



Fd-Lok[®]

ZHEJIANG FANGDUN INSTRUMENT VALVE CO.,LTD

Tube Fittings



FEATURES

- Sizes range from 1/8" to 1 1/2" and 3 mm to 38 mm.
- Diverse materials and configurations are available.
- Precision machined components ensure perfect deformation of the ferrules and tubing.
- Hardened threads and smoothed surface finishes extend fitting life and prevent sticking of the matching threads.
- Female nut threads are silver-plated to minimize the friction with the body threads.
- Radius junction design with elbows provides smooth flow path.
- Every fitting is stamped with size, material, and heat code.
- Fittings are easy to disconnect and retighten.

Pipe Fittings



FEATURES

- Sizes range from 1/8" to 2".
- The hardened threads with smooth surface finishing avoid galling and help to extend the fitting service life.
- Radius junction design with elbows provides smooth flow path.
- Every fitting is stamped with size, material, and heat code.

Weld Fittings



FEATURES

- Sizes range from 1/8" to 1" and 6 mm to 38mm.
- Working Pressure
Catalog working pressures shown are based on ANSI/ASME B31.3, to determine working pressures in accordance with ANSI/ASME B31.1 multiply catalog working pressures shown by 0.94.
- 316 stainless steel material is standard, Other materials are available upon request.
- Straight fittings are manufactured from quality bar stock. Shaped fittings are manufactured from forgings.
- Quality machining of all ports ensures proper connection.
- Radius junction design with elbows provides smooth flow path.
- All fittings are cleaned to remove oil, grease, and loose particles.
- Every fitting is stamped with size, material, and heat code.

SAE 37° Flared Tube Fittings



FEATURES

- Size range from 1/8" to 2" and 3 mm to 50 mm.
- Fittings are designed and manufactured in compliance with SAE J514.
- The hardened threads with smooth surface finish avoid galling and help to extend the fitting service life.
- Radius junction design with elbows provides smooth flow path.
- Stainless steel nut threads are silver-plated to minimize the friction with the body threads.
- Every fitting is stamped with size, material and heat code.
- Fittings are easy to disconnect and retighten.
- All male threads are protected with plastic caps.

O-ring Face Seal Fittings



FEATURES

- Size range from 1/8" to 1".
- Working Pressure:
Working Pressure is calculated in accordance with ANSI/ASME B31.3. To determine working pressure in accordance with ANSI/ASME B31.1, multiply values by 0.94.
- 316, 316L stainless steel materials are available.
- O-ring seal provides perfect leak-tight service from critical vacuum to high pressure.
- FO female threads are silver plated.
- Every gland and body are stamped with size, material and heat code.
- Provide easy installation and maintenance.

Ball Valves



SERIES

- One-piece Instrument Ball Valves / B1 Series----2500 psig(172 bar)
- Hex Bar Stock Ball Valves / B2 Series----2000 psig (138 bar)
- Trunnion Ball Valves / B3, B3H Series----10000 psig (690 bar)
- Bar Stock Ball Valves / B4 Series----10000 psig (690 bar)
- 3-piece Ball Valves / B5 Series High Pressure Application----3000 psig(207 bar)

FEATURES

- Maximum working pressure: 10000 psig (690 bar).
- Working temperature from -65°F to 450°F (-54°C to 232°C).
- Size from 1/8" to 1" and 3 mm to 25 mm.

VL Vacuum Fittings



FEATURES

- Stainless steel construction, fluorocarbon FKM O-ring.
- Available in tube sizes from 1/8" to 1 1/2".
- Temperature rating: -25°F to 400°F (-31°C to 204°C).
- Knurled nut for easy, finger-tight assembly.
- Reliable, repeatable sealing performance.
- The VL vacuum fitting design has been helium leak tested to a maximum leak rate of 4×10^{-9} std cm³/s at ambient temperature.
- The leak rate increases as temperature increases due to permeation through the O-ring.

Forged Steel Valves



FEATURES

- Size: 1/2" ~ 4" (15 mm ~ 100 mm).
- Class: 1500, 1690, 2500, 2680 and 4500.
- Design: ASME B16.34.
- Testing: ASME B16.34 and API 598.
- Marking: MSS-SP-25.
- Socket weld ends: ASME B16.11.
- Butt weld ends: ASME B16.25.
- Threaded ends: ASME B1.20.1.

Needle Valves



SERIES

- General Purpose Needle Valves / V1 Series----5000 psig (345 bar)
- Integral Bonnet Barstock Needle Valves / V2 Series----6000 psig (414 bar)
- Union Bonnet Needle Valves / V3 Series----6000 psig , V3H Series----10000 psig
- Bar Stock Needle Valves / V4 Series----6000 psig , V4H Series----10000 psig
- Hexagonal Bar Stock Needle Valves / V5 Series----6000 psig , V5H Series----10000 psig
- Forged Needle Valves / V6 Series----6000 psig (414 bar)
- Nonrotating-stem Needle Valves / V7 Series----3000 psig (207 bar)
- High-pressure Needle Valves / V8 Series----10000 psig (690 bar)
- Rising Plug Valves / V9, V9G Series----6000 psig (414 bar)
- Toggle Valves / V10 Series----300 psig (20.7 bar)

FEATURES

- Maximum working pressure: 10000 psig (690 bar).
- Working temperature from -65°F to 1200°F (-54°C to 649°C).
- Size from 1/8" to 1" and 3 mm to 25 mm.

Check Valves



SERIES

- Check Valves.
 - C1 Series----3000 psig (207 bar)
 - C2 Series----6000 psig (414 bar)
 - C3 Series----3000 psig (207 bar)
 - C4 Series----3000 psig (207 bar)
 - C5 Series----3000 psig (207 bar)
 - C6 Series----6000 psig (414 bar)

FEATURES

- Maximum working pressure: 6000 psig(414 bar).
- Working temperatures:-10°F to 400°F (-23°C to 204°C).
- Size from 1/8" to 1" and 3 mm to 25 mm.

Bellows-sealed Valves



FEATURES

- Working pressure up to 2500 psig (172 bar).
- Working temperatures from -20°F to 1200°F (-28°C to 649°C).
- Size from 1/8" to 1" and 3 mm to 25 mm.
- Wide variety options of end connections.
- 316 SS body materials.
- Upper packing provides secondary containment system above the bellows.
- Hydraulic-formed multilayer bellows enhanced cycle life .
- Nonrotating stem tip eliminates galling within the seat area.
- Strictly controlled bellows stroke to improve safety and cycle life.
- Replaceable bellows and stem assembly.
- Regulating, conical, and spherical stem tips available.
- Panel, bottom, and side mounting available.
- Double lock-pins enable steady and durable fastening of the handle.
- Optional handle colors are available.
- Every FD-LOK bellows-sealed valve is factory tested with helium to a maximum leak rate of 4×10^{-8} std cm³/s at the seat, envelope and all seals.

Proportional Relief Valves



FEATURES

- Set pressures:50 to 6000 psig @70°F (0.34 to 41.4 Mpa @21°C).
- Maximum outlet pressures: 1500 psig (103 bar).
- Working temperatures:-10°F to 300°F (-23°C to 148°C).
- Size from 1/4" to 1/2".
- Many options for various end connections.
- Liquid or gas service.
- Adjustable bonnet cap, and adjustable set pressure.
- Balance stem design to eliminate the effect of system back pressure.
- 7 color-coded springs available for a wide range of set pressure.
- Lock wired secure cap to maintain set pressure.
- Many options for various seal materials.
- Label identifies the set pressure range.
- Manual override handle available to open the valve without changing the set pressure when lower than 1500 psig.

Plug Valves



FEATURES

- Working pressure up to 3000 psig (207 bar) @ 70°F (21°C).
- Working temperature from -10 to 400°F (-23 to 204°C).
- Size from 1/8" to 1" and from 3 mm to 25 mm.
- FD-LOK tube fitting or pipe thread end connections available.
- Easy to maintain and clean.
- Low operating torque.
- Replaceable plug assembly.
- Handle indicates flow direction.
- Options for handle color.
- Positive handle stop.
- Manual, electric or pneumatic actuation available.
- All designs are checked at 1.5 times work pressure with pure water to confirm the strength, every valve is factory tested with nitrogen at working pressure to detect the leakage.

Filters



FEATURES

- Maximum working pressure: 6000 psig (414 bar).
- Working temperature: -20°F to 900°F (-29°C to 482°C).
- Size from 1/8" to 1/2" and from 3 mm to 14 mm.
- Nominal pore sizes for sintered element: 0.5, 2, 7, 15, 40, 60 and 80 um.
- Nominal pore sizes for sintered element: 100, 150, 250 and 450 um.

Gauge Valves and Instrument Manifolds



FEATURES

- Pressure up to 6000 psig(414 bar) for standard stainless steel body.
- Temperature for PTFE packing from -65°F to 450°F (-54°C to 232°C)
- Temperature for Grafoil packing from -65°F to 1200°F (-54°C to 649°C).
- Packing below stem thread isolates the thread lubricant from the media.
- Back seating design protects the packing in fully open position.
- Non-rotating stem tip.
- 100% factory tested.
- Orifice: 0.157"(4.0mm), CV: 0.35.

Block and Bleed Valves



FEATURES

- Class 150 through 2500 to ASME B 16.5
- Flange size 1/2" to 2"
- Temperature for PTFE packing from -65°F to 400°F (-54°C to 204°C)
- Temperature for Grafoil packing from -65°F to 850°F (-54°C to 454°C).
- Colour coded valve function identification.
- Every design is hydraulic pressure tested in accordance with EN 12266-1 and API 598. Every set is tested with nitrogen for leak-tight performance at 6000 psig.
- Fire-tested design in accordance with BS 6755 part 2.
- Flanged connections comply with ANSI B16.5 RF and RTJ.
- Pressure ratings in accordance with ANSI B16.34.

Tubes and pipes



FEATURES

Tube

- Sizes range from 1/8" to 1 1/2" and 3 mm to 38 mm.
- Marked to indicate material, size, specifications, and heat number.

Pipe

- Nominal pipe sizes from 1/8" to 2".
- Marked to indicate material, size, specifications, and heat number.

Syphons



FEATURES

- Maximum working temperature is 850°F (454 °C).
- Maximum working pressure is 6000 psig (414 bar). Multiply the working pressure by the elevated temperature factors to get the working pressure at elevated temperature. To know the elevated temperature factor, please refer to the related information of FD-LOK Tube Fittings in page 9.
- Standard materials is 316 SS and 304 SS, other materials are available upon request.

Sample Cylinders



FEATURES

- Body made of seamless tubing provides consistent wall thickness, size, and capacity.
- Cold-formed female NPT threads provide greater strength. Cylinder ends come in 1/8", 1/4", and 1/2" NPT female connections.
- Heavy-wall end connections provide strength and resist flaring. Full-penetration gas tungsten arc-weld construction provides leak-tight sample containment.
- Sizes from 40 cm³ to 3785 cm³ (1 gal).
- Working pressures up to 5000 psig (344 bar).
- 304L and 316L and Alloy 400 stainless steel materials resist intergranular corrosion.
- Each cylinder is hydrostatically tested to at least 5/3 the working pressure.

Hoses and Connectors



FEATURES

- MFH, MM, PNYH, PTL, MPH, NYH and HCS Series
- Lightweight construction for easy handling and installation
- Standard and custom-length available
- Maximum working pressure: 5000 psig (345 bar)
- Hose size: 1/4" to 2"

High Pressure Ball Valves



SERIES

- 15B Series----15,000 psig (1034 bar).
- 20B Series----20,000 psig (1379 bar).

FEATURES

- One-piece, trunnion mounted style, ideal for severe duty applications.
- Two-way and three-way valve configurations.
- PEEK seats offer excellent resistance to chemicals, heat, and wear/abrasion.
- Full-port flow path minimizes pressure drop.
- 316 cold worked stainless steel construction.
- Viton o-rings for operation from 0°F (-17.8°C) to 400°F (204°C).
- Optional o-rings available for high-temperature applications.
- Wide selection of tube and pipe end fittings available.
- Electric and pneumatic actuator options. Please contact the FD-LOK for details of actuator options.

High Pressure Needle Valves



SERIES

- V15 Series----15,000 psig (1034 bar).
- V20 Series----20,000 psig (1379 bar).
- V30 Series----30,000 psig (2068 bar).
- V60 Series----60,000 psig (4137 bar).

FEATURES

- Non-rotating stem and bar stock body design.
- Easy to assemble and replace packing.
- Metal-to-metal seating achieves ideal shut off, longer stem/seat service lifetime for abrasive flow, excellent corrosion resistance and greater durability for repeated on/off cycles.
- Extend stuffing box valve with of Graphite can be operated to 1200°F (649°C).
- The material of packing gland and stem sleeve have been selected to achieve reduced handle torque and extended thread cycle life.
- The material of body is 316 SS. The material of valve stem is 17-4PH SS.
- Five flow patterns are available.

20 Series Tube Fittings



FEATURES

- Pressures up to 20,000 psig (1379 bar).
- Available sizes are 1/4", 3/8", 9/16", 3/4" and 1".
- Temperature Rating: -325°F to 800°F (-198°C to 427°C).
- Coned-and-Threaded Connection.
- Metal-to-metal seal provides perfect leak-tight service from critical vacuum to high pressure.
- Anti-vibration connection components available.
- Fittings are easy to disconnect and retighten.
- 316 stainless steel is standard material. Other materials are available upon request.
- Every fitting is stamped with size, material, and heat code.

Tools and Accessories



SERIES

- Hand Tube Benders HTB Series.
- Tube Cutters FTC Series.
- Tube Deburring Tools TDT Series.
- Hydraulic Presetting Tools HPT Series.
- Manual Presetter Tools MPT Series.
- Gap Inspection Gauges GIG Series.



About US

Established in 1991, Zhejiang Fangdun Instrument Valve Co., Ltd is located in the Industrial Center of Longwan District of Wenzhou, Zhejiang, only 5min's drive from Wenzhou Airport. With import & export authority and coordinating together research and development, manufacturing, marketing and after-service, we are specialized in manufacturing instrumentation fittings and various high and low pressure instrumentation valves, including needle valves, 2-way valve manifolds, 3-way valve manifolds, 5-way valve manifolds, ball valves and also double block and bleed valves. We manufacture these products not only in SS316, SS316L but also special materials such as inconel, monel, hastelloy, incolloy, duplex and super duplex. Our products are widely used in many fluid systems for industries of oil and gas, chemical, petrochemical, power, shipbuilding, machinery, analytical instrumentation and etc. Till now our sales network has reached every corner of the world especially in South & North America, Europe, East Asia and Middle East.

We regard quality as life of the company. So we imported advanced producing and testing equipments, such as Sweden Tornos, Japanese LGMAZAK machine center, burst testing machine, pressure test machine and impulse test machine.

It is our mission to provide the best quality products and highest level of professional services to our customers.

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