

PLASTIC PIPE SYSTEMS



Smith Brothers stocks a variety of brand leading manufacturers, which offers the latest technology and some of the brands are exclusive to SBS.

Due to the wide range of stock, we can help support your project requirements along with our FORS accredited vehicles.

A vital statistics guide can be downloaded from www.sbs.co.uk – 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.



- ◆ EFFAST
- ◆ GF
- ◆ AQUATECHNIK
- ◆ MULTI-LAYER SYSTEMS
- ◆ PUSH-FIT
- ◆ MDPE TUBE & FITTINGS
- ◆ BARRIER PIPE PROTECTION
- ◆ PLASSON
- ◆ PRE-INSULATED PIPE

EFFAST

Modern, plastic pressure pipe systems are a lightweight and durable alternative to pressure pipe & fitting systems, made from traditional materials and offer equivalent life cycles. The material has a wide range of benefits over traditional materials in commercial buildings especially where high pressure plumbing is required. Within any pressure piping system, it's vital that the temperature and pressure relationship along with thermal movement is controlled.

The Effast system has different material compounds to suit particular application situations with the range including PVC-U, ABS, PPH and Valves.

The range of pipe and fittings have different temperature ranges and jointing techniques, all of which carry WRAS approval and the relevant BSI Kitemark.

PVC-U

The Effast PVC-U pipe and fittings range is a pressure system which has high chemical resistance and good flow characteristics, which make it a safe and secure choice for potable water & food products supply. The solvent welded pipe fittings are especially well-suited to industrial process applications where high pressure systems are required. It becomes a full bore system when used in conjunction with the range of PVC-U ball valves.



FEATURES

- Lightweight
- No specialist tooling required
- Smooth bore pipe reduces pressure loss
- High abrasion resistance
- Operating temperature from 0°C to +60°C subject to pressure requirements
- Solvent welded system
- Class 7 range of pressure pipes and fittings available
- Wide range of applications to transport fluids
- Chemical Resistant
- Available in Metric sizes 16 to 315mm and Imperial sizes ½" to 8"

ABS

The Effast ABS (Acrylonitrile Butadiene Styrene) Pressure Pipe System, can tolerate temperatures as low as -40°C and has good flow characteristics.

This makes the system a safe and secure choice for chilled or potable water, for food and beverage applications in a commercial environment. Effast pressure pipe and fittings remain a full bore system when used in conjunction with the range of ABS ball valves.



FEATURES

- Lightweight
- Robust system at low temperatures down to -40°C
- Smooth bore pipe reduces pressure loss
- Operating temperature -40°C to +60°C subject to pressure requirements
- Solvent weld pipe fitting system
- Suitable for mains water and chilled water applications
- Class T range of pipes and fittings available

EFFAST

PPH

Effast PP-H pressure pipe system is lightweight with high impact strength and reliable heat fusion welding. The Polypropylene pipe fitting system offers good abrasion resistance and is widely used in industrial processing and commercial applications.

FEATURES

- Suitable for socket fusion, butt fusion and electro fusion jointing
- Lightweight
- High abrasion resistance
- Good chemical resistance
- Operating temperature from -10°C to +95°C (short term +110°C) subject to pressure requirements
- Ideally suited to many industrial/processing applications



VALVES

Effast provides a wide selection of valves across a range of materials including ABS, PVCu and Polypropylene. They are suited to a wide range of commercial and Industrial applications and are available electrically or pneumatically actuated if required.

The ball, check and butterfly valves are available in different sizes to fit a variety of applications, from shopping centres and supermarkets, to hotels, pharmaceuticals, factories and mines.

The Polypipe range of Effast Valves includes:

- Ball valve
- Butterfly valves
- ProFlow check valve
- Air release valve
- Pressure relief valve
- Diaphragm valve



+GF+

GF products are manufactured and tested to the highest quality with strict quality control measures. With its own independent accredited test laboratory, GF meets all the relevant third party approvals while offering solutions for virtually all applications.

PVC-U

PVC-U is well suited to environments where temperature range is from 0°C to +60°C. Ensuring highest possible thermal stability and chemical resistance, PVC-U systems stand up to the most demanding conditions, particularly where fluids such as acids, alkalis, bases and salts are transported. The universal solution covers all aspects of safety, efficiency and reliability required to build, maintain and operate industrial piping.

APPLICATIONS

Water treatment, marine, chemical process industry, micro-electronics and power plants.

FEATURES

- Low investment for tools and equipment
- Very good chemical and corrosion resistance
- Proven physiological harmlessness
- Range of PVC-U valves; ball, butterfly and diaphragm
- Pipe/fittings made from Bio-Attributed PVC-U, reducing CO₂ by up to 90%
- Innovative IR-Welded PVC-U available



- SIZE:** EN/ISO: 6 to 400mm
BS Inch: 3/8" to 8"
ASTM/ANSI: 1/2" to 24" ASTM SCH80
- CONNECTION:** Tangit gap filling solvent weld system (Tangit DTX or GF Dytex for aggressive chemicals)
Tangit PVC-U Plus (a clean solution for solvent cement)
IR-Welded (suitable for small sizes)
- TEMPERATURE:** 0°C to 60°C
- PRESSURE:** up to 16 bar (up to 160mm)

PVC-C

PVC-C piping materials are suitable for high temperature environments with an operational range from 0° to 80°C. The excellent mechanical characteristics such as a high tensile strength, stiffness and impact strength are evident even at increased temperatures.

APPLICATIONS

Chemical process industry, marine, building technology and microelectronics.

FEATURES

- Very good mechanical characteristics, also at elevated temperatures
- Outstanding chemical resistance
- High burning resistance and self-extinguishing
- Range of PVC-C valves; ball, butterfly and diaphragm



- SIZE:** EN/ISO: 16 to 225mm
ASTM/ANSI: 1/2" to 24" ASTM Sch 80.
- CONNECTION:** Tangit gap filling solvent cement
Tangit PVC-C Plus (a clean solution for solvent cement)
- TEMPERATURE:** 0°C to 80°C
- PRESSURE:** up to 16 bar (up to 160mm)



ABS

The outstanding characteristics of ABS is its flexibility allowing its application in a temperature range from -50°C to +60°C. The exceptionally high notched impact strength values, even at low temperatures, indicate the material's high robustness and tolerance to surface damage.

APPLICATIONS

Water treatment, food & beverage refrigeration, marine, building technology, industrial refrigeration applications and warehouse cooling.

FEATURES

- Low operational energy loss
- High impact strength even at low temperatures
- Halogen free
- Range of ABS valves; ball, butterfly and diaphragm

SIZE: EN/ISO: 20 to 225mm
BS Inch: ½" to 4"

CONNECTION: Tangit gap filling
Solvent cement

TEMPERATURE: -50°C to 60°C

PRESSURE: Class E = up to 15 bar
Class D = up to 12 bar
Up to 225 mm = up to 10 bar



COOL-FIT 4.0

COOL-FIT 4.0 is the pre-insulated piping system for secondary cooling with brine, glycol, ethanol and chilled water. It is ideal for temperatures ranging from -50°C to 60°C. The system is cutting-edge technology that benefits fruit & vegetable processors, slaughter houses, breweries and supermarkets in particular. COOL-FIT 4.0 helps you to work with maximum efficiency and without disruption, while simultaneously reducing your maintenance and operating costs.

APPLICATIONS

Chilled water, boosted cold water, data centres, food industry and cold stores.

FEATURES

- 50% faster installation
- 30% higher energy efficiency
- 65% less weight
- 100% maintenance-free

SIZE: d32 – d450mm

CONNECTION: PN16 bar (d32 – d450)
PN10 bar (d160 – d450)

MATERIALS: PE100 – GF HE foam - HDPE

TEMPERATURE: -50°C to 60°C



COOL-FIT 2.0

COOL-FIT 2.0 is a completely pre-insulated plastic pipe system for secondary cooling and refrigeration systems operated with brine or glycol solutions. The system is based on impact resistant PE100 pipes and fittings, which are insulated with 20mm/40mm high energy efficient (HE) foam insulation in addition to a UV-resistant outer jacket which is both weather resistant and watertight. The inner surface of the PE pipe provides minimal pressure loss, while the low thermal conductivity of plastic and the insulation, ensure low energy and running costs for the lifetime of the product.

APPLICATIONS

Cold Storage, food & beverage production, supermarkets and process cooling systems.

FEATURES

- Fast connection, easy suspension
- Excellent insulating properties, low operational and energy costs
- No corrosion
- Low CO₂ emissions

SIZE: 16 - 450mm

CONNECTION: Electrofusion

TEMPERATURE: 0°C to 60°C

PRESSURE: up to 16 bar



ECOFIT (PE)

A heavy duty piping system with excellent impact strength in all climatic conditions. Good chemical and abrasion resistance up to ambient process temperatures. Highly cost-efficient system assembled from a comprehensive product range, with the option of off-site pre-fabrication if required.

APPLICATIONS

Water treatment, energy, marine, cooling and chemical process industry

FEATURES

- UV and weather-resistant
- Outstanding abrasion resistance
- High impact strength
- Wide choice of jointing technologies

TEMPERATURE: -50°C to 60°C

PRESSURE: Up to 16 bar

SDR 11: 20 - 1200mm couple
(2000mm branch saddles available)

SDR 17: 160 - 1200mm on couplers



SANIPEX MT

Sanipex MT is GF Piping Systems' innovative solution for potable water and heating projects. The high-quality PE-RT multilayer composite pipes and the innovative dual layer PPSU fittings are jointed by an extremely secure grip union connection.

During jointing, the expansion of the pipe ensures excellent flow rates throughout the system. The joint is free of water pockets and offers market leading flow rates without any reduction within the internal cross-section. Sanipex MT connections are detachable and reusable, which brings enormous benefits when extending an installation.

The simple and easy-to-use tools help reduce assembly times. Sanipex MT is the ideal system for distribution lines, risers and connecting lines in private homes as well as in large buildings. Thanks to simple and handy tools, installation times are significantly reduced.

APPLICATIONS

A complete, secure system for heating, domestic hot water and drinking water distribution including space heating systems, domestic hot water systems and mains cold water services.

FEATURES

- Market leading flow rates
- Intelligent simple tooling
- Suitable for water applications
- Excellent range of fittings

SIZE: d16 - d63mm

PRESSURE: PN10 Bar at 20°C

MATERIALS: PE-RT/AL/PE-RT

TEMPERATURE: 0°C - 80°C

EXPECTED LIFE SPAN: 50 years



PROGEF STANDARD (PP)

The highly resistant material offers numerous fields of application with outstanding weldability and low heat distortion. High stress fracture, pressure, abrasion, corrosion and temperature resistance are only some of the advantageous characteristic properties for a polypropylene system.

APPLICATIONS

Water treatment, chemical process industry and energy

FEATURES

- Very good abrasion and corrosion-resistance
- High thermal ageing and thermal forming resistance
- High impact strength
- Range of PP-H valves; ball, butterfly and diaphragm

SIZE: 16 to 500mm

CONNECTION: Butt Fusion/Socket Fusion

TEMPERATURE: 0°C to 80°C

PRESSURE: up to 10 bar





PROGEF PLUS (PP)

Cleaned and packed in specified processes, the silicone-free or oil-free PROGEF Plus system has a high pureness factor. The system is widely used in demanding applications in microelectronics or coating and surface treatment, where features such as an outstanding surface finish and excellent leach-out characteristics offer additional benefit. The components are double-bagged to ensure cleanliness and prevent contamination before installation.

APPLICATIONS

Microelectronics and coating/surface treatment.

FEATURES

- High Pureness
- Double Bagged
- Silicon or oil free

TEMPERATURE: 0°C to 80°C

PRESSURE: Up to 10 bar

SIZE: 20 to 315mm

CONNECTION: Butt Fusion/Socket Fusion



PROGEF NATURAL (PP-R)

PROGEF Natural is the transparent, pigment-free polypropylene product range offering beneficial properties such as excellent clean, smooth surfaces, high chemical and temperature resistance along with the bead and crevice free jointing technologies. PROGEF Natural provides a cost-efficient solution for high purity applications.

APPLICATIONS

Microelectronics and chemical process industry

FEATURES

- Very good abrasion and corrosion-resistance
- Bead and Crevice Free weldability
- High impact strength

TEMPERATURE: 0°C to 80°C

PRESSURE: Up to 10 bar (up to 63mm)

SIZE: 20 to 110mm



AQUASYSTEM

Aquasystem piping system has been designed for hot and cold water, as well as heating applications. The integrated system simplifies pipe correct material selection by only offering Faser fibre barrier pipe, avoiding complications. Aquasystem meets the stringent requirements of the water sector while offering a cost effective solution. It is an ideal option for piping installations for schools, hospitals, hotels, office blocks and in fields of modular construction.

APPLICATIONS

Building technology, marine and hot & cold water installations

FEATURES

- Low expansion with fibre pipes
- Off-site fabrication
- Cost certainty
- Good chemical resistance
- Minimum pressure losses

MATERIALS: Polypropylene, brass

SIZE: 20 to 125mm

CONNECTION: Electrofusion & Socket Fusion

TEMPERATURE: 0°C to 95°C

PRESSURE: Up to 20 bar (at +20°C)



INSTAFLEX

Instraflex is a high tech polybutene system for installations in the building technology and marine sector. Major fields of application are hot & cold water, cooling systems and compressed air. The system offers complete solution packages for buildings ranging in size from single-family detached houses and apartment blocks to public/commercial buildings.

APPLICATIONS

Building technology, marine, industrial applications, hot & cold water installations, compressed air and cooling systems

FEATURES

MATERIALS: Polybutene, brass

SIZE: 16 to 315mm

CONNECTION: Electrofusion, Socket fusion, Butt fusion, Compression joint

TEMPERATURE: -10°C to +95°C

PRESSURE: Up to 16 bar



AQUATECHNIK



The Safety-Pol/Safety-Plus system by Aquatechnik has a unique flared tube-end jointing system, which provides a simple, yet secure, installation method for multi-layer pipes. The drinking water approved product has high insurance-backed warranties, giving the user total peace of mind when installing.

The Lloyds-registered system utilises an easy-to-use battery flaring tool, which automatically expands the end of the pipe in order to accept the fitting. This method, unlike other fitting systems, does not reduce the bore of the pipe/fitting, keeping available flow-rates at their optimum. This often means smaller pipe-sizes are needed compared to other installation technologies.

The hand-assembled & lockable fittings are fully demountable if required and rotation-adjustable, allowing installation flexibility whilst maintaining joint integrity. The Safety system is made up of Pe-X/Aluminium/Pe-X pipe and PPS/PPSU fittings, which together form a complete solution, providing high thermo-mechanical resistance and long-term material stability and reliability, which is backed up by a 25-year warranty.

ADVANTAGES

- Secure, demountable, adjustable and re-useable fitting system
- High resistance against impacts
- Higher flow rates & lower pressure drop against other MLCP systems
- Fast, clean & simple installation process
- Modular & comprehensive fitting system allowing total flexibility
- Resistant to the possibility of corrosion & scaling
- Resistant to lime, cement and plaster
- Suitable for potable, heating and chilled water applications
- Also compatible with a wide range of fluid types, making it suitable for use in many industrial applications including compressed air installations with low oil content
- ISO approved for constant-temperature, hot-water and re-circulation



SIZE: 16 to 75mm

CONNECTION: Flared Mechanical Jointing System

TEMPERATURE: Up to 70°C (95°C peak)

PRESSURE: Up to 20 bar at 20°C
Up to 10 bar at 95°C

FINISH: White Pipe/Pastel coloured fitting

LENGTHS: 4m Straight Lengths
50m & 100m in coils
25m & 50m class-O Pre-Insulated in Red & Blue from 16mm to 26mm



MULTI-LAYER SYSTEMS



Multi-layer composite pipes (MLCP) consist of PERT, PEX and an aluminium layer that offers rigidity. The combination helps form retention and a solid oxygen barrier to prevent internal corrosion of heating system components. It is suitable for use in both the domestic and commercial markets and made to be suitable for water applications, including sanitary purposes.

UPONOR

The MLC system is ideal for most applications including heating water, chilled water and for the hygienic supply of drinking water in both domestic and commercial water systems.

In the smaller pipe sizes (16-32mm) where the highest degree of flexibility is required. Uponor offers a unique Multilayer pipe, which is a composite pipe with a seamlessly extruded aluminium layer - SAC, Uni Pipe Plus. The unique process used to manufacture these pipes gives the installer a flexible multilayer pipe with the tightest bending possible, which can significantly reduce the number of fittings required for an installation.

S-press PLUS – Our secure system of connections offers many benefits to the installer including observation windows to review the connection once installed, a unique press indicator to ensure a secure and accurate connection every time and best in class flow characteristics to maintain system performance.



FEATURES & BENEFITS

- Quick and easy to install
- Easily modelled into the optimum profile, meaning fewer connections required
- Ideal for use with manifold plumbing schemes
- Pipe form is stable when bent
- SAC pipes offer up to 40% smaller bending radius compared to conventional multilayer pipes

SAC: 16 - 32mm
MLC: 12 - 110mm
Pre-insulated MLC: 16 - 25mm

HENCO

Henco provides a wide range of top-quality products, such as press and push fittings, manifolds and compression fittings suitable for drinking water. To support the ranges they also offer a comprehensive range of tools.

The Henco MLCP range is guaranteed to offer the quality and works together perfectly.

- SIZE OPTIONS: 16mm to 90mm Straight Lengths
12mm to 32mm Coils – Pre-Insulated or Naked
- CONNECTION: Press, Push & Compression
- TEMPERATURE: Up to 95°C
- PRESSURE: Up to 16 bar (10 bar depending on pipe choice)
- PRE-INSULATED: Coils – 10mm, 13mm and 20mm (Part L Complaint) in Red or Blue
- SYSTEM: Type C - environmentally friendly Cross Linking process



EMMETTI

For branch plumbing applications, the system includes high quality brass press and compression fittings, together with tooling and a full range of accessories. The pipe is also fully compatible with sanitary and heating manifolds for use in point-to-point installations using the patented Monoblocco fittings to make the secure connection.

The wide range of pipe sizes, fittings, accessories and various fastening options make the Emmeti system a complete and highly reliable solution for any project, with the option to extend the standard warranty up to 50 years.

- SIZE: 16 to 75mm PRESSURE: Up to 10 bar
- CONNECTION: Press FINISH: White
- TEMPERATURE: Up to 95°C LENGTHS: Coiled & Straight Lengths



PUSH-FIT SYSTEMS



To cater for the domestic plumbing market, an extensive range of high quality, reliable and time saving plumbing fittings are available. Suitable for domestic hot and cold-water applications, these systems can help when installing water pipes in a new home, extending a system or repairing a leak. The push-fit fittings, valves and accessories can make the job easy.

JG SPEEDFIT

Get fast and leak-tight connections every time, with RWC's JG Speedfit range easy to install push-fit plumbing and heating system. Using a unique blend of push-fit and multi-seal technology, JG Speedfit can be installed and demounted in seconds without the need for tools or hot works. RWC is suitable for hot and cold-water applications, as well as central heating systems.



KEY BENEFITS

- High performance leakproof connections
- Install, demount and refit in seconds, without tools
- Safer and cleaner with no hot works, flux or glue
- Less labour-intensive, especially in tight spaces
- Non-toxic, resists corrosion and scale build-up
- Compatible with plastic or copper pipe

HEP20

The plumbing system offers a comprehensive range of pipes and fittings in 10mm, 15mm, 22mm and 28mm nominal diameters. The system is suitable for domestic hot & cold water and central heating systems. They are fully compatible with plastic, MLCP and copper piping.

The Hep20 Wavin system creates a water-tight seal on any pipes when you use push-fit waste connectors, so no need to worry about leaks again. Plastic push-fit plumbing fittings are usually demountable, whereas copper fittings are not.



KEY BENEFITS

- Plastic pipe means no scale build-up
- No corrosion and reduced risk of burst pipes
- Quieter in service
- Cooler to touch
- Less heat loss
- Highly flexible
- Comes off the coil straight (no memory)
- Easy to work with
- Hep key included with Wavin
- In4Sure joint recognition with demounting possibilities using the Hep key
- 50-year guarantee

HEP KEY REQUIRED

MDPE TUBE & FITTINGS



MDPE stands for Medium Polyethylene pipe (MDPE), which is a light flexible and durable piping system. MDPE is easy to install, ideal for carrying water including Potable Water and a variety of chemicals. The system can be both installed above or below ground and can be connected to both copper and plastic pipes (please ensure MDPE pipe inserts for plastic pipes).



KEY BENEFITS

- Corrosion resistant
- Light weight
- Quick and easy to install
- Lower installation costs
- Longer lengths of pipe
- Can be installed using trenchless techniques
- Over 100 years' service life

	Energy & Power	Gas	Non Potable Water	Potable Water
Finish	Black	Yellow	Black	Light Blue / Dark Blue
Size	20mm - 1200mm	180mm - 630mm	20mm - 1200mm	25mm - 180mm
Max Operating Pressure	16 bar	2 bar	16 bar	16 bar
Lengths	6m - 100m	6m - 12m	6m - 100m	6m, 12m, 50m, 100m

BARRIER PIPE PROTECTION



Barrier pipe protection systems have been tried and tested by water companies and housebuilders for over 25 years, to safely transport drinking water through areas of contaminated land and sites, with potential future contamination concerns.

The comprehensive range available at SBS is stocked from 25mm up to 90mm and larger sizes are available upon request. Barrier pipes are a diverse range of fully approved fittings for different jointing methods to meet every customer's requirements. Developments in this range over the years ensures a complete service-to-mains PE barrier pipe and fittings system, ensuring any project can be completed, from trunk-mains to service connections. The range is approved to BS 8588, which is the British standard for barrier pipes and fittings, meeting the standards required for contractors, developers and water utilities with the reassurance that a safe and reliable solution is being installed.

Using Barrier Pipes, reduces the costs of land reclamation and chemical treatments. Meaning that the installation of Barrier pipes gives the adopting body, the peace of mind that there will be no ingress into the potable water (drinking water) pipeline of ground contaminants such as phenols, arsenic, mercury, etc...



KEY BENEFITS

- Multi-Layer pipe construction
- Full barrier pipe system
- Combines the flexibility of polyethylene with the barrier properties of aluminium
- Easy to handle, flexible and lightweight
- No expensive soil sampling required
- Proven protection against all recognised brownfield contaminants
- Suitable for water applications
- Dedicated fittings
- Lightweight and flexible
- Excellent lifetime cost savings
- BS 8588 approval

PLASSON



Plasson develop and manufacture fittings for connecting Water and Gas supply pipes, predominately PE but also for connecting other existing pipes.

The company is ISO 9001 and 14001 certified with products meeting the various but vital standards making it suitable for water, barrier and gas applications.



- MECHANICAL:** 20-160mm fittings for mains water supply pipes
- PUSHFIT:** 20 – 63mm mains supply pipe to 'house' connections
- BARRIER:** The only fitting approved for connecting all leading Barrier pipe brands
- ELECTROFUSION:** 20mm to 1200mm fittings, for PE pipes SDR7.4 – SDR41
- MCP SYSTEM:** Specialist manifolds for multi OCC buildings water meter connection

PRE-INSULATED PIPE



Smith Brothers are able to offer a range of pre-insulated pipes (single and dual/multiple pipe) for a variety of applications, even custom options for specific requirements. Pre-Insulated pipes are used for transporting hot or cold water between plant rooms and building applications. Flexenergy's range of pre-insulated pipe systems offer a safe, secure and efficient means of transporting hot and cooled liquids – whatever the application.



KEY BENEFITS

- Flexible & easy to install
- Low heat loss
- Suitable for both heating and cooling applications
- Potable water certified
- Cost effective
- Long lifetime expectancy
- Sustainable product 100% recyclable

APPLICATIONS

- Heating Inc. District Heating
- Potable Water
- Chilled Water
- Hot Water