METAL PIPE **SYSTEMS**

A wide range of tubes, flanges and fittings made from copper, carbon steel and stainless steel. The technique to join the products varies and materials used often depends on application/approvals along with the substance being transported.

Our vital statistics section is a useful guide to help determine which products are best suited in different environments. However, final reliance on information lies with the client; always consult with the manufacturer where necessary.

































- ◆ STEEL TUBE
- **♦** MALLEABLE IRON FITTINGS
- ◆ FLANGES
- ◆ WELDING FITTINGS
- **♦ MILD STEEL & FORGED STEEL**
- ◆ VICTAULIC
- ◆ FLEXIBLE GAS PIPING
- **◆ STAINLESS STEEL TUBE & FITTINGS**
- ◆ COPPER TUBE

- **♦** ENDFEED
- ♦ SOLDER RING
- **◆** COMPRESSION
- **♦ PRESS CONNECTION SYSTEMS**
- **◆ EXPANSION & FLEXIBLE SOLUTIONS**
- ◆ PRIMOFIT
- **◆ PUSH-FIT SYSTEMS**

STEEL TUBE



SBS distribute hot finished tube of the highest standard (EN10255/EN10217-2 GH) to meet all requirements relevant to its application or pressure. Remaining true to only offering quality products, our stocked steel tube is British Standard, dual certified CE & UKCA - marked to meet the Construction Products Regulations (CPR) and Pressure Equipment Directive (PED). API tube available in shed 20, 40, 80, 160 and standard weight plain ended in full randoms.

SIZE: 15mm (½") to 150mm (6")

GRADE: S195T-P235GH TEMPERATURE: -20 to 300°C

8mm (1/4") to 900mm (36") API:

Screwed & socketed, plain end, grooved CONNECTION:

FINISH: Galvanised, red, self colour Full & half randoms available LENGTHS:

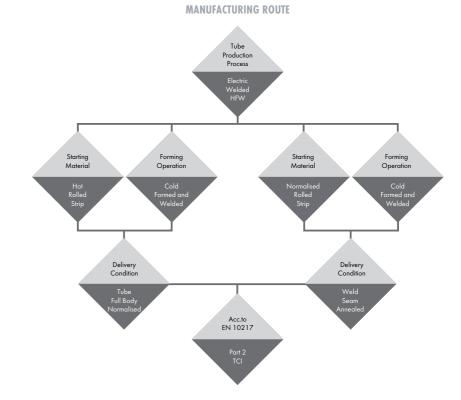
WEIGHT: Medium, heavy



The tubes are manufactured by an electric welding process employing high frequency welding (HFW). All pipes are heated at normalising temperature for fine grain, homogenous microstructure and hardness.

THE ADVANTAGES OF **NORMALISED STEEL PIPE**

- The heat affected zone (HAZ) is normalised and obtained a homogeneous microstructure
- The ductility that has been lost in some pipe processing, forming and welding are improved
- The hardness that has been increased by the mechanical forming and welding processes is reduced
- The toughness of the pipes is increased
- The internal stresses that occurred during the cold forming are reduced
- The machinability and stability are improved
- The strength and resistance for elevated temperature applications are increased



All raw materials are tested in terms of chemical and mechanical properties during incoming material control In addition, for each casting, all products are retested after all production processes (including heat tratment) ensuring full traceability. Mechanical testing includes tensile, leak tightness, hydrostatic and NDT & flattening and expanding tests for weld durability.

For tube size, weight & thickness, recommended temperature and pressure by application along with chemical and mechanical compositions, please refer to the vital statistics section



MALLEABLE IRON FITTINGS

CRANE PLUID SYSTEMS +GF+

A comprehensive range of British Standard (BS EN 10242) malleable iron fittings are available from stock including one's which are kite-marked certified if required. The range also includes Primofit compression fittings, which offer full end load capacity ideal for HVAC and gas installations.

6mm ($\frac{1}{8}$ ") to 150mm (6") depending on fitting CONNECTION: Taper/taper and taper/parallel threads available

TEMPERATURE: -20°C to 320°C

PRESSURE: 25 bar (max working pressure)

FINISH: Black, galvanised

For comparison code numbers of each fitting please view the vital statistics section.



PRIMOFIT

SIZE: 15mm ($\frac{1}{2}$ ") to 76mm (3") depending on fitting

CONNECTION: Compression FINISH: Black, galvanised



EXPANSION & FLEXIBLE SOLUTIONS

CORE

The comprehensive range contains expansion joints (including drinking water application), rubber bellows, hoses, anchors and pipe guides which absorb vibrations and noise, compensating for thermal expansion and pressure differences as well as other kinds of movements. Rubber bellows are coming to the CORE range soon.

Expansion joints: DN 25 to DN 7000

Bellows: DN 3 to DN 125

Hoses & hose assemblies: DN 5 to DN 300

Screwed & socketed, plain end, grooved, flanged, crimped

TEMPERATURE: -150°C to 650°C

PRESSURE: Absolute vacuum to 200 bar

ADVANTAGES

- Vibration resistance
- Noise Control
- Cleanliness (clean rooms classed ISO 5, 6, 7)
- Corrosion resistance, whatever the fluid or environmental conditions
- Guides, anchors & skids available



FLANGES

CORE

METAL PIPE SYSTEMS

An extensive variety of flanges from stock in both black and galvanised finishes. Upon request larger sizes can be made for any bespoke solution. Accompanying joint rings, nuts & bolts and flange packs are also available.

Flanges: $15 \text{mm} (\frac{1}{2})$ to 900 mm (36)

Gaskets & joint rings: 15mm (1/2") to 900mm (36")

CONNECTION: Screwed, slip-on, weld-neck, blank to BS10, ANSI, EN 1092-1 (BS4504) plate, forged

Black, galvanised FINISH:

CORE only applies to flange packs (gaskets & bolts) & clips

For flange charts and pack information, please refer to the vital statistics section.





WELDING FITTINGS

A wide selection of butt weld fittings available, the majority from stock. Non stocked sizes (predominantly larger diameters) are subject to a longer lead times.

EN10253-2 / BS1965

Fitting types	90's LR & SR, 45's, Tees, Red Outlet Tees, Con Reducers, Ecc Reducers, Caps, Branch Bends, Sweep Tees, Twin Elbows, 180 Return Bends LR & SR
SIZES:	15mm to 400mm (½" to 16")
Material Grades:	P235GH / ASTM A234 WPB

ANSI / ASME B16.9

Fitting types	90's LR & SR, 45's, Tees, Red Outlet Tees, Con Reducers, Ecc Reducers, Caps, 180 Return Bends LR & SR
SIZES:	15mm to 900mm (½" to 36")
Material Grades:	ASTM A234 WPB & ASTM A420 WPL6 (LTCS)



MILD STEEL & FORGED STEEL

A full range of mild steel BS EN10241 (BS1740) fittings in stock with availability of forged steel fittings to ANSI B16.11 (BS3799).

Mild steel: 6mm (1/8") to 150mm (6")

Forged steel: $15 \text{mm} (\frac{1}{2})$ to 100 mm (4)

NPT, BSP, socket weld end connections

Mild steel & forged steel



With more than 4,000 employees and 50+ international facilities, Victaulic helps customers in over 140 countries succeed in the global construction industry. From the tallest buildings to the deepest mines, customers trust the products used to increase overall system durability in the most demanding construction projects and operating conditions.

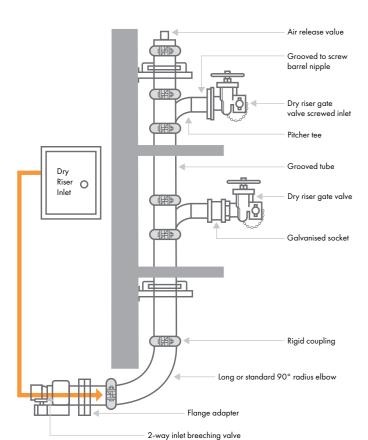
SIZE: Diameter: $32mm (1\frac{1}{4})$ to 305mm (12)

CONNECTION: Grooved

TEMPERATURE: -30°C to 120°C



ctaulic





GASTITE

Gastite's CSST flexible gas piping system is able to transport natural gas or liquefied petroleum gas to appliances. Simple hand tools such as tubing cutters, wrenches and utility knives are all that are needed to work with the system, which is fully approved under BS EN 15266 (500mbar max working pressure) with Kitemark certification. Gastite offers flexibility and durability with easy routing through complex building structures and designs with coils pre-marked by the metre for easy measuring and installation.

SIZE: 12mm (DN15: 1/2") to 50mm (DN50: 2")

Stainless Steel 1.4306-304L PIPES:

APPLICATION: GAS

Yellow UV resistant polyethylene JACKET:

30m to 90m coils LENGTHS: CONNECTION: XR2™ Fittings - Brass

Designed exclusively for use with Gastite® CSST, the XR2 fittings have a toolless, flare design with no special tools required for installation. The patented Jacket-Lock® fitting eliminates exposed stainless steel beyond the nut and the self-guiding assembly ensures a perfectly even flare. All components are reusable

For comparison product & code information, please refer to the vital statistics section.



GFS (GAS FLEX SYSTEMS)

GFS stainless steel semi-rigid gas piping system is used on commercial and residential projects for LPG or natural gas from the meter to the appliance. It has a unique patented Push & Seal design and is also BSi Kitemarked and approved to BS EN 15266 standards with an operating pressure up to 0,5 bar. It is supplied in long coils and can be bent by hand, no elbows are required, and the number of joints is greatly reduced. The fittings are simply attached without any special tools or hot work. The flexible system allows for simple routing through buildings with pre-marked metre markings for easy measuring of coils.

SIZE: 15mm (DN15: ½") to 50mm (DN50: 2")

PIPES: Stainless steel 1.4404-316L

APPLICATION: GAS

JACKET: Yellow UV resistant polyethylene

LENGTHS: 15m to 90m coils (bespoke lengths available for special projects)

CONNECTION: Patented Push & Seal fittings - DZR

FITTINGS

GFS CSST fittings are manufactured from dezincification resistant brass (DZR) to EN 12164 standards. They are nickel coated for added material protection and

All GFS CSST fittings include a heat resistant silicon rubber sealing ring olive and brass compression washer. They possess a unique yellow retaining clip that is removed and disposed of once the fitting has been inserted onto the CSST pipe. The fitting can then be fully tightened onto the CSST pipe with appropriate spanners or wrenches to achieve its mechanical gas tight seal. There is no disassembly of the GFS fitting required and no split ring assembly.

For comparison product & code information, please refer to the vital statistics section.





SIZE: 6mm to 219mm

FINISH: Chrome plated, plastic coated, table Y, table X,

table W, medical gas, MiniBore

LENGTHS: 3m, 6m lengths, various other coils & lengths

available upon request



AIR CONDITIONING

Refrigeration and air conditioning copper all complies to $\ensuremath{\mathsf{EN}}$ 12735-1 supported by an ISO 9001 environment and are designed specifically for the industry being cleaned, nitrogen-purged and capped before SBS receive delivery. Available in both straight lengths and coils to various gauges (SWG), it is available along with a range of ancillaries and refrigerant gas to support your air conditioning installation and maintenance projects.

COILS: $\frac{1}{4}$ " to $\frac{7}{8}$ " GAUGE: 19 to 22 3/8" to $4\frac{1}{8}$ " LENGTHS: GAUGE: 11 to 21

COILS: 6m, 15m & 30m

LENGTHS: 3m & 6m



FIELDS OF APPLICATION

- Drinking water
- Gas
- Central heating
- Hot & cold water
- Sanitation
- Air Conditioning
- Refrigeration

For tube thickness and maximum working pressures please refer to the vital statistics section.



ENDFEED





METAL PIPE SYSTEMS

Manufactured in copper and brass and suitable for drinking water applications, this product complies with international standards being made to EN 1254 (BS864). Each fitting is made within an ISO 9001 environment and comes with a 25 year guarantee against manufacturing defects when installed in accordance with the manufacturer's guidelines.

Endfeed: 6mm to 54mm Endbraze: 67mm to 159mm

CONNECTION: Endfeed



SOLDER RING





Suitable for drinking water applications, these fittings are manufactured in copper and brass, complying with international standards and made to EN 1254 (BS864). A ring of high quality lead free solder is located in each fitting which comes with a 25 year guarantee against manufacturing defects when installed in accordance with manufacturer's guidelines. Each fitting is made within an ISO 9001 environment ensuring quality management is present.

SIZE: 6mm to 67mm CONNECTION: Solder ring



COMPRESSION





Compression fittings create a mechanical joint when tightening the nut, compressing the ring onto the tube. This range of fittings can be used with a variety of materials including light gauge plain and chrome plated copper tube, stainless steel, carbon steel tube, PEX, PB and polyethylene pipe. The fittings are suitable for drinking water applications (approved to EN 1254 - formerly BS864) and come with a full manufacturer's guarantee.

SIZE: 6mm to 159mm CONNECTION: Compression MATERIAL: DZR and brass



Smith Brothers supply all of the commonly required forms of stainless steel with a full range of pipe, fittings, flanges and fixings for a wide range of applications. In addition to a comprehensive range of standard products, specific items often referred to as 'specials' can be ordered with numerous specialist products and alloys satisfying the needs of a broad range of industries.

Tubes sold are from companies conforming to BSI standards and virtually all tube will be embossed with the following information:

- Nominal pipe size (nominal bore)
- Schedule (wall thickness)
- Specification
- Grade
- Method of manufacture (seamless or welded)
- Heat number

PIPES & FITTINGS

TUBE: SCH 10 & 40 Nominal Bore to ASTM A312:DIMS ANSI B36.19 FITTINGS: SCH 10 & 40 to ASTM A403:DIMS ANSI B16.9

TUBE: Metric to EN ISO 1127, EN 10217-7
FITTINGS: Metric to EN 10253-4

TUBE: True Bore Hygienic Dairy ASTM A270 Dull Polished or Descaled FITTINGS: True Bore BS4825 Part 2 including RJT BS4825 Part 5, IDF BS4825 Part 4, Tri-Clover BS4825 Part 3 & DIN Unions

TUBE: True Bore Ornamental

TUBE: Small Bore Metric A269/213 316

OTHER ACCOMPANYING FITTINGS

FLANGES:

PN 16 Slip On, Screwed and Blind to EN 1092 ASA 150 Slip On, Screwed and Blind to ASTM A 182:DIMS ANSI Table E Slip On, Screwed and Blind to BS 10

Metric and Nominal Bore Pressed Collar & Backing Ring

BSP Class 150 Stainless Screwed Fittings. CFM8 ISO 4144

Box, Angle and Flat Bar

 $\label{thm:local_problem} \mbox{ISOTUBI Press-Fit system, available in XL sizes and available in gas}$

VALVES: Gate, Ball, Globe, Butterfly and Check



PUSH-FIT SYSTEMS





SHARKBITE

SharkBite brass push-fit fittings are tough. Able to withstand high temperature and pressure makes them ideal for connecting copper pipes directly to a boiler. Made from DZR brass, their sleek design makes them also look good in front of the wall.

Using a simple push action, SharkBite is installed without the need for tools, hot works, crimping or glue, and is compatible with both plastic and copper pipe. Sharkbite is suitable for drinking water applications and comes with a 25-year guarantee as standard, giving extra peace of mind.

RANGE: 10mm to 28mm (including 'slip' couplings and tees)

PRESSURE: Up to 12.0 bar (dependent on size and operating temperature)

FITTINGS SUITABLE FOR FOLLOWING PIPES:

- Copper (including chrome copper) pipes to BE EN 1057 R250 and R290
- PEX Barrier Pipes to BS7921
- Polybutylene (PB) pipes to BS7921
- Galvanised Carbon Steel pipes to EN 10305 (as used with Press Systems)

TECTITE

VSH Tectite is a push-fit system which offers a heat free installation that is rodent resistant. It incorporates pipe fittings, valves and controls, delivering cost savings as a result of its speed of installation and a combination of push fit jointed technology across a range of materials, copper and PEX.

Typical Applications: Domestic, Multi-occupancy, Light commercial.

CLASSIC

Tectite Classic offers all the performance of metal, with the installation benefits of push-fit. Demountable, slim profile and compatible with most domestic tube materials, it's an all-round performer.

- Up to 16 bar at 30°C & 6 bar at 95°C
- DZR brass body

- Compatible with Copper, Tectite Tube, PB and PEX
- Fully demountable

SPRINT

Metal push-fit in its purest form, only 3 components make up this fitting allowing it to be as slim and attractive as possible. This doesn't prevent it from providing the exceptional performance.

- Up to 20 bar at 30°C & 10 bar at 114°C
- Domestic and Commercial applications
- Slim Copper body

- Compatible with Copper, PB and PEX
- Electrical continuity
- Available in sizes up to 54mm

PRO

Specifically designed for the high demands of a modern commercial system, the Brass bodied Pro fitting makes high performance installations quicker, safer and more reliable.

- Up to 20 bar at 30°C & 10 bar at 114°C
- Performance Fully demountable DZR Brass fitting
- Compatible with Copper, Tectite Tube, PB, PEX and Carbon Steel
- Electrical continuity

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For those specialist applications requiring Stainless Steel due to hygiene, 316 offers a swift installation without the need to scribe the tube prior to jointing.

- Up to 20 bar at 30°C & 10 bar at 114°C
- Stainless Steel body and Pipe

- Specialised applications eg/ Brewery, Hospital etc
- Electrical continuity



Service & Value since 1897

PRESS CONNECTION SYSTEMS



Smith Brothers offer a comprehensive and flexible range of press systems for all modern building services providing customers with an easy, fast, cost effective and reliable jointing solution. Leak path, heat free and long guarantees are a few features of the technology which can be used in a wide variety of applications. With stainless, copper and carbon systems along with the ability to press on to 4" NB thick walled steel, the scope for application is wider than ever. If a multi-layer press system is required, view the flared mechanical system Aquatechnik. It is located within the plastic pipe system section.

Typical Applications: Heating, Drinking Water, Fire Protection, Gas, Solar, Compressed Air, Oil

Please note: Jaw profiles can vary between manufacturers and some ranges are limited on size. Refer to pipe application tables in vital statistics to compare all press systems available



VIEGA

Viega's V-profile system has a wide application range incorporating SC-Contur (leak-path) detection. The range includes Megapress, which can press thick walled steel pipe up to 4" NB and also has the capability to also transport gas (HNBR yellow sealing element).

MEGAPRESS (STEEL)

The only thick walled press system available with sizes from $\frac{1}{2}$ " to 4" which can be used on seamless, welded, black, galvanised, epoxy-resin coated and industrially painted pipes. Comes with 25 year warranty, will work up to a maximum pressure of 16 bar and can also be used on gas applications.

TEMPERATURE & PRESSURE

BLACK SEALING ELEMENT: -5°C to 110°C

YELLOW SEALING ELEMENT: -20°C to 40°C (only up to 2")

SANPRESS INOX (STAINLESS)

Approved for drinking water installations and gas safe (FKM yellow o-ring) with a 25 year warranty with a size range of 15 to 108mm.

TEMPERATURE & PRESSURE

BLACK SEALING ELEMENT: -5°C to 110°C up to 16 bar YELLOW SEALING ELEMENT: -20°C to 70°C up to 5 bar

PROFIPRESS (COPPER AND GUNMETAL)

Approved for drinking water installations, gas safe (FKM yellow o-ring), and suitable for solar (FKM matt black o-ring) with a 25 year warranty.

TEMPERATURE & PRESSURE

BLACK SEALING ELEMENT: -5°C to 110°C, up to 16 bar, 12mm to 108mm YELLOW SEALING ELEMENT: -20°C to 70°C, up to 5 bar, 12mm to 54mm MATT BLACK SEALING ELEMENT: 0°C to 140°C, up to 16 bar, 12mm to 35mm





PRESS CONNECTION SYSTEMS



METAL PIPE SYSTEMS

ISOTUBI

With over 40 years of stainless steel manufacturing and global experience, Isotubi's NUMEPRESS system provides a stainless steel press solution for both gas and water (suitable for drinking water applications and BSi approved) and also meets EN 10312 standards (up to 108mm currently). It is available from 15mm to 168.3mm with a maximum working pressure of 16 bar along with a 25 year warranty.

The M profile product is suitable, providing the correct O-ring is used, for steam, drinking water, solar, natural gas (and other gasses), compressed air and other applications.

With annual press fitting production approaching four million from the factory based in Barcelona, Spain, quality is assured with Isotubi, a global brand and leader in stainless steel.

KEY INFORMATION

TUBE: 6m lengths available in 304 and 316L

FITTINGS:

SIZE: 15mm to 168.3mm BLACK (EPDM) O-RING: -20°C to 110°C GREEN (FKM) O-RING: -20°C to 200°C -10°C to 160°C RED (FKM) O-RING:

YELLOW (HNBR) 0-RING: -20°C to 70°C (up to 5 bar)







XL FITTINGS AVAILABLE FROM STOCK

Isotubi's M-profile stainless steel press-fit system can be pressed in XL sizes 5" (139.7mm) and 6" (168.3mm) for both water & gas, eliminating the need to weld down to 4" (108mm).

The availability of these XL tube and fittings is advantageous for gas and water installation projects, enabling a quick and simple jointing process which can be utilised with larger diameters down to its smallest size, 15mm.

PRESS CONNECTION SYSTEMS



XPRESS

Xpress is the complete M profile press-fit system from Pegler Yorkshire offering leak before press (LBP) detection and various approvals in a diverse range suitable for most installation environments. A brief overview of their range is listed below:



COPPER

Ideal for fast, efficient jointing of copper tube to BS EN 1057 R250 and R290 in sizes 12 to 108mm. XPress fittings are designed for use on hot and cold water services, vented and unvented closed circuit heating, chilled water and oil-free compressed air applications within permissible pressure and temperature limits. Approved to Kitemark certification BS 8537:2010 for use with copper tube.

XPress Copper Gas available for internal and external above-ground 2nd and 3rd-family gas services.

SIZE: 12mm to 108mm (54mm for solar, Viton green o-ring)

TEMPERATURE & PRESSURE

BLACK O-RING: -20°C to 110°C up to 16 bar -20°C to 200°C up to 10 bar GREEN O-RING:

YELLOW O-RING: -20°C to 70°C up to 1 bar inside and up to 5 bar outside

CARBON

A cost effective system for vented and unvented closed circuit heating and chilled water applications, with a size range from 15mm to 108mm. Temperature capacity ranging between -35°C to 135°C with pressures up to 16 bar and 5 year warranty. Plastic coated and internally galvanised tube range available along with 67mm sizes.

STAINLESS

Fittings manufactured from 316L stainless steel and designed for potable water applications where water quality and hygiene are crucial and chilled water applications. Water purified by Reverse Osmosis (RO) is likely to have a low pH and an extremely low dissolved solid content. XPress Stainless provides resistance to RO purified water. The size range is from 15mm to 108mm complete with a 25 year warranty.

XPress Stainless Gas available for use with XPress Stainless System and other stainless steel tubes on above ground 2nd-and 3rd-family gas pipelines, including applications where high levels of hydrogen sulphide make copper unsuitable.

TEMPERATURE & PRESSURE

BLACK O-RING: -35°C to 135°C up to 16 bar

YELLOW 0-RING: -20°C to 70°C up to 1 bar inside and up to 5 bar outside

PRESS CONNECTION SYSTEMS

₽ FRABO

METAL PIPE SYSTEMS

FRABO

With over 50 years of manufacturing experience, Frabo offers a wide range of press fittings in copper and carbon steel for different applications, both compatible with M Profile jaws, the press fitting technique provides easy and fast joints. Frabo press fittings have been designed to guarantee performance in the most testing conditions, resistant against pulling forces and torsional stresses, therefore providing a safe and long-lasting system. All press fittings from 12 to 54mm are equipped with SECURFRABO patented system which allows any un-pressed fitting to be detected during a leakage test.

COPPER - H2O SECURFRABO

Suitable for drinking water applications thanks to the high performance black O-Ring EPDM seal. All fittings are equipped with SECURFRABO patented leakpath detection.

SIZE: 12mm to 54mm

TEMPERATURE & PRESSURE

BLACK O-RING: -10°C to 110°C up to 16 bar

COPPER - XL SIZE

Ideal for commercial projects distributing all types of water (EPDM black O-ring). Especially useful in large civil and industrial installations and is suitable for drinking water applications.

SIZE: 66.7mm to 108mm

TEMPERATURE & PRESSURE

BLACK O-RING: -10°C to 110°C up to 16 bar

CARBON STEEL - SECURFRABO

The carbon-steel system (pipe & fittings) is corrosion resistant through zinc-plating treatment with high-performance EPDM O-ring. Value for money, lightness, practicality and speed of use make the carbon steel SECURFRABO the ideal solution in closed circuit installations. All fittings are equipped with SECURFRABO patented leakpath detection.

SIZE: 15mm to 54mm

TEMPERATURE & PRESSURE

BLACK O-RING: -10°C to 110°C up to 16 bar

CARBON STEEL - XL SIZE

The carbon-steel system (pipe & fittings) is corrosion resistant through zinc plating treatment with high-performance EPDM O-ring. The most useful areas of application include closed circuit systems in buildings or large civil and industrial works.

66.7mm to 108mm SIZE:

TEMPERATURE & PRESSURE

BLACK O-RING: -10°C to 110°C up to 16 bar



