

## Slip On Alloy Steel Flange ASTM A182 Corrosion Resistant Pipe Fittings

Our Product Introduction

### Basic Information

- Place of Origin: China
- Brand Name: Kasugai
- Model Number: SO LJF WN PL BL SW
- Minimum Order Quantity: Negotiable
- Price: Negotiable
- Packaging Details: Seaworthy Packing
- Delivery Time: 30 - 60 working days
- Payment Terms: L / C , T / T
- Supply Ability: 1000 tons per month



### Product Specification

- Product Name: ASTM A182 F1 F5 F9 F11 F12 F22 F91  
ANSI B16.5/B16.47 Alloy Steel Slip On Flange
- Dimensions: ANSI B16.5/B16.47 , Custom Drawings
- Face Type: Slip On (SO)
- Thickness: Sch10S To Sch160
- Pressure Class: 150 300 400 600 900 1500 2500
- Size Range: 1/2" To 24"
- Highlight: **Slip On Alloy Steel Flange,  
Corrosion Resistant Slip On Pipe Flange,  
ASTM A182 Alloy Steel Flange**



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## Product Description

### ASTM A182 F1 F5 F9 F11 F12 F22 F91 ANSI B16.5/B16.47 Alloy Steel Slip On Flange

Alloy steel is a type of steel alloyed with several elements such as molybdenum, manganese, nickel, chromium, vanadium, silicon, and boron. According to the different added elements and appropriate processing techniques, alloy steel can obtain special properties such as high strength, high toughness, wear resistance, corrosion resistance, low temperature resistance, high temperature resistance, and non-magnetic properties. Those have less than 5% alloy elements are categorized as low alloy steel, those have alloy elements ranging from 5%-10% are categorized as minimum alloy steel, those have more than 10% alloy elements are categorized as high alloy steel.

Flanges made of alloy steel are widely used in water lines, oil, and gas, chemical plants, food production systems, etc. where high corrosion resistance, high temperature resistance and high pressure resistance are required.

#### Product Information

|                   |  |
|-------------------|--|
| Product Name      | ASTM A182 F1 F5 F9 F11 F12 F22 F91 ANSI B16.5/B16.47 Alloy Steel Slip On Flange  |
| Size Range        | 1/2' to 24"  |
| Pressure Class    | 150, 300, 400, 600, 900, 1500, 2500,   |
| Thickness         | Sch10S to Sch160   |
| Standards         | ASME/ANSI B16.5/B16.47, JIS B2220  |
| Type              | Slip - on Flange ( SO )  |
| Dimensions        | ANSI B16.5, Custom Drawings  |
| Coating           | Anti-rust Paint, Oil Black Paint, Cold and Hot Dip Galvanized, Yellow Transparent, Zinc Plated                                 |
| Origin            | China  |
| Applications      | Offshore, Oil Field, Shipbuilding, Water System, Nature Gas, Pipe Projects, Electric Power, etc.                               |
| Test              | Direct-reading Spectrograph, Hydrostatic testing machine, X-ray detector, Ultrasonic flaw detector, Magnetic particle detector |
| Test Certificates | Raw Materials Certificate, 100% Radiography Test Report, Third Party Inspection Report   |

#### Chemical Composition of Alloy Flange Material

| Grade         | Steel Names  | C            | Mn      | Si      | P    | S    | Cr      | Mo        |
|---------------|--|--------------|---------|---------|------|------|---------|-----------|
| ASTM A182 F1  | C-0.5Mo  | 0.15 max     | 0.3-0.6 | 0.5     | 0.03 | 0.03 | 4-6     | 0.44-0.65 |
| ASTM A182 F5  | 5Cr-0.5Mo  | 0.15 max     | 0.3-0.6 | 0.5-1.0 | 0.03 | 0.03 | 4-6     | 0.44-0.65 |
| ASTM A182 F9  | 9Cr-1Mo  | 0.15 max     | 0.3-0.6 | 0.5-1.0 | 0.03 | 0.03 | 8-10    | 0.9-1.1   |
| ASTM A182 F11 | 1.25Cr-0.5Mo-Si(CL1/CL3)<br>1.25Cr-0.25Mo-Si (CL2) | 0.5-0.15     | 0.3-0.6 | 0.5-1.0 | 0.03 | 0.03 | 1.0-1.5 | 0.44-0.65 |
| ASTM A182 F12 | 1Cr-0.5Mo  | 0.15 max     | 0.3-0.6 | 0.5     | 0.03 | 0.03 | 4-6     | 0.44-0.65 |
| ASTM A182 F22 | 2.25Cr-1Mo   | 0.5-0.15 max | 0.3-0.6 | 0.5     | 0.03 | 0.03 | 4-6     | 0.44-0.65 |
| ASTM A182 F91 |  | 0.15 max     | 0.3-0.6 | 0.5-1.0 | 0.03 | 0.03 | 8-10    | 0.9-1.1   |

#### Flange Type: Slip On (SO)

Slip on flange also simplified as SO flange. SO flanges slip over pipes and are designed to fit slightly bigger on the inside than the pipe. They connect to the pipe through a fillet weld at the flange top and bottom. It is used to insert the pipe into the inner hole of flange, as the flange inner diameter is little bigger than the pipe's outer diameter, pipe and flange could be connected by lap welding at the top and bottom of the flange.

The slip on flange is shorter in length than a weld neck flange, and is used in areas where short tie-ins are necessary or space limitations necessitate its use. Generally, the life span of a slip-on flange connection is about one-third that of the weld neck flange. Despite of additional welding involved during installation, its lower initial cost makes the SO flange preferred over WN flanges by many users. It is generally used in non-corrosive, non-critical, moderate pressure services. Slip on flanges of Class 150 and Class 300 are most commonly seen in utility engineering.

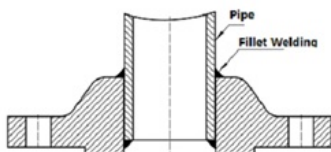


Illustration of welding a pipe to a slip-on flange conforming to ASME B16.5: two fillet welds shall be furnished.

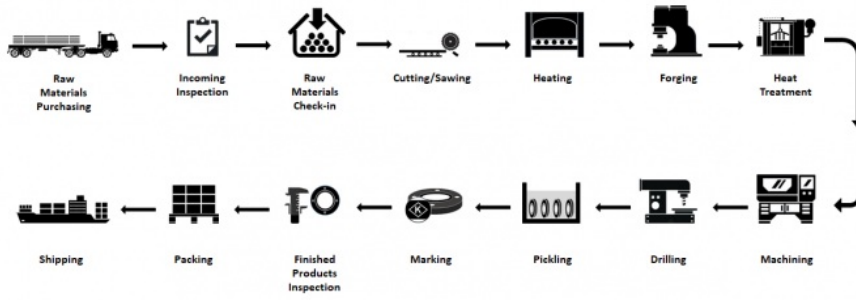


A sample picture of a slip on flange

## Manufacturing Process

### 法兰制造流程

#### Flange Manufacturing Process



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