

Flanges







Types

Weld Neck Flanges (WN)
 Lap Joint Flanges (LJ)
 Blind Flanges (BL)
 Threaded Flanges (THR)
 Slip-on Flanges (SO)
 Socket Welding Flanges(SW)



WPP provides all types of flanges.

If you need more information about our products, please be free to contact sales@wppetroleum.com **Flanges**

Standards

ANSI/ASME Standard: ANSI B16.5, ANSI B16.47 Series A & B, MSS-SP-44, API 605, API6A in class 150 to 2500;

AWWA C207 flanges in Class B, Class D, Class E, Class F, Ring, Blind & Hub; European DIN, UNI, EN 1092-1, BS 4504, ISO, NS, NFE29203 flanges in Pressure PN6 to PN100;

Japanese JIS B2220 & Korean KS B1503 flanges in pressure 5K to 40K; Russian GOST 12820-80, GOST 12821-80, GOST 12815-80 in pressure PN0.6MPa to PN10MPa;

South African SABS 1123 / SANS 1123 in Class 600kPa to 4000kPa. Materials

Carbon Steel

ASTM A105/A105N A350 LF1, LF2 CL1/CL2, LF3 CL1/CL2 A694, F42, F46, F48, F50, F56, F60, F65, F70 Steel RDT37.2 Stainless steel ASTM A182 F304/304L, F316/316L, F316H, F316TI, F310, F321;

Alloy Steel

ASTM A182 F1, F5, F9, F11, F22, F91

Duplex & Super Duplex Steel

ASTM A182 F51/UNS S31803, A182 F53/UNS S32750, ASTM A182 F55 / UNS S3260

Flange Face Type

Flat Face (FF), Raised Face (RF), Ring Type Joint (RTJ)

Nominal Diameter Range 1/2" – 96", DN15 – DN2000

Nominal Pressure Range Class 150 – Class 2500 (PN6 - PN40)



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• Weld Neck Flanges

Weld-Neck flanges or welding-neck flanges can be differentiated from all other types of flange by their long tapered hub. In addition, there is also a gentle transition of thickness in the region of the butt weld that joins them to pipe or a fitting. Weld-Neck flanges or welding-neck flanges are best suited for severe service conditions, whether loading conditions are substantially constant or fluctuate between wide limits.

Weld Neck Flanges are flanges with the wall thickness of the flange having the same dimensions of the matching pipe, the lighter the pipe is, the larger the bore, conversely, the heavier the pipe, the smaller the bore, they are normally used for high pressure, cold or hot temperature.





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Stainless Steel WN Flange

Model No. WPP 013 FLWN1 Specifications Materials ASTM A105, A350 LF1, LF2 CL1/CL2, LF3 CL1/ CL2, A694 (F42, F46, F48, F50, F52, F56, F60, F65, F70) A182 F304/304L, F316/316L, F316H, F310, F321, A182 F11, F22 Standards API, ANSI, BS, JIS, UNI, MSS, SP Pressure Range ANSI Class 150 – Class 2500 Size Range 1/2 to 56 inches (DN 15 to DN 1400) Coating Yellow color Anti- corrosive coating is also available





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Forged Steel WN Flange

Model No. WPP 013 FLWN2 **Specifications** Materials ASTM A105, A350 LF1, LF2 CL1/CL2, LF3 CL1/ CL2, A516.60 A694 (F42, F46, F48, F50, F52, F56, F60, F65, F70) A182 F304/304L, F316/316L, F316H, F310, F321, A182 F11, F22 Standards API, ANSI, BS, JIS, UNI, MSS, SP **Pressure Range** ANSI Class 150 - Class 2500 Size Range 1/2 to 56 inches (DN 15 to DN 1400) Coating Yellow color Anti- corrosive coating is also available





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Long WN Flange

Model No. WPP 013 FLWN3 **Specifications Materials** ASTM A105, A350 LF1, LF2 CL1/CL2, LF3 CL1/ CL2, A516.60, A694 (F42, F46, F48, F50, F52, F56, F60, F65, F70) A182 F304/304L, F316/316L, F316H, F310, F321, A182 F11, F22 **Standards** API, ANSI, BS, JIS, UNI, MSS, SP **Pressure Range** ANSI Class 150 - Class 2500 Size Range 1/2 to 56 inches (DN 15 to DN 1400) Coating Yellow color Anti- corrosive coating is also available





Lap Joint Flanges

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Lap Joint Flanges

A **lap joint flange** is very similar to a slip-on flange, with the main difference being that it has a curved radius at the bore and face to house a lap joint stub-end. **Lap joint flanges** and stub-end assemblies are typically used in situations where frequent dismantling is required for inspection.

The **lap joint flange** itself is not welded or fixed in any way. It is free to spin for proper alignment with whatever it is joining to.







Lap Joint Flanges

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Lap Joint Flanges

Model No. WPP 013 FLLJ1 Specifications Materials Carbon Steel, ASTM A105 Standards ANSI B16.5 Pressure Range ANSI Class 150 – Class 2500 Size Range 1/2 to 24 inches (DN 15 to DN 600) Coating Anti- Rust Black Coating is also available





Lap Joint Flanges

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Lap Joint Flanges

Model No. WPP 013 FLLJ2 Specifications Materials Carbon Steel: ASTM A105 Stainless Steel: A182 F304, A182 F304L, F316, F316L Standards ANSI B16.5 Pressure Range ANSI Class 150 – Class 600 Size Range 1/2 to 24 inches (DN 15 to DN 600) Coating Anti- Rust Black Coating is also available





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Blind Flanges

A **Blind flange** is round plate which has all of the relevant bolt holes but no center hole, and because of this feature this flange is used to close off the ends of a piping systems and pressure vessel openings. It also permits easy access to the interior of a line or vessel once it has been sealed and must be reopened.





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Ring Type Joint Blind Flange

Model No. WPP 013 FLB1 Specifications Materials A350 LF1, LF2, CL1, CL2. LF3 Standards API, ANSI, BS, JIS, UNI, DIN, EN1092-1 Pressure Range ANSI Class 150 – Class 2500 Size Range 1/2 to 56 inches (DN 15 to DN 1400)





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Alloy Steel Blind Flange

Model No. WPP 013 FLB2 Specifications Materials Alloy Steel, ASTM A182 F1, F5 F9, F11, F22, F91 Standards API, ANSI, BS, JIS, UNI, DIN, EN1092-1 Pressure Range ANSI Class 150 – Class 2500 Size Range 1/2 to 56 inches (DN 15 to DN 1400)



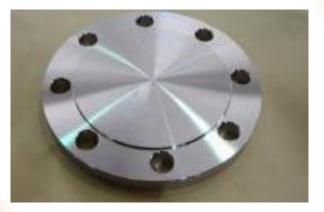


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Forged Steel Blind Flange

Model No. WPP 013 FLB3 Specifications Materials Forged Steel, ASTM A105, A350 LF1, LF2 CL1/CL2, LF3 CL1/ CL2, A516.60 A694 (F42, F46, F48, F50, F52, F56, F60, F65, F70) Standards ANSI Pressure Range ANSI Class 150 – Class 2500 Size Range 1/2 to 56 inches (DN 15 to DN 1400)





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Spectacle Blind Flange

Model No. WPP 013 FLB4 Specifications

Materials

ASTM A105, A350 LF1, LF2 CL1/CL2, LF3 CL1/ CL2, A694 (F42, F46, F48, F50, F52, F56, F60, F65, F70) A182 F304/304L, F316/316L, F316H, F310, F321, A182 F11, F22 Standards

API, ANSI, BS, JIS, UNI, DIN, EN1092-1 **Pressure Range** ANSI Class 150 – Class 2500 **Size Range** 1/2 to 56 inches (DN 15 to DN 1400)





Threaded Flanges

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Threaded Flanges

Threaded flanges look very similar to Slip-On flanges but the main difference is that the threaded flange has been was bored out to match a specific pipe inside diameter. The backside of this center opening is then threaded with the relevant-sized tapered pipe thread.
Threaded Flanges can be used in very high pressure services and their major advantage is that they can be assembled without welding.





Threaded Flanges

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Threaded Flange

Model No. WPP 013 FLT-1 **Specifications** Materials ASTM A105, A350 LF2 A182 F304/304L, F316/316L, F316H, F310, F321 (SS), A182 F11, F22 (AS) Standards ANSI B16.5, BS4504, EN1092-1, DIN **Pressure Range** ANSI Class 150 - Class 600 Size Range 1/2 to 6 inches (DN 15 to DN 150) Coating Black Coating, Yellow color, Galvanized, Hot Dipped





Threaded Flanges

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Screw Threaded Flange

Model No. WPP 013 FLT-2 **Specifications** Materials ASTM A105, A350 LF2 (CS) A182 F304/304L, F316/316L, F316H, F310, F321 (SS), A182 F11, F22 (AS) Standards ANSI B16.5, BS4504, EN1092-1, DIN **Pressure Range** ANSI Class 150 - Class 600 Size Range 1/2 to 6 inches (DN 15 to DN 150) Coating Black Coating, Yellow color, Galvanized, Hot Dipped





Slip-on Flanges

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Slip-on Flanges

Slip-on flanges or **SO flanges** are commonly lower in price and also lower life expectancy than weld-neck flanges. The **slip-on flange** is positioned so the inserted end of the pipe or fitting is set short of the flange face by the thickness of the pipe wall plus 1/8 of an inch, which thus allows for a fillet weld inside the SO flange equal without doing any damage to the flange face. The back or outside of the **slip-on flange** or **SO flange** is also welded with a fillet weld.





Slip-on Flanges

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A350 LF2 Slip-on Flange

Model No. WPP 013 FLS1 Specifications Materials A350 LF2 Standards API, ANSI, BS, JIS, UNI, MSS, SP Pressure Range ANSI Class 150 – Class 2500 Size Range 1/2 to 56 inches (DN 15 to DN 1400)





Slip-on Flanges

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Forged Steel Slip-on Flange

Model No. WPP 013 FLS1 Specifications Materials Alloy Steel, Stainless Steel, Carbon Steel ASTM A105 A516.60 A694 (F42, F46, F48, F50, F52, F56, F60, F65, F70) A182 F304/304L, F316/316L, F316L, F316H, F310,F321 A182 F11, F22 Standards API, ANSI, BS, JIS, UNI, MSS, SP Pressure Range ANSI Class 150 – Class 2500 Size Range 1/2 to 56 inches (DN 15 to DN 1400)





Socket Welding Flanges

Model No. WPP 013 FLSW1 Specifications Materials Stainless Steel, Alloy Steel, Carbon Steel ASTM A105 A350 LF1, LF2 CL1/CL2, LF3 CL1/CL2 A516.60 A694 (F42, F46, F48, F50, F56, F60, F65, F70) A182 F304/304L, F316/316L, F316H, F310, F321 A182 F11, F22

Standards API, ANSI, BS, JIS, UNI, MSS, SP Pressure Range ANSI Class 150 – Class 2500 Size Range 1/2 to 64 inches (DN 15 to DN 1600)

Socket Welding Flanges

A **Socket Welding flange** is very similar in appearance to a Slip-On flange, but the main difference is the **socket weld flange** is bored out match a specific pipe inside-diameter. The back side of this center opening is then counter bored to form the appropriate size socket to take the pipe outside diameter.

The diameter of the smaller bore is the same as the inner diameter of the matching pipe. A restriction is built into the bottom of the bore, which sets as a shoulder for the pipe to rest on. This eliminates any restriction in flow when using a socket-weld flange. **Socket welding flanges** are primarily used to make flanged joints where required in small sizes in socket welded pipe specs.





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