

Flanges

Industrial flanges for high-pressure and high-temperature service, in standard and custom-engineered designs.

Our industrial flanges are ideal for high-pressure and high-temperature applications across various industries. Carefully engineered for seamless installation, these flanges ensure reliable performance. Along with standard options, we also offer custom-designed solutions tailored to meet our customers' specific needs.

AVAILABLE GRADES

ASTM A182 F304 / F316 · F44 / F51 / F53 / F55 / F60 / F61 · ASTM A105 / A350 LF2 · F5 / F9 / F11 / F22 / F91 · Monel 400 / 500 · Inconel 600 / 625 / 825 · Cu-Ni 90/10 & 70/30

FLANGES — MATERIALS

Stainless Steel	ASTM A479, A182 - 202, 303, 304, 304L, 304H, 316, 316L, 316Ti, 309, 310, 310S, 321, 321H, 317, 347, 347H, 904L
Duplex & Super Duplex	F 44, F 45, F51, F 53, F 55, F 60, F 61
Carbon Steel	ASTM A105, A350 LF2, A106 Gr A, B, C, A333 Gr 6, 3
Alloy Steel	ASTM A182 F5, F9, F11, F12, F21, F22, F91, A335 Gr P1, P11, P12, P5, P9
Nickel Alloys	Nickel 200 (UNS No. N02200), Nickel 201 (UNS No. N02201), Monel 400 (UNS No. N04400), Monel 500 (UNS No. N05500), Inconel 800 (UNS No. N08800), Inconel 825 (UNS No. N08825), Inconel 600 (UNS No. N06600), Inconel 625 (UNS No. N06625), Inconel 601 (UNS No. N06601), Hastelloy C 276 (UNS No. N10276), Alloy 20 (UNS No. N08020)
Copper Alloy Steel	C 70600 (Cu-Ni 90/10), C 71500 (Cu-Ni 70/30), UNS No. C 10100, 10200, 10300, 10800, 12000, 12200

WELD NECK FLANGES

Dimensions	ANSI B16.5, ANSI B16.47 Series A & B, MSS SP44, ASA, API-605, AWWA, Custom Drawings
Size	1/2" (15 NB) to 48" (1200 NB)
Class	150 LBS, 300 LBS, 600 LBS, 900 LBS, 1500 LBS, 2500 LBS
BS	BS4504, BS4504, BS1560, BS10, PN6, PN10, PN16, PN25, PN40, etc
Table	D / E / F / H / J / K
API Standards	PSI-2000/3000/5000/10000/etc
JIS Standards	2220-2004 5k/10k/16k, etc
Flange Face Type	Flat Face (FF), Raised Face (RF), Ring Type Joint (RTJ)

LONG WELD NECK FLANGES

Dimensions	ANSI B16.5, ANSI B16.47 Series A & B, MSS SP44, ASA, API-605, AWWA, Custom Drawings
Size	1/2" (15 NB) to 48" (1200 NB)
Class	150 LBS, 300 LBS, 600 LBS, 900 LBS, 1500 LBS, 2500 LBS
BS	BS4504, BS4504, BS1560, BS10, PN6, PN10, PN16, PN25, PN40, etc
Table	D / E / F / H / J / K
API Standards	PSI-2000/3000/5000/10000/etc
JIS Standards	2220-2004 5k/10k/16k, etc
Flange Face Type	Flat Face (FF), Raised Face (RF), Ring Type Joint (RTJ)

SLIP ON FLANGES

Dimensions	ANSI B16.5, ANSI B16.47 Series A & B, MSS SP44, ASA, API-605, AWWA, Custom Drawings
Size	1/2" (15 NB) to 48" (1200 NB)
Class	150 LBS, 300 LBS, 600 LBS, 900 LBS, 1500 LBS, 2500 LBS
BS	BS4504, BS4504, BS1560, BS10, PN6, PN10, PN16, PN25, PN40, etc
Table	D / E / F / H / J / K
API Standards	PSI-2000/3000/5000/10000/etc
JIS Standards	2220-2004 5k/10k/16k, etc
Flange Face Type	Flat Face (FF), Raised Face (RF), Ring Type Joint (RTJ)

BLRF FLANGES

Property	Blind Flange Raised Face (BLRF) Flanges
Description	Flanges used to close the end of a pipe, with a raised face for better sealing.
Design	Features a solid, flat disc with a raised face that provides a surface for the gasket.
Flange Faces	Raised face, which ensures a tight seal by making full contact with the gasket.
Material Options	Available in various materials such as carbon steel, stainless steel, and alloy steels.
Pressure Rating	Available in various pressure ratings, including ANSI Class 150, 300, 600, etc.
Temperature Range	Varies depending on the material; generally used for moderate to high temperatures.
Common Applications	Used in applications where a pipe needs to be closed off, including in water, oil, gas, and chemical processing systems.
Advantages	Provides a secure closure for pipes; allows for easy removal if needed; offers a robust seal.
Disadvantages	Not suitable for applications where regular access to the pipe is required; can be bulky and heavy.
Installation	The flange is bolted to the pipe's end and is sealed with a gasket to ensure no leakage.
Common Standards	ANSI B16.5, API 605, and other relevant industry standards.

SORF FLANGES

Property	Slip-On Raised Face (SORF) Flanges
Description	Flanges that slide over the pipe and are then welded in place, with a raised face for sealing.
Design	The flange has a raised face that helps in forming a better seal with the gasket.
Flange Faces	Raised face, which helps to improve the sealing capability by providing a flat surface that contacts the gasket.
Material Options	Available in various materials including carbon steel, stainless steel, and alloy steels.
Pressure Rating	Typically available in various pressure ratings, such as ANSI Class 150, 300, 600, etc.
Temperature Range	Varies depending on material; generally suitable for moderate to high temperatures.
Common Applications	Used in a wide range of applications including water, oil, gas, and chemical processing systems.
Advantages	Easier to align and weld compared to other flange types; cost-effective; simple design.
Disadvantages	Less strength compared to Weld Neck flanges in high-pressure or high-stress applications.
Installation	Pipe is inserted into the flange, and then it is welded both inside and outside the flange to ensure a secure connection.
Common Standards	ANSI B16.5, API 605, and other relevant industry standards.

RING JOINT FLANGE

Property	Ring Joint Flanges (RJF)
Description	Flanges designed with a groove to accommodate a ring joint gasket, providing a high-pressure seal.
Design	Features a groove for a ring joint gasket, which is inserted between the flange faces to ensure a tight seal.
Flange Faces	Can have various face types, including Raised Face, Flat Face, or Ring Type Joint (RTJ).
Material Options	Typically made from carbon steel, stainless steel, and alloy steels.
Pressure Rating	Available in high pressure ratings, including ANSI Class 300, 600, 900, 1500, 2500, and higher.
Temperature Range	Suitable for high-temperature applications; temperature range depends on the material and gasket used.
Common Applications	Used in high-pressure and high-temperature applications such as oil and gas pipelines, refineries, and petrochemical facilities.
Advantages	Provides a very high level of sealing capability; suitable for extreme conditions; can handle high pressures and temperatures.
Disadvantages	Typically more expensive than other types of flanges; installation requires precision and care to ensure proper sealing.
Installation	The ring joint gasket is placed in the groove of the flange, and the flanges are bolted together. Proper alignment and torqueing are essential for a leak-proof seal.
Common Standards	API 6A, ASME B16.5, ASME B16.47, and other relevant industry standards.

LAP JOINT FLANGE

Property	Lap Joint Flanges
Description	Consists of a stub end and a loose flange; the stub end is welded to the pipe and the loose flange bolts onto it.
Design	The stub end is welded to the pipe and has a flange with a flat face, while the loose flange

	bolts onto the stub end, allowing for easy alignment and disassembly.
Flange Faces	Can be flat face, raised face, or ring type joint, depending on the application and requirements.
Material Options	Available in various materials such as carbon steel, stainless steel, and alloy steels.
Pressure Rating	Typically available in various pressure ratings, including ANSI Class 150, 300, 600, etc.
Temperature Range	Suitable for moderate to high-temperature applications, depending on material.
Common Applications	Used in applications where frequent disassembly is required, such as in piping systems, chemical processing, and shipbuilding.
Advantages	Allows for easy alignment and removal; reduces the need for precise welding and alignment; cost-effective compared to other flange types.
Disadvantages	Less suitable for high-pressure applications compared to other flange types like weld neck flanges; may require a gasket to ensure a leak-proof seal.
Installation	The stub end is welded to the pipe, and the loose flange is bolted onto the stub end. Proper alignment and gasket selection are necessary for a secure seal.
Common Standards	ANSI B16.5, ASME B16.47, and other relevant industry standards.

ORIFICE FLANGE

Property	Orifice Flanges
Description	Flanges specifically designed to hold orifice plates for measuring fluid flow through a pipe. They include a special arrangement to support the orifice plate and ensure accurate flow measurement.
Design	Typically includes a raised face or ring joint face to accommodate the orifice plate, with bolt holes for securing the flange to the pipe.
Flange Faces	Can have raised face, ring type joint (RTJ), or flat face, depending on the application and requirements.
Material Options	Available in various materials such as carbon steel, stainless steel, and alloy steels.
Pressure Rating	Available in various pressure ratings, including ANSI Class 150, 300, 600, etc.
Temperature Range	Suitable for moderate to high temperatures, depending on the material and design.
Common Applications	Used in flow measurement applications in industries such as oil and gas, chemical processing, and water treatment.
Advantages	Provides a standardized method for flow measurement; allows for easy installation and removal of orifice plates; ensures accurate flow measurement.
Disadvantages	Typically requires precise alignment and installation; may be more complex than standard flanges due to the additional components.
Installation	The orifice plate is placed between the orifice flanges, which are then bolted together with gaskets to ensure a secure and leak-proof connection. Proper alignment and torqueing are crucial for accurate measurements.
Common Standards	ANSI B16.36, API 605, and other relevant industry standards for orifice flanges.

KEY FEATURES & APPLICATIONS

Key Features	Applications
Weld neck, long weld neck, slip-on, blind, SORF, RTJ, lap joint and orifice types	Oil & gas pipelines and refineries
Flat Face (FF), Raised Face (RF) and Ring Type Joint (RTJ) facings	Petrochemical facilities
ANSI, ASME, BS, API, JIS and custom drawing dimensions	Water treatment and flow measurement
Class 150 to 2500 LBS pressure ratings	Chemical processing systems

Key Features	Applications
Custom-designed flanges manufactured to customer drawings	Shipbuilding and marine piping

QUALITY ASSURANCE

All material is supplied with EN 10204 3.1 Material Test Certificates covering chemical composition and mechanical properties. Third-party inspection (TUV, SGS, BV, Lloyds) available on request. Material is third-party marked, colour coded and packed for export dispatch worldwide.

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