



## Forged SS High Pressure Pipe Fittings Cross Tee With Pressure 3000lbs 6000lbs 9000lbs

Our Product Introduction

### Basic Information

- Place of Origin: CHINA
- Brand Name: DEYE
- Certification: ISO9001:2015 PED
- Model Number: PF-BS-F10
- Minimum Order Quantity: 10PCS
- Price: USD2-USD50 each pc as per different material
- Packaging Details: cartons + ply-wooden cases
- Delivery Time: 7 days for stock items
- Payment Terms: L/C, , T/T, D/P
- Supply Ability: 10000pcs each month



### Product Specification

- Standard: ANSI B16.11
- Material: A105, A105N, A350LF2, F22, SS316, SS304, DUPLEX SS, ALLOY STEEL
- Pressure: 2000#, 3000#, 6000#, 9000#
- Size: 1/4"-4"
- Connection: Socket Welded SW Threaded NPT BSPT BSPP
- Surface: Black, Pickling, Anti-rust Oil
- Highlight: **SS High Pressure Pipe Fittings ,  
High Pressure Pipe Fittings Forged ,  
9000lbs cross tee**

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## Product Description

### Forged SS High Pressure Fittings Cross Tee With Pressure CI3000lbs 6000lbs 9000lbs

**3000# Cross:** This type of pipe fitting contains cross four openings in all the four major directions. This fitting is adjoined to four pipes meeting at common point. There is either one inlet and three outlets or vice-versa to flow water or any other liquid in four different directions. These kinds of pipe fittings are commonly used in fire sprinkler systems.

#### Product Information/Product Description/Basis Information/Specification

Forged Steel Fitting		
Name	45D/90D Elbow, Street Elbow, Tee, Cross, Cap, Coupling, Half Coupling, Plug, Bushing, Unin, Hexagon Nipple Outlet, Weldolet, Thredolet, Sockolet, Bull plug, Reducer Insert, Pipe Nipple, Swage Nipple	
H.S. Code	7307920000	
Pressure	Threaded Type	2000LBS, 3000LBS, 6000LBS
	Socket-Weld Type	3000LBS, 6000LBS, 9000LBS
Surface Finish	Anti-Rust Oil, Hot Dipped Galvanised, Customized.	
Technology	Forged	
Standard	American Standard	ANSI B16.11, MSS SP 97, MSS SP 95, MSS SP 83, ASTM A733
	British Standard	BS3799
	Japan Standard	JIS B2316
Size	1/8" - 6" (DN6 - DN150)	
Wall Thickness	SCH5S, SCH10S, SCH10, SCH40S, STD, XS, XXS, SCH20, SCH30, SCH40, SCH60, SCH80, SCH160, XXS	
Materials	Mild/Carbon Steel	A234 WPB/WPC, A105, A105N, A350LF2, F11, F22
	Stainless Steel	A403 WP304, 304(L), 316(L), 321, 310S, 347H, 316Ti, 317(L), F904L, 1.4301, 1.4307, 1.4401, 1.4571, 1.4541
	Duplex Stainless Steel	UNS31803, SAF2205, UNS32205, UNS31500, UNS32750, UNS32760, 1.4462, 1.4410, 1.4501
	Alloy Steel	Alloy20, A860 WPHY 42-46-52-60-65-70

#### Features /Characteristics

**Strength and Durability:** Forged pipe fittings are known for their superior strength and durability compared to fittings made through other manufacturing methods. The forging process creates a dense and compact structure that can handle high-pressure and high-temperature applications.

**Leak-Free Performance:** The tight grain structure of forged fittings ensures a leak-free connection. The absence of porosity or voids in the metal reduces the risk of leaks or failures, making them suitable for critical applications where leakage is not acceptable.

**Pressure Ratings:** Forged pipe fittings generally have higher pressure ratings compared to fittings made by other methods. This makes them ideal for systems that operate under high pressure conditions.

**Resistance to Corrosion:** Forged fittings are available in various materials such as carbon steel, stainless steel, and alloy steel, which offer excellent resistance to corrosion. The choice of material depends on the specific requirements of the application, ensuring compatibility with the transported fluid or gas.

**Wide Range of Shapes and Sizes:** Forged pipe fittings are available in a wide range of shapes and sizes to meet different piping system requirements. Common types include elbows, tees, crosses, couplings, unions, caps, and plugs.

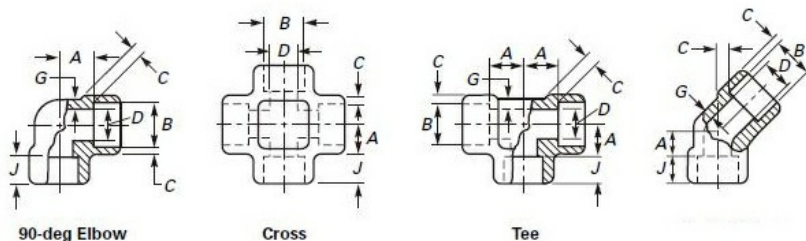
**Versatility:** Forged fittings are suitable for use in various industries such as oil and gas, petrochemicals, power generation, and chemical processing. They can handle different types of fluids, gases, and temperatures, making them versatile for diverse applications.

**Quality and Consistency:** Due to the controlled forging process, forged pipe fittings exhibit consistent quality and dimensional accuracy. This ensures that the fittings can be easily installed and provide a reliable connection within the piping system.

**Longevity:** With their robust construction and resistance to wear and tear, forged fittings offer a longer service life compared to other types of fittings. Proper installation, maintenance, and adherence to recommended operating conditions can further enhance their longevity.

#### Technology/ Technical Data Sheets

#### Dimension of socket welding Fittings for 90-Deg Elbow, Cross, Tee, 45deg elbow



Nominal Pipe Size	Socket Bore Diameter, B [Note (1)]	Bore Diameter of Fittings, D [Note (1)]			Socket Wall Thickness, C [Note (2)]						Body Wall, G			Min. Depth of Socket, J	
		Class Designation	Class Designation						Class Designation						
			3000		6000		9000		3000		6000		9000		
			Avg.	Min.	Avg.	Min.	Avg.	Min.	Avg.	Min.	Avg.	Min.	Avg.		Min.
1/8	0.440	0.299	0.189	...	0.125	0.125	0.156	0.135	...	...	0.095	0.124	...	0.38	
	0.420	0.239	0.126	...											
	0.575	0.394	0.280	...	0.149	0.130	0.181	0.158	...	...	0.119	0.145	...	0.38	
	0.555	0.334	0.220	...											
3/8	0.710	0.523	0.389	...	0.158	0.138	0.198	0.172	...	...	0.126	0.158	...	0.38	
	0.690	0.463	0.329	...											
	0.875	0.652	0.494	0.282	0.184	0.161	0.235	0.204	0.368	0.322	0.147	0.188	0.294	0.38	
	0.855	0.592	0.434	0.222											
3/4	1.085	0.854	0.642	0.464	0.193	0.168	0.274	0.238	0.385	0.337	0.154	0.219	0.308	0.50	
	1.065	0.794	0.582	0.404											
	1	1.350	1.079	0.845	0.629	0.224	0.196	0.312	0.273	0.448	0.392	0.179	0.250	0.358	0.50
	1.330	1.019	0.785	0.569											
1 1/4	1.695	1.410	1.190	0.926	0.239	0.208	0.312	0.273	0.478	0.418	0.191	0.250	0.382	0.50	
	1.675	1.350	1.130	0.866											
	1 1/2	1.935	1.640	1.368	1.130	0.250	0.218	0.351	0.307	0.500	0.438	0.200	0.281	0.400	0.50
	1.915	1.580	1.308	1.070											
2	2.426	2.097	1.717	1.533	0.273	0.238	0.430	0.374	0.545	0.477	0.218	0.344	0.436	0.62	
	2.406	2.037	1.657	1.473											
	2 1/2	2.931	2.529	...	...	0.345	0.302	...	...	...	...	0.276	...	...	0.62
	2.906	2.409	...	...											
3	3.560	3.128	...	...	0.375	0.327	...	...	...	...	0.300	...	...	0.62	
	3.535	3.008	...	...											
	4	4.570	4.086	...	...	0.421	0.368	...	...	...	...	0.337	...	...	0.75
	4.545	3.966	...	...											

General Note: Dimensions are in millimeters.

#### Application/Usage

**Oil and Gas Industry:** Forged high pressure fittings are widely used in upstream, midstream and downstream applications in oil and gas. They are suitable for high pressure pipelines, oil and gas production facilities, refineries and petrochemical plants.

**Power Generation:** Forged parts are used in power plants in the conventional and renewable energy sectors. They are used in high pressure steam and water systems, boiler piping, turbine control systems and other power generating equipment.

**Chemical Processing:** Forged fittings are critical in chemical processing plants due to their resistance to corrosion and high pressure. They are used in pipelines carrying corrosive chemicals, acids, solvents and other corrosive fluids.

**Pharmaceutical industry:** Forged high-pressure fittings are used in pharmaceutical facilities where high pressures are required for various processes including fluid transfer, purification and sterilization.

**Water Treatment:** Forged fittings are used in high pressure water treatment and distribution systems. They ensure that piping and connections can handle the water pressure required in applications such as desalination plants, water treatment plants and pumping stations.

**Mining and Construction:** Mining operations require high-pressure piping, especially when transporting materials and slurries. Forged fittings are used in mining and construction projects involving high pressure fluid, mud or compressed air systems.

**Aerospace and Defense:** Forged fittings find application in aerospace and defense, especially in high-pressure hydraulic systems for aircraft, missiles, and other defense-related equipment.

**HVAC and Piping:** High pressure forged fittings are used in commercial and industrial HVAC (heating, ventilation and air conditioning) systems. They provide reliable connections for high pressure refrigerant, chilled water and steam distribution.

#### Material Specification

Forged high pressure pipe fittings here mentioned below are only a few of those covered by B16.11 standard. The physical and chemical values indicated correspond to the latest issued standard, although they are affected by modifications year after year, so we suggest to use them only as a guide.

#### Chemical Composition

ASTM Designation	Analysis in %							
	C	Mn	Si	Max. P	Max. S	Cr	Ni	Mo
A105 - 05	max. 0.35	0.60 - 1.05	0.10 - 0.35	0.035	0.04	max. 0.3 <sup>3 4</sup>	max. 0.4 <sup>3 4</sup>	max. 0.12 <sup>3</sup>

A182 - 07									
Grades	F1 F5	max. 0.25	0.60 - 0.90	0.15 - 0.35	0.045	0.045	4.00 - 6.00		0.44 - 0.65
	F11 Cl. 1	max. 0.15	0.30 - 0.60	max. 0.50	0.030	0.030	1.00 - 1.50	max. 0.50	0.44 - 0.65
		0.05 - 0.15	0.30 - 0.60	0.50 - 1.00	0.030	0.030			0.44 - 0.65
	F11 Cl. 2 / Cl. 3	0.10 - 0.20	0.30 - 0.80	0.50 - 1.00	0.040	0.040	1.00 - 1.50		0.44 - 0.65
	F22 Cl. 1 / Cl. 3	0.05 - 0.15	0.30 - 0.60	max. 0.5	0.040	0.040	2.00 - 2.50	8.00 - 11.00	0.44 - 0.65
	F304 <sup>1</sup>	max. 0.08	max. 2.00	max. 1.00	0.045	0.030	18.00 - 20.00		0.87 - 1.13
	F304 L <sup>1</sup>	max. 0.030	max. 2.00	max. 1.00	0.045	0.030	18.00 - 20.00	8.00 - 13.00	
	F316 <sup>1</sup>	max. 0.08	max. 2.00	max. 1.00	0.045	0.030	16.00 - 18.00	10.00 - 14.00	2.00 - 3.00
	F316L <sup>1</sup>	max. 0.030	max. 2.00	max. 1.00	0.045	0.030	16.00 - 18.00	10.00 - 15.00	2.00 - 3.00
	F321 <sup>2</sup>	max. 0.08	max. 2.00	max. 1.00	0.045	0.030	17.00 - 19.00	9.00 - 12.00	
A350 - 04									
Grades	LF1	max. 0.30	0.60 - 1.35	0.15 - 0.30	0.035	0.040	max. 0.3 <sup>3 4</sup>	max. 0.4 <sup>3</sup>	max. 0.12 <sup>3</sup>
	LF2 Cl. 1	max. 0.30	0.60 - 1.35	0.15 - 0.30	0.035	0.040	max. 0.3 <sup>3 4</sup>	max. 0.4 <sup>3</sup>	max. 0.12 <sup>3</sup>
	LF2 Cl. 2 LF3	max. 0.30	0.60 - 1.35	0.20 - 0.35	0.035	0.040	max. 0.3 <sup>3 4</sup>	max. 0.4 <sup>3</sup>	max. 0.12 <sup>3</sup>
		max. 0.20	max. 0.90	0.20 - 0.35	0.035	0.040	max. 0.3 <sup>3 4</sup>	3.3 - 3.7	max. 0.12 <sup>3</sup>
A694 - 03									
Grades	F42 / F52 / F56 F60 / F65 / F70	max. 0.26	max. 1.4	0.15 - 0.35	0.025	0.025			

## PHYSICAL PROPERTIES

ASTM		Tensile strength		Fluency limit Elongation in 50 mm.			Stress	Brinell
Designation		Ksi min.	MPa	Ksi min.	MPa	% min.	% min.	Hardness (HB)
A105 - 05								
		70	485	36	250	22	30	187 max.
A182 - 07								
Grades	F1	70	485	40	275	20	30	143 - 192
	F5	70	485	40	275	20	35	143 - 217
	F11 Cl. 1	60	415	30	205	20	45	121 - 174
	F11 Cl. 2	70	485	40	275	20	30	143 - 207
	F11 Cl. 3	75	515	45	310	20	30	156 - 207
	F22 Cl. 1	60	415	30	205	20	35	170 max.
	F22 Cl. 3	75	515	45	310	20	30	
	F304	751	5151	30	205	30	50	156 - 207
	F304L	702	4852	25	170	30	50	
	F316	751	5151	30	205	30	50	
	F316L	702	4852	25	170	30	50	
	F321	751	5151	30	205	30	50	
A350 - 04								
Grades	LF1	60 - 85	415 - 585	30	3 4 205	25	38	197 max.
	LF2 Cl. 1	70 - 95	485 - 655	36	3 4 250	22	30	197 max.
	LF2 Cl. 2	70 - 95	485 - 655	36	3 4 250	22	30	197 max.
	LF3 Cl. 1	70 - 95	485 - 655	37.5 <sup>3 4</sup>	260	22	35	197 max.
	LF3 Cl. 2	70 - 95	485 - 655	37.5 <sup>3 4</sup>	260	22	35	197 max.
A694 - 03								
Grades	F42	60	415	42	290	20		
	F52	66	455	52	360	20		
	F56	68	470	56	385	20		
	F60	75	515	60	415	20		
	F65	77	530	65	450	20		
	F70	82	565	70	485	18		

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