



ASHWORTH

# PRODUCT PORTFOLIO GUIDE

Specialist distributors of commercial heating,  
plumbing & drainage solutions

# ASHWORTH



## ABOUT ASHWORTH

Ashworth is recognised as one of the leading distributors of commercial heating, plumbing & drainage solutions to the Building Services, Industrial, Data Centre and Tunnelling markets, providing market-leading products from a network of strategically located branches across the UK.

We continually adapt to changing market conditions and pride ourselves on developing innovative, problem-solving service solutions to meet our customer's needs, as well as continuing to supply many proven products in our traditional Pipeline, Valves and Fittings portfolio.

That's one of the reasons why we have been in the business for over 100 years. We employ knowledgeable staff equipped to answer our customers enquires and needs, whether that be sourcing a new range of products or simply providing service on our stocked product portfolio.



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## OUR KEY VALUES



### People

The key strength within our business are our colleagues, due to the vast product ranges we supply, the importance of correct product identification & selection, goods that are delivered safely and complete to site, we highly value industry experience and therefore recruit the best in class.



### Products

Operating within the Building Services and Industrial markets requires us to stock and supply high quality market leading branded products suitable for critical applications. We operate to ISO9001, ISO 14001 and are registered under Achilles® Supply Chain and Safe Supplier Management schemes.



### Service

Our transport fleet operates to FORS Silver and our vehicles are equipped with HIAB off-loading facilities complete with all the latest health & safety equipment to safely convey material to site. The lorries are specified with Euro 6 engines that meet the stringent London low emission zone standards.

**BUILDING SERVICES VALVES & CONTROLS INDUSTRIAL PIPE SYSTEMS PVC DRAINAGE SYSTEMS FIRE VALVES & EQUIPMENT PP DRAINAGE SYSTEMS INDUSTRIAL VALVES & CONTROLS HDPE DRAINAGE SYSTEMS PLASTIC PIPE SYSTEMS PUMPS & EXPANSION ASHWORTH ONLINE TOOLS ABS DRAINAGE SYSTEMS COPPER PIPE SYSTEMS**

**MULTI-USE COUPLINGS SYPHON & GAUGES BELLOWS CARBON STEEL PIPE SYSTEMS CAST IRON DRAINAGE SYSTEMS DRAINAGE SYSTEMS CONSUMABLES FIRE COLLARS DUCTILE IRON GULLIES & GRATES**

**STAINLESS STEEL PIPE SYSTEM**

**PIPE INSULATION HEATING BRACKETS**

### Terms & Conditions

A copy of our Terms & Conditions are available upon request from your local sales office, representative or can be downloaded from our website at [www.Ashworth.uk.com](http://www.Ashworth.uk.com). E&OE.

### Images

The colours of products depicted in this publication are within the constraints of the printing process and may not be used for colour matching and are representation only and do not necessarily show the product on offer.



# PIPE SYSTEMS

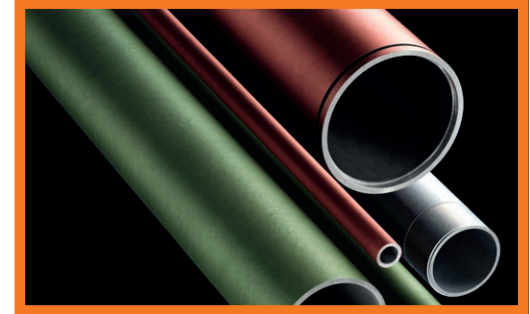
We stock a comprehensive range of tubes, flanges and fittings including Carbon Mild Steel, Malleable, Stainless Steel, Copper and Plastic.



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## TATA STEEL



### STEEL TUBE

TATA Steel tube is recognised for robustness, reliability and its wide variety of industry use. Both **INSTALL PLUS 235** (BS EN 10255/ 10217-2) & **INLINE 265** (BS EN 10217-2/ API5LB) are multi-certified, hot-finished and come with a range of ends and finishes.

- UK manufactured with traceability and fully technically supported with mill approvals, datasheets, tech-subs, DOP, BIM, compliance approvals, CPD's and specification assistance. Compliant with the Pressure Equipment Directive
- Size options from 15nb (OD 21.2mm) to 500nb (OD 508mm), Imperial from ½" to 20"
- **Large bore tube available**
- Carbon Neutral **Optimis** range available



### STEEL TUBE

We source a variety of tube manufactured within the EU and further afield to satisfy our clients' requirements.

- **EN 10255/EN 10217-1/BS 1387** Cold finished from 8mm (¼") to 150mm (6")
- API 5L HFI pipe from 50mm to 600mm (2" to 24")
- SAW pipe from 600mm to 1200mm (24" to 48")
- APL/A 106 HFS pipe up to 600mm (24")
- A333 low temperature up to 400mm (16") API



+GF+



### MALLEABLE IRON FITTINGS

GF Piping Systems ensures high quality production standards when it comes to their range of whiteheart malleable iron. It has long durability and excellent resistance to mechanical stress; these fittings are the most popular and common in the market today.

- BS EN10242 Kite Marked
- 6mm (1/8") to 100mm (4")
- Suitable for gas, oil, air and hot/ cold supply
- Available in hot-dip galvanised or black



### WELD FITTINGS & FLANGES

A wide range of carbon steel fittings and flanges are stocked in branch with extensive specification coverage.

- **ANSI/ASME B16.9** – Fittings range from 15 to 900mm and material grades to ASTM A234 WPB & ASTM A420 WPL6 (LTCS)
- **N10253-2/BS1965** – Fittings range from 15 to 400mm (1/2" to 16") and material grade to P235GH/ASTM A234 WPB
- **ANSI B16.5 Forged Class 150 to 2500lb** – Fittings range from 1/2" to 24" and grades to

ASTM A105N, ASTM A350 LF2 and ASTM A694

- **BS EN1092 (BS4504) Forged PN6 to PN40** – Fittings range from 15 to 300mm (1/2" to 12") and grades to BS EN 10025 S235JR & ASTM A105N
- **Plate & Blinds PN6 to PN40** – Flanges from 15 to 900mm (1/2" to 36") and grades to S235JR & P245GH
- **BS10 Flanges** – Slip-ons forged & plate up to 12", only plate above 12" and blinds from 5 to 900mm (1/2" to 36")



### WROUGHT IRON FITTINGS

We also stock a range of British Standard steel pipe fittings for low pressure applications such as pipe-work systems for water supply and sewage applications.

- BS 3799, 3000, 6000 PSI fittings up to 600mm (24")
- BS EN10241 Mild Steel Tubulars from 6mm (1/8") to 150mm (6")



### GROOVED SYSTEMS

Victaulic grooved systems are all about saving time and money through ease of installation and reduces downtime on maintenance. These fittings eliminate the need for hot works which improves jobsite safety.

- Sizes range from 60.3mm to 323.9mm
- Noise and vibration attenuation
- Accommodates piping system movement in smaller spaces, less stress on components



**+GF+**

### COMPRESSION FITTINGS

GF Piping Systems provide **PRIMOFIT** malleable iron compression fittings which offer full end load capability, allow for angular deviation and various pipe type connections. These are considered best suited for new installations, pipe repair and pipe work extension.

- Suitable for Steel, PE, Lead and Special steel pipes
- 15mm (½") to 50mm (2")
- Angular deviation of up to 3 degrees
- Arrive pre-assembled & ready for installation

**TEEKAY**  
the pipe coupling



### MULTI-USE COUPLINGS

Teekay couplings are extremely versatile and can be used on many pipe applications including Carbon steel, Ductile iron, Stainless Steel, Copper and many more. No special tools or flange connections are needed, no on-site hot works, electrofusion, welding or grooving is required. All couplings are WRAS approved and are designed and manufactured in the UK.

- Up to PN42 pressure rating on most couplings
- Suit most pipework materials from 21mm to 4200mm Pipe OD's



**Wednesbury**<sup>®</sup>  
COPPER TUBE

## UK'S LARGEST COPPER TUBE & COIL MANUFACTURER

Whether you're undertaking a complex commercial project or a simple home renovation, Wednesbury Copper Tube offers a versatile range of products to meet your needs.

### APPLICATIONS:

- Plumbing systems
- Heating systems
- Air-conditioning and refrigeration systems
- Home decor

### WHY USE WEDNESBURY COPPER TUBE?

- Worldwide trusted and reputable brand
- Made in Great Britain
- Products come with a 25-year guarantee against manufacturing defects
- Company operates sustainable practices
- Copper tubes and coils are available in a wide range of sizes

**MADE IN  
BRITAIN**<sup>®</sup>

[www.wednesburytube.com](http://www.wednesburytube.com)





## COPPER TUBE

Wednesbury is a UK Based Manufacturer of copper tube for plumbing, heating and a wide range of industrial applications since 1921 and is a proud sponsor of Made in Britain.

- 25-year guarantee against manufacturing failures
- Made from 100% recyclable copper with anti-microbial properties
- Hard, Half Hard and Soft Tempers for malleability
- Strength and ductility in high and low temperature
- **EN1057 R250/BS2871** Table X from 6mm to 159mm
- **EN1057 R220/BS2371** Table Y from 6mm to 76mm and X from 6mm to 8mm



## PEGLER XPRESS

Pegler **Xpress** is a no-fuss solution for domestic, commercial and industrial applications. It retains high performance while avoiding the need for solder, adhesives, or additional jointing materials.

- Sizes from 15mm to 108mm
- Unique Leak Before Press feature which ensures unpressed fittings are identified
- Completed joints have electrical continuity
- BSI Kitemark approved (BS 8537)
- Chrome Plated range available
- Material available in Copper, Stainless Steel and Carbon
- Gas and valve variants if required



■ GEBERIT

GEBERIT MAPRESS

# DESIGNED FOR SPEED BUILT FOR BUSINESS



**KNOW  
HOW  
INSTALLED**

No wonder so many business-minded installers are switching to Geberit Mapress. Quick and easy to install, with no hot works or costly one-hour cooling down period, our advanced pipe fitting solutions offer leak-free, hassle-free performance and unrivalled support.

[geberit.co.uk/mapress](http://geberit.co.uk/mapress)




### GEBERIT MAPRESS

Geberit **Mapress** copper is a quick and cost-effective press-fit system designed with safety in mind.

- Size range from 15mm to 108mm
- Protection end caps to stop debris and dirt from compromising the system
- Coloured pressing indicators help identify unpressed fittings
- Safer connecting method as no open flame required therefore no cooling down period
- Available in Copper, Stainless Steel, Carbon Steel and CuNiFe




### COPPER FITTINGS

Pegler provides several options with unique properties depending on the solution required.

- **Yorkshire** - Potable Integral Solder Ring (ISR) capillary fittings in sizes from 6 to 66.7mm. Creates a reliable joint without needing additional end-feeding solder
- **Endex** – Range of end feed capillary fittings manufactured from copper, gunmetal and DZR alloy, designed for jointing copper tubes to BS EN 1057 in sizes from 6 to 159mm
- **Kuterlite** – Quick, easy-to-use heat-free system. Excellent for repairs and in applications where ongoing maintenance is envisaged. Sizes from 15 to 54mm



### COPPER FITTINGS

We supply essential copper fittings for use in domestic, commercial heating and plumbing applications both water and gas. WRAS approved, EN1254 compliant and a 25-year warranty.

- **Compression** - Manufactured within the UK. Mechanical heat free connection. Full range is available in Chrome Plate
- **Solder Ring** - A ring of high-quality lightweight lead-free solder in each fitting
- **End Feed** - Lightweight, fast & simple joints created through capillary action



### BI-METAL FLANGES

If you require a flange suited for chemical processing, we highly recommend Bi-metal as the ideal option. Also known as Composite or spinning flanges, these are perfect for use with copper and copper alloy tubes for water and sanitary applications.

- BS4504 Compliant – Table 16/23





**GEBERIT STAINLESS STEEL**

Geberit **Mapress** Stainless Steel is a quick and cost-effective press-fit system designed with additional safety in mind. Protection end caps stop debris and dirt from compromising the system ensuring a cleaner installation process.

- No open flame required and no cooling down period means safer joining

- Coloured pressing indicators highlight unpressed fittings
- Size range from 15mm to 108mm
- Available in Copper, Stainless Steel, Carbon Steel and CuNiFe
- CrNiMo Steel 1.4401 (EN10088)



**PEGLER STAINLESS STEEL**

Pegler Stainless Steel solutions for when water quality and hygiene are crucial requirements.

**VSH Xpress** - Press-fit fittings for quicker installation heat free jointing.

- 316L press systems from 15mm to 168.3mm
- 444 WRAS approved press systems from 15mm to 54mm
- Gas press systems from 15mm to 108mm

**VSH Powerpress** - Designed for galvanised thick wall steel pipe. Installation times are reduced, and a clean working environment is assured

- Sizes from 15mm to 54mm

**VSH Tectite** - 316L push fit system from 15mm to 54mm.



GF Piping Systems

+GF+

Innovative, reliable and flexible solutions for you



Malleable Iron

GF Piping Systems is a leading supplier of piping systems and solutions for the safe and reliable transport of liquids and gases.

Customer-centric innovation and sustainability remain the defining values. Our extensive range includes piping, fittings, valves and process automation. No matter the size of your project, GF provides the perfect system to meet your needs.



PVC-U



[www.gfps.com/uk](http://www.gfps.com/uk)






### ABS & PVC

Polypipe Effast's plastic systems maintain optimum flow rates while under high pressure.

- **Effast ABS** - Ideal for chilled and potable water, food stuffs and beverage applications. Operating temperatures as low as -40°C. Sizes available from ½" to 2"
- **Effast PVCU** – Ideal for high pressure systems and potable water and food product supply. Metric from 16mm to 315mm and Imperial from ½" to 8"




### PLASTIC PIPING SYSTEMS

GF Piping Systems offer high quality products for safe transportation of water, chemicals & gasses and can provide off-site fabrications to meet your requirements. Their range includes:

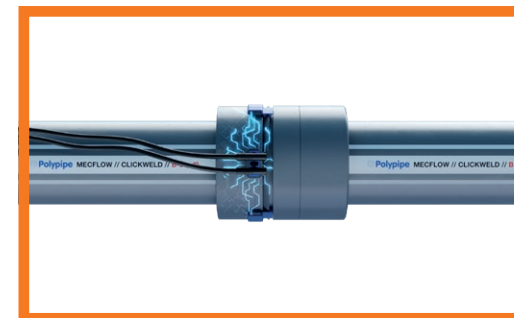
- **COOLFIT 2.0** – Polyethylene pre-insulated high-performance system for temperature-controlled transportation
- **FUSEAL** - Chemical waste drainage with flame retardant properties up to 6" standard
- **INSTAFLEX** – Efficient, flexible option for simple processing & high hygiene from 16mm to 225mm
- **ELGEF Plus** – Extensive HDPE piping system. Sizes from D20 - D2000 suitable from -50°C to 60°C
- **GF PVC-U** – Bio-attributed for use in chemical, textile, water treatment & vacuum lines. Imperial from ¾" to 8" and Metric from 6mm to 400mm
- **GF ABS** – Energy efficient cemented system used in water treatment & Marine applications with temperature ranges of -50 to 60°C, Imperial from ½" to 4" and Metric from 16mm to 315mm




### POLYPROPYLENE PIPE & FITTINGS

Aquatherm is ideal for heating and cooling systems from commercial buildings to single-family residences. Simply cut & weld as per requirement.

- Available in sizes 20mm to 630mm
- Corrosion-resistant and withstands high pressures and temperatures
- Long-lasting material with excellent thermal and sound insulation
- Highly sustainable, non-toxic and antimicrobial

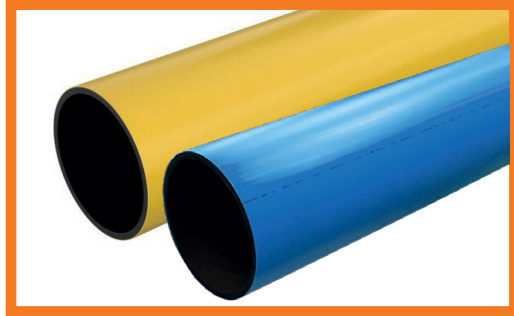
### MECFLOW

MecFlow Fusion is a highly engineered product designed for robustness and tested to achieve a fire classification rating of B-s1, d0\* in accordance to EN13501. Used in plantroom, riser, header and runout applications from 20mm – 315mm.

- Tough multi-layer PP-RCT pipe composition that's reinforced by microfibres for added mechanical strength
- Suitable for a variety of applications, including boosted cold water, low temperature hot water, chilled water and heating applications
- Produce secure, long-lasting joints with minimal fuss using fusion welding techniques, including the unique patented CLICKWELD electrofusion jointing technology

\*Fire classification rating according to EN13501, installed according to building regulations.





### MDPE & PVC

We also supply intelligent solutions for more complex industrial applications either in straight lengths or coils.

- **MDPE Blue & Yellow** – Potable water and Gas handling from 20mm to 180mm
- **PVCU Imperial & Metric** – Chemical & Industrial fluid handling from ½" to 8" or 16mm to 315mm
- **ABS Imperial & Metric** – Chilled & cold-water systems from ¾" to 8" and from 16mm to 315mm



### PRE-INSULATED MLCP

Take your project to the next level with REHAU building solutions. Experts in supplying sustainable pipework for: heating and plumbing, underfloor heating, and water management systems. Their Rautitan range is O-ring free and made from universal polymer which provides optimal hygiene, future-proof reliability, and high performance as standard.

- 10 bar WRAS-approved heating and plumbing system
- RAUTITAN fex (PE-Xa)
- EVERLOC™ compression sleeve fitting
- Independent certification of 'cavity-free' joint
- Only simple visual inspection of fittings is required

**PLASSON**



### PLASSON MDPE

Plasson mechanical fittings have revolutionised how PE pipes are connected using their unique high grade copolymer design. They can withstand high working pressure while conveying water and other fluids in a multitude of areas for example urban and inter urban infrastructure, industrial, mining, landscape, farming as well as optical fibre duct systems.

- NBR seals
- WRAS Approved
- Sizes available from 16mm to 160mm

**RIIFO**



### MULTI-LAYER PIPE

RIIFO Multilayer unites the benefits of PEX and weld aluminium to create a high degree of flexibility and toughness. A clean and corrosion-proof hot and cold-water supply option that excels in residential, commercial and industrial applications.

- Working temperatures between -40°C and 95°C
- ISO accredited by NSF and AENOR
- Sizes available from 12mm to 75mm





### PIPE INSULATION

Pipe insulation is necessary for energy-conscious clients with refrigeration, air conditioning or heating and cooling project requirements. Ashworth supplies low conductive lagging in many sizes and wraps to ensure all temperature conditions last longer, remain consistent and save money in the long term.

- Thermal conductive materials
- Flexible installation options given in either Class O or Self-sealing, slit or un-slit
- Size ranges of 15mm to 67mm



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If you want to know more about us or want to get in touch and talk about how we can help support your business, you can ring one of our strategically placed branches around the UK or visit our website and contact us at [www.Ashworth.uk.com](http://www.Ashworth.uk.com).



You can also follow us on social media via LinkedIn at

← [www.linkedin.com/company/ashworth](https://www.linkedin.com/company/ashworth)  
and  
[www.linkedin.com/showcase/ashworthenergy](https://www.linkedin.com/showcase/ashworthenergy) →



### GAUGES & THERMOSTATS

With over 100 years of industry experience, Brannan is a leading UK manufacturer of quality, reliable and sustainable gauges, thermometers and digital meters for use across sectors including HVAC, Process and Oil & Gas.

- Customisable dial designs for different industrial measurement requirements.
- Bi-metal or Stainless Steel casings
- Clip-on and extension options available
- Indoor and weatherproof options available

For added protection and longevity against the effects of hot pressure substances and rapid pressure surges, a choice of brass and mild steel U and Ring syphons can complement the gauges.



### BINDER TEST POINTS

A well-known staple, Test Plugs have been essential for uninterrupted pressure and temperature performance monitoring for decades.

- Cost-saving and reliably effective
- Available in Brass and 316 Stainless Steel
- Sizes come in 8mm (1/4") to 15mm (1/2") BSPT
- Temperature range from -8°C to 135°C
- Max pressure 35Bar, 500PSI





Specialist distributors of commercial heating, plumbing & drainage solutions

# ASHWORTH ONLINE!

## The 'Ashworth Online Seven'

Bespoke & customised registrations

- 1 View your prices 24/7
- 2 Place priced orders & enquiries
- 3 Avoid queues with the Click & Collect option
- 4 Re-order faster by building multiple Wish lists
- 5 Download, save or print outstanding Invoices
- 6 Access product information including features & attributes
- 7 Personalised sales support with every order

Register your trade account at  
**ASHWORTH.UK.COM**



# VALVES & CONTROLS

Our valve portfolio features some of the biggest brand names within the building services, water and gas markets and covers a wide selection of valve types, sizes and materials to serve our client specifications.

These include but are not limited to: **Ball, Butterfly, Balancing, Check, Combination, Commissioning, DPC, Gate, Globe, Pressure Reducing, Strainer, Safety, Solenoid, Thermostatic Mixing.** These can come made in Bronze, Brass, Cast Iron, Ductile Iron, Gun metal and Stainless Steel.



Specialist distributors of commercial heating, plumbing & drainage solutions

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**NABIC**<sup>®</sup>

**AMICK**

**CRANE** FLUID SYSTEMS

**RWC**

**Bray**

**victaulic**<sup>®</sup>

**A** integrated  
aalberts piping systems



# ALBION

For a complete building  
services valve solution  
**#AskForAlbion**

[www.albionvalvesuk.com](http://www.albionvalvesuk.com)



## VALVES

Albion's well-established high-quality valve selection makes them a reliable choice. They offer traditional and specialist valve applications from **ball, butterfly, check, gate, globe and strainers** to **press, hydronic, pressure control, solenoid, public health** and more. Award winning in-house technical support is ready to advise on any project.

- Brass, Bronze, Cast & Ductile Iron, Gunmetal and Stainless Steel materials are on offer
- All products meet the necessary standards and approvals, such as WRAS, EN331, EN161, ATEX and API 607. Albion adheres to ISO standards 9001, 14001 and 45001



## VALVES

Pegler Valves are manufactured by Aalberts Integrated Piping Systems UK, a renowned British company, known for their reliability, durability, and innovation in valve technology. Many are WRAS or NSF approved and certified to British Standard. ISO 9001 accredited.

- High-quality materials: Brass, Stainless Steel, and other durable alloys
- Robust construction: Designed to withstand high pressure and temperature conditions
- Precision engineering: Ensures accurate flow control and efficient operation
- Meets various international standards for safety and performance



# THE IDEAL VALVE SOLUTION FOR DATA CENTRES

Data centres are essential to everyday life, downtime or system failure of these facilities can cause significant disruption.

Butterfly Valves are an ideal solution to isolate parts of the cooling system to allow safe and speedy maintenance of the servers.

Crane Fluid Systems offer a huge range of Butterfly Valves providing full isolation.

And for peace of mind, all our Butterfly Valve's are 100% production tested to BS EN 12266-1.

So talk to the experts.

OUR GENIUS IS VALVES

CRANE FLUID SYSTEMS



CRANE FLUID SYSTEMS



## VALVES

Crane offers a range of traditional valves including **ball, butterfly, check, gate, globe** and **strainers**, alongside a range of WRAS approved public **health & safety** valves including **strainers** and **thermo-static mixing**. In addition, the **ProBalance** range offers dynamic and static **balancing** valve solutions.

- Valve sizes range from 15mm to 600mm (½" to 24")
- Brass, Bronze, Cast & Ductile Iron, Gunmetal, Stainless Steel and Plastic materials are on offer with a variety of finishes including DZR and Chrome Plate
- All products are available as BIM ready product components. Crane adheres to ISO 9001 and the Pressure Equipment Directive (PED)

Victaulic®



## GROOVED VALVES

Victaulic's grooved end valves were developed as an innovative pipe joining solution that improved safety, reduced risk and compressed project schedules. All grooved valves are easy to maintain, repair and operate.

- Type selection includes **ball, butterfly, check, commissioning, gate, check** and **strainer**
- Installation time up to 3 times faster than flanged connections
- Reduced system footprint and total cost as dismantling is no longer required
- Conform to ASTM A-536 and ASTM A-395 specifications



**A** integrated  
aalberts piping systems

Pegler ResiFlow valve  
increase waterway for  
improved flow

## Pegler Valve

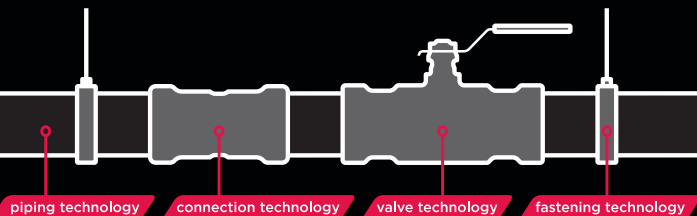
### ResiFlow



The Pegler ResiFlow valve is a unique prefabricated utility array with a direct function of providing potable water supply into multi-occupancy high-rise dwellings.

- WRAS approved unit
- direct class D water meter connection, no additional adapters required
- integrated stop valve with drain outlet

Pegler ResiFlow insulation  
streamlined, moulded  
expanded polypropylene (EPP)



**RWC**



### TENANT VALVES

Reliance Tenant Valves are combination valves that control and monitor water supply to multi-unit sites. A one-piece cartridge designed to reduce labour costs and potential leak points.

- **Tenant Valve Advance** – Supplies to multi-occupancy sites. WRAS approved for hot and cold water. Temperatures up to 65°C
- **Tenant Valve Compact** – Ideal for applications with a pre-installed water meter or any project that uses a master meter. WRAS approved for hot and cold water. Temperatures up to 65°C

**A** integrated  
aalberts piping systems



### RESIFLOW VALVES

The Pegler ResiFlow Valve, RES1 is a unique prefabricated utility array with the specific function of providing a potable water supply into multi occupancy high rise buildings. The primary function of the valve is to maintain system operating requirements by pressure reduction and allow ease of maintenance to the supplied dwelling via

the easy shut off the water supply.

- Brass
- 3/4" & 1"
- PN16
- EPDM
- -10°C to 80°C





**VALVES**

Bray specialises in helping customers with their flow control requirements. Their modular product line of butterfly valves, ball valves, actuators and accessories offer the best compatibility, economy and quality performance in the flow control industry.

**Butterfly Valves** - Resilient Seated, Lined, High Performance, & Triple Offset butterfly valves engineered for reliable performance in the most

demanding applications.

- Peace of mind: Over 36 years of industry experience
- Quality Assurance (ISO 9001, 14001 & 45001): Products are designed, manufactured, and certified to the most stringent requirements
- Solutions: NEW VAC & Clean Room facilities for that one stop experience



**CONTROL VALVES**

Nabic manufacture a high-quality precision engineered range of safety and pressure relief valves as well as control valves in Gunmetal and Stainless Steel suitable for a wide variety of fluids including steam, hot water and air. NABIC valves are ideal for vented and unvented heating systems, hot water and steam boilers, compressed air systems, pump relief and bypass.

- NABIC range includes High Lift Safety valves, Safety Relief valves with or without flanges, Pressure Relief valves, combined Pressure & Temperature Relief valves and anti-vacuum valves
- NABIC valves are compliant with BS EN ISO 4126-1:2013
- Most NABIC valves are WRAS approved
- All safety valves are set, tested, stamped and sealed prior to dispatch
- Pressure test certificate and letters of conformity supplier upon request



**DRAINAGE SYSTEMS**

We work in partnership with industry-leading manufacturers to provide you with high-quality, versatile and long-lasting drainage and rainwater products.

A comprehensive range of materials are available to help cover any soil and waste project requirements. These include sustainable cast iron, corrosion resistant HDPE, lightweight and easy to install PVC and durable Polypropylene Pipe solutions.



Specialist distributors of commercial heating, plumbing & drainage solutions

**ASHWORTH**

Cast Iron Above & Below Ground Drainage 32

Above Ground Drainage 34

PP Chemical Waste 37







### SOIL & WASTE

PAM specialises in the manufacture of cast iron drainage systems, for commercial, public and residential buildings. These systems are quick and easy to install, adjust and dismantle and come with a long working life and material construction which is 100% recyclable.

- St Gobain **ENSIGN AGILIUM**<sup>®</sup> cast iron above ground with an A1 fire rating from 50mm to 300mm
- St Gobain **Timesaver**<sup>®</sup> cast iron below ground with a kitemark approval to BS 437. Sizes from 100mm to 225mm
- PAM also offers a technical take-off and support and pre-assembly service



### ROOF OUTLETS

We have extended our range of **VortX** outlets to include a new line of high-quality and competitive aluminium roof outlets. They are manufactured here in the UK enabling us to minimise transport-related carbon emissions, provide a consistently excellent service and retain total control over quality.

- Vertical spigot roof outlets in 100mm and 150mm diameters
- Strong and robust performance
- Clamping Ring on the vertical and angled roof outlets can accommodate a liquid membrane of 2-3mm to full membranes with hot bitumen of 8mm
- Raising pieces and gravel guard



## ENSIGN AGILIUM<sup>®</sup>

### INTRODUCING ENSIGN AGILIUM<sup>®</sup>

The latest addition to PAM Building UK's cast iron drainage systems. Designed with flexibility and durability in mind, Ensign Agilium is the perfect solution for commercial and public buildings with tight deadlines and complex layouts. Ensign Agilium reduces its environmental impact and facilitates the daily work of installers. An innovation that is part of our eco-design approach.

**30% lighter** - easier to carry and faster to install.

**20% reduction in carbon emissions** - better for our planet.

**Compact fittings** - space saving in constrained areas.

With its lightweight design, Ensign Agilium is easy to install and handle, reducing installation time and costs. But don't let its lightweight design fool you - Ensign Agilium is still made of the same high-quality cast iron as our other drainage systems, providing superior strength and resistance to corrosion. It's also compatible with our pre-assembly service, saving you even more time and money on-site.

So whether you're working on a new build or a refurbishment project, Ensign Agilium is the perfect choice for a fast, efficient and reliable drainage solution. Contact us today to learn more about how Ensign Agilium can benefit your project.

### CONTACT US:

[www.pambuilding.co.uk](http://www.pambuilding.co.uk)

Innovation driven  
by experience.

THIS  
IS OUR  
TERRAIN

With decades of experience in drainage systems, we're in the best position to develop the right solutions for the future. Working together with our customers to find the most effective drainage systems and meet the latest industry challenges.

Explore our innovative solutions: [polypipe.com/this-is-our-terrain](https://polypipe.com/this-is-our-terrain)

Part of the  GENUIT  
GROUP

 **Polypipe**  
Building Services

 **Polypipe**  
Building Services



### HDPE SYSTEMS

Polypipe **Fuze** HDPE is a fully accredited and BBA certified drainage system suited for use in commercial building services. Specifiers and installers can take advantage of the in-house fabrication service to design drainage to specification.

- **Terrain FUZE** - Modern high density polyethylene system with excellent impact, abrasion, chemical and extreme temperature

resistance. Versatile application for any above ground drainage and waste projects. Available from 40mm to 315mm.

- **Terrain Q** - Above ground noise reducing acoustic drainage system built with triple-layered Polypropylene with impressive chemical resistance, anti-fouling protection and a fire rating classification of B-s1 d0. Available from 40mm to 200mm.

 **Polypipe**  
Building Services



### PVC SYSTEMS

Polypipe **Terrain** PVCu is fully accredited and suitable for all types of commercial, high rise residential, domestic, industrial and public sector installations. It is lightweight and easy to handle making it quick to install. With a wide range of solvent and push-fit options this gives unrivalled installation options to match any project.

- Fully adaptable with the HDPE Terrain FUZE drainage system
- High quality finish and colours to match






### HDPE SYSTEMS

Geberit HDPE is a robust and reliable wastewater and rainwater discharge drainage system designed for a multitude of applications including roof and land drainage. Flexible and resistant to impact and UV radiation with a leakproof permanence.

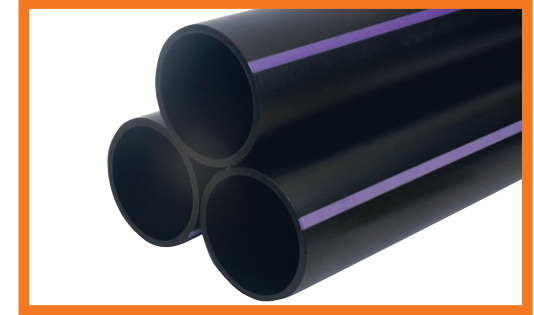
- Pipes available from 32mm to 315mm with a comprehensive range of fittings
- Various jointing options including butt welding, electrofusion and screw connections
- 100% recyclable
- Geberit HDPE Silent db20 acoustic from 56mm to 160mm




### TRAPS & WASTE FITTINGS

McAlpine is the first company in the UK to manufacture plastic traps and remains one of the best choices for high quality bathroom and shower wastewater systems.

- All traps, waste outlets and overflows meet the requirements of EN 274-1-2002
- Most trap outlets and fittings have **Multifit** connections which suit plastic waste pipes subject to BS EN 1451-1-2000 and EN 1329-1-2000, copper pipe and lead pipe
- Most traps are available from 1 ¼" to 1 ½"



### DURAPIPE DRAINAGE

Ashworth provides several drainage solutions for projects that require more specialist concerns.

- **Durapipe Friaphon** – A drainage option that is purpose-designed to be sound attenuated that offers excellent sound insulation. Ideal for care homes, apartments and hospitals where sound is major factor for wellbeing. Sizes range from 110mm to 160mm.
- **Durapipe Vulcathene** – A complete BBA approved laboratory drainage system option which provides chemical resistance even at high temperatures with UV degradation prevention. Sizes from 38mm to 152mm.




### FUSEAL DRAINAGE

**FUSEAL**® is the only thermoplastic chemical waste drainage in the UK, which has flame retardant properties. This provides added security to the end user. The distinctive colour and markings also give a clear identification.

- Excellent chemical resistance and physical properties
- Ideal for handling special waste mixtures of acids, bases and solvents
- Applications can include, school, college and university laboratories, hospitals and the health sector, chemical process, utilities and food and beverage





### MULTI-USE COUPLINGS

VIP Polymers VIPSeal flexible couplings were created to join and repair low to no pressure sewerage and drainage pipes of any material and size combination. The elastomeric seals and rubber is designed to be long-lasting and durable while also meeting all relevant UK water industry standards.

- Sizes range from 50mm to 620mm
- CE, UKCA, BS EN 681-1 & EN295-4 compliant
- Grade 1.4301 Stainless Steel heavy-duty tension and shear bands for general applications
- Grade 1.4401 Stainless Steel bands for high corrosion or contaminated ground areas and marine environments



# ASHWORTH

Specialist distributors of commercial heating,  
plumbing & drainage solutions

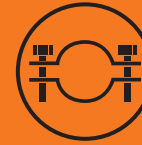


If you want to know more about us or want to get in touch and talk about how we can help support your business, you can ring one of our strategically placed branches around the UK or visit our website and contact us at [www.Ashworth.uk.com](http://www.Ashworth.uk.com).



You can also follow us on social media via LinkedIn at

← [www.linkedin.com/company/ashworth](http://www.linkedin.com/company/ashworth)  
and  
[www.linkedin.com/showcase/ashworthenergy](http://www.linkedin.com/showcase/ashworthenergy) →



## PIPE HANGING SYSTEMS

Having a strong and versatile framework is the basis for success when it comes to project planning. We take pride in supplying essential channel, fittings and fixings that conform to the highest standards. This covers not just steel but brass, malleable iron, plastic and phenolic as per requirement.

Installation should also be easy, that's why we work alongside suppliers who can cater for your individual specifications as not every project is the same but should always commence smoothly.

Specialist distributors of commercial heating,  
plumbing & drainage solutions

ASHWORTH

Channel & Fixings 40

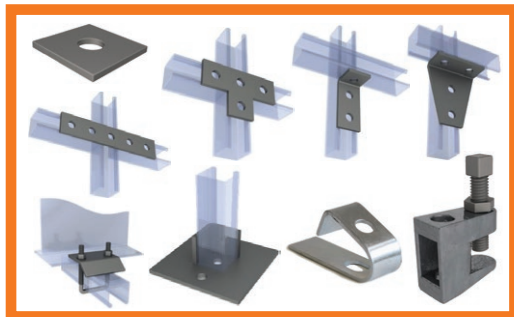
Pipe Support 41

Pipe Clips 42



**Talon.**





### CHANNEL BRACKETS & FITTINGS

To satisfy the need for versatility in the construction of effective channel support, we ensure that the ability to create joints and connections between sections of channel is unlimited.

- Washers
- Flat Plates
- T Plates
- Top Hat
- Splice
- Angles
- Wing
- Tower
- Delta
- Window
- Clamps
- Purlin
- Toggle
- Base
- Beam



### CHANNEL

Complex support system can be easily built from our range of strong and flexible channel and accessories to complement.

- 21 x 41 Pre-Galvanized available in 2m, 3m and 6m lengths.
- 41 x 41 Pre-Galvanized available in 2m, 3m and 6m and in Slotted or Plain Channel
- 41 x 41 Pre-Galvanized Back-to-Back
- End Channel and Studding Caps



### PIPE SUPPORT

Secure and safe pipe support can be achieved regardless of material, elevation or angle with our high-quality collection of clips, bolts, bands and blocks.

- Split Bands
- Saddle Clamps
- U Bolts
- Unlined Clips
- Rubber Lined Clips
- Filbo
- Phenolic Blocks
- Wood Blocks



### GENERAL FASTENERS

Every branch carries an extensive range of fasteners vital to supporting the groundwork of any project.

- Nuts & Washers
- Spring Washers
- Screwed Rods
- Connectors
- Eye Bolts
- Channel Nuts
- Spring Channel Nuts
- Penny Washers
- High Tensile Bolts
- Screws
- Anchors
- Wedge Nuts
- Rawl Bolts
- Thru Bolts
- Swivels





**PIPE CLIPS**

Our pipe clips reflect the diversity required within pipe supporting by allowing a wide catalogue of sizes and materials to be on hand for our customers. Available in standard and corrosion-resistant finishes for durability and longevity.

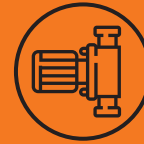
- For use with Steel, Cast Iron, Copper and Plastic tubes
- **Malleable Iron in Black or Galvanised**
  - Screw-on bracket
  - Back Plate
  - Single
  - Double
- **Brass or Chrome Plated**
  - Hospital
  - Screw on
  - Back Plate
  - Single
  - Double



**TALON PIPE CLIPS**

Talon's pipe clips reflect the diverse nature of projects by supplying a selection that incorporates various materials and types making them suitable for pipes including PEX, copper, MDPE and PVC pipework. They also offer accessories to compliment the installation process.

- Coloured identification for various applications
- Sizes available from 10mm to 35mm



**PUMPS & EXPANSION**

Closed water heating systems always run the risk of pressure building which can lead to disastrous results if left unmaintained. This reason alone is why a combination of expansion vessels and pumps are required to keep systems running smoothly and safe.

We have established partnerships with suppliers who provide energy efficient and effective pressure solutions so that you will always have options to control and mitigate whatever your project requires.

Specialist distributors of commercial heating, plumbing & drainage solutions

**ASHWORTH**

Pumps	44
Expansion	46






## PUMPS

Wilo produce locally manufactured and high-tech energy-efficient pumps and pump systems for both residential houses and commercial facilities. Their experienced technical team and digital on-site assistance alongside remote monitoring can support any HVAC to water supply and drainage projects.

- Easy to commission and maintain
- Ready-to-plug, quick electrical connection
- Variable and constant differential pressure
- Pump venting function
- **Wilo-Stratos & Yonos MAXO** – automatic power adjustment, nominal pressure 6 to 16, pump connections DN32 to DN100




## BOOSTER SETS AND PRESSURISATION UNITS

To meet complex requirements for providing a continuous water supply in large buildings (such as energy efficiency, operational reliability, hygiene and reliability in supply), you need an innovative partner. Wilo has comprehensive expertise in this area. We provide high-efficiency pumps, which can be connected to a system, according to demand, and easily integrated into the building automation system.

- **Booster Sets** - Fully automatic water supply and pressure boosting inlet mode, either from the public water supply or from a tank
- Packaged system for automatic topping up of system with wholesome water via AB airgap. Available in one or 2 pump versions in wallmount, freestanding or open pack variants
- **Pressurisation units** – for maintaining the required system pressure in closed heating, ventilation and air-conditioning systems





## PRESSURISATION UNIT

Our innovative range of highly energy efficient, locally manufactured, pressurisation equipment and booster sets cover a multitude of LPHW or CHW demands for large domestic and commercial sealed heating systems as well as chilled water systems.

- Compact and installer friendly design with direct connection to mains or booster supply
- Microprocessor technology for early warnings of system leakage and unrivalled precision in water treatment calculation
- All products are CE approved
- Units comply with PED 97/23/EC



# ASHWORTH

Specialist distributors of commercial heating, plumbing & drainage solutions



If you want to know more about us or want to get in touch and talk about how we can help support your business, you can ring one of our strategically placed branches around the UK or visit our website and contact us at [www.Ashworth.uk.com](http://www.Ashworth.uk.com).



You can also follow us on social media via LinkedIn at

← [www.linkedin.com/company/ashworth](https://www.linkedin.com/company/ashworth) and

[www.linkedin.com/showcase/ashworthenergy](https://www.linkedin.com/showcase/ashworthenergy) →





### FLAMCO FLEXVENT

Flamco floating air vents guarantee top quality ventilation for closed central heating and cooling installations. All Flexvents are thoroughly tested before leaving the factory.

- Captive cap with open/close function for leak protection
- Working temperature from -10°C to 90°C
- Sizes available in 3/8", 1/2" and 3/4"



### CHEMPOT & RAPIDVENT

We are on hand to provide options for the safe removal of unwanted sediment and air for projects that require it.

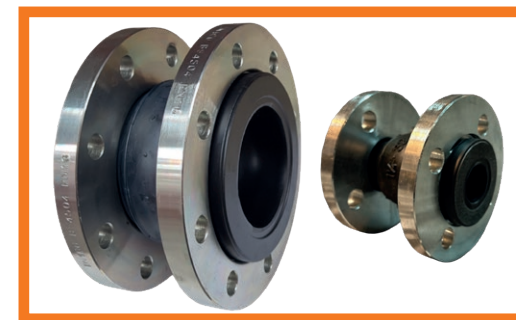
- **Chempot** - Vessels designed for accurate measurements in systems involving precise chemical dosage and removal. Available in 6,11 & 18 litre versions. WRAS approved
- **Rapidvent** - Flanged air and dirt removers created for HVAC piping systems. Available from 50mm to 200mm. WRAS approved



### EXPANSION BELLOWS

Albion offers a selection of carbon steel flexible connectors to provide your piping systems with the resilience needed to absorb noise and vibration, to compensate for thermal growth or to permit motion of other elements.

- EPDM/NBR Body
- **PN16 Screwed Flexible Connectors**
- Available in BSP Taper BS21 (ISO 7/1) or NPT (ANSI B1.20.1)
- **PN6 to PN25 Flanged Flexible Connectors**
- Most are BS4504 Compliant



### EXPANSION BELLOWS

We also provide our own range of zinc coated Carbon Steel bellows. Suited for systems carrying chilled and heated water these units are full bore and come with reinforced collars and EDPM bodies for excellent vibration and noise level absorption.

- Drilled PN6 or PN16 available
- Made of anti-tamper carbon steel
- No Tie bars







# ACCESSORIES & CONSUMABLES

Whatever you require on the worksite, we have you covered. All our branches hold a selection of the UK's best jointing compounds, sealants, soldering, paints, oils, treatments and tools for any pipework related on-site work you may need to undertake.

Keep healthy and protected while using these essentials with our range of testing equipment. We value our ability to supply what our customers need as well as what keeps them legally compliant and safe.



General Consumables 49

Measurement Tables & Charts 52



# ACCESSORIES & CONSUMABLES



## FIXINGS, SEALANTS & JOINTING

Jointing pipe and fittings can require a few industry essentials to get right. Each branch has well-known brands on hand for your convenience.

- Flux
- Hemp
- Solder
- Welding Rods
- Brazing Rods
- Rawl Plugs
- Screws
- Cotton Thrum
- Lubricant
- Silicone
- PTFE
- Rocol
- Loctite
- Fernox
- Wisemans



## PAINT, OIL, TOOLS & TREATMENTS

On-site safety and hygiene is just as important as attaining long-lasting and effective pipe systems. We stock a range of products to achieve both.

- Red Oxide Paint
- Yellow Ochre Paint
- Green Primer Paint
- Galvanising Spray
- Threading Oil
- Drain Cleaner
- Fernox
- Hygiene
- Inhibitor
- Paint Brushes
- Rothenberger
- Starett
- Protective & Safety Equipment
- Bags of Rags
- Steel Wool





### LOCTITE 55/557

A general-purpose thread-sealing application designed for metal and plastic pipes and fittings. A quick and easy reliable seal allowing pipe adjustment up to 45 degrees.

- Resists temperatures up to 149°C(300°F)
- Tested in accordance with EN 751-2 and DIN 30660.
- DVGW/KTW approved for gas and potable water
- Complies with KIWA GASTEC QA AR 214 for hydrogen gas
- WRAS approved and certified to NSF/ANSI Standard 61



### AIR BAGS & DRAIN TESTING

A viable alternative to test plugs, Horobin inflatable sealing bags and drain testing kits are ideal for any project which requires trouble-free pipe sealing and maintenance.

- Durable and tough PVC
- Can be fitted with a pressure gauge to prevent overinflation
- Ideal for use in areas where access is smaller than the test diameter
- Pipe diameter coverage of 25mm up to 450mm



## MANUFACTURER LINKS

<b>Albion</b>	<a href="http://www.albionvalvesuk.com">www.albionvalvesuk.com</a>	<b>Polypipe</b>	<a href="http://www.polypipe.com">www.polypipe.com</a>
<b>Aquatherm</b>	<a href="http://www.aquatherm.com">www.aquatherm.com</a>	<b>Rehau</b>	<a href="http://www.rehau.com">www.rehau.com</a>
<b>Brannan</b>	<a href="http://www.brannan.co.uk">www.brannan.co.uk</a>	<b>Reliance</b>	<a href="http://www.rwc.com">www.rwc.com</a>
<b>Bray</b>	<a href="http://www.bray.com">www.bray.com</a>	<b>RIIFO</b>	<a href="http://www.riifo.com">www.riifo.com</a>
<b>Crane Fluid Systems</b>	<a href="http://www.cranefs.com">www.cranefs.com</a>	<b>Saint Gobain</b>	<a href="http://www.saint-gobain-pam.co.uk">www.saint-gobain-pam.co.uk</a>
<b>Geberit</b>	<a href="http://www.geberit.co.uk">www.geberit.co.uk</a>	<b>Talon</b>	<a href="http://www.talon.co.uk">www.talon.co.uk</a>
<b>Georg Fischer</b>	<a href="http://www.georgfischer.com">www.georgfischer.com</a>	<b>Tata Steel</b>	<a href="http://www.tatasteleurope.com">www.tatasteleurope.com</a>
<b>Henkel</b>	<a href="http://www.henkel.co.uk">www.henkel.co.uk</a>	<b>Teekay</b>	<a href="http://www.teekay.com">www.teekay.com</a>
<b>Horobin</b>	<a href="http://www.horobin.co.uk">www.horobin.co.uk</a>	<b>Test Plugs</b>	<a href="http://www.test-plugs.com">www.test-plugs.com</a>
<b>McAlpine</b>	<a href="http://www.mcalpineplumbing.com">www.mcalpineplumbing.com</a>	<b>Victaulic</b>	<a href="http://www.victaulic.com">www.victaulic.com</a>
<b>Mikrofill</b>	<a href="http://www.mikrofill.com">www.mikrofill.com</a>	<b>VIP Polymer</b>	<a href="http://www.vip-polymers.com">www.vip-polymers.com</a>
<b>Nabic</b>	<a href="http://www.nabicvalves.com">www.nabicvalves.com</a>	<b>Wednesbury</b>	<a href="http://www.wednesburytube.com">www.wednesburytube.com</a>
<b>Pegler Yorkshire</b>	<a href="http://www.aalberts.com">www.aalberts.com</a>	<b>Wilo</b>	<a href="http://www.wilo.com/gb/en">www.wilo.com/gb/en</a>
<b>Plasson</b>	<a href="http://www.plasson.co.uk">www.plasson.co.uk</a>		

Final reliance on information lies with the client; always consult with the manufacturer where necessary.

## IMPORTANT LINKS

Achilles Utilities Vendor Database Service (UVDB)  
 Alcumus  
 British Metal Tubes and Fittings Association (BMFTA)  
 Timber Research and Development Association (BMTRADA)  
 Lloyd's Register Quality Assurance (IRQA)

[www.achilles.com/uvdb](http://www.achilles.com/uvdb)  
[www.alcumus.com](http://www.alcumus.com)  
[www.bmfata.org](http://www.bmfata.org)  
[www.bmtrada.com](http://www.bmtrada.com)  
[www.lrqqa.com](http://www.lrqqa.com)

## FLANGE TABLES

BS1560 ASA 150					
Nominal bore inches	Flange dia. inches	Thickness inches	Length and diameter of bolts mm	Number of holes	P.C.D. inches
1/2	3 1/2	7/16	M12 x 50	4	2 3/8
3/4	3 7/8	1/2	M12 x 55	4	2 3/4
1	4 1/4	9/16	M12 x 55	4	3 1/8
1 1/4	4 5/8	5/8	M12 x 65	4	3 1/2
1 1/2	5	11/16	M12 x 65	4	3 7/8
2	6	3/4	M16 x 70	4	4 3/4
2 1/2	7	7/8	M16 x 75	4	5 1/2
3	7 1/2	15/16	M16 x 75	4	6
4	9	15/16	M16 x 75	8	7 1/2
5	10	15/16	M20 x 90	8	8 1/2
6	11	1	M20 x 90	8	9 1/2
8	13 1/2	1 1/8	M20 x 90	8	11 3/4
10	16	1 3/16	M20 x 100	12	14 1/4
12	19	1 1/4	M20 x 100	12	17

BS10 Table D					
Nominal bore inches	Flange dia. inches	Thickness inches	Length and diameter of bolts mm	Number of holes	P.C.D. inches
1/2	3 3/4	3/16	M12 x 40	4	2 5/8
3/4	4	3/16	M12 x 40	4	2 7/8
1	4 1/2	3/16	M12 x 40	4	3 1/4
1 1/4	4 3/4	1/4	M12 x 40	4	3 7/16
1 1/2	5 1/4	1/4	M12 x 40	4	3 7/8
2	6	5/16	M16 x 50	8	4 1/2
2 1/2	6 1/2	5/16	M16 x 50	8	5
3	7 1/4	3/8	M16 x 50	4	5 3/4
4	8 1/2	3/8	M16 x 55	4	7
5	10	1/2	M16 x 55	8	8 1/4
6	11	1/2	M16 x 55	8	9 1/4
8	13 1/4	1/2	M16 x 55	8	11 1/2
10	16	5/8	M20 x 60	8	14
12	18	3/4	M20 x 60	12	16

BS10 Table F					
Nominal bore inches	Flange dia. inches	Thickness inches	Length and diameter of bolts mm	Number of holes	P.C.D. inches
1/2	3 3/4	3/8	M12 x 40	4	2 5/8
3/4	4	3/8	M12 x 40	4	2 7/8
1	4 3/4	3/8	M16 x 45	4	3 7/16
1 1/4	5 1/4	1/2	M16 x 50	4	3 7/8
1 1/2	5 1/2	1/2	M16 x 50	4	4 1/8
2	6 1/2	5/8	M16 x 55	4	5
2 1/2	7 1/4	5/8	M16 x 55	8	5 3/4
3	8	5/8	M16 x 55	8	6 1/2
4	9	3/4	M16 x 65	8	7 1/2
5	11	7/8	M20 x 75	8	9 1/4
6	12	7/8	M20 x 75	12	10 1/4
8	14 1/4	1	M20 x 90	12	12 3/4
10	17	1 1/8	M20 x 90	12	15
12	19 1/4	1 1/4	M20 x 90	16	17 1/4

BS1560 ASA 300					
Nominal bore inches	Flange dia. inches	Thickness inches	Length and diameter of bolts mm	Number of holes	P.C.D. inches
1/2	3 3/4	9/16	M12 x 55	4	2 5/8
3/4	4 5/8	5/8	M16 x 65	4	3 1/4
1	4 7/8	11/16	M16 x 65	4	3 1/2
1 1/4	5 1/4	3/4	M16 x 70	4	3 7/8
1 1/2	6 1/8	1	M20 x 75	4	4 1/2
2	6 1/2	7/8	M16 x 75	8	5
2 1/2	7 1/2	1	M20 x 90	8	5 7/8
3	8 1/4	1 1/8	M20 x 90	4	6 5/8
4	10	1 1/4	M20 x 100	8	7 7/8
5	11	1 3/8	M20 x 110	8	9 1/4
6	12 1/2	1 7/16	M20 x 110	12	10 5/8
8	15	1 5/8	M20 x 120	12	13
10	17 1/2	1 7/8	M24 x 150	16	15 1/4
12	20 1/2	2	M30 x 150	16	17 3/4

BS10 Table E					
Nominal bore inches	Flange dia. inches	Thickness inches	Length and diameter of bolts mm	Number of holes	P.C.D. inches
1/2	3 3/4	1/4	M12 x 40	4	2 5/8
3/4	4	1/4	M12 x 40	4	2 7/8
1	4 1/2	9/32	M12 x 40	4	3 1/4
1 1/4	4 3/4	5/16	M12 x 40	4	3 7/16
1 1/2	5 1/4	11/32	M12 x 40	4	3 7/8
2	6	3/8	M16 x 50	4	4 1/2
2 1/2	6 1/2	13/32	M16 x 50	4	5
3	7 1/4	7/16	M16 x 50	4	5 3/4
4	8 1/2	1/2	M16 x 55	8	7
5	10	9/16	M16 x 55	8	8 1/4
6	11	11/16	M20 x 65	8	9 1/4
8	13 1/4	3/4	M20 x 65	8	11 1/2
10	16	7/8	M20 x 75	12	14
12	18	1	M20 x 90	12	16

BS10 Table H					
Nominal bore inches	Flange dia. inches	Thickness inches	Length and diameter of bolts mm	Number of holes	P.C.D. inches
1/2	4 1/2	1/2	M16 x 50	4	3 1/4
3/4	4 1/2	1/2	M16 x 50	4	3 1/4
1	4 3/4	9/16	M16 x 50	4	3 7/16
1 1/4	5 1/4	11/16	M16 x 55	4	3 7/8
1 1/2	5 1/2	11/16	M16 x 55	4	4 1/8
2	6 1/2	3/4	M16 x 65	4	5
2 1/2	7 1/4	3/4	M16 x 65	8	5 3/4
3	8	7/8	M16 x 65	8	6 1/2
4	9	1	M16 x 75	8	7 1/2
5	11	1 1/8	M20 x 90	8	9 1/4
6	12	1 1/8	M20 x 90	12	10 1/4
8	14 1/2	1 1/4	M20 x 90	12	12 3/4
10	17	1 3/8	M20 x 100	12	15
12	19 1/4	1 5/8	M20 x 125	16	17 1/4

## FLANGE TABLES

EN1092 - 1 (BS4504) Table 6					
Nominal bore mm	Flange dia. mm	Thickness mm	Length and diameter of bolts	Number of holes	P.C.D. mm
15	80	12	M10 x 40	4	55
20	90	14	M10 x 45	4	65
25	100	14	M10 x 45	4	75
32	120	14	M12 x 50	4	90
40	130	14	M12 x 50	4	100
50	140	14	M12 x 50	4	110
65	160	14	M12 x 50	4	130
80	190	16	M16 x 60	4	150
100	210	16	M16 x 60	4	170
125	240	18	M16 x 60	8	200
150	265	18	M16 x 60	8	225
200	320	20	M16 x 65	8	280
250	375	22	M16 x 70	12	335
300	440	22	M20 x 70	12	395

EN1092 - 1 (BS4504) Table 16					
Nominal bore mm	Flange dia. mm	Thickness mm	Length and diameter of bolts	Number of holes	P.C.D. mm
15	95	14	M12 x 45	4	65
20	105	16	M12 x 50	4	75
25	115	16	M12 x 50	4	85
32	140	16	M16 x 60	4	100
40	150	16	M16 x 60	4	110
50	165	18	M16 x 60	4	125
65	185	18	M16 x 60	4	145
80	200	20	M16 x 65	8	160
100	220	20	M16 x 70	8	180
125	250	22	M16 x 70	8	210
150	285	22	M20 x 70	8	240
200	340	24	M20 x 90	12	295
250	405	26	M24 x 90	12	355
300	460	28	M24 x 90	12	410

EN1092 - 1 (BS4504) Table 40					
Nominal bore mm	Flange dia. mm	Thickness mm	Length and diameter of bolts	Number of holes	P.C.D. mm
15	95	16	M12 x 50	4	65
20	105	18	M12 x 55	4	75
25	115	18	M12 x 55	4	85
32	140	18	M16 x 60	4	100
40	150	18	M16 x 60	4	110
50	165	20	M16 x 65	4	125
65	185	22	M16 x 70	8	145
80	200	24	M16 x 70	8	160
100	235	24	M20 x 80	8	190
125	270	26	M24 x 85	8	220
150	300	28	M24 x 100	8	250
200	375	32	M27 x 100	12	320
250	450	40	M30 x 110	12	385
300	515	48	M30 x 120	16	450

EN1092 - 1 (BS4504) Table 10					
Nominal bore mm	Flange dia. mm	Thickness mm	Length and diameter of bolts	Number of holes	P.C.D. mm
15	95	14	M12 x 45	4	65
20	105	16	M12 x 50	4	75
25	115	16	M12 x 50	4	85
32	140	16	M16 x 60	4	100
40	150	16	M16 x 60	4	110
50	165	18	M16 x 60	4	125
65	185	18	M16 x 60	4	145
80	200	20	M16 x 65	8	160
100	220	20	M16 x 70	8	180
125	250	22	M16 x 70	8	210
150	285	22	M20 x 70	8	240
200	340	24	M20 x 80	8	295
250	395	26	M20 x 80	12	350
300	445	26	M20 x 80	12	400

EN1092 - 1 (BS4504) Table 25					
Nominal bore mm	Flange dia. mm	Thickness mm	Length and diameter of bolts	Number of holes	P.C.D. mm
15	95	16	M12 x 50	4	65
20	105	18	M12 x 55	4	75
25	115	18	M12 x 55	4	85
32	140	18	M16 x 60	4	100
40	150	18	M16 x 60	4	110
50	165	20	M16 x 65	4	125
65	185	22	M16 x 70	8	145
80	200	24	M16 x 70	8	160
100	235	24	M20 x 80	8	190
125	270	26	M24 x 85	8	220
150	300	28	M24 x 100	8	250
200	360	32	M24 x 100	12	310
250	425	40	M27 x 100	12	370
300	485	48	M27 x 110	16	430

EN1092 - 1 (BS4504) Table 64					
Nominal bore mm	Flange dia. mm	Thickness mm	Length and diameter of bolts	Number of holes	P.C.D. mm
15	105	20	M12 x 65	4	75
20	130	22	M16 x 70	4	90
25	140	24	M16 x 75	4	100
32	155	24	M20 x 80	4	110
40	170	26	M20 x 85	4	125
50	180	26	M20 x 85	4	135
65	205	26	M20 x 85	8	160
80	215	30	M20 x 90	8	170
100	250	32	M24 x 95	8	200
125	295	34	M27 x 110	8	240
150	345	36	M30 x 115	8	280
200	415	46	M33 x 130	12	345
250	470	54	M33 x 140	12	400
300	530	62	M33 x 150	16	460

### GENERAL DIMENSIONS

Length - Imperial/Metric		Metric/Imperial	
inches	mm	mm	inches
1	25.4	10	0.39
2	50.8	20	0.78
3	76.2	30	1.18
4	101.6	40	1.57
5	127	50	1.96
6	152.4	60	2.36
7	177.8	70	2.75
8	203.2	80	3.14
9	228.6	90	3.54
10	254	100	3.93
20	508	200	7.8
30	762	300	11.8
40	1016	400	15.7
50	1270	500	19.6
60	1524	600	23.6
70	1778	700	27.5
80	2032	800	31.4
90	2286	900	35.4
100	2540	1000	39.3

### WELD FITTINGS

Welding Fitting Dimensions						
BS1965						
Nominal Bore		Outside Diameter		Wall Thickness		
inches	mm	inches	mm	inches	mm	weight
1/2	15	0.840	21.3	0.104	2.6	medium
3/4	20	1.062	26.9	0.104	2.6	medium
1	25	1.315	33.4	0.128	3.2	medium
				0.160	4.0	heavy
1 1/4	32	1.688	42.4	0.180	3.2	medium
				0.160	4.0	heavy
1 1/2	40	1.906	48.3	0.128	3.2	medium
				0.160	4.0	heavy
2	50	2.375	60.3	0.144	3.6	medium
				0.176	4.5	heavy
2 1/2	65	2.875	73	0.144	3.6	medium
				0.176	4.5	heavy
3	80	3.500	88.9	0.169	4.0	medium
				0.192	5.0	heavy
3 1/2	90	4.000	101.6	0.176	4.5	medium
				0.212	5.4	heavy
4	100	4.500	114.3	0.176	4.5	medium
				0.202	5.4	heavy
5	125	5.563	141.3	0.192	5.0	medium
				0.212	5.4	heavy
6 (6 1/2 od)	150	6.625	168.3	0.192	5.0	medium
				0.212	5.4	heavy
6 (6 5/8 od)	150	6.625	168.3	0.212	5.4	medium
				0.250	6.3	heavy
8	200	8.625	219.1	0.281	7.1	other
				0.212	5.4	medium
10	250	10.750	273	0.250	6.3	medium
				0.312	8.0	heavy
12	300	12.750	323.9	0.375	9.5	other
				0.250	6.3	medium
14	350	14.000	355.6	0.281	7.1	heavy
				0.312	8	other
16	400	16.000	406.4	0.375	9.5	heavy

### TUBE SIZES

ANSI B 36.19							
Schedule		Schedule		Schedule		Schedule	
5S		10S		40S		80S	
mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m
		1.65	0.50	2.24	0.64	3.02	0.81
		1.65	0.64	2.31	0.86	3.20	1.12
1.65	0.81	2.11	1.02	2.77	1.29	3.73	1.65
1.65	1.03	2.11	1.30	2.87	1.71	3.91	2.23
1.65	1.31	2.77	2.13	3.38	2.54	4.55	3.29
1.65	1.68	2.77	2.73	3.56	3.44	4.85	4.53
1.65	1.93	2.77	3.16	3.68	4.11	5.08	5.49
1.65	2.42	2.77	3.99	3.91	5.52	5.54	7.60
2.11	3.75	3.05	5.35	5.16	8.77	7.01	11.59
2.11	4.59	3.05	6.56	5.49	11.47	7.62	15.51
2.11	5.26	3.05	7.53	5.74	13.78	8.08	18.92
2.11	5.93	3.05	8.50	6.02	16.32	8.56	22.67
2.77	9.61	3.40	11.74	6.55	22.10	9.53	31.44
2.77	11.48	3.40	14.04	7.11	28.70	10.97	43.22
2.77	14.90	3.76	20.12	8.18	43.20	12.70	65.64
3.40	22.95	4.19	28.20	9.27	61.22	12.70	82.78
3.96	31.71	4.57	36.53	9.53	74.94	12.70	98.96
3.96	34.87	4.78	41.99	9.53	82.50	12.70	109.05
4.19	42.20	4.78	48.07	9.53	94.61	12.70	125.20
4.19	47.53	4.78	54.15	9.53	106.83	12.70	141.35
4.78	60.23	5.54	69.70	9.53	118.95	12.70	157.51
4.78	66.31	5.54	76.75	9.53	131.07	12.70	173.66
5.54	83.80	6.35	95.92	9.53	143.20	12.70	189.82
				9.53	155.22	12.70	205.85
				9.53	167.39	12.70	222.06
6.35	120.15	7.92	149.55	9.53	179.56	12.70	238.28
				9.53	191.73	12.70	254.50
				9.53	203.90	12.70	270.72
				9.53	215.83	12.70	286.62





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