D) >	Ø≤55 ≥	15
			Ø >55 ≥	15

Brinell hardness HB	Room Temp.	Ø≤5 ≤	310
		Ø >55 ≤	310

Technology/ Technical Data Sheets

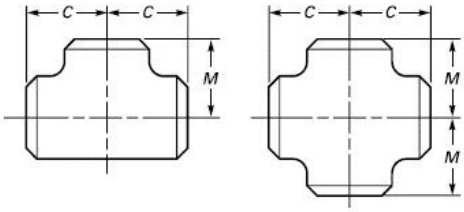
Thickness List for pipefittings ANSI B16.9

Unit: mm

Norminal Pipe Size DN (in)	Outside Dimeter D	Norminal Wall Thickness										
		Sch5s	Sch10S	Sch40s	STD	Sch40	Sch80s	XS	Schl20	Schl40	Sch160	XXS
1/8	10. 3	——	1. 24	1. 73	1. 73	1. 73	2. 41	2. 41	——	——	——	——
1/4	13. 7	—	1. 65	2. 24	2. 24	2. 24	3. 02	3. 02	—	—	—	—
3/8	17. 1	—	1. 65	2. 31	2. 31	2. 31	3. 20	3. 20	—	—	—	—
1/2	21. 3	1.65	2. 11	2. 77	2. 77	2. 77	3. 73	3. 73	——	——	4. 78	7. 47
3/4	26. 7	1.65	2. 11	2. 87	2. 87	2. 87	3. 91	3. 91	——	——	5. 56	7. 82
1	33.4	1. 65	2. 77	3. 38	3. 38	3. 38	4. 55	4. 55	—	—	6. 35	9. 09
1 1/4	42. 2	1.65	2. 77	3. 56	3. 56	3. 56	4. 85	4. 85	—	—	6. 35	9. 70
1 1/2	48. 3	1.65	2. 77	3. 68	3. 68	3. 68	5. 08	5. 08	——	——	7. 14	10. 15
2	60. 3	1. 65	2. 77	3. 91	3. 91	3. 91	5. 54	5. 54	——	——	8. 74	11. 07
2 1/2	73. 0	2. 11	3. 05	5. 16	5. 16	5. 16	7. 01	7. 01	—	—	9. 53	14. 02
3	88. 9	2. 11	3. 05	5. 49	5. 49	5. 49	7. 62	7. 62	—	—	11. 13	15. 24
3 1/2	101. 6	2. 11	3. 05	5. 74	5. 74	5. 74	8. 08	8. 08	——	——	——	——
4	114. 3	2. 11	3. 05	6. 02	6.02	6. 02	8. 56	8. 56	11. 13	——	13. 49	17. 12
5	141. 3	2. 77	3. 40	6. 55	6. 55	6. 55	9. 53	9. 53	12. 70	—	15. 88	19. 05
6	168. 3	2. 77	3. 40	7. 11	7. 11	7. 11	10. 97	10. 97	14. 27	—	18. 26	21.95
8	219. 1	2. 77	3. 76	8. 18	8. 18	8. 18	12. 70	12. 70	18. 26	20. 62	23. 01	22.23
10	273. 1	3. 40	4. 19	9. 27	9. 27	9.27	12. 70	12. 70	21. 44	25. 40	28. 58	25. 40
12	323.9	3. 96	4. 57	9. 53	9. 53	10. 31	12. 70	12. 70	25. 40	28. 58	33. 32	25. 40
14	355. 6	3. 96	4. 78	—	9. 53	11. 13	—	12. 70	27. 79	31. 75	35. 71	—
16	406. 4	4. 19	4. 78	——	9. 53	12. 70	——	12. 70	30. 96	36. 53	40. 49	——
18	457. 2	4. 19	4. 78	——	9. 53	14. 27	——	12. 70	34. 96	39. 67	45. 24	——
20	508. 0	4. 78	5. 54	—	9. 53	15. 09	—	12. 70	38. 10	44. 45	50. 01	—
22	558. 8	4. 78	5. 54	—	9. 53	—	—	12. 70	41. 28	47. 63	53. 98	—
24	609. 6	5. 54	6. 35	——	9. 53	17. 48	——	12. 70	46. 02	52. 37	59. 54	——
26	660.4	——	——	——	9. 53	——	——	12. 70	——	——	——	——
28	711.2	—	—	—	9. 53	—	—	12. 70	—	—	—	—
30	762. 0	6. 35	7. 92	—	9. 53	—	—	12. 70	—	—	—	—
32	812. 8	——	——	——	9. 53	17. 48	——	12. 70	——	——	——	——
34	863. 6	——	——	——	9. 53	17. 48	——	12. 70	——	——	——	——
36	914. 4	—	—	—	9. 53	17. 48	—	12. 70	—	—	—	—
38	965.2	—	—	—	9. 53	—	—	12. 70	—	—	—	—
40	1016. 0	——	——	——	9. 53	——	——	12. 70	——	——	——	——
42	1066. 8	——	——	——	9. 53	——	——	12. 70	——	——	——	——

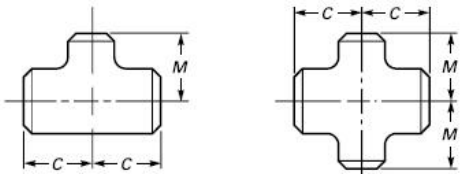
44	1117. 6	—	—	—	9. 53	—	—	12. 70	—	—	—	—
46	1168.4	—	—	—	9. 53	—	—	12. 70	—	—	—	—
48	1219. 2	—	—	—	9. 53	—	—	12. 70	—	—	—	—

Table 1 Dimensions of staight tee and cross



Nominal Pipe Size (NPS)	Outside Diameter at Bevel	Center-to-End	
		Run, C	Outlet, M [Notes (1) and (2)]
1/2“	21.3	25	25
3/4”	26.7	29	29
1	33.4	38	38
1-1/4“	42.2	48	48
1-1/2”	48.3	57	57
2	60.3	64	64
2-1/2“	73.0	76	76
3	88.9	86	86
3-1/2”	101.6	95	95
4	114.3	105	105
5	141.3	124	124
6	168.3	143	143
8	219.1	178	178
10	273.0	216	216
12	323.8	254	254
14	355.6	279	279
16	406.4	305	305
18	457.0	343	343
20	508.0	381	381
22	559.0	419	419
24	610.0	432	432
26	660.0	495	495
28	711.0	521	521
30	762.0	559	559
32	813.0	597	597
34	864.0	635	635
36	914.0	673	673
38	965.0	711	711
40	1 016.0	749	749
42	1 067.0	762	711
44	1 118.0	813	762
46	1 168.0	851	800
48	1 219.0	889	838

Table 2 Dimensions of Reducing Outlet Tees and Reducing Outlet Crosses



Nominal Pipe Size (NPS)	Outside Diameter at Bevel		Center-to-End		Nominal Pipe Size (NPS)	Outside Diameter at Bevel		Center-to-End	
	Run	Outlet	Run, C	Outlet, M [Note (1)]		Run	Outlet	Run, C	Outlet, M [Note (1)]
1/2 x1/2 x3/8	21.3	17.3	25	25	4 x 4 x 3-1/2	114.3	101.6	105	102
1/2 x1/2 x1/4	21.3	13.7	25	25	4x4x3	114.3	88.9	105	98
3/4 x 3/4 x1/2	26.7	21.3	29	29	4 X 4 X 2-1/2	114.3	73.0	105	95
3/4 x 3/4 x3/8	26.7	17.3	29	29	4x4x2	114.3	60.3	105	89

1 X 1 X 3/4	33.4	26.7	38	38	4 x 4 x 1-1/2	114.3	48.3	105	86
1 x 1 x 1/2	33.4	21.3	38	38					
					5X5X4	141.3	114.3	124	117
1-1/4 x 1-1/4 x 1	42.2	33.4	48	48	5 X 5 X 3-1/2	141.3	101.6	124	114
1-1/4 x 1-1/4 x3/4	42.2	26.7	48	48	5X5X3	141.3	88.9	124	111
1-1/4 x 1-1/4 x1/2	42.2	21.3	48	48	5 X 5 X 2-1/2	141.3	73.0	124	108
					5X5X2	141.3	60.3	124	105
1-1/2 x1-1/2 x 1-1/4	48.3	42.2	57	57	6X6X5	168.3	141.3	143	137
1-1/2 x1-1/2 x 1	48.3	33.4	57	57	6x6x4	168.3	114.3	143	130
1-1/2 x1-1/2 x3/4	48.3	26.7	57	57	6 x 6 x 3-1/2	168.3	101.6	143	127
1-1/2 x1-1/2 x 1/2	48.3	21.3	57	57	6x6x3	168.3	88.9	143	124
					6 x 6 x 2-1/2	168.3	73.0	143	121
2 x 2 x 1-1/2	60.3	48.3	64	60					
2 x 2 x 1-1/4	60.3	42.2	64	57	8x8x6	219.1	168.3	178	168
2 X 2 X 1	60.3	33.4	64	51	8x8x5	219.1	141.3	178	162
2 x 2 x 3/4	60.3	26.7	64	44	8X8X4	219.1	114.3	178	156
					8 x 8 x 3-1/2	219.1	101.6	178	152
2-1/2 X 2-1/2 X 2	73.0	60.3	76	70					
2-1/2 X 2-1/2 X 1-1/2	73.0	48.3	76	67	10 x 10 x 8	273.0	219.1	216	203
2-1/2 X 2-1/2 X 1-1/4	73.0	42.2	76	64	10 x 10 x 6	273.0	168.3	216	194
2-1/2 X 2-1/2 X 1	73.0	33.4	76	57	10 x 10 x 5	273.0	141.3	216	191
					10 x 10 x 4	273.0	114.3	216	184
3 X 3 X 2-1/2	88.9	73.0	86	83	12 x 12 x 10	323.8	273.0	254	241
3x3x2	88.9	60.3	86	76	12 x 12 x 8	323.8	219.1	254	229
3 x 3 x 1-1/2	88.9	48.3	86	73	12 X 12 X 6	323.8	168.3	254	219
3 x 3 x 1-1/4	88.9	42.2	86	70	12 x 12 x 5	323.8	141.3	254	216
3-1/2 x 3-1/2 x 3	101.6	88.9	95	92	14 X 14 X 12	355.6	323.8	279	270
3-1/2 x 3-1/2 x 2-1/2	101.6	73.0	95	89	14 X 14 X 10	355.6	273.0	279	257
3-1/2 x 3-1/2 x 2	101.6	60.3	95	83	14 X 14 X 8	355.6	219.1	279	248
3-1/2 x 3-1/2 x 1-1/2	101.6	48.3	95	79	14 x 14 x 6	355.6	168.3	279	238

Size (NPS)	Outside Diameter at Bevel		Center to Ends		Nominal Pipe Size (NPS)	Outside Diameter at Bevel		Center to Ends	
	Run	Outlet	Run, C	Outlet, M [Note (1)]		Run	Outlet	Run, C	Outlet, M [Note (1)]
16 x 14	406.4	355.6	305	305	28 X 28 X 26	711	660.0	521	521
16 x 12	406.4	323.8	305	295	28 X 28 X 24	711	610.0	521	508
16 x 10	406.4	273.0	305	283	28 x 28 x 22	711	559.0	521	495
16 x 8	406.4	219.1	305	273	28 x 28 x 20	711	508.0	521	483
16 x 6	406.4	168.3	305	264					
					28 X 28 X 18	711	457.0	521	470
18 x 16	457.0	406.4	343	330	28 X 28 X 16	711	406.4	521	457
18 x 14	457.0	355.6	343	330	28 x 28 x 14	711	355.6	521	457
18 X 12	457.0	323.8	343	321	28 X 28 X 12	711	323.8	521	448
18 x 10	457.0	273.0	343	308					
18 X 8	457.0	219.1	343	298	30 X 30 X 28	762	711.0	559	546
					30 x 30 x 26	762	660.0	559	546
20 X 18	508.0	457.0	381	368	30 x 30 x 24	762	610.0	559	533
20 x 16	508.0	406.4	381	356	30 x 30 x 22	762	559.0	559	521
20 x 14	508.0	355.6	381	356	30 x 30 x 20	762	508.0	559	508
20 X 12	508.0	323.8	381	346					
20 X 10	508.0	273.0	381	333	30 x 30 x 18	762	457.0	559	495
20 X 8	508.0	219.1	381	324	30 x 30 x 16	762	406.4	559	483
					30 x 30 x 14	762	355.6	559	483
22 X 20	559.0	508.0	419	406	30 x 30 x 12	762	323.8	559	473
22 x 18	559.0	457.0	419	394	30 x 30 x 10	762	273.0	559	460
22 x 16	559.0	406.4	419	381					
22 X 14	559.0	355.6	419	381	32 x 32 x 30	813	762.0	597	584
22 X 12	559.0	323.8	419	371	32 X 32 X 28	813	711.0	597	572
22 X 10	559.0	273.0	419	359	32 X 32 X 26	813	660.0	597	572
					32 x 32 x 24	813	610.0	597	559
24 X 22	610.0	559.0	432	432					
24 X 20	610.0	508.0	432	432	32 X 32 X 22	813	559.0	597	546
24 X 18	610.0	457.0	432	419	32 X 32 X 20	813	508.0	597	533
					32 X 32 X 18	813	457.0	597	521
24 X 16	610.0	406.4	432	406	32 x 32 x 16	813	406.4	597	508

24 X 14	610.0	355.6	432	406	32 X 32 X 14	813	355.6	597	508
24 X 12	610.0	323.8	432	397					
24 x 10	610.0	273.0	432	384	34 x 34 x 32	864	813.0	635	622
					34 x 34 x 30	864	762.0	635	610
26 X 24	660.0	610.0	495	483	34 x 34 x 28	864	711.0	635	597
26 x 22	660.0	559.0	495	470	34 x 34 x 26	864	660.0	635	597
26 X 20	660.0	508.0	495	457					
					34 x 34 x 24	864	610.0	635	584
26 x 18	660.0	457.0	495	444	34 x 34 x 22	864	559.0	635	572
26 X 16	660.0	406.4	495	432	34 x 34 x 20	864	508.0	635	559
26 x 14	660.0	355.6	495	432	34 x 34 x 18	864	457.0	635	546
26 X 12	660.0	323.8	495	422	34 x 34 x 16	864	406.4	635	533

Production Process

1. Raw material Receiving and Cutting

2.Material Identification

3. Elbows, Tees ,reducers, Caps, stub ends, kinds of pipefittings shape forming

4. Material wedling process (welded elbows)

5. Heat Treatment for SS pipefittings

6. Shot Blast and cleaning

7. Surface checking

8. After Polished

9. stainless steel Pipefittings Material In Stock

Application/Usage

Low and middle pressure fluid pipeline,boiler, petroleum and natural gas industry, drilling,chemical industry, electric industry,shipbuilding,fertilizer equipment and pipeline, structure,petrochemical,pharmaceutical industry,etc.

Standard Reference

Fabricated Fittings
Fabricated laterals and other fittings by circumferential or intersection welds are considered pipe fabrication could not apply this standard.

Units under ASME B16.9 shall be stated in both SI (Metric) and U.S. Customary units. Designation for size is NPS.

Reference Standards
It is not considered practical to identify the specific edition of each standard and specification in the individual references. A product made comply with a prior edition of referenced standards and in all other respects conforming to this standard will be considered complied.

ASME B16.5: Pipe Flanges and Flanged Fittings: NPS 1⁄2 Through NPS 24 Metric/Inch Standard
ASME B16.25: For Buttwelding Ends
ASME B31: Code for Pressure Piping
ASME B31.3: Process Piping
ASME B36.10M, Welded and Seamless Wrought Steel Pipe
ASME B36.19M, Stainless Steel Pipe

ASME Boiler and Pressure Vessel Code
ASTM A234/A234M-17, Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service
ASTM A403/A403M-16, Specification for Wrought Austenitic Stainless Steel Piping Fittings
ASTM A420/A420M-16, Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for LowTemperature Service
ASTM A815/A815M-14e1, Specification for Wrought Ferritic, Ferritic/Austenitic and Martensitic Stainless Steel Piping Fittings
ASTM A960/A960M-16a, Specification for Common Requirements for Wrought Steel Piping Fittings
ASTM E29-13, Practice for Using Significant Digits in Test Data to Determine Conformance With Specifications
ASTM B361-16, ASTM B363-14, ASTM B366/B366M-17: For other material metals. (Aluminum, Titanium, Nickel, and alloy).

FAQ/ Customer Question and Answers

Q:Customer asked for butt weld fittings in A105:
A: Most common carbon steel buttweld fitting material is A234WPB. It is equivalent to A105 flanges, however there is no such thing as an A105 or A106 butt weld fitting. A106 Gr.B is for pipe grade. The A234WPB fittings are made from A106GR.B pipes. A105 is a material from Bar forged to be High pressure Fittings or Flange

Q: Customer requests “Normalized” butt weld fittings:
A: This is also a misconception since flanges are available in A105 and A105 N, where N stands for normalized.
However, there is no such thing as A234WPBN. Manufactures normalize their butt weld fittings was considered that normalized heat treating process was done, Espeically for the elbows and Tees
Customer needing “normalized” butt weld fittings should request WPL6 fittings which are high yield and are normalized as a standard procedure.

Q: Customer forgets to mention pipe schedule:
A: Buttweld fittings are sold as per pipe size but pipe schedule must be specified to match the ID of the fitting to the ID of the pipe. If no schedule is mentioned, we will assume a standard wall is requested.

Q: Customer forgets to mention welded or seamless butt weld fitting:
A: Butt weld fittings are available in both welded and seamless configuration. A seamless butt weld carbon steel or stainless steel fitting is made of seamless pipe and is generally more expensive.
Seamless pipe fittings are NOT common in sizes bigger than 12”. Welded pipe fittings are made of ERW welded carbon steel or stainless steel pipe. They are available in sizes ½” to 72” and are more affordable than seamless fittings.

Q: What does Short Radius (SR) or Long Radius (LR) means?
A: You will often hear SR45 elbow or LR45 elbow. The 45 or 90 refers to the angle of the bend for buttweld fitting to change the direction of flow.
A long radius elbow (LR 90 Elbow or LR 45 elbow) will have a pipe bend that will be 1.5 times the size of the pipe. So, a 6 inch LR 90 has bending radius that is 1.5 x nominal pipe size.

A short radius elbow (SR45 or SR90) has a pipe bend that is equal to the size of the fitting, so a 6” SR 45 has a bending radius that is 6” nominal pipe size.

Q: What is a 3R or 3D elbow pipe fitting?
A: First, the terms 3R or 3D are used synonymously. A 3R butt weld elbow has a bending radius that is 3 times the nominal pipe size. A 3R elbow is equal to 3D Elbows

Our Service

1. Tehcnial support
2. Raw Material Quality control.
3. Inspection during the production time.
4. Final Test includes Surface, Dimension, PT Test, RT test, ultrasonic Test
5. Test Report each shipment
4. Flexiable Delivery terms. EXW FOB CIF CFR DDP DDU
5. Fliexable payment Ways: LC. TT. DP
6. Customized Package inlcudes Logo. Cases Dimension .
7. 18 months quality Gurantee time.
9. Free replacement by air if any error founded
10. 24 hours to Feedback your questions

SHIJIAZHUANG DEYE PIPING INDUSTRY CO., LTD Pipefittings Department)

+8613292824811 sales@deyepiping.com piping-industry.com

No. 368 Youyi St. Shijiazhuang, Hebei, China