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BOYATT WOOD
EASTLEIGH
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OPENING TIMES

MONDAY TO FRIDAY

TRADE COUNTER: 7:30am to 5pm
SALES OFFICE: 8am to 5pm

Some branches open on Saturdays,
earlier and stay later than stated times
but speak to branches direct
for accurate information.

PRODUCT GUIDE 2015/16

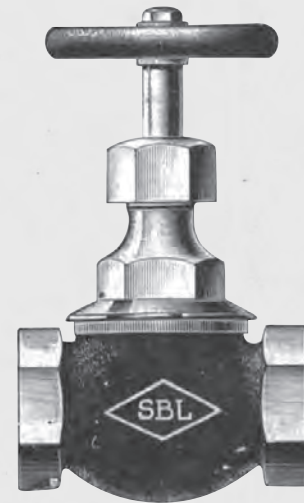
PRODUCT GUIDE 2015/16





OUR STORY

SMITH BROTHERS STORES LTD
SUPPLIERS TO BUILDING SERVICES



Smith Brothers (Leicester) Limited (SBL) was originally founded in 1897 and has a collection of companies operating within its structure, with SBS Ltd being one of them. Throughout its history it has maintained family ownership status under the total control of family members and an independent Chief Executive.

The Company was founded by Walter Smith and his photo along with other pictures from the earlier days of operation are often displayed around our various locations to remind everyone of our heritage. SBS currently has 3rd, 4th and 5th generation family members working within the business & had been trading for 10 years prior to incorporation in 1907 and the certificate celebrating 100 years of trading is proud and cherished within the Company's history. The strength of the business is down to the core structure

and cash flow management which has been maintained from the outset ensuring a long & successful history. The strict management of the financial principles the company follows means that even when the economy is far from stable, SBS is still secure and well placed to capitalise in such markets, nothing could highlight the issue more than our turnover and branch expansion from 2006. Major strides have been made over our 100 plus year history from operational aspects to product range development.

Disclaimer: As much information has been given and believed correct at time of publication, however the literature is for guideline use only. Although many products throughout the brochure highlight particular certifications, this may only indicate part of the range comes with the 'approval' or certain brands have the accreditation. For complete accuracy, always check the product with an SBS representative. Missing information was either not available or disclosed, confirm with manufactures for full and accurate information as it is your responsibility any products meet the necessary requirements. Any reliance placed upon this information will be totally at the user's risk.

YOUR REPRESENTATIVE:

CONTACT DETAILS:

YOUR LOCAL BRANCH:

CONTENTS

04 ABOUT SBS

12 METAL PIPE SYSTEMS

26 PLASTIC PIPE SYSTEMS

33 VALVES & DRAINAGE

40 COMMERCIAL HEATING & PLANT

49 AIR CONDITIONING & ANCILLARIES

52 RENEWABLES

56 ANCILLARIES & CONSUMABLES

59 TOOLING

62 VITAL STATISTICS

96 GENERAL INFORMATION



TIMELINE

1897-2015



1897 **Smith Brothers is established** by founder Walter Smith.



1907 **Smith Brothers becomes incorporated** to Limited company.

1978 **Head Office moves from Aylestone Road to Batten Street** where it remains in operation today as our Leicester branch.

04

1800s

1900s

2000s

1902 **Smith Brothers move from Saffron Lane to Aylestone Road** which is still occupied by Smith Brothers today.



1980 **SBS decide to expand** for the first time opening a branch in Northampton.

2006 **Apex changes its name to SBS** and joins the expanding branch network. SBS expands with the opening of its 4th Branch located in Oldham serving the Lancashire & North West area.

1998 **Old logo is redesigned** to incorporate our yellow diamond which is still present today.



2008 **On the 1st of December SBS opens its 6th Branch** based in Smethwick which is well placed to service the Birmingham & Midlands region. 2008 also sees the launch of SBS on the web.

1989 **SBS begin recording details on a computer system** starting the move away from our paper based routes.





2004

SBS completes the purchase of Apex Ltd in

Peterborough giving better coverage with distribution to the East England region.



2009

On the 1st of October SBS opens it's 7th Branch which is based in

Thurrock perfectly placed to service Central London & the South East. A hand picked team brings a wealth of experience and technical knowledge to the business. The Leeds branch also relocates and moves to brand new purpose built 22,000 sq ft unit in the ideal location with excellent transport links.

2007

This year sees SBS open its 5th Branch situated in

Leeds servicing Yorkshire & the North East.

2012

Southampton becomes the 9th and most southern SBS Branch situated in Eastleigh.

The new redesigned website is launched along with new circular logo to match our expansion in the HVP sector. Partnership with MEP (HireStation) is announced to further help customers with tooling.



2011

On the 1st of February SBS opens it's 8th Branch, Bristol, which is perfectly placed to service the South West. Leeds also have over six figure investment covering their roof in 200+ solar panels generating annual yields of nearing 50,000 kWh.



2015

New I.T system is launched to help with all aspects of the business from sales through to accounts. After 18 months of bespoke development and 6 months of staff training, the move sets the next level of foundation and shows our desire to constantly adapt for the needs of our customers.

2013

SBS transport becomes FORS accredited across the national network

demonstrating the commitment to safety and the environment. Patented WRAS approved Aquatechnik multilayer system comes exclusively to SBS giving a great alternative to traditional steel or copper. Tool hire through HireStation can now be ordered online through www.sbs.hirestation.co.uk



DEFINING OUR BUSINESS

SBS is one of the oldest and, more recently, one of the largest independent merchants operating from within the UK directly focusing on supplying to the commercial and industrial mechanical services sector.

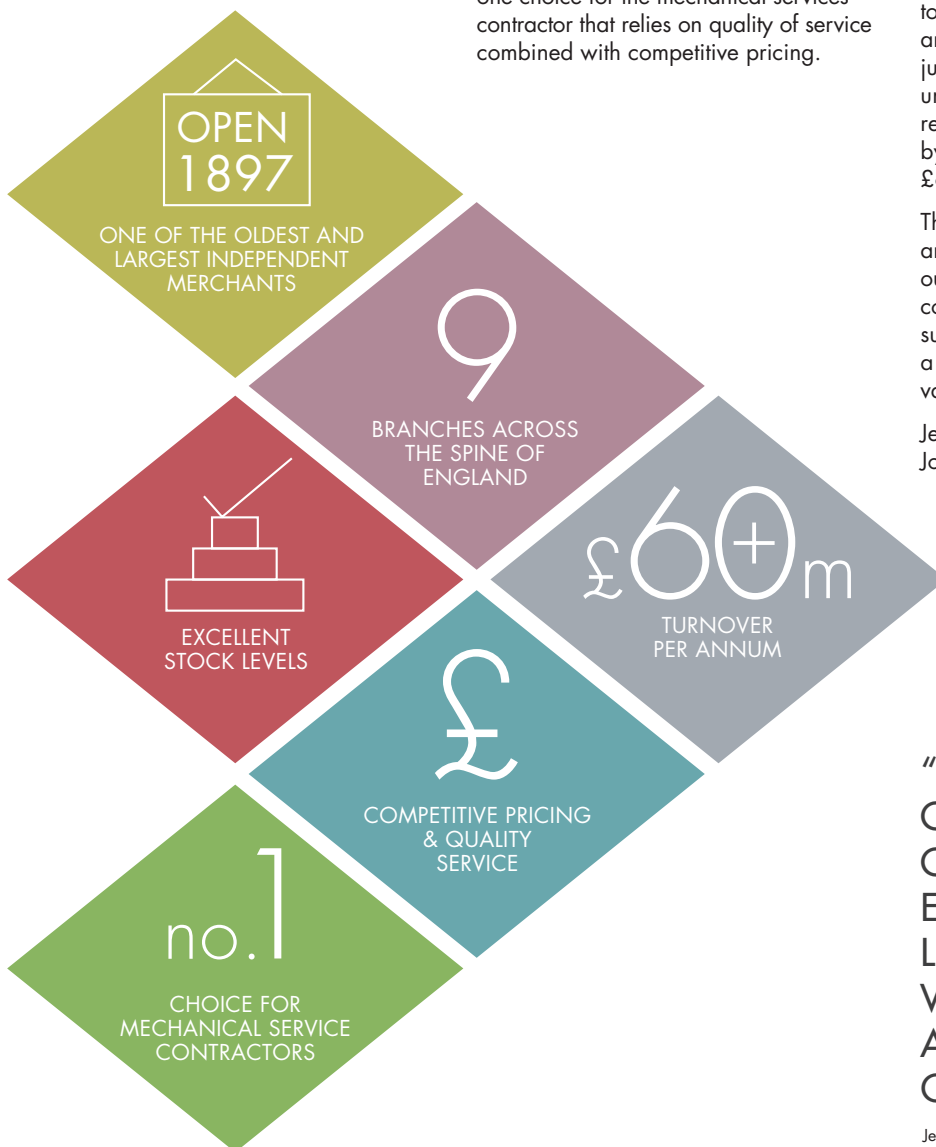
The core business specialises in the distribution of pipework, valves and all associated fittings and has extensively increased both its product portfolio and geographical coverage since the turn of the millennium. With branch coverage across the spine of England, including Head Office from Leicester, we are able to meet our customers service commitments, our brand promise since 1897. SBS should be the number one choice for the mechanical services contractor that relies on quality of service combined with competitive pricing.

SBS can offer added value over its competitors in a multitude of ways. By drawing from our close relationships with our carefully selected and quality assured suppliers, by maintaining excellent stock levels at all branches and thus reducing supplier lead times. In turn we can provide unrivalled levels of service along with competitive pricing.

Our investment strategy for sustainable growth, along with our commitment to the branch expansion programme and product range development, are just some of the reasons behind the unprecedented success of the business, resulting in turnover having increased by over twelvefold since 2005 to £60+ million per annum today.

Through the development of our people and product range, with the support of our suppliers, shareholders and parent company, we shall maintain our desire to surpass our customers' expectations with a level of service that will continually add value to their changing needs...

Jeff Robertshaw
Joint Managing Director



“WE SHALL MAINTAIN OUR DESIRE TO SURPASS OUR CUSTOMERS’ EXPECTATIONS WITH A LEVEL OF SERVICE THAT WILL CONTINUALLY ADD VALUE TO THEIR CHANGING NEEDS”

Jeff Robertshaw, Joint Managing Director

CASE STUDIES

／ PENGLAIS FARM STUDENT RESIDENCES ／

DESIGN AND CONSTRUCTION

BALFOUR BEATTY

CONTRACTOR

T.CLARKE'S (BRISTOL)

PROJECT VALUE

£45 MILLION

PROJECT DURATION

AUGUST 2013 TO SEPTEMBER 2014

PRODUCTS SUPPLIED

- Sanha Press System
- BOA Expansion Solution

The Penglais Farm Student Residences will offer the very latest in purpose built student accommodation for 1000 students and the development includes 100 studio flats specifically designed for postgraduate students.

Located within easy walking distance to the University's Penglais Campus, the new residences will offer plenty of space for living and studying and will be equipped with hard wired and Wi-Fi internet access. Inspired by the landscape and architecture of rural Wales, the new development features a series of two and three storey buildings with flats for six or eight students living in self-catered accommodation. A central hub will also provide a range of social, learning and living functions including launderettes, bike stores, communal space for clubs and societies, and



computing facilities. There will also be a new grass sports pitch.

The first students moved in for the beginning of the 2014 academic year and amongst the first to take up residence will be the community of students currently living in Pantycelyn.

／ AVENUE SCHOOL READING ／

OWNER

READING BOROUGH COUNCIL

LOCATION

TILEHURST, READING

PROJECT DURATION

35 WEEKS

CONTRACTOR

LJJ CONTRACTORS

PROJECT VALUE

£3.5 MILLION

SERVICES USED

MECHANICAL, ELECTRICAL, PLUMBING

PRODUCTS SUPPLIED

- Steel Tube
- Crane Valves
- Aquatechnik Multilayer System

This special needs school was developed in conjunction with Willmott Dixon Construction as part of their supply chain strategy.

This project achieved an excellent BREEAM rating. This is due to the introduction of many items of renewable energy including ground source heat pumps, solar panels, wind turbines and CHP plant. All of the services were monitored and controlled via BMS including the CCTV, heating, access control and the renewable energy systems. As this is a special needs school many other features were included i.e. panic alarms, voice evacuation, UV lighting and soft play/sensory rooms.



SERVICE & EXPERTISE

BRANCH EXPANSION PROGRAMME

Head Office is based centrally in Leicester & our carefully selected branch locations give us a great presence across the spine of England. The coverage and geographical positions are heavily based around being able to support our customers with the high level of service which have formed our foundation of 100+ years of successful trading. SBS have and will continue to make efforts widening our network with the expansion programme aiming to:

INCREASING GEOGRAPHICAL COVERAGE

Giving better flexibility for our customers, wherever the project is located

ADDING DEPTH TO STOCK

In both quantities & range, shortening lead times for our customers

IMPROVING THE TRANSPORT CAPABILITIES

With a larger fleet we can manipulate the vehicles to maximise our operational capacity

WIDENING KNOWLEDGE

With all staff, we actively encourage sharing of best practice, product knowledge and continued training

STAFFING

Various staff are trained in multiple job roles along with being available to cover in different branches if emergencies or operational demands required.

Like most companies, we are keen to grow and continue to capitalise on our successes, however SBS will never jeopardise current business operations by over-stretching ourselves for a quick success.



TRANSPORT DEVELOPMENT

To maintain service excellence significant investment has been made into our transport department giving greater flexibility for our customers. Our fleet of vehicles have continually reduced CO2 emissions over recent years making sure our vehicles conform to the 'low emission zone' which started operation in 2008 administered by the Transport for London. The latest guidelines mean our 12 tonne plus vehicles and 7.5T flat bed lorries meet Euro 4 standards with our vans compliant to Euro 3 criteria.

With a dedicated national transport manager all branches have a range of transportation options from large lorries with Hiab cranes for off loading heavy tube/items to small vans. To meet small back orders or final balances

to complete a project, we offer a TNT courier service to make sure our customers are never let down. Our high standards have been externally verified by 'FORS', a fleet operator recognition scheme. The scheme aims to improve safety and reduce environment impact with our transport giving SBS tangible evidence of our hard work and development in this area. More recently our vehicles have started having audio left indicators fitted along with forward facing cameras. Look out for the FORS sticker when you next see an SBS vehicle.



NATIONAL PRODUCT SPECIALIST

The business growth and product range expansion has meant investment in specialist personnel working in a national role overseeing product sales and responsibility. For the customers this has meant more knowledgeable staff along with a key person as one point of contact. For product areas like renewables, a key contact is vital to ensure success from quote to delivery with detailed product knowledge to answer any questions which may arise.

The product areas with national specialists are highlighted below and they are available for site visits, meetings or simply on call to offer support when and however it is required;

- Air Conditioning
- Renewables
- Commercial Plant
- Pumps

SBS PROMISE

We make no secret when talking to the building services industry, the promises we make to our customers. By being transparent it not only guarantees stakeholder backing, but also notifies our support network from suppliers to delivery drivers, the level of performance we expect.

Our promises breakdown into 4 areas;

SERVICE / STOCK / STAFF

UNDERSTANDING YOUR INDIVIDUAL REQUIREMENTS

KNOWLEDGE & COMMITMENT

SERVICE

No secret has ever been made that our vision since the company was founded was to offer value through service, making sure our customers never fall short on their commitments, which will hopefully lead to them having a long and successful trading history like ours. We have a National transport manager dedicated to making sure all our branches have the facilities on hand to meet demands of the external climate. This has led to heavy investment in vehicles to increase delivery options and reduce lead times. On occasions when the facilities are not available, we send via carrier to meet customer obligations. Smith Brothers aim to supply, support and succeed in meeting your expectations.

STOCK

Whilst other competitors reduce stock levels to improve cash flow or minimise investment, SBS still remain committed to hold sufficient core product stock levels to make sure we can support our trade counters whilst being able to draw from such reserve to support different stages within a project or even a site 'take off'. Our service and stock has on many occasions fulfilled project work or back orders after customers have been let down elsewhere. SBS always aim to keep the customer informed from start to finish.



SBS ALWAYS
AIM TO KEEP
THE CUSTOMER
INFORMED FROM
START TO FINISH.

STAFF

One of the key areas to our success has been the investment in people throughout the business. Committed, helpful and product knowledgeable staff with excellent reputations within the industry have been key to maintaining our success. Building upon those foundations the business aims to also work closely with suppliers so information, training and relationships maintain a high level to the benefit of the customer.



**UNDERSTANDING YOUR
INDIVIDUAL REQUIREMENTS**

SBS hasn't been trading since the 19th century without getting to understand how every customer requires service excellence in different ways. We aim to work closely with each customer to help support their business, tailored to suit them, whether it be site visits, product knowledge, training (on-site or off-site), product cost savings, meeting specified requirements or simply offering an efficient service. SBS has assisted customers in various countries and serviced major projects of numerous hotels, hospitals, schools, sporting venues including various projects on the 2012 London Olympics, 2015 Rugby World Cup and many other household name developments. With head office based in Leicester, SBS were delighted to be one of the main supplying merchants supporting the build of the King Power Stadium (previously known as the Walkers Stadium), home to Leicester City Football Club.



METAL PIPE SYSTEMS

EXTENSIVE RANGE OF METAL PIPE SYSTEMS IN A VARIETY OF MATERIALS INCLUDING STAINLESS, CARBON, API, MALLEABLE, MILD STEEL, COPPER & CHROME PLATED.

Kuterlite **TracPipe** **XPress** **Yorkshire**

Grinnell **+GF+** **BOA Group** **TATA** **YORKSHIRE COPPER TUBE**

GREENAWAY **BORUSAN MANNESMANN** **SANHA** **CRANE** **FLUID SYSTEMS** **Keep Access**

Pegler Yorkshire **walraven** **WESTOL** **Prestex** **Tectite**

Endex **Keep Klamp**

- / FLEXIBLE GAS PIPE
- / PRIMOFIT
- / STAINLESS
- / COPPER TUBE
- / ENDFEED
- / SOLDER RING
- / COMPRESSION
- / PRESS FITTINGS
- / EXPANSION
- / TECTITE
- / TUBULAR PIPE & FITTINGS
- / BRACKETRY
- / STEEL TUBE
- / MALLEABLE IRON FITTINGS
- / FLANGES
- / WELD
- / MILD STEEL
- / GROOVE PIPE SYSTEM

STEEL TUBE

SBS distribute tube of the highest standard (BS1387/EN10255/EN10217-1) both robust and reliable 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-marked to meet the construction products directive (CPD) and pressure equipment directive (PED). API tube available in shed 40, 80, 160 and standard weight plain ended in full randoms.

SIZE:	EN10255: 8mm (1/4") to 150mm (6") API: 8mm (1/4") to 900mm (36")
CONNECTION:	Screwed & socketed, plain end, grooved
FINISH:	Galvanised, red, self colour (upon request)
LENGTHS:	Full & half randoms available
WEIGHT:	Medium, heavy

For tube size, weight & thickness refer to the vital statistics section.



MALLEABLE IRON FITTINGS

A comprehensive range of British Standard (BS EN 10242) malleable iron fittings are available from stock including a range of Bronze pipe fittings and kite-marked fittings.

SIZE:	6mm (1/8") to 150mm (6") depending on fitting
CONNECTION:	Taper/taper and taper/parallel threads available
TEMPERATURE:	-20°C to 320°C
FINISH:	Black, galvanised

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



FLANGES

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

- SIZE:** Flanges: 15mm (1/2") to 900mm (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
- FINISH:** Black, galvanised

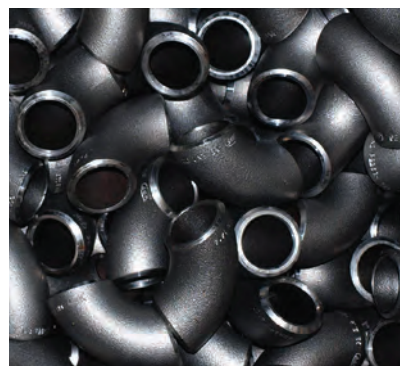
For flange charts please refer to the vital statistics section.



WELDING FITTINGS

A wide selection of butt weld fittings from stock to BS EN10253 (BS1965) to ASTM A234WPB (BS1640) in Std Weight and XS.

- SIZE:** 15mm (1/2") to 600mm (24")
- WEIGHT:** Medium, heavy, standard weight & XS



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).

- SIZE:** Mild steel: 6mm (1/8") to 150mm (6")
Forged steel: 15mm (1/2") to 100mm (4")
- CONNECTION:** NPT, BSP, socket weld end connections
- FINISH:** Mild steel & forged steel



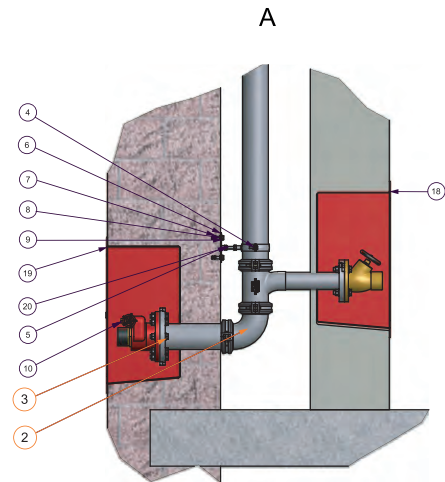
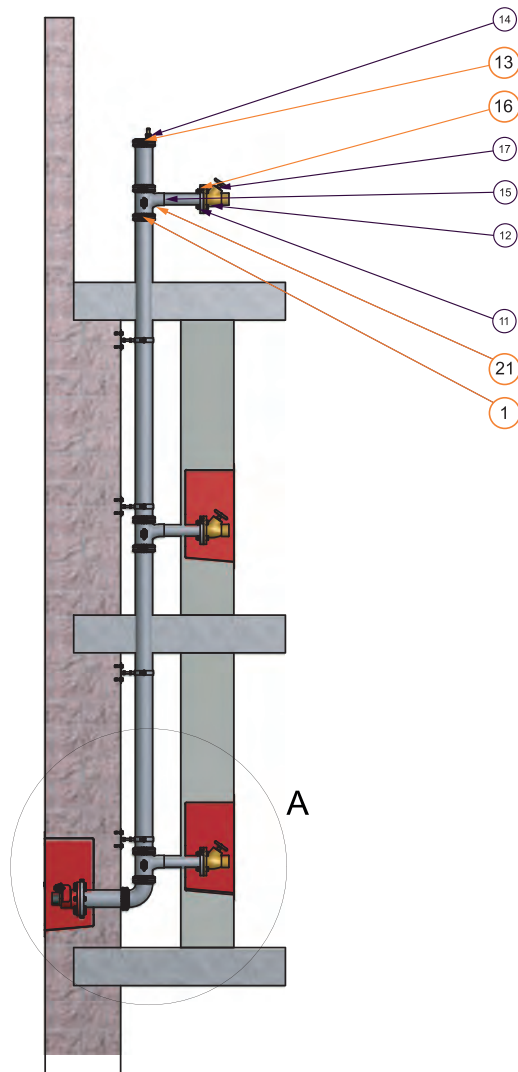
GROOVED PIPE SYSTEM

SBS offers grooved piping products for HVAC and Building Services (Heating, Cooling, Chilled and Potable) through Grinnell which includes pipe couplings and fittings, butterfly and ball valves, strainers, check valves, circuit balancing valves and pipe end grooving equipment. This piping solution is suited to installations within confined areas. Grooved pipe jointing provides a means of installing a clean and maintenance free piping system safely and quickly. Grinnell solutions are utilised in Building Services in many industries including; Hospitals, Universities, Food Processing, Commercial Offices, Airports etc... All products are backed by the industry's leading 10-year limited warranty and are supported by more than 3,000 engineering, sales and manufacturing personnel. Grinnell can offer a stainless steel WRAS approved system to meet the more demanding projects. A typical Dry Riser installation can be seen below highlighting some key Grinnell products regularly used.



SIZE: Diameter: 32mm (1 1/4") to 305mm (12")
 CONNECTION: Grooved
 TEMPERATURE: -34°C to 121°C

INSTALLATION EXAMPLE



POS	GRINNELL PART NUMBER	DESCRIPTION
1	577MA01142	Rigid G-Fire coupling fig 577 EPDM Gasket 4"/100-114.3mm
2	510A001142	2 G-Fire Elbow 90 fig 510 4"/100-114.3mm
3	71DAE01142	3 Flange adapter fig 71 (PN10/PN16) 4"/100-114.3mm
4		Heavy duty pipeclip 4"/100-114.3mm
5		Hexagonal nut DIN 934
6		Base plate 2 holes
7		Zykon anchor non drill
8		Flat washer DIN 125-1A
9		Hexagon head screw DIN 933
10		2 way dry riser inlet breeching
11		Hexagonal nut DIN 934
12		Hexagon head screw DIN 933
13	364M001142	Fig. 364 End Cap with 1" Outlet ISO R7 Drain
14		Air release valve
15		Grooved pipe dia
16	71DAE00762	Flange adapter Fig 71 (PN10/PN16) 2.5"/65-76.1mm
17		2.5" oblique pattern hydrant valve
18		Dry riser landing valve box
19		Dry riser landing valve box
20		Threaded rod DIN 976
21	222V42262	Tee hydrant fig 222 4"x4" x 76.1mm



／ FLEXIBLE GAS PIPE ／

TracPipe is a fully approved (B G Technology approved to BS7838) flexible stainless steel semi-rigid gas piping system used for natural gas and LPG installations, normally between meters and appliances in residential, commercial, and industrial premises. The British Standard (BS7838) and Kitemarked TracPipe is supplied in coils and can be bent by hand so no elbows are required and the number of joints are greatly reduced. The patented AutoFlare end fittings are quick and simple to attach without any special tools, and without any hot work. TracPipe and AutoFlare fittings are available in sizes from DN12 to DN50, and are BSi Kitemarked and BG Technology Approved to BS7838.

SIZE:	12mm (DN12: ½") to 50mm (DN50: 2")
CONNECTION:	AutoFlare
PRESSURE:	Working pressures to 75mbar for: 1 st (manufactured gases), 2 nd (natural gases), 3 rd (LPG-propane, butane) family gases
FINISH:	Yellow
LENGTHS:	Various length coils



／ PRIMOFIT ／

Primofit is a compression fitting made of malleable iron which offers full end load capability ideal for use within the heating, ventilation, air conditioning and now even have a range for gas. No special tooling is required and it is perfect for efficiently connecting smooth-ended steel and PE pipes. Various sealing materials enable pressure-proof connections to be made for a wide variety of applications.

SIZE:	15mm (½") to 76mm (3")
CONNECTION:	Compression
FINISH:	Black, galvanised

ADVANTAGES

- Very versatile connection – suitable for different pipe material and applications
- Quick & easy assembly – low costs
- No special tools or skills necessary
- Dismantling not required (before installation)
- No threads on steel pipe required
- Angular deviation possible
- Can be used in "awkward" places



STAINLESS STEEL TUBE & FITTINGS

SBS supply stainless steel (seamless & welded) pipe, flanges and fixings in grades 303 (1.4305), 304 (1.4301) or 316 (1.4401) for various applications including process, hydraulics, pneumatics, chemical, petrochemical, water, marine and pump.

SIZE: 6mm (1/8") to 300mm (12") – depending on weld or seamless with various wall thickness available

CONNECTION: BSP screwed, butt weld, seamless, compression, end feed, welded

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
- Manufacturer's name or symbol



COPPER TUBE

The copper supplied is EN1057 (BS2871) in plain tube and coils, as well as plastic coated and chrome plated options. SBS are proud to only offer quality copper priding itself on strength and reliability, with most of the stocked tube Kitemark certified with a minimum of a 25 year guarantee.

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



FIELDS OF APPLICATION

- Drinking water
- Gas
- Central heating
- Hot & cold water
- Sanitation

For tube thickness and maximum working pressures please refer to the vital statistics section. Air conditioning and refrigeration copper also available, see page 51 for more information.



／ ENDFEED/ENDBRAZE ／

All branches hold a stock holding of endfeed fittings which are manufactured to BS EN 1254 (BS864), with most of the range guaranteed for 25 years with WRAS approval, for use on both hot and cold water services.

SIZE: Endfeed: 8mm to 54mm
Endbraze: 67mm to 159mm

CONNECTION: Endfeed



／ SOLDER RING ／

An in-depth stock holding of high quality lead free solder ring fittings is available with the majority of stock being WRAS approved to EN1254 (BS864) with a 25 year guarantee for use on hot and cold water services.

SIZE: 6mm to 67mm

CONNECTION: Solder ring



／ COMPRESSION ／

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. A high proportion of fittings are WRAS approved to EN1254 (BS864) with a full manufacturers guarantee.

SIZE: 6mm to 108mm

CONNECTION: Compression



／ PRESS FITTINGS ／

SBS offer press fittings from 12mm to 108mm compatible with V (only up to 54mm), M and SA-profile jaws giving excellent flexibility. The fully guaranteed system with leak path feature offers a pressure rating of at least 16bar with technical gases (non toxic) and water/aqueous solutions. The comprehensive and flexible press fitting range is suitable for all modern building services, providing easy, fast, cost effective and reliable joints.



APPLICATIONS

COPPER (WRAS APPROVED)

WATER AND AQUEOUS SOLUTIONS:

Up to 108mm = 16bar

INFLAMMABLE GASES:

Up to 54mm = 5bar

TECHNICAL GASSES (NON-TOXIC):

Up to 108mm = 16bar

BLACK O-RING (NORMAL PRESS):

-30°C to 120°C

- Drinking water
- Rainwater
- Purified water
- Heating & cooling water
- Fire extinguishing systems
- Sprinkler installations
- Shipbuilding

RED O-RING (SOLAR PRESS):

-20°C to 200°C

(depending on the medium)

- Solar energy thermal
- Fuel oil & diesel fuel
- Compressed air

YELLOW O-RING (GAS PRESS):

-20°C to 75°C

- Natural Gas LPG (up to PN 5)

STAINLESS (WRAS APPROVED)

WATER AND AQUEOUS SOLUTIONS:

Up to 22mm = 40bar

28mm to 35mm = 25bar

42mm to 108mm = 16bar

INFLAMMABLE GASES:

Up to 108mm = 5bar

TECHNICAL GASSES (NON-TOXIC):

Up to 108mm = 16bar

BLACK O-RING (NORMAL PRESS):

-30°C to 120°C

- Drinking water
- Rainwater & Industrial
- Purified water
- Heating & cooling water
- Steam condensate

RED O-RING (SOLAR PRESS):

-20°C to 200°C

(depending on the medium)

- Solar energy thermal
- Compressed air
- Fuel oil plants
- Fire sprinklers
- Industrial applications

YELLOW O-RING (GAS PRESS):

-20°C to 100°C

- Natural gas plants
- Liquid gas plants

CARBON

WATER AND AQUEOUS SOLUTIONS:

Up to 108mm = 16bar

TECHNICAL GASSES (NON-TOXIC):

Up to 108mm = 16bar

BLACK O-RING (NORMAL PRESS):

-30°C to 120°C

- Heating & cooling water

RED O-RING:

-20°C to 200°C

(depending on the medium)

- Compressed air

Refer to pipe application tables in vital statistics to compare all press systems available.



EXPANSION & FLEXIBLE SOLUTIONS

For over 20 years the market leading Engineering Appliances was a distributor for BOA bellows and expansion joints. When Engineering Appliances closed in 2011, BOA set up a UK office to keep supplying the marketplace. The comprehensive range contains expansion joints (including WRAS approved), rubber bellows, hoses, anchors and pipe guides which absorb vibrations and noise, compensate thermal expansion and pressure differences as well as other kinds of movements.

SIZE: Expansion joints: DN 25 to DN 7000
Bellows: DN 3 to DN 125
Hoses & hose assemblies: DN 5 to DN 300

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

TEMPERATURE: -273°C to 950°C

PRESSURE: Absolute vacuum to 300 bar

ADVANTAGES

- Vibration resistance
- Lifetime in excess of 109 cycles
- Cleanliness (clean rooms classed ISO 5, 6, 7)
- Corrosion resistance, whatever the fluid or environmental conditions
- Guides & anchors available for all systems



bsi.
British
Standards

WRAS
APPROVED
PRODUCT



TECTITE

This push-fit system comes in sizes from 10mm to 54mm and provides a heat-free installation with a choice of demountable or non-demountable fittings. When using PEX and PB plastic pipe the correct support liner must be inserted into the pipe. Ideal for applications as diverse as domestic maintenance and refurbishment, new build and large scale public sector projects. The fittings can be used with many different types of materials; copper tube, PEX and PB pipe, and a variety of steel including stainless and carbon.

CARBON

Carbon steel fittings guaranteed for a minimum 5years in sizes 15mm to 54mm ideal for closed circuit heating and chilled water applications but not suitable for gas.

CLASSIC

Demountable fitting WRAS approved and compatible with copper and plastic pipe available in sizes from 10mm to 28mm. Manufactured from DZR brass alloy the range is guaranteed for a minimum of 25years ideal for hot and cold water services in low temperature hot water and heating but not suitable for gas.

SPRINT

Manufactured from copper and DZR brass, it is also WRAS approved and compatible with copper and plastic pipe available in sizes from 10mm to 54mm. The range is guaranteed for a minimum of 25years ideal for hot and cold water services in low temperature hot water and heating but not suitable for gas.

PRO

Demountable fitting WRAS approved compatible with copper available in sizes from 15mm to 54mm and guaranteed for a minimum of 25years but not suitable for gas.

316

Stainless steel WRAS approved fittings in sizes from 15mm to 54mm guaranteed for a minimum of 25years but not suitable for gas.



TUBULAR PIPE & FITTINGS

KEE KLAMP

Kee Klamp are tubular fittings that are galvanised iron castings manufactured to the requirement of BS EN 1562 & 1563. The tubing is slipped into the fitting and locked by a cup-ended socket set screw. A simple hexagon key is the only tool required to give a strong rigid joint.

All components are produced in a range of sizes to suit steel tubing to BS EN 10255 (ISO 65) medium or heavy gauges and 17.5mm to 60.3mm outside diameter. Tube manufactured to other specifications can be used providing the steel is compatible with BS EN 10255 (ISO 65) and the wall thickness is not less than 3.2mm.

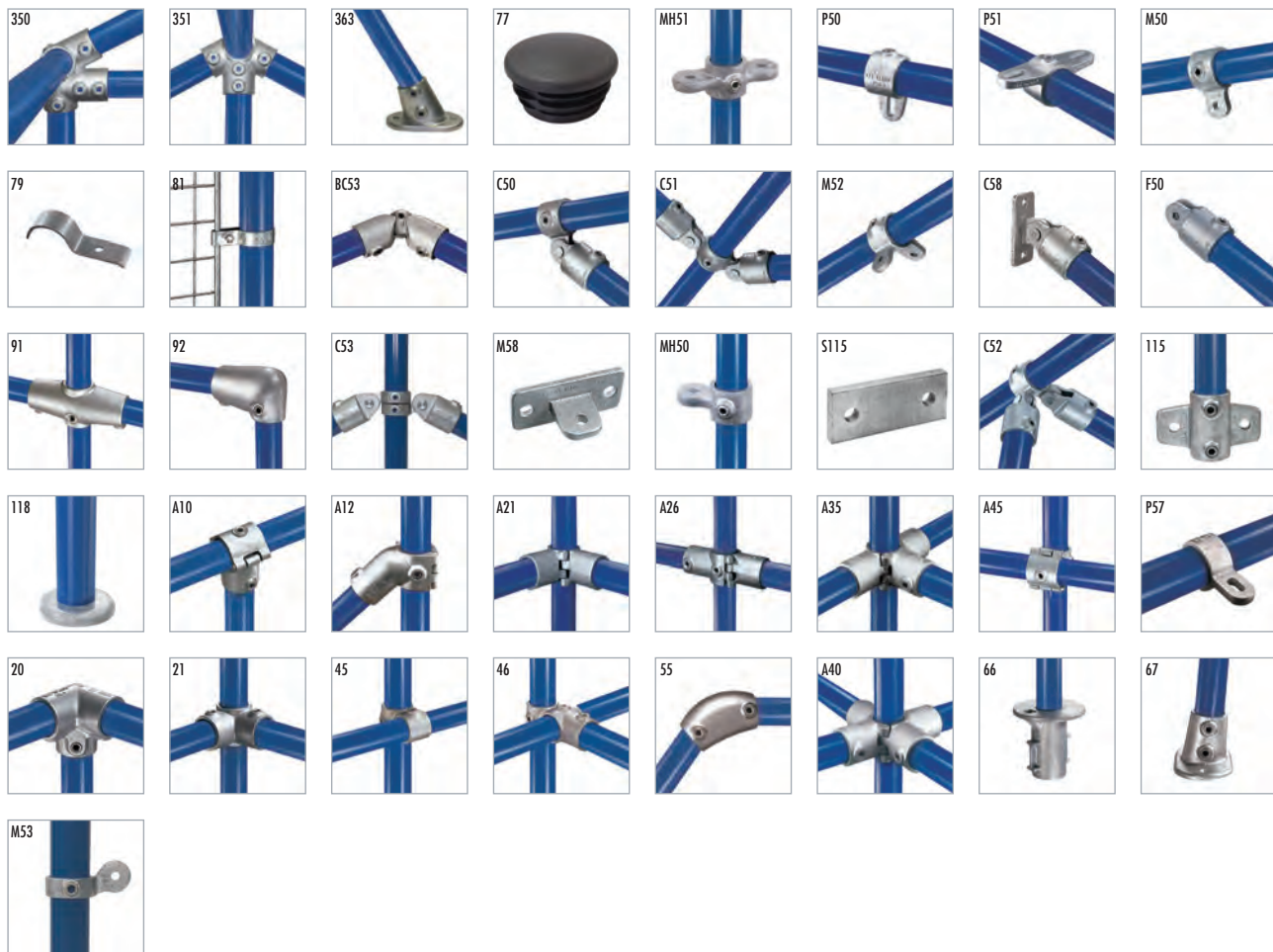
SIZE: Nominal bore: 10mm to 50mm
Outside diameter: 17.5mm to 60.3mm

CONNECTION: Allen key

FINISH: Galvanised

KEE KLAMP SIZE	OUTSIDE DIAMETER	NOMINAL BORE
3	17.5mm	10mm
4	21.3mm	15mm
5	26.9mm	20mm
6	33.7mm	25mm
7	42.4mm	32mm
8	48.3mm	40mm
9	60.3mm	50mm





KEE ACCESS

Kee Access is DDA compliant handrail where the components are designed to create safety handrailing that complies with the UK Disability Discrimination Act (DDA). With Kee Access, the hand rail only comes in tube size 7 with an upright tube size of 8.

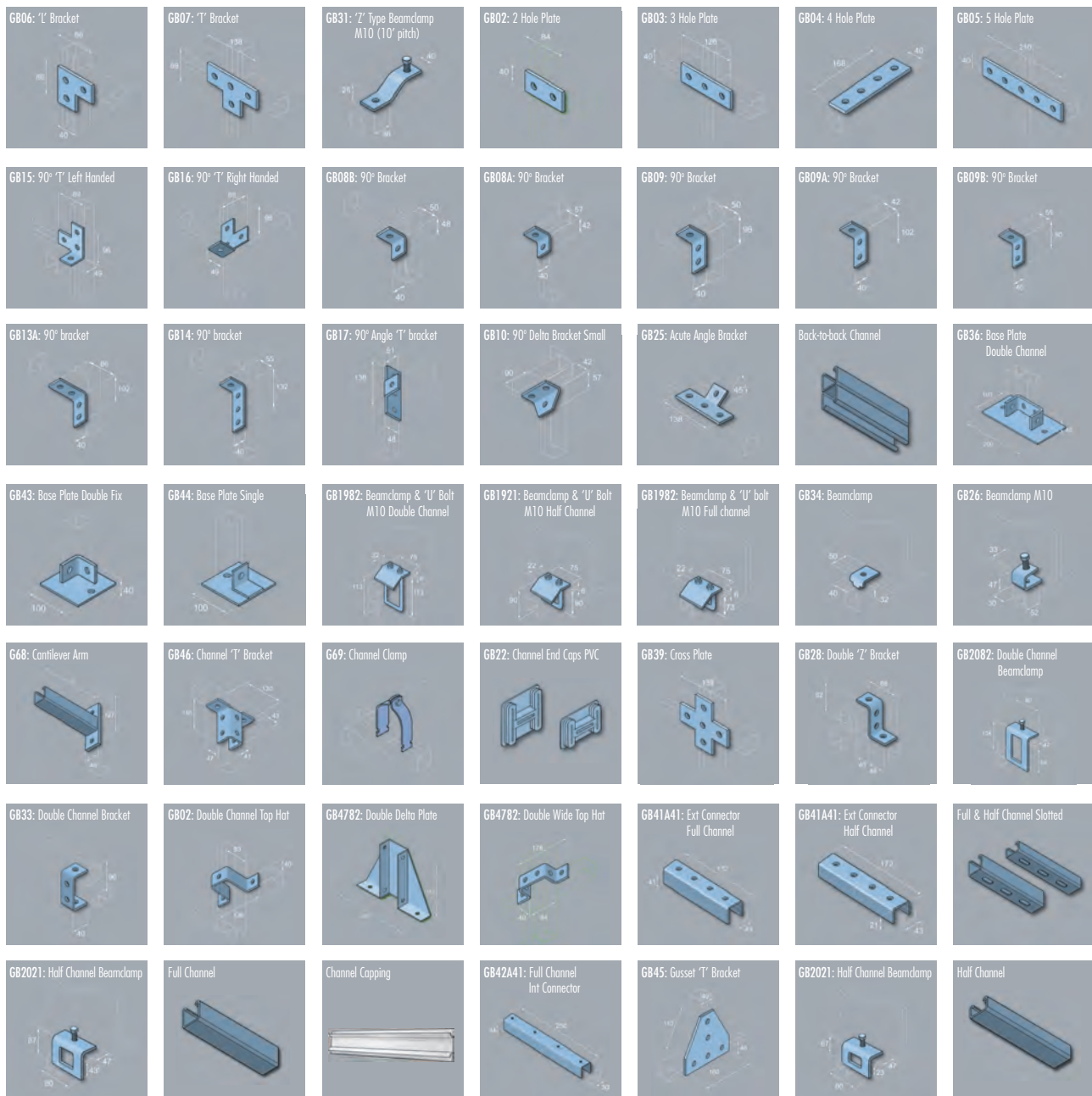


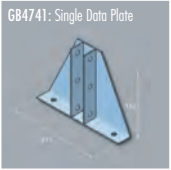
For other Kee safety products please enquire; Guard, Lite, Anchor, Stainless, Dome, Mark.

BRACKETRY

Channel manufactured in accordance with BS6946:1988 available in 3 and 6 metre lengths in plain or slotted profile, back to back profile in both standard and light gauge material. Pre-galvanised finish, full end slots on all sections. All Bracketry manufactured in accordance with BS6946, 6mm thick HDG finish. Channel support system is fully certified in accordance with BSI guidelines.

SIZE: 6mm thick HDG finish
FINISH: Pre-galvanised
LENGTHS: Channel: 3m, 6m lengths in plain or slotted profile in various thicknesses





PLASTIC PIPE SYSTEMS

26

WIDE RANGE OF PLASTIC PIPE SYSTEMS FROM VARIOUS BRAND LEADING MANUFACTURERS AND THE LATEST TECHNOLOGIES WITHIN THE MARKETPLACE.

+GF+  **Speedfit**

 **PLASSON** **EFFAST**

 **aquatechnik**

 **Hep2O**
Handing and Draining Systems

- / EFFAST
- / +GF+
- / MDPE
- / PLASSON
- / MULTILAYER
- / DOMESTIC PUSH FIT

EFFAST

Effast from Polypipe Terrain is a well-established brand name that is recognised throughout both the industrial process market and construction industry. The system is WRAS approved and has been awarded with the BSI Kitemark for demonstrating commitment to delivering consistent quality.



✓ PVC-U ✓

PVC-U (Unplasticised Polyvinyl Chloride) system has high chemical resistance and good flow characteristics, which make it a safe and secure choice for potable water and food products supply. Effast PVC-U is especially well suited to water supply in high rise projects such as apartments, hotels, offices, as well as swimming pools, spas, waste water, coolant and industrial process applications.

- High chemical resistance
- Range of isolating and check valves including actuated options
- Variable area flowmeters (VAF)

SIZE: $\frac{3}{8}$ " to 8" or 16mm to 315mm
 TEMPERATURE: 0°C to 60°C



✓ ABS ✓

ABS (Acrylonitrile Butadiene Styrene) is completely non-toxic, it will preserve the purity of drinking water, food stuffs and beverages for added security and peace of mind. Effast ABS is suitable for industrial process applications as well as water treatment and sewerage projects.

SIZE: $\frac{3}{8}$ " to 8" TEMPERATURE: -40°C to 60°C
 CONNECTION: Solvent weld system



✓ PPH ✓

PPH (polypropylene Homopolymer) piping is widely used in industrial processing. Light in weight with high impact strength and reliable heat fusion welding, PPH offers good abrasion resistance and is a good thermal and electrical insulator. PPH also offers excellent chemical resistance to many aqueous solutions of acids, alkalis and salts, and to a large number of organic solvents.

TEMPERATURE: -10°C to 90°C



✓ PE ✓

PE100 (High Density Polyethylene) pressure pipe system is a fast and reliable solution to the challenges presented by the requirements of modern supply systems. Utilising the benefits of polyethylene jointing technologies and excellent chemical resistance, the system can be used across a wide range of applications including: water supply and distribution, water treatment, cooling water and pressurised waste water systems, as well as for transportation of chemicals.

SIZE: SDR 17: 32mm to 1200mm TEMPERATURE: -40°C to 60°C
 SDR 11: 20mm to 630mm PRESSURE: SDR 17: (10bar)
 SDR 11: (16bar)



+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 /

+GF+ PVC-U systems have been leading the industry for decades through continuous innovation and proven benefits on safety, efficiency and reliability suitable for water, drinking water (WRAS Approved) & chemical conveyance. All aspects required to build, maintain and operate industrial piping systems are covered with PVC-U and is one of the most widely used thermoplastic materials for pipe installations ensuring the highest thermal stability and chemical resistance.

FIELDS OF APPLICATION

Water treatment, marine industry, chemical industry, drinking water, swimming pools, food & beverage production

PRODUCT RANGE

Pipes, fittings, manual valves, actuated valves, pressure safety valves, jointing systems, flow, pH, conductivity, turbidity, chlorine, level, pressure & temperature measurement.

RESISTANT TO

Resistant to acids & alkalis, suitable for drinking, food stuffs & beverages, de-mineralised & de-ionised water, paints, sea water, waste & general.

- SIZE: EN/ISO: 6mm to 400mm
BS Inch: 3/8" to 8"
ASTM/ANSI: 1/2" to 16" ASTM SCH80
- CONNECTION: Tangit (or Dytex for aggressive chemicals) gap filling solvent weld system
- TEMPERATURE: 0°C to 60°C
- PRESSURE: Up to 16bar

/ ABS (COOL-FIT) /

+GF+ ABS has a high impact resistance and an excellent resistance to extreme environmental conditions suitable for water, chilled water, cooling, drinking water (WRAS Approved) & chemical conveyance. It is particularly suitable for use at low temperatures down to -40°C, due to its good insulating properties and requires little or no insulation.

FIELDS OF APPLICATION

Water treatment, Marine industry, Chemical industry, Drinking water, swimming pools, food & beverage production, building services.

PRODUCT RANGE

Pipes, fittings, manual valves, actuated valves, jointing systems, flow, pH, conductivity, turbidity, chlorine, level, pressure & temperature measurement.

RESISTANT TO

Resistant to bases, weak acids & salts, suitable for drinking.

- SIZE: EN/ISO: 16 to 315mm
BS Inch: 3/8" to 8"
- CONNECTION: Tangit gap filling solvent cement
- TEMPERATURE: -40°C to 60°C
- PRESSURE: Up to 16bar

/ PVC-C /

PVC-C (Post-Chlorinated Polyvinyl Chloride) has better mechanical strength and flame retardation performance over PVC-U. The piping system fulfils internationally recognised standards and is WRAS approved with working temperatures up to 80°C and is available in two standards, EN/ISO/DIN and ASTM/ANSI.

FIELDS OF APPLICATION

Hot & aggressive mediums, high temperature, high corrosive environments, chemical industry generally (e.g. mixed acid waste), hot water industrial applications.

PRODUCT RANGE

Pipes, fittings, manual valves, actuated valves, jointing systems, measurement & control, machines, tools

RESISTANT TO

Acids & alkalis at high temps (max 90°C for short periods of time), high concentrations



SIZE: 16mm to 225mm

TEMPERATURE: 0°C to 80°C

PRESSURE: Up to 16bar

/ AQUASYSTEM /

Aquasystem (Polypropylene Random) is a plastic piping system for hot & cold water (WRAS approved) and heating installations. It is an ideal cost effective solution for use in schools, hospitals, hotels, accommodation and office blocks. A wide range of pipe & fittings are available up to d125mm. For larger sizes up to d250mm then Aquabig might meet your requirement. Thermal expansion coefficient (fibre pipe) 0.04mm/mK and thermal conductivity 0.24 at 20°C

SIZE: 20mm to 125mm

TEMPERATURE: 0°C to 95°C

CONNECTION: Socket fusion, electrofusion

PRESSURE: PN20 at 20°C



/ INSTAFLEX /

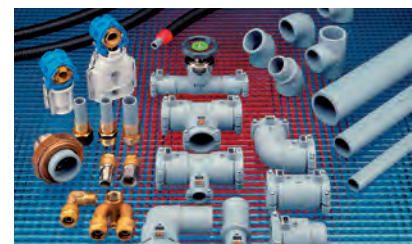
Flexible polybutylene WRAS approved pipe is a fast, economic installation even in awkward shaped & curved buildings. The main areas of application are hot and cold water, cooling systems and compressed air. Instaflex offers a complete solution package for buildings ranging in size from single-family detached houses through apartment blocks right up to public or commercial buildings.

SIZE: 16mm to 110mm

TEMPERATURE: 5°C to 95°C

CONNECTION: Socket, compression, electrofusion

PRESSURE: Up to 16bar



/ COOL-FIT PLUS /

Pre-insulated WRAS approved ABS pipe and fittings with PUR insulation (> 45 kg/m³) and PEHD UV resistant jacket delivered ready to install direct to site. Insulation high density PUR with either a black or white HDPE outer jacket. UV and weathering resistant, water and vapour tight, ideal for indoor and outdoor applications.

SIZE: 25mm to 225mm

TEMPERATURE: -80C to 40C

CONNECTION: Tangit gap filling solvent cement

PRESSURE: Up to 10bar



/ MDPE TUBE /

Can be connected to both copper and plastic pipes (please ensure MDPE pipe inserts for plastic pipes). It can reduce installation time and it carries the BBA and WRAS approvals along with being manufactured to British Standards. Pipe is available in various colours depending on application or requirement such as Yellow (Gas) MDPE, Black (water) MDPE, Blue (water) MDPE and Royal Blue (water) HPPE with fittings to accompany the range.

SIZE: 25mm to 400mm
FINISH: Yellow, black, blue
LENGTHS: 6m lengths & coiled up to 180mm



/ PLASSON /

Plasson offer WRAS approved fittings and valves connecting PE pipe applications for water supply, plumbing, agriculture, landscape irrigation, waste water, industrial/M&E and many other applications. The company is BSEN9001 and DSEN140001 certified providing reliable fittings all around the world.

SIZE: 20mm to 110mm Mechanical,
 20mm to 63mm Push-Fit,
 20mm to 800mm Electrofusion
CONNECTION: Compression, Push-Fit, Electrofusion
TEMPERATURE: -10°C to 40°C
PRESSURE: PN16



MULTILAYER

The WRAS approved Aquatechnik product is one of the safest and most reliable methods for the joining of multilayer pipes present in the marketplace worldwide. The main features of the safety system are: enlargement of the pipe head (coupling process) through a special tool. This process allows the user to put the fitting on the pipe in a simple & quick way offering the highest safety as the pipe is locked on the fitting by an anti-unscrewing cap which avoids any movement and, if necessary, can be unlocked and used again. The whole range of fittings (safety-pol) is completely made in PPSU, with polymer having a high thermo-mechanical resistance with long stability on continuous working conditions and added reliability.

ADVANTAGES

- Total safety in joining pipe to the fitting
- High resistance against impacts
- Higher flowing & less pressure drop
- Quick to install
- Possibility to unlock the fittings & to use them again
- Resistant to lime, cement, plaster, phenomena of electro-chemical aggression
- Complete compatibility to cold & warm drinking fluids
- Low costs & cheap processing tools
- Less processing waste thanks to the reutilisation of the fittings

FIELDS OF APPLICATION

The safety system with the multi-color pipe can be used in all plants for civil house building:

- Conveyance nets & sanitation (rising pipes, interception collectors, traditional conveyance)
- Thermal stations, power to thermal appliances, traditional central heating with modular collectors for the distribution to the heating & conditioning devices, & so on...
- Conditioning & climatisation plants
- Heating & cooling panel plants
- Greenhouse & garden irrigation, nebulizing plants

SIZE:	16mm to 75mm
CONNECTION:	Flared compression
TEMPERATURE:	Up to 95°C
PRESSURE:	Up to 10bar
FINISH:	White
LENGTHS:	Coiled (no memory) & straight lengths



Refer to pipe application tables in vital statistics to compare other systems of multilayer which are available.



DOMESTIC PUSH-FIT

To cater for the domestic plumbing market an extensive range of high quality, reliable and time saving plumbing fittings suitable for domestic hot and cold water applications are available. Speedfit and Hep2o 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 is a plastic push-fit system suitable for the plumbing of hot and cold water services and central heating applications, including pressurised and combi systems. The fittings can be demounted if required, are lead free, and remove the risk of any scale build up. Manufactured to British Standards and Kitemarked the fittings are available in diameters up to 28mm. It is cross linked polyethylene barrier pipe and fittings can be used on both Speedfit and copper pipe, which can offer a complete system for plastic plumbing.



The Hep2O push-fit flexible plumbing system offers a comprehensive range of pipes and fittings in 10, 15, 22 and 28mm nominal diameters for domestic water supply and heating applications on both plastic and copper pipe. The packaging is now colour coded, 10mm green, 15mm blue, 22mm purple and 28mm orange and has 50 year guarantee and has secure demounting. The polybutylene pipe has changed to white but remains extremely flexible.



VALVES & DRAINAGE

33

A RANGE OF VALVES TO SUIT EVERY APPLICATION ALONG WITH DRAINAGE FOR BOTH ABOVE AND BELOW GROUND.



- / CRANE & HATTERSLEY
- / PEGLER YORKSHIRE
- / SBS RANGE
- / ALTECNIC
- / AUTOMATIC/DYNAMIC
- / STEAM/SAFETY VALVES
- / RADIATOR VALVES
- / SOIL & WASTE
- / DRAINAGE
- / PUMPED WASTE
- / WATER TREATMENT
- / MCALPINE

CRANE & HATTERSLEY

The comprehensive range of Crane & Hattersley valves are synonymous with quality, reliability and service to the very highest standards. The valves are used on a wide range of sectors and applications including mechanical services, heating & ventilation, chemicals, textiles, drugs, waste treatment and power generation sector. They are market leading brands and approved manufacturers under various independent quality schemes, including the British Standards Institution (BSI) Kitemark, ISO9001 accredited and approved by WRAS. Crane has recently added pressure independent control valves (PICV) & differential pressure control valves (DPCV) to their range.



PRODUCT RANGE

Ball, gate, globe, check, commissioning, butterfly, strainers

SIZE: 1/8" to 24"

CONNECTION: Threaded, compression, flanged, grooved

TEMPERATURE: -10°C to 288°C

PRESSURE: Up to 64bar (often dependent on size)

FINISH: Bronze, cast iron, ductile iron, stainless, DZR, malleable iron



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



PEGLER YORKSHIRE

Pegler Yorkshire has been a major force in valves and fittings for over 100 years and their commercial valves package for the HVAC market is built upon the unique strengths in design and manufacture accumulated over this period. Pegler Yorkshire has pioneered the market by introducing both press & push fit end connections, offering significant installed cost savings. They are dedicated to designing, developing and manufacturing products of the highest quality. Their products, where applicable, comply with the relevant British, European and International standards. Whatever the latest developments, they guarantee that the products will always meet the latest and highest standards.



PRODUCT RANGE

Gate, commissioning, globe, check, butterfly, quarter turn ball valves, strainers, ballomax, ballofix, thermal circulation valves

SIZE: 1/4" to 12"

CONNECTION: Press-fit, push-fit, threaded, compression and flanged

TEMPERATURE: -40°C to 165°C

PRESSURE: Up to 40bar (often dependent on size)

FINISH: Brass, plastic, cast iron, stainless, bronze, DZR



/ SBS RANGE /

With a growing reputation for quality and reliability, SBS valves offer an established brand of commercial valves providing our customers with a trusted alternative to premium priced products whilst conforming to standards such as WRAS. We stock a full range of valves for the building services and industrial markets.

PRODUCT RANGE

Ball, gate, globe, check, commissioning, PICV, DPCV, ABV, butterfly valves, strainers

SIZE: 1/4" to 16"

CONNECTION: Press-fit, threaded, compression, weld, flanged

TEMPERATURE: -25°C to 230°C

PRESSURE: Up to 25bar (often dependent on size)

FINISH: Brass, plastic, cast Iron, stainless, bronze, DZR, Cast Steel



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



/ ALTECNIC /

Altecnic's range has potential to meet every requirement for every application and meets relevant legislation and environmental standards. With more than a decade of experience in meeting specifiers', stockists' and installers' needs, Altecnic can offer competitively priced products to meet cost conscious applications whilst complying with current standards such as WRAS and company backed by BSI ISO 9001 and BSI ISO 14001 quality certification.

PRODUCT RANGE

Mixing, PRV, radiator, safety relief, RPZ, double & single check, NRV, ball gate, meters

TEMPERATURE: Up to 110°C

PRESSURE: Up to 16bar



/ AUTOMATIC / DYNAMIC BALANCING VALVES /

FlowCon has more than 50 years of HVAC market experience and are devoted to dynamic flow regulation and pressure independent temperature control. FlowCon's evolution into a provider of advanced commissioning technology began with the development of their first generation of automatic balancing valves in 1993. The company is recognised by BSI with the ISO 9001 certification.

ADVANTAGES

- Eliminates overflows in variable flow systems
- Accuracy unaffected by dirt or debris
- Interchangeable orifice allows easy adjustment
- Quick & easy to install with reduced commissioning time
- Simple selection and identification of flow rate
- Requires fewer valves than traditional DRV's
- Can be fitted adjacent to bend or fitting in pipe
- Maintains constant flow independent of pressure with silent operation in all conditions
- No need to recommission after alterations & systems can even be partially commissioned



PRESSURE: Up to 24bar



/ STEAM / SAFETY VALVES /

When it comes to hot water, steam or air pressure the greatest priority is safety and then control, which is why SBS has chosen to work with market leading manufacturers offering the highest quality products to make sure our customers are never let down when it comes to performance.

SPIRAX SARCO

The comprehensive product range covers the entire steam and condensate loop, from blow down valves and steam trap stations with 10 year warranty's, to bespoke packaged systems and sustainable boiler houses. The company is recognised by BSI with ISO 9001 and 14001 for added creditability.

SIZE: 1/4" to 4"

CONNECTION: Screwed & socket weld, butt weld, flanged

TEMPERATURE: -254°C to 425°C

PRESSURE: 0.1bar to 40bar

NABIC

Nabic safety valves are ideal for hot water supply, heating, pump relief, bypass relief, outside installation and for use with different gases and liquids. The company is recognised by BSI with ISO9001 and 14001 for added creditability.

TEMPERATURE: Up to 260°C

PRESSURE: 0.15bar to 24bar



／ RADIATOR VALVES ／

To compliment the stock of radiators SBS can provide high quality angle and straight manual & thermostatic radiator valves specifically designed to meet the requirements of both domestic and commercial markets where performance & reliability are paramount.

BELMONT

Belmont radiator valves have long been the most trusted and respected in the industry for quality, design, reliability and overall value for money with the valves being designed for use on commercial through to residential properties, including combi boiler installations. The Belmont TRV benefits from a frost setting where the valve is opened automatically at 7°C to prevent the system freezing. It has a built-in patented tamper-resistant feature that is key operated. The TRV also employs a patented 'lift and lock' operation which prevents accidental adjustment.

ADVANTAGES

- Frost setting at 7°C
- Positive shut off for maintenance purposes
- Range limiting locking customised temperature setting
- Approved to EN 215
- Matching manual radiator valves
- Horizontal & vertical mounting
- Patented unique lift & lock
- Tamper-resistant mechanism
- Bi-directional flow

SIZE: 15mm to 22mm

TEMPERATURE: Up to 120°C (Control range: 11°C to 29°C)

PRESSURE: Up to 10bar



MISTRAL

Often sold as a TRV and lockshield pack, they are also available as TRV only if required. Although 15mm is where the bulk of the stock is kept, the product is also available with 8mm and 10mm connections.

ADVANTAGES

- Temperature setting from 7°C to 28°C
- Frost setting at 7°C (preventing freezing)
- Nickel plate finishing
- Bi-directional flow
- Compression ends to EN1254

SIZE: 8mm to 15mm

CONNECTION: Compression

TEMPERATURE: Up to 120°C (Control range: 11°C to 29°C)

PRESSURE: Up to 10bar



In addition to those stated, SBS have relationships with a list of bespoke/specialised manufactures so have the facility to source the more unusual valves from leading manufacturers from around the world as and when required.

SOIL & WASTE

SBS have been working closely with Polypipe Terrain so the relationship in turn offers better service to our customers, which is now tangible with SBS being classed as a 'specialist' Terrain merchant. Terrain operates across commercial, residential, retail, multi-occupancy and public sector development projects with systems above & below ground. Terrain are uniquely able to support the design and installation of such systems:

ABOVE GROUND

Conventional soil & waste systems, alternatives to traditional cast iron, chemically resistant, acoustic systems

RAINWATER

Gravity & siphonic systems

UNDERGROUND

Surface water drainage & sewerage systems

Our Terrain range offers many solutions with large stock levels within the 'soil and waste' range. The range is often in demand because of the small footprint of products giving space savings, ideal for pre-fabrication with a high quality finish. The innovative products of solvent, push-fit & waste solutions give many installers flexible options.

ADVANTAGES

- Solvent-welded & push-fit options for both soil & waste drainage
- Also available for use on rainwater systems
- Traps & WC pan connectors

Terrain Solvent Weld offers a great way to achieve a permanent joint, and is a complete and comprehensive system with flexibility for design using the Terrain unique fittings. Terrain push-fit 'soil & waste' system gives a comprehensive range of socketed pipes and fittings for all designs. Along with soil & waste we supply a full range of Terrain which includes:



- Rainwater, underground, acoustic, Effast
- Polypress, rainwater harvesting, fuze
- Others upon request

SIZE: Soil: 82mm to 160mm
WASTE: 32mm to 50mm
OVERFLOW: 19mm
CONNECTION: Solvent Weld, push-fit
FINISH: Grey, black, white, rustic brown

For jointing guidelines with the Terrain products go to the vital statistics section for extra assistance.

Alongside the Terrain brand we also have access to Polypipe products if required along with their underfloor heating solutions.



DRAINAGE

Alumasc's Harmer range provides a single source for innovative drainage solutions that are designed to perform and engineered to last. Covering everything from soil drainage to internal water drainage, there's the system to suit any plumbing need for construction projects of all kinds, with the Harmer range offering market-leading drainage solutions that can meet and exceed expectations. From cast iron drainage pipes to gully drainage, channel drainage and everything in between, Harmer are able to accommodate and offer the ideal solution.

SIZE: 50mm to 300mm
FINISH: Cast iron
LENGTH: 3m



/ PUMPED WASTE /

Saniflo range can pump waste and water vertically or horizontally, through small bore pipework of 22/32mm diameter to existing drainage. To cater for the commercial market Saniflo now have a 'Professional Range'. This comprises seven products that are tough enough to perform in some of the most demanding situations where it is necessary to deliver waste water over a distance of 100m or vertically to a height of 11m using small bore discharge pipework.

SIZE: Can be pumped vertical up to 5m and horizontal up to 100m



/ WATER TREATMENT /

A range of water treatment is available from the simple to complex products for both domestic and commercial applications.

PRODUCT RANGE

- Water filtration
- Scale inhibitor
- Scale reduction
- Water conditioners
- Water softening
- Reverse osmosis
- Ultra violet disinfection
- Chlorine dioxide



/ MCALPINE PLASTIC WASTE /

Market leading McAlpine waste and fittings have an extensive range of plumbing products to meet market conditions and customer demand. Being a member of the British Standards Institution the quality is assured in the products from traps to fittings. The majority of trap outlets and fittings have multifit connections which suit plastic waste pipes, copper pipe (metric or imperial) and lead pipe.

SIZE: 1 ¼" (32mm) to 2" (50mm) – other sizes available on different products and upon request

CONNECTION: Multifit or Universal (compression)

FINISH: Plastic (white) & chrome



COMMERCIAL HEATING & PLANT

COMMERCIAL HEATING FOR ALL APPLICATIONS INCLUDING ALL THE NECESSARY PUMPS AND SYSTEM EQUIPMENT.



- / BOILERS
- / WATER HEATERS
- / CYLINDERS
- / PUMPS
- / PRESSURISATION UNITS
- / BOOSTER SETS
- / DOSING POTS
- / DIRT/AIR SEPARATORS
- / EXPANSION VESSELS
- / METERING
- / RADIATORS
- / TOWEL RAILS
- / HEATERS
- / INFRARED HEATING

/ BOILERS /

SBS partner a number of commercial boiler manufacturers making sure there is an appliance for every application. All condensing boilers meet both environmental and economical demands by coupling high efficiency with low emissions.

SIZE: Up to 20,000kW

CONNECTION: Wall hung, floor mounting



See vital statistics section to see the comparison chart for your desired model



/ WATER HEATERS /

Commercial electric water heating products, both vented and unvented from 5 to 250 litre capacity are available. This is supplemented by a range of instantaneous water heaters and a wide selection of water chillers. Our range covers hot water requirements from small basin applications up to large washrooms, sports club shower rooms or hairdressing salons and even complete stadiums and office blocks.

SIZE: 5ltr to 250ltr

TEMPERATURE: Up to boiling point

PRESSURE: 1 bar to 7bar



/ WATER CYLINDERS /

Water heaters have developed significantly over recent years offering high efficiency capable for either commercial or industrial applications. Offering CE marked and WRAS approved products SBS are confident the products meet expectations for reliability, efficiency and cost effectiveness for the UK market.

FEATURES

- CE marked & WRAS listed units available
- Excellent efficiency
- Long Guarantee's available
- Products for the Commercial and Domestic Markets
- Various sizes of capacity available
- Special 'tank-in-tank' concept available delivering outstandingly reliable performance

SIZE: 70ltr to 2,500ltr

PRESSURE: 0.1 bar to 15bar



For additional support on replacement and new water cylinders please refer to vital statistics section.



/ PUMPS /

To compliment our pipework SBS deal with the brand leading manufacturers for any pumping requirement in various applications such as; domestic building, commercial building, fire protection, industrial, water supply and waste water. A small insight into the extensive range of efficient & energy saving pumps available are listed below;

PRODUCT RANGE

- Circulator (ErP compliant)
- Bronze
- In-line centrifugal
- End suction
- Sump
- Multi-stage

SIZE: 32mm to 100mm

CONNECTION: Flanged, Screwed

To help convert new, old and different model pumps a conversion chart is available in vital statistics to help with replacements and new pumps.



bsi.
British Standards

/ PRESSURISATION UNITS /

SBS offers a wide range of high quality pressurisation units that provide a solution for replenishing water into sealed system heating and chilled water installations, from a small domestic/light commercial system to a large industrial high-temperature or district heating system. Models can come with either digital or dial (analogue) displays, single and two pump versions, boxed (cabinet) or open units and even small compact versions for small spaces.

SIZE: From small compact analogue units to large two pump digital units



/ BOOSTERS SETS /

With the ever increasing demand for more water and constant pressure, along with the fact Water Authorities only guaranteeing a pressure of 1 bar at a simultaneous flow of 9 litres/min, buildings of three levels or more will often require a booster set. Solutions are available for all types of installation from domestic to large industrial applications, even WRAS approved cold water booster sets. Models vary from a single pump, constant speed set, to multiple pumps, variable speed, inverter controlled sets.

SIZE: Cold water break tanks up to 2,000ltrs



/ DOSING POTS /

Dosing pots are installed in a heating or cooling system to allow rapid introduction of water treatment safely for the prevention of sludge, limescale and corrosion. The ideal location is where there is a high differential pressure between the flow and return pipework or heaters. The range has both mild steel weld and stainless steel construction supplied fully assembled ready for installation on site. A non return valve has been fitted for additional safety due to its anti flash protection.

SIZE: 3.5ltr to 50ltr

TEMPERATURE: -10°C to 120°C

PRESSURE: 0.5bar to 14bar

FINISH: SBS blue & stainless steel



43

/ AIR & DIRT SEPARATORS /

The range of separators available from SBS are designed to automatically remove dirt and air from heating, cooling and process systems, ensuring optimum performance of your equipment at all times. These should be installed in all buildings and can be retro-fitted into existing systems, to provide economic and environmental benefits. Separators should be installed in any sizeable open or closed loop system, including chilled water systems, condenser water systems, and process water systems.

ADVANTAGES

- All units feature a stainless steel internal element which is guaranteed for life.
- All units are designed and manufactured in accordance with pressure equipment directive 97/23/EC, 1997.
- Larger units up to DN600 are available upon request.

SIZE: DN50 to DN300

CONNECTION: PN16 (others available upon request)

TEMPERATURE: Up to 110°C

PRESSURE: Up to 10bar

FINISH: Carbon steel with stainless steel internal element



EXPANSION VESSELS

The expansion vessels for heating and potable water applications are manufactured in Italy and use only the highest grade materials to ensure long and reliable life. Each vessel is individually tested and finished in bright red epoxy paint for durability. Sizes of 750 upwards are Grey in colour complete with built in pressure indicator. All units are fully compliant with European standards and meets all PED directives.

SIZE: 8mm (1/4") to 300mm (12")

TEMPERATURE: 99°C

PRESSURE: All pre set at 1.5bar, 8bar max up to 24ltr,
10bar max 35ltr up to 500ltr

FINISH: Red epoxy paint, grey, white (potable water)



METERING

Working with leading suppliers of metering products SBS can offer meters for the building services, process and agricultural markets along with a wide range of meters suitable for residential to hygienic applications.

PRODUCT RANGE

- Gas: turbine, rotary, diaphragm
- Energy: ultrasonic, turbine, heat (RHI Compliant)
- Water: hot, cold
- Electricity: multi-functional
- Oil (suitable for oil, naphtha, diesel, petrol)
- Steam (suitable for saturated steam, solvents, water, de-mineralised water, compressed air, gases) rotary, diaphragm



/ RADIATORS /

Part of the Ideal Group, Stelrad offers the widest range of steel panel radiator styles and sizes in the UK and also has a comprehensive selection of designer products and towel warmers, not forgetting our market leading low surface temperature radiators. With radiator heights up to 2200mm and width/lengths up to 3000mm, all size requirements can be met. Outputs are as low as 190 Watts (648 BTU's (Delta T50)) up to 6,276 Watts (21,419 BTU's (Delta T50))

Compact and Elite were the first radiator ranges in the UK market to have a ten year guarantee. All products conform to EN442, the European Standard for radiators, and are manufactured in ISO 9000 certified facilities. The products are pressure tested to 10.5 bar to assure weld integrity and a thorough leak testing regime, followed by a four stage inspection process. Every radiator undergoes a two stage painting process to give an exceptionally hard-wearing finish.

ELITE

UK's most popular radiator, perfect solution when maximum heat output is needed from a steel panel radiator

COMPACT

UK's best selling and most comprehensive range of compact radiator ideal for any situation where space is at a premium

PLANAR

Minimalist radiator, slim & smooth for a stylish finish

CONCORD

Sophisticated highly efficient radiator with excellent size flexibility

LST

Low Surface Temperature range from Stelrad is the most comprehensive in the UK, with sizes and models to suit all applications. They all meet NHS guidance for 'Safe hot water and surface temperature' and are finished with anti-bacterial paint as standard, excellent for safety critical environments. Installation is simple and all components are included in a single robust pack.

SIZE: Up to 2200mm height & 3000mm width/lengths

TEMPERATURE: 190W (648 BTU's (Delta T50))
Up to 6,276W (21,419 BTU's (Delta T50))



To compliment our range of radiators, rad valves are also stocked which can be seen on page 37.



/ TOWEL RAILS /

Heated rails have not only brought a greater amount of comfort to the towel user but also fulfil an additional important function, they heat the room. Bathroom heating has always been treated with a certain amount of caution due to the health and safety considerations regarding water and electric. The heated rails of today are the epitome of safety and the advanced earthing techniques make them the most popular bathroom appliance anywhere. With a number of suppliers available, SBS can provide a towel rail to suit any needs or look at our Infracomfort infrared heated mirrors as an alternative solution.



HEATERS

In partnerships with brand leading manufacturers, an extensive range of heating equipment is available through SBS. With such focus on the energy sector, maximising control, while minimising running costs and heat loss is key within any heaters. A small selection of the range SBS supply is highlighted below with various approvals supporting their products.



UNIT HEATERS (FLOOR STANDING, CABINET AND OPEN)

Unit heaters can be installed in the widest variety of locations, from factories and warehouses to exhibition halls and showrooms. The two discharge options – downward or horizontal – meet all likely space configurations. Downward discharge is particularly suited to complex areas where obstacles might impede airflows from a horizontal unit. However the horizontal discharge units, with high adjustability, they are ideal where directional heating (eg along production lines) is required.

Most unit heaters can operate with low, medium or high pressure from hot water and steam. This means that most existing factory or commercial units need no major or expensive capital installation, before an effective heating solution can be found.

ADVANTAGES

- Increased comfort
- Extensive range
- Tried, tested and trusted over many years
- Simple to install
- Control flexibility
- Natural gas, oil or LPG fired options
- Ideal for most industrial and commercial applications with large range of heat outputs and burner options.
- CE approved gas models available

SIZE: 10kW to 300kW

To assist with model sections see vital statistics section.



DESTRATIFICATION FANS

With any conventional air heating system warm air will rise to roof level by natural convection. In high buildings such as factories, warehouses and sports centres, this can result in high temperature gradients and consequently increased energy usage. Destratification fans reverse the natural convection process, recirculating warm air back to working level providing a permanent reduction in roof space temperature and uniform temperature distribution.

ADVANTAGES

- Ease of installation
- Low running costs
- Reliable in operation with minimum maintenance
- Extremely effective heat distribution
- Variety of paint finishes available upon request



RADIANT HEATERS

Easily installed and requiring minimal maintenance, these gas heaters provide clean, quiet, energy efficient heat. Ceiling mounted and aesthetically pleasing, these heaters are available in a variety of sizes and designs.

ADVANTAGES

- Broad range of inputs and tube lengths to fit a variety of building sizes and floor plans.
- Durable components help provide long equipment life.
- Ceiling mounting options.
- Detailed installation, commissioning, operation and service manuals to assist in reducing installation and service time.
- Deep-dish, parabolically-designed reflectors with end caps help maximise energy reflection & minimise heat loss by convection.
- Reflectors can often be tilted or side reflectors can be added to concentrate heat where needed.
- Quick fix couplings and hangers provide ease of installation.
- Natural gas or LPG models available.
- Unit can be CE design certified to meet industry standards.

For comparison chart for your desired model please refer to the vital statistics section.



AIR CURTAINS

An air curtain does not act as a physical barrier, but is designed to retain air conditioned or heated air, reduce cooling or heating loads while allowing the use of an 'open door' policy & keeping smells and other contaminants out. Applications can be retail premises, sales outlets, cold stores, busy main entrance, busy warehouse & reception areas. With any air curtain it is essential that the 'jet' of air reaches the floor and covers the entire door width. An air curtain should therefore enhance comfort and save energy.

ADVANTAGES

- Increased comfort
- Energy savings
- Tried, tested & trusted over many years
- Simple to install – plug & play
- Control flexibility

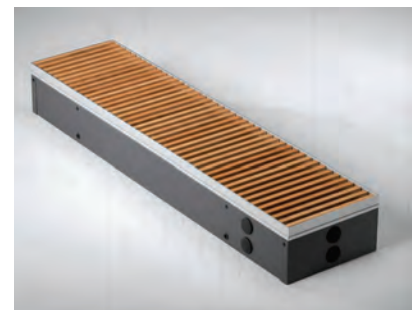
SIZE: 9kW to 60kW



TRENCH HEATING

Trench heating is very discreet, frees up floor space and does not obscure vision through any glazing. It also reduces the liability for accidental damage and requires minimal maintenance. However if space beneath the floor is restricted or the floor is solid, low level floor-mounted perimeter heaters or runs of continuous above-floor perimeter heating may provide the answer. Perimeter heating provides all the benefits of trench heating, circulating and heating cool air from windows, minimal dimensions and it works well in situations where trench heating cannot be installed.

SIZE: 100kW to 1800kW (Individual units)



INFRARED HEATING

Infracomfort is the electric infrared heating system which can be used anywhere and everywhere, like a normal radiator. Our bodies find natural radiation (Infrared heating) to be the most comfortable, because this is how the sun heats us. Although the product gets used a lot during initial building phase, the panels can be retro fitted and have often been part of refurbishment projects. The luxury panels have improved the experience of heating by making it more comfortable, healthier with no maintenance along with being up to 70% energy saving* against other heating systems.

*For more details on panel sizes and options, the benefits, energy savings, case studies and panel customisation available, please visit www.infracomfort.co.uk.

For sizing call the infracomfort team on 03303 321600 or visit www.infracomfort.co.uk/calculate-your-size

As a general rule of thumb, 1 'infracomfort' watt equals 9 BTU's or 2.64 watts as a convection heat conversion.

INFRACOMFORT HEATING VS CONVECTION HEATING



NO AIR CIRCULATION

As seen above, infrared heats all areas of the room equally, so energy usage is efficient because energy is not heating inaccessible/unwanted areas (ceiling). This characteristic makes the heating very comfortable to live in.

REDUCED HEAT LOSS & LOWER ROOM TEMPERATURES

Infracomfort heats elements within the room unlike convection heating, meaning heat loss is far less when compared. With even room temperatures an area can be heated 2°C less than convective heat with uneven temperatures. Both factors are great energy saving characteristics.

EASY INSTALLATION WITH NO MAINTENANCE

Installation as mentioned above is extremely flexible and is also quick, whether pre build or retro fit. With a life cycle of 30 years and 5 years warranty with no ongoing maintenance required after installation, it gives the installer peace of mind.

SIZE: 120w to 710w

CONNECTION: Electric

FINISH: Aluminum, glass, plaster



AIR CONDITIONING & ANCILLARIES

A FULL RANGE OF AIR CONDITIONING AND REFRIGERATION ANCILLARIES AVAILABLE FROM SBS.

LittleGIANT

Armaflex®

DAIKIN



- ✓ AIR CONDITIONING
- ✓ ROOF TOP SUPPORT & PROTECTION
- ✓ ANCILLARIES

AIR CONDITIONING

Daikin is regarded by many as a leader in the air conditioning field. The manufacturer's air conditioning products are known for their reliability, efficiency and excellent design. They can provide users with integrated climate control solutions for domestic, commercial and industrial applications. With dedicated Daikin experts for our air conditioning sales, SBS can offer excellent service with high levels of product knowledge.

PRODUCT RANGE

SPLITS

FTXS (wall)
 FVXS (floor)
 FTXG (emura)
 FLXS (floor or ceiling)
 FVXG (nexura)

SKY AIR

FAQ (wall)
 FHQ (1 way)
 FCQG (roundflow)
 FBQ (ducted)
 FVQ (floor)
 FFQ (compact) FUQ (4 way)
 FDXS (slim ducted)

MULTI

2 port
 3 port
 4 port
 5 port

TWIN/TRIPLES/QUAD

RZQSG71-140
 RZQ200
 RZQG71-140
 RZQ250

VRV INDOOR

FXZQ (roundflow cassette)
 FXCQ (2 way blow cassette)
 FXHQ (ceiling suspended)
 FXDQ (small & slim ducted)
 FXMQ-P (high static ducted)
 FXMQ-MF (fresh air processing ducted)
 FXLQ (floor mounted cased)
 UK.FXDQ (low Level wall mounted)
 FXZQ (600 Sq 4 way blow cassette)
 FXKQ (1 way blow corner cassette)
 FXUQ (under ceiling cassette)
 FXSQ (ducted with inverter fan)
 FXMQ-MA (large 20/25kW ducting)
 FXAQ (wall mounted)
 FXNQ (floor mounted chassis)

VRV OUTDOOR

RXYSQ (mini)
 REYQ (3 pipe)
 RWEYQ (water cooler)
 RQYQ (R22 2 pipe)
 RYYQ (2 pipe), REYAQ (hotwater)
 RQCEQ (R22 3 pipe)

VAM/VKM UNITS

Total heat exchanger (ventilation)



THE END OF R22

After 2014, all sources of R22 will be banned, so any equipment requiring R22 gas will become redundant. This is because new refrigerants, such as R-410A, can transform performance, making the latest R22 replacement systems 40% more efficient in cooling than older R22 systems. Using a drop in refrigerant may seem like a simple answer, but this is only a short term solution which comes with increased risks of system failure, higher running costs and without the backing of a manufacturer's warranty. Instead Daikin UK offers a complete range of R22 replacement options that are easily installed and much more energy efficient.

Daikin R22 replacement solutions utilise R-410A, which has zero ozone depletion potential. The R22 replacement upgrade automatically cleans the piping of an existing R22 system so it is suitable for reuse and charges it with R-410A refrigerant. As a result, no new copper piping is required. This innovative solution minimises waste and increases energy efficiency, thus reducing CO2 emissions.



ROOF TOP SUPPORT & PROTECTION

With the increasing need to mount plant equipment safely, especially when on a roof top, Flexi-Foot system offers a flexible solution for spreading load, anti vibration and cable tray runs to keep everything safe and tidy. Health and safety regulations have meant walkways, step over platforms, and roof edge protection (Kee Guard) have become extremely popular. Kee Guard meets the requirements of the 'Working at Heights' regulations and is a modular free standing rooftop guardrail system which does not penetrate the roof membrane. This group of products has been a valued addition to support installers of our Daikin units on roof tops.



AIR CONDITIONING ANCILLARIES

To compliment our Daikin stock SBS now supply air conditioning and refrigeration ancillaries to offer a total solution. With the infrastructure 100+ years experience comes with, the customer has a distributor with history and experience fulfilling every market demand. A snapshot of the stocked range is highlighted below with various approvals attached to the different products;

COPPER

All copper conforms to PED and meets British Standard (EN12735) for quality copper tube in both hard straight lengths or soft coils.

- COIL: 1/4" to 7/8" 15m & 30m
- STRAIGHT: 3/8" to 1 3/8" 3m & 6m
- FROM: 18 to 22 gauge

LAGGING

A full range of lagging is offered to suit all sizes of copper which can reduce energy losses up to 87% along with preventing condensation, mould and bacteria. Lengths, bags and boxes all offered with various thickness to suit all requirements.

PUMPS

SBS offer a wide range of pumps which continue to make the installer's life easier whilst offering the most reliable condensate removal pumps available. There are many benefits to using a condensate removal pump over gravity, with four different types:

- Piston
- Peristaltic
- Centrifugal
- Diaphragm

SUPPORT SYSTEMS

Mounting blocks for various loads and anti-vibration pads with normal or lightweight options. The flexi-foot support system is also available with strut which can be custom built to support any unit requirement.



PIPE CLAMPS, FIXINGS & STEEL

SBS has a range of BBJ and cushion clamps along with unlined and rubber lined clips to support our full range of steel components.



TRUNKING

In stock is both 70mm and 105mm trunking with all fittings and components manufactured to high quality to give a professional finish.



ACCESSORIES & ELECTRICAL

Brackets, condensing guards, unit trays for all size and weight units are available with supporting rotary isolators, switch fuses, both metal and plastic, for outdoor or indoor use.

ANCILLARIES

The usual stock of sundries is kept such as; cable ties, mapp gas, silicone sealants..etc..



RENEWABLES

WITH THE EVER INCREASING FOCUS FROM BOTH GOVERNMENT LEGISLATION AND SOCIAL PRESSURE, A RANGE OF RENEWABLES FROM SBS IS OBTAINABLE AS A SUSTAINABLE FUTURE IS BECOMING MORE IMPORTANT.



- / HEAT PUMPS
- / BIOMASS BOILERS
- / SOLAR
- / CYLINDERS
- / INFRARED HEATING
- / UNDERFLOOR HEATING

With a wide range of renewables and RHI extending across new product ranges the sector keeps growing. A specialist national renewables expert has been appointed so every enquiry can be dealt with efficiently giving our customers access to our supply chain so design, technical support and after sales service can be offered. With a lot of these products, water treatment and other ancillary items are required which are all available from stock.

HEAT PUMPS

Heat pumps are designed to move thermal energy opposite to the direction of spontaneous heat flow by absorbing heat from a cold space and releasing it to a warmer one or vice-versa. A heat pump uses some amount of external power to accomplish the work of transferring energy from heat source to output.

AIR SOURCE

Air source heat pumps use the heat in the ambient air to provide efficient heating and hot water at air temperatures as low as -25°C . Installation can be indoors or outdoors and with the UK having mild winters, excellent performance levels can be reached. Another feature associated with the product is low installation costs and minimal space requirements.

GROUND SOURCE

The earth has energy from solar radiation and rainfall and a ground source heat pump extracts this energy either horizontally or vertically. Although more costly to install, higher efficiency is usually achieved regardless of seasonal variations in temperature.

AIR TO AIR (GAS ABSORPTION)

An all in one heating and cooling system which works in reverse to a refrigerator providing low cost heating. The extremely efficient process can produce five times more heat than the electrical energy it uses and the added benefit is the process can be reversed in the warmer months to provide cooling air.



BIOMASS BOILERS

Biomass means a fuel of organic material (usually wood or plant) of recent origin rather than fossil fuel which has taken millions of years to develop. As these organic materials absorb carbon dioxide (CO_2) during growing, they cancel out any CO_2 production during combustion and by managing a replanting programme, CO_2 balance can be maintained. The biomass market most commonly uses wood pellets and logs for fuel and with a feeder mechanism taking fuel (combined with air) from a hopper to the combustion chamber, heat production over 90% efficiency can be achieved.



／ SOLAR ／

Solar power is the conversion of sunlight into energy and the packages offered are from various brand leading manufacturers with flat plate, vacuum tube (tubular), on-roof and in-roof options. For convenience SBS can offer solar packs which come complete all on one pallet ready for installation.

THERMAL

Solar thermal is solar energy generating thermal energy for use in industry, residential and commercial sectors to heat all types of applications such as providing hot water or warming swimming pools.

PV

A photovoltaic system (informally known as PV) is designed to supply usable electric power using the Sun as the power source. Systems can be built in various configurations such as;

- Off-grid without battery (array-direct)
- Off-grid with battery storage for DC-only appliances
- Off-grid with battery storage for AC and DC appliances
- Grid-tie without battery
- Grid-tie with battery storage



／ CYLINDERS ／

Although cylinders have been around for years they have developed considerably and can now offer an renewable solution itself or alongside other renewable systems.

SOLAR

Along with different sizes, vented, unvented or sealed system types are available manufactured from copper and stainless steel. The cylinders aim for maximum heat transfer of solar energy into stored water. They are available in direct and indirect versions with direct units having an immersion heater to meet any additional load. Indirect units use input from the householders' traditional heat source (boiler) to top-up water temperature to the required level.

BUFFERS

A buffer tank is integrated into a system when additional volume of hot water is required to provide uninterrupted operation of a heat pump. The tank increases the volume of water a heat pump has to heat, allowing excess heat to be stored until it is required. They can be manufactured from copper or stainless steel for use on both vented and unvented (sealed) systems of variable sizes.

AIR SOURCE

Hot water storage cylinders designed specifically for use with an air source heat pump with a back up immersion heater used if and when required. With direct and indirect options of various sizes available they are an efficient and environmentally friendly way of providing hot water. Certain models operate quietly below 40dB(A) and have a plug & play (no F-Gas qualifications needed to install, only G3) feature along with excellent CoP ratings.



／ INFRARED HEATING ／

The electric infrared heating system can be run in conjunction with solar PV systems to further enhance its energy savings against other heating systems available. Just like the most natural renewable source, the sun, Infrared heating produces heat when the waves touch surfaces or objects, and then in turn emit heat. Although a simple concept, it has proven to provide massive energy savings against other convection heat systems.



／ UNDERFLOOR HEATING ／

With virtually all floor types now able to take UFH, SBS can offer both electric and wet systems from various manufacturers with options of bespoke design or off the shelf depending on requirement. Regardless of system used, existing renewable packages can be used in conjunction with the heating to reduce gas, electric or oil usage.



ALL ENQUIRIES: renewables@sbs.co.uk

ANCILLARIES & CONSUMABLES

TO SUPPORT ALL PIPEWORK AND SITE PROJECTS
A BROAD RANGE OF ACCESSORIES ARE AVAILABLE.



Armaflex®



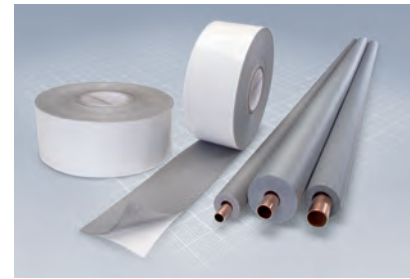
LOCTITE



- / LAGGING
- / JOINTING
- / SUPPORT SYSTEM
- / PIPE SUPPORT

/ LAGGING /

Various thickness, slit, un-slit and foil lagging available to maximise heat savings, noise reduction and pipe protection. Coils and straight lengths available with flexible options means that SBS have lagging to suit any pipework and temperature requirement.



/ JOINTING /

All forms of jointing and sealants available for tube and fittings regardless of substance passing through the pipework.

PRODUCT RANGE

- Flux
- Hemp
- Stag
- Solder
- PTFE
- Glue
- Loctite
- Silicone
- Brushes
- Tape



For a jointing guide on the various products please refer to the vital statistics section.



/ SUPPORT SYSTEMS /

With the increasing need to mount plant equipment safely, especially when on a roof top, Flexi-Foot system offers a flexible solution for spreading load, anti vibration and cable tray runs to keep everything safe and tidy. Health and safety regulations have meant walkways, step over platforms, and roof edge protection (Kee Guard) have become extremely popular. Kee Guard is a modular free standing rooftop guardrail system which does not penetrate the roof membrane. This group of products has been a valued addition to support installers of our Daikin units on roof tops.

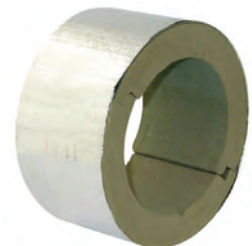


/ PIPE SUPPORT SYSTEMS /

A comprehensive range of pipe support systems are available from stock and a brief overview is listed below

PRODUCT RANGE

CLIPS:	6nb to 300nb lined, unlined, split bands, saddles
MALLEABLE IRON:	6nb to 150nb single rings, school board clips, screw on brackets
BRASS:	15mm to 108mm single rings, school board clips, screw on brackets
PLASTIC:	Talon single & double wrap over clips, 15mm to 28mm
SLOTTED CHANNEL & RAPID RAIL:	41 x 41 x 1.6/2.5, 41 x 21 x 1.6/2.5, back-to-back (82 x 41)
CHANNEL ACCESSORIES:	Slide nuts, square plate washers, channel fittings
PHENOLIC & WOODEN BLOCKS:	Full range to suit steel, copper pipes
HOSES & TAP CONNECTORS:	Braided, fan coil, gas, metallic



TOOLING

A WIDE RANGE OF TOOL REQUIREMENTS
ACCESSIBLE TO PURCHASE OR HIRE.



TOOLS

Through Rems, Ridgid and Rothenberger your tool requirements can be met whether your pipes require cutting, joining, bending or cleaning. The extensive range has been designed specifically for the plumbing and heating engineers. From mini press guns and pressure test pumps to pipe cutters and wrenches, our world leading manufacturers make life easy for the pipe installation professional. A brief overview of the range can be seen below:

PRODUCT RANGE

CUTTING:	Pipeslice, tube cutters etc..
HAND TOOLS:	Pliers, wrenches etc..
EXPANDING & EXTRACTING TOOLS:	For different size tube
BENDING TOOLS:	Different type benders – Hydraulic, electrical, stand, hand etc..
PRESS FITTING TOOLS:	Guns and jaws for different sizes & range
PIPE THREADING:	Different size machines with accessories available
PIPE SAWING:	For all types of application
DRILLING:	Different drill bits available
HOLE CUTTING:	Sets and individual obtainable
GAS & WATER TESTING:	Manometers, gauges, all other accessories
PRESSURE & ELECTRONIC TESTING EQUIPMENT:	Test kits, accessories
PIPE FREEZING:	Both spray & kit with accompanying accessories
PIPE & DRAIN CLEANING AND INSPECTION KIT:	Both electrical & manual with accessories
SOLDERING & WELDING TOOLS:	Sets & individual items
GAS:	Propane, Mapp-Gas etc..



TOOL HIRE

SBS have teamed up to work closely in partnership with a tool hire company called HireStation. Whilst it makes life easier and saves time for our customers, the main benefit is the discounted rates offered on the quality hire equipment through being an SBS customer. HireStation, part of VP plc, have national coverage of nearly 100 branches and is one of the UK's leading tool hire companies with over 2,000 products to choose from, including lifting equipment, mini diggers, pressing tools, power tools, scaffolding and much more. With account or cash sale options, hiring couldn't be any easier with items available for next day delivery (Mon to Sat am). Hire periods are extremely flexible for both long and short term options with ordering done via phone or online.

To speed up your order, it helps to have the following information handy before you contact us:

- Details of the equipment you require
- The delivery address (including postcode)
- Landline contact phone number
- Credit/debit card details or your account number

HOW TO ORDER

WEBSITE

Hire tools online using our specialist tool hire website.
www.sbs.hirestation.co.uk

PHONE

0844 892 1902 (Freephone)
 Monday to Friday: 07:30 to 17:00
 Saturday: 08:00 to 12:00



VITAL STATISTICS

A VARIETY OF IMPORTANT INDUSTRY STATISTICS TO
HELP WITH EVERYDAY QUESTIONS AND PROBLEMS.

Please note: As much information has been given and believed correct at time of publication, however it is only a guideline. Missing information was either not available or disclosed, confirm with manufacturers for full and accurate information as it is your responsibility any products meet the necessary requirements. Any reliance placed upon this information will be totally at the user's risk.

PIPE SYSTEMS APPLICATION

POTABLE WATER

MANUFACTURER	PRODUCT	SIZE	MAX PRESSURE (BAR)	TEMPERATURE (°C)	MATERIAL	JOINTING	WARRANTY (YEARS)
AQUATECHNIK	Safety-Pol	16 to 75mm	10	0 to 95	Multi-layer	Flared Compression, Mechanical	25
GEORGE FISCHER	Cool-Fit	16 to 315mm	10	-50 to 40	ABS/PUR/HDPE	Solvent Weld	1
	ABS	8"	15	-40 to 60	ABS	Screwed, Solvent Weld	1
	ABS Metric	16 to 315mm	10	-40 to 60	ABS	Screwed, Solvent Weld	1
	PVC	¼" to 16"	15	0 to 60	PVC	Screwed, Solvent Weld	1
	PVC Metric	6 to 400mm	16	0 to 60	PVC	Screwed, Solvent Weld	1
	Instaflex	16 to 225mm	16	0 to 95	PB	Push-Fit, Weld, Electrofusion, Mechanical	1
	ELGEF+PE	16 to 1200mm	16	-50 to 60	HDPE	Weld, Electrofusion	1
	PVC-C	16 to 225mm	16	0 to 80	PVC-C	Screwed, Solvent Weld	1
	PROGEF PP	16 to 500mm	10	0 to 80	PP	Weld	1
Primofit	½" to 3"	16	-20 to 105	Iron (EPDM seal)	Compression	1	
GRINNELL	Stainless Steel	1" to 12" or 25 to 300mm	34	-30 to 149	Stainless Steel	Grooved	10
PLASSON	Mechanical	20 to 110mm	6	-10 to 70	PE	Compression	1
	Push-Fit	20 to 110mm	6	-10 to 70	PE	Push-Fit	1
	Electro-Fusion	20 to 110mm	10	-10 to 70	PE	Electrofusion	1
PEGLER YORKSHIRE	Henco	14 to 63mm	10	-20 to 110	Multi-layer	Press-Fit	30
	Tectite Classic	15 to 28mm	16	-24 to 95	Brass	Push-Fit	25
	Tectite 316	15 to 54mm	20	-24 to 114	Stainless Steel	Push-Fit	25
	Tectite Pro	15 to 54mm	20	-24 to 114	Gunmetal	Push-Fit	25
	Tectite Sprint	10 to 54mm	20	-24 to 114	Copper	Push-Fit	25
	Xpress Copper	15 to 108mm	16	-24 to 110	Copper	Press-Fit	25
	Xpress Stainless	15 to 108mm	16	-20 to 110	Stainless Steel	Press-Fit	25
SANHA	Copper Press	12 to 108mm	16	-30 to 120	Copper	Press-Fit	30
	Stainless Press	12 to 108mm	16	-30 to 120	Stainless Steel	Press-Fit	30
WESTCO	Premium Plast	20 to 110mm	10	0 to 80	PE	Compression	25

SOLAR SYSTEM

MANUFACTURER	PRODUCT	SIZE	MAX PRESSURE (BAR)	TEMPERATURE (°C)	MATERIAL	JOINTING	WARRANTY (YEARS)
PEGLER YORKSHIRE	Xpress Solar	15 to 54mm	10	-35 to 200	Copper	Press-Fit	25
SANHA	Copper (Solar)	12 to 108mm	16	-20 to 200	Copper	Press-Fit	30
	Stainless Steel (Solar)	12 to 108mm	16	-20 to 200	Stainless Steel	Press-Fit	30

HEATING

MANUFACTURER	PRODUCT	SIZE	MAX PRESSURE (BAR)	TEMPERATURE (°C)	MATERIAL	JOINTING	WARRANTY (YEARS)
AQUATECHNIK	Safety-Pol	16 to 75mm	10	0 to 95	Multi-layer	Flared Compression, Mechanical	25
GEORGE FISCHER	Primofit	½" to 3"	16	-20 to 105	Iron	Compression	1
	Instaflex	16 to 225mm	16	0 to 95	PB	Push-Fit, Weld, Electrofusion, Mechanical	1
	Aquasystem	20 to 125mm	20	0 to 95	PP-R	Weld, Electro-Fusion	1
GRINNELL	Normal Grooved	1" to 24" or 25 to 600mm	34	-34 to 121	Ductile Iron	Grooved	10
	Stainless Steel	1" to 12" or 25 to 300mm	34	-34 to 121	Stainless Steel	Grooved	10
PEGLER YORKSHIRE	Henco	14 to 63mm	10	-20 to 110	Multi-layer	Press-Fit	30
	Tectite Classic	10 to 28mm	16	-24 to 95	Brass	Push-Fit	25
	Tectite Sprint	10 to 54mm	20	-24 to 114	Copper	Push-Fit	25
	Tectite 316	15 to 54mm	20	-24 to 114	Stainless Steel	Push-Fit	25
	Tectite Pro	15 to 54mm	20	-24 to 114	Gunmetal	Push-Fit	25
	Xpress Carbon	15 to 108mm	16	-20 to 110	Carbon Steel	Press-Fit	10
	Xpress Copper	15 to 108mm	16	-24 to 110	Copper	Press-Fit	25
	Xpress Stainless	15 to 108mm	16	-20 to 110	Stainless Steel	Press-Fit	25
SANHA	Carbon Press	12 to 108mm	16	-30 to 120	Carbon	Press-Fit	10
	Copper Press	12 to 108mm	16	-30 to 120	Copper	Press-Fit	30
	Stainless Press	12 to 108mm	16	-30 to 120	Stainless Steel	Press-Fit	30

GAS

MANUFACTURER	PRODUCT	SIZE	MAX PRESSURE (BAR)	TEMPERATURE (°C)	MATERIAL	JOINTING	WARRANTY (YEARS)
CRANE	Malleable Iron (Black & Galv)	½" to 6"	25	-20 to 300	Malleable Iron	Screwed	1
GEORGE FISCHER	Malleable Iron (Black & Galv)	½" to 4"	25	-20 to 300	Malleable Iron	Screwed	1
	Primofit	½" to 3"	16	-20 to 105	Iron	Compression	1
OMEGAFLEX	TracPipe	12 to 50mm	75mbar	-15 to 95	Stainless Steel	Flared	1
PLASSON	Electro-Fusion	20 to 110mm	10	-10 to 70	PE	Electrofusion	1
PEGLER YORKSHIRE	Xpress Copper (Gas)	15 to 108mm	16	-24 to 110	Copper	Press-Fit	25
	Xpress Stainless (Gas)	15 to 108mm	16	-20 to 110	Stainless Steel	Press-Fit	25
SANHA	Copper (Gas)	12 to 108mm	16	-20 to 75	Copper	Press-Fit	30
	Stainless Steel (Gas)	12 to 108mm	16	-20 to 100	Stainless Steel	Press-Fit	30

HOT WATER SERVICES

MANUFACTURER	PRODUCT	SIZE	MAX PRESSURE (BAR)	TEMPERATURE (°C)	MATERIAL	JOINTING	WARRANTY (YEARS)
AQUATECHNIK	Safety-Pol	16 to 75mm	10	0 to 95	Multi-layer	Flared Compression, Mechanical	25
GEORGE FISCHER	PVC-C	16 to 225mm	16	0 to 80	PVC-C	Screwed, Solvent Weld	1
	Primofit	½" to 3"	16	-20 to 105	Iron	Compression	1
	Instaflex	16 to 225mm	16	0 to 95	PB	Push-Fit, Weld, Electrofusion, Mechanical	1
	Aquasystem	20 to 125mm	20	0 to 95	PP-R	Weld, Electro-Fusion	1
PEGLER YORKSHIRE	Henco	14 to 63mm	10	-20 to 110	Multi-layer	Press-Fit	30
	Tectite Carbon	15 to 54mm	20	-24 to 114	Carbon Steel	Push-Fit	10
	Tectite Sprint	10 to 54mm	20	-24 to 114	Copper	Push-Fit	25
	Tectite Pro	15 to 54mm	20	-24 to 114	Gunmetal	Push-Fit	25
	Xpress Copper	15 to 108mm	16	-24 to 110	Copper	Press-Fit	25
	Xpress Stainless	15 to 108mm	16	-20 to 110	Stainless Steel	Press-Fit	25
SANHA	Copper Press	12 to 108mm	16	-30 to 120	Copper	Press-Fit	30
	Stainless Press	12 to 108mm	16	-30 to 120	Stainless Steel	Press-Fit	30

CHEMICAL/PROCESS

MANUFACTURER	PRODUCT	SIZE	MAX PRESSURE (BAR)	TEMPERATURE (°C)	MATERIAL	JOINTING	WARRANTY (YEARS)
GEORGE FISCHER	ABS	¾" to 8"	15	-40 to 60	ABS	Screwed, Solvent Weld	1
	ABS Metric	16 to 315mm	10	-40 to 60	ABS	Screwed, Solvent Weld	1
	PVC	¼" to 16"	15	0 to 60	PVC	Screwed, Solvent Weld	1
	PVC Metric	6 to 400mm	16	0 to 60	PVC	Screwed, Solvent Weld	1
	PVC-C	16 to 225mm	16	0 to 80	PVC-C	Screwed, Solvent Weld	1
	PROGEF PP	16 to 500mm	10	0 to 80	PP	Weld	1
	Sygef PVDF	16 to 315mm	16	-20 to 140	PVDF	Weld	1
PLASSON	Mechanical	20 to 110mm	6	-10 to 70	PE	Compression	1
	Push-Fit	20 to 110mm	6	-10 to 70	PE	Push-Fit	1
	Electro-Fusion	20 to 110mm	10	-10 to 70	PE	Electrofusion	1
PEGLER YORKSHIRE	Yorkshire GHD	6 to 54mm	242	-196 to 200	Copper	Solder Ring	25
SANHA	Stainless Steel	12 to 108mm	16	-30 to 120	Stainless Steel	Press-Fit	30
WESTCO	Premium Plast	20 to 110mm	10	0 to 80	PE	Compression	25

CHILLED WATER

MANUFACTURER	PRODUCT	SIZE	MAX PRESSURE (BAR)	TEMPERATURE (°C)	MATERIAL	JOINTING	WARRANTY (YEARS)
AQUATECHNIK	Safety-Pol	16 to 75mm	10	0 to 95	Multi-layer	Flared Compression , Mechanical	25
GEORGE FISCHER	ABS	¾" to 8"	15	-40 to 60	ABS	Screwed, Solvent Weld	1
	ABS Metric	16 to 315mm	10	-40 to 60	ABS	Screwed, Solvent Weld	1
	Cool-Fit	16 to 315mm	10	-50 to 40	ABS/PUR/HDPE	Solvent Weld	1
	Instaflex	16 to 225mm	16	0 to 95	PB	Push-Fit, Weld, Electrofusion, Mechanical	1
	Aquasystem	20 to 125mm	20	0 to 95	PP-R	Weld, Electro-Fusion	1
	ELGEF+PE	16 to 1200mm	16	-50 to 60	HDPE	Weld, Electrofusion	1
PEGLER YORKSHIRE	Henco	14 to 63mm	10	-20 to 110	Multi-layer	Press-Fit	30
	Tectite Sprint	10 to 54mm	20	-24 to 114	Copper	Push-Fit	25
	Tectite Carbon	15 to 54mm	20	-24 to 114	Carbon Steel	Push-Fit	10
	Tectite 316	15 to 54mm	20	-24 to 114	Stainless Steel	Push-Fit	25
	Tectite Pro	15 to 54mm	20	-24 to 114	Gunmetal	Push-Fit	25
	Xpress Carbon	15 to 108mm	16	-20 to 110	Carbon Steel	Press-Fit	5
	Xpress Copper	15 to 108mm	16	-24 to 110	Copper	Press-Fit	25
	Xpress Stainless	15 to 108mm	16	-20 to 110	Stainless Steel	Press-Fit	25
SANHA	Carbon Press	12 to 108mm	16	-30 to 120	Carbon Steel	Press-Fit	10
	Copper Press	12 to 108mm	16	-30 to 120	Copper	Press-Fit	30
	Stainless Press	12 to 108mm	16	-30 to 120	Stainless Steel	Press-Fit	30

WASTE & DRAINAGE

MANUFACTURER	PRODUCT	SIZE	MAX PRESSURE (BAR)	TEMPERATURE (°C)	MATERIAL	JOINTING	WARRANTY (YEARS)
GEORGE FISCHER	ELGEF+PE	16 to 1200mm	16	-50 to 60	HDPE	Weld, Electrofusion	1
PEGLER YORKSHIRE	Yorkshire ISR Waste Fittings	28 to 54mm	0.35	-10 to 30	Copper	Solder Ring	25
POLYPIPE TERRAIN	Solvent Soil	80, 110 & 160mm	N/A	0 to 76	MUPVC	Solvent Weld	1
	Solvent Waste	32, 40 & 50mm	N/A	0 to 76	MUPVC	Solvent Weld	1

COMPRESSED AIR

MANUFACTURER	PRODUCT	SIZE	MAX PRESSURE (BAR)	TEMPERATURE (°C)	MATERIAL	JOINTING	WARRANTY (YEARS)
CRANE	Malleable Iron (Black & Galv)	1/8" to 6"	25	-20 to 300	Malleable Iron	Screwed	1
GEORGE FISCHER	Malleable Iron (Black & Galv)	1/8" to 4"	25	-20 to 300	Malleable Iron	Screwed	1
	Primofit	1/2" to 3"	16	-20 to 105	Iron	Compression	1
	ABS	3/8" to 6"	15	-40 to 60	ABS	Screwed, Solvent Weld	1
	ELGEF+PE	16 to 1200mm	16	-50 to 60	HDPE	Weld, Electrofusion	1
JOHN GUEST	Speedfit Airline	4 to 28mm	10	-20 to 70	Nylon/LLDPE/Aluminium	Push-Fit	1

FIRE PROTECTION

MANUFACTURER	PRODUCT	SIZE	MAX PRESSURE (BAR)	TEMPERATURE (°C)	MATERIAL	JOINTING	WARRANTY (YEARS)
CRANE	Malleable Iron (Black & Galv)	1/8" to 6"	25	-20 to 300	Malleable Iron	Screwed	1
GEORGE FISCHER	Malleable Iron (Black & Galv)	1/8" to 4"	25	-20 to 300	Malleable Iron	Screwed	1
GRINNELL	Normal Grooved	1" to 24" or 25 to 600mm	34	-34 to 121	Ductile Iron	Grooved	10
PEGLER YORKSHIRE	Xpress Sprinkler Carbon	15 to 108mm	16	-20 to 110	Carbon Steel	Press-Fit	25
	Xpress Sprinkler Stainless	15 to 108mm	16	-20 to 110	Stainless Steel	Press-Fit	25
SANHA	Carbon Press	12 to 108mm	16	-30 to 120	Carbon Steel	Press-Fit	10
	Stainless Press	12 to 108mm	16	-30 to 120	Stainless Steel	Press-Fit	30

FLANGES

EN1092-1 (BS4504) PN6

NOMINAL BORE	FLANGE DIAMETER (MM)	THICKNESS (MM)	BOLTS (MM)	NUMBER OF HOLES	P.C.D. (MM)
15	80	12	M10 x 45	4	55
20	90	14	M10 x 45	4	65
25	100	14	M10 x 45	4	75
32	120	14	M12 x 55	4	90
40	130	14	M12 x 55	4	100
50	140	14	M12 x 55	4	110
65	160	14	M12 x 55	4	130
80	190	16	M16 x 60	4	150
100	210	16	M16 x 60	4	170
125	240	18	M16 x 65	8	200
150	265	18	M16 x 65	8	225
200	320	20	M16 x 70	8	280
250	375	22	M16 x 75	12	335
300	440	22	M20 x 75	12	395

EN1092-1 (BS4504) PN10

NOMINAL BORE	FLANGE DIAMETER (MM)	THICKNESS (MM)	BOLTS (MM)	NUMBER OF HOLES	P.C.D. (MM)
15	95	14	M12 x 55	4	65
20	105	16	M12 x 55	4	75
25	115	16	M12 x 55	4	85
32	140	16	M16 x 60	4	100
40	150	16	M16 x 60	4	110
50	165	18	M16 x 65	4	125
65	185	18	M16 x 65	4	145
80	200	20	M16 x 70	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) PN16

NOMINAL BORE	FLANGE DIAMETER (MM)	THICKNESS (MM)	BOLTS (MM)	NUMBER OF HOLES	P.C.D. (MM)
15	95	14	M12 x 55	4	65
20	105	16	M12 x 55	4	75
25	115	16	M12 x 55	4	85
32	140	16	M16 x 60	4	100
40	150	16	M16 x 60	4	110
50	165	18	M16 x 65	4	125
65	185	18	M16 x 65	4	145
80	200	20	M16 x 70	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	12	295
250	405	26	M24 x 90	12	355
300	460	28	M24 x 90	12	410

EN1092-1 (BS4504) PN25

NOMINAL BORE	FLANGE DIAMETER (MM)	THICKNESS (MM)	BOLTS (MM)	NUMBER OF HOLES	P.C.D. (MM)
15	95	16	M12 x 55	4	65
20	105	18	M12 x 60	4	75
25	115	18	M12 x 60	4	85
32	140	18	M16 x 65	4	100
40	150	18	M16 x 65	4	110
50	165	20	M16 x 70	4	125
65	185	22	M16 x 75	8	145
80	200	24	M16 x 80	8	160
100	235	24	M20 x 80	8	190
125	270	26	M24 x 85	8	220
150	300	28	M24 x 90	8	250
200	360	32	M24 x 100	12	310
250	425	40	M27 x 120	12	370
300	485	48	M27 x 140	16	430

EN1092-1 (BS4504) PN40

NOMINAL BORE	FLANGE DIAMETER (MM)	THICKNESS (MM)	BOLTS (MM)	NUMBER OF HOLES	P.C.D. (MM)
15	95	14	M12 x 55	4	65
20	105	18	M12 x 60	4	75
25	115	18	M12 x 60	4	85
32	140	18	M16 x 65	4	100
40	150	18	M16 x 65	4	110
50	165	20	M16 x 70	4	125
65	185	22	M16 x 75	8	145
80	200	24	M16 x 80	8	160
100	235	24	M20 x 80	8	190
125	270	26	M24 x 85	8	220
150	300	28	M24 x 90	8	250
200	375	32	M27 x 100	12	320
250	450	40	M30 x 120	12	385
300	515	48	M30 x 140	16	450

EN1092-1 (BS4504) PN64

NOMINAL BORE	FLANGE DIAMETER (MM)	THICKNESS (MM)	BOLTS (MM)	NUMBER OF HOLES	P.C.D. (MM)
15	105	20	M12 x 65	4	75
20	130	22	M16 x 75	4	90
25	140	24	M16 x 80	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 120	8	280
200	415	46	M33 x 130	12	345
250	470	54	M33 x 140	12	400
300	530	62	M33 x 160	16	460

BS10 TABLE D

NOMINAL BORE	FLANGE DIAMETER (MM)	THICKNESS (MM)	BOLTS (MM)	NUMBER OF HOLES	P.C.D. (MM)
15	95	5	M12 x 40	4	67
20	102	5	M12 x 40	4	73
25	114	5	M12 x 40	4	83
32	121	6	M12 x 40	4	87
40	133	6	M12 x 40	4	98
50	152	8	M16 x 45	4	114
65	165	8	M16 x 45	4	127
80	184	10	M16 x 50	4	146
100	216	10	M16 x 50	4	178
125	254	13	M16 x 55	8	210
150	279	13	M16 x 55	8	235
200	337	13	M16 x 55	8	292
250	406	16	M20 x 60	8	356
300	457	20	M20 x 65	12	406

BS10 TABLE E

NOMINAL BORE	FLANGE DIAMETER (MM)	THICKNESS (MM)	BOLTS (MM)	NUMBER OF HOLES	P.C.D. (MM)
15	95	6	M12 x 40	4	67
20	102	6	M12 x 40	4	73
25	114	7	M12 x 40	4	83
32	121	8	M12 x 40	4	87
40	133	9	M12 x 45	4	98
50	152	10	M16 x 50	4	114
65	165	10	M16 x 50	4	127
80	184	11	M16 x 50	4	146
100	216	13	M16 x 55	8	178
125	254	14	M16 x 60	8	210
150	279	18	M20 x 65	8	235
200	337	19	M20 x 70	8	292
250	406	22	M20 x 75	12	356
300	457	25	M22 x 80	12	406

BS10 TABLE F

NOMINAL BORE	FLANGE DIAMETER (MM)	THICKNESS (MM)	BOLTS (MM)	NUMBER OF HOLES	P.C.D. (MM)
15	95	10	M12 x 45	4	67
20	102	10	M12 x 45	4	73
25	121	10	M16 x 50	4	87
32	133	13	M16 x 55	4	98
40	140	13	M16 x 55	4	105
50	165	16	M16 x 60	4	127
65	184	16	M16 x 60	8	146
80	203	16	M16 x 60	8	165
100	229	19	M16 x 70	8	191
125	279	22	M20 x 75	8	235
150	305	22	M20 x 75	12	260
200	368	25	M20 x 80	12	324
250	432	29	M22 x 90	12	381
300	489	32	M22 x 100	16	438

BS10 TABLE H

NOMINAL BORE	FLANGE DIAMETER (MM)	THICKNESS (MM)	BOLTS (MM)	NUMBER OF HOLES	P.C.D. (MM)
15	114	13	M16 x 55	4	83
20	114	13	M16 x 55	4	83
25	121	14	M16 x 60	4	87
32	133	18	M16 x 65	4	98
40	140	18	M16 x 65	4	105
50	165	19	M16 x 70	4	127
65	184	19	M16 x 70	8	146
80	203	22	M16 x 75	8	165
100	229	25	M20 x 80	8	191
125	279	29	M20 x 90	8	235
150	305	29	M20 x 90	12	260
200	368	32	M20 x 90	12	324
250	432	35	M22 x 100	12	381
300	489	41	M22 x 110	16	438

ANSI B16.5 (BS1560) ASA150

NOMINAL BORE	FLANGE DIAMETER (MM)	THICKNESS (MM)	BOLTS (MM)	NUMBER OF HOLES	P.C.D. (MM)
15	89	11	M12 x 45	4	60
20	95	13	M12 x 50	4	70
25	108	14	M12 x 50	4	79
32	117	16	M12 x 55	4	89
40	127	17	M12 x 60	4	98
50	152	19	M16 x 70	4	121
65	178	22	M16 x 75	4	140
80	191	24	M16 x 80	4	152
100	229	24	M16 x 80	8	191
125	254	24	M20 x 80	8	216
150	279	25	M20 x 80	8	241
200	343	29	M20 x 90	8	298
250	406	30	M24 x 90	12	362
300	483	32	M24 x 95	12	432

ANSI B16.5 (BS1560) ASA300

NOMINAL BORE	FLANGE DIAMETER (MM)	THICKNESS (MM)	BOLTS (MM)	NUMBER OF HOLES	P.C.D. (MM)
15	95	14	M12 x 45	4	67
20	117	16	M16 x 50	4	83
25	124	18	M16 x 50	4	89
32	133	19	M16 x 55	4	98
40	156	21	M20 x 60	4	114
50	165	22	M16 x 70	8	127
65	191	25	M20 x 75	8	149
80	210	29	M20 x 80	8	168
100	254	32	M20 x 80	8	200
125	279	35	M20 x 80	8	235
150	318	37	M20 x 80	12	270
200	381	41	M24 x 90	12	330
250	445	48	M27 x 90	16	387
300	521	51	M30 x 95	16	451

TUBE SIZE, WEIGHT & THICKNESS

STEEL TUBE WALL THICKNESS (MM)

NOMINAL BORE (IN)	OUTSIDE DIAMETER (MM)	SCHEDULE														
		5S	10S	10	20	30	STD & 40S	40	60	XS & 80S	80	100	120	140	160	XXS
1/8	10.3		1.24				1.73	1.73		2.41	2.41					
1/4	13.7		1.65				2.24	2.24		3.02	3.02					
3/8	17.1		1.65				2.31	2.31		3.20	3.20					
1/2	21.3	1.65	2.11				2.77	2.77		3.73	3.73				4.78	7.47
3/4	26.7	1.65	2.11				2.87	2.87		3.91	3.91				5.56	7.82
1	33.4	1.65	2.77				3.38	3.38		4.55	4.55				6.35	9.09
1 1/4	42.2	1.65	2.77				3.56	3.56		4.85	4.85				6.35	9.70
1 1/2	48.3	1.65	2.77				3.68	3.68		5.08	5.08				7.14	10.16
2	60.3	1.65	2.77				3.91	3.91		5.54	5.54				8.74	11.07
2 1/2	73	2.11	3.05				5.16	5.16		7.01	7.01				9.52	14.02
3	88.9	2.11	3.05				5.49	5.49		7.62	7.62				11.13	15.24
4	114.3	2.11	3.05				6.02	6.02		8.56	8.56		11.13		13.49	17.12
5	141.3	2.77	3.40				6.55	6.55		9.52	9.52		12.70		15.88	19.05
6	168.3	2.77	3.40				7.11	7.11		10.97	10.97		14.27		18.26	21.95
8	219.1	2.77	3.76		6.35	7.04	8.18	8.18	10.31	12.70	12.70	15.09	18.26	20.62	23.01	22.22
10	273	3.40	4.19		6.35	7.80	9.27	9.27	12.70	12.70	15.09	18.26	21.44	25.40	28.58	25.40
12	323.9	3.96	4.57		6.35	8.38	9.52	10.31	14.27	12.70	17.47	21.44	25.40	28.38	33.34	25.40
14	355.6	3.96	4.78	6.35	7.92	9.52	9.52	11.13	15.09	12.70	19.05	23.82	27.79	31.75	35.71	
16	406.4	4.19	4.78	6.35	7.92	9.52	9.52	11.13	15.09	12.70	21.44	26.19	30.96	36.52	40.49	
18	457.2	4.19	4.78	6.35	7.92	11.13	9.52	14.27	19.05	12.70	23.82	29.36	34.92	39.69	45.24	
20	508	4.78	5.54	6.35	9.52	12.70	9.52	15.09	20.62	12.70	26.19	32.54	38.10	44.45	50.01	
22	558.8	4.78	5.54	6.35	9.52	12.70	9.52	15.88	22.22	12.70	28.58	34.92	41.28	47.62	53.98	
24	609.6	5.54	6.35	6.35	9.52	14.27	9.52	17.48	24.61	12.70	30.96	38.89	46.02	52.39	59.54	
26	660.4			7.92	12.70		9.52			12.70						
28	711.2			7.92	12.70	15.88	9.52			12.70						
30	762.8	6.35	7.92	7.92	12.70	15.88	9.52			12.70						
32	812.8			7.92	12.70	15.88	9.52	17.48		12.70						
34	863.6			7.92	12.70	15.88	9.52	17.48		12.70						
36	914.4			7.92	12.70	15.88	9.52	19.05		12.70						

BS EN 10255 & 10217-1 (BS1387) TUBE SIZES

NOMINAL BORE		OUTSIDE DIAMETER		MEDIUM WALL THICKNESS		HEAVY WALL THICKNESS	
(MM)	(INCHES)	(MM)	(INCHES)	(MM)	(INCHES)	(MM)	(INCHES)
6	1/8	10.2	0.405	2.0	0.082		
8	1/4	13.5	0.540	2.35	0.092	2.9	0.116
10	3/8	17.2	0.675	2.35	0.092	2.9	0.116
15	1/2	21.3	0.840	2.65	0.104	3.25	0.128
20	3/4	26.9	1.050	2.65	0.104	3.25	0.128
25	1	33.7	1.315	3.25	0.128	4.05	0.16
32	1 1/4	42.4	1.660	3.25	0.128	4.05	0.16
40	1 1/2	48.3	1.900	3.25	0.128	4.05	0.16
50	2	60.3	2.375	3.65	0.144	4.5	0.176
65	2 1/2	76.1	2.875	3.65	0.144	4.5	0.176
80	3	88.9	3.500	4.05	0.16	4.85	0.192
100	4	114.3	4.500	4.5	0.176	5.4	0.212
125	5	139.7	5.563	4.85	0.192	5.4	0.212
150	6	165.1	6.625	4.85	0.192	5.4	0.212

BS EN 10255 & 10217-1 (BS1387) TUBE WEIGHTS

NOMINAL BORE		MEDIUM			HEAVY		
(MM)	(INCHES)	KG'S PER METRE	METRE'S PER TONNE	LENGTH'S PER TONNE	KG'S PER METRE	METRE'S PER TONNE	LENGTH'S PER TONNE
8	¼	0.645	1550	238.5			
10	⅜	0.845	1183	182.0			
15	½	1.220	820	126.2	1.449	690	106.2
20	¾	1.570	637	98.0	1.880	532	81.8
25	1	2.427	412	63.4	2.959	338	52.0
32	1 ¼	3.135	319	49.1	3.831	261	40.2
40	1 ½	3.610	277	42.6	4.425	226	34.8
50	2	5.102	196	30.2	6.250	160	24.6
65	2 ½	6.536	153	23.5	8.065	124	19.1
80	3	8.547	117	18.0	10.526	95	14.6
100	4	12.500	80	12.3	14.706	68	10.5
125	5	17.241	58	8.9	18.519	54	8.3
150	6	20.408	49	7.5	21.739	46	7.1

EN 1057 - TYPE Y (BS 2871)

SIZE/OUTSIDE DIAMETER	NOMINAL WALL THICKNESS	MAX. WORKING PRESSURES*		
		HALF HARD (R250)	HARD (R290)	ANNEALED (R220)
(MM)	(MM)	(BAR [†])	(BAR [†])	(BAR [†])
6	0.8	188	223	144
8	0.8	136	161	105
10	0.8	106	126	82
12	0.8	87	104	67
15	1.0	87	104	67
18	1.0	72	85	55
22	1.2	69	84	53
28	1.2	55	65	42
35	1.5	54	65	41
42	1.5	45	54	34
54	2.0	47	56	36
66.7	2.0	37	45	28
76.1	2.0	33	39	25
108	2.5	29	34	22

*Based on designated temperature 65°C
†1 bar = 0.1N/mm² = 10⁵ N/m²

USAGE: Underground works and heavy duty requirements including hot and cold water supply, gas reticulation, sanitary plumbing, heating and general engineering.

ADDED TOUGHNESS & DURABILITY

EN 1057 - TYPE X (BS 2871)

SIZE/OUTSIDE DIAMETER	NOMINAL WALL THICKNESS	MAX. WORKING PRESSURES*		
		HALF HARD (R250)	HARD (R290)	ANNEALED (R220)
(MM)	(MM)	(BAR [†])	(BAR [†])	(BAR [†])
6	0.6	133	161	102
8	0.6	97	118	75
10	0.6	77	93	59
12	0.6	63	76	48
15	0.7	58	71	45
18	0.8	56	67	43
22	0.9	51	62	39
28	0.9	40	48	31
35	1.2	42	51	33
42	1.2	35	43	27
54	1.2	27	33	21
66.7	1.2	20	27	17
76.1	1.5	24	29	18
108	1.5	17	20	13
133	1.5	14	17	10
159	2.0	15	18	12

*Based on designated temperature 65°C
†1 bar = 0.1N/mm² = 10⁵ N/m²

USAGE: Above ground services including drinking water supply, hot and cold water systems, sanitation, central heating and other general purpose applications.

ECONOMICAL & STRONG

MECHANICAL PROPERTIES OF TUBE TO EN 1057

TEMPERATURE	NOM. DIA. (OUTSIDE)	MPA*	MINIMUM ELONGATION	HARDNESS**
R220 Annealed	6 to 54mm	220	40%	40 to 70
R250 Half Hard	6 to 66.7mm	250	30% #	75 to 100
R250 Half Hard	6 to 159mm	250	20% #	75 to 100
R290 Hard	6 to 267mm	290	3%	100 min

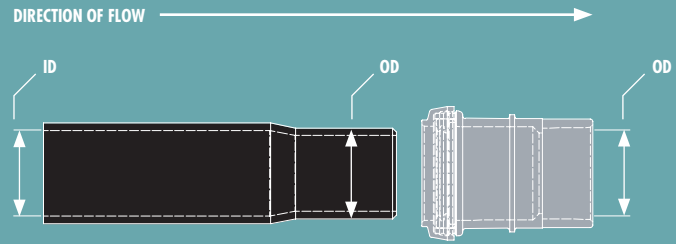
Note: Elongations for half hard tubes depend on the ratio of outside diameter to wall thickness
* MPa: Minimum tensile strength
** Hardness HV/5 indicative

JOINTING GUIDE

PRODUCT	KEY INFORMATION	POTABLE WATER	NON-POTABLE WATER	COMPRESSED AIR	NATURAL & TOWN GAS	LPG (GAS)	OIL & PETROL	STEAM
STAG WHITE	up to 150°C		◆	◆	◆			◆ (UP TO 7BAR)
STAG WHITE UNIVERSAL		◆	◆	◆	◆			◆
STAG A	up to ½" -40°C to 400°C		◆	◆	◆		◆	◆
STAG B	½" to 1 ½" -40°C to 650°C		◆	◆	◆		◆	◆
STAG PLASTI-COIL X10G	-40°C to 150°C				◆	◆		
PTFE (WHITE)	-200°C to 260°C up to 30bar	◆	◆					
PTFE (YELLOW)	-200°C to 260°C up to 100bar		◆		◆	◆	◆	
ROCOL GASSEAL	-20°C to 125°C				◆	◆		
ROCOL STEAMSEAL	-20°C to 600°C		◆	◆				◆ (UP TO 193BAR)
YORKSHIRE TRADITIONAL FLUX			◆		◆			
LAWTON FLUX		◆	◆		◆			
POWERFLOW FLUX		◆	◆					
CAPSOL SOLDER WIRE			◆					
CAPSOL LEAD-FREE WIRE		◆	◆					
LOCTITE 55		◆	◆		◆			
JET-LUBE V-2 PLUS	-45°C to 260°C, up to 680bar liquids & 137bar gases (taper/taper only)	◆	◆	◆	◆		◆	
HEMP			◆	◆				◆
LA-CO SLIC-TITE	-45°C to 260°C, up to 680bar liquids & 204bar gases	◆	◆	◆	◆	◆	◆	◆
LA-CO FLUX		◆	◆					
MAGIC TAPE	Gas: -20°C to 70°C up to 5bar. Water: up to 95°C at 16bar and 130°C at 7bar. Tested up to 160°C with solar (glycol mixture) and water up to 26bar.	◆	◆		◆	◆		◆

TERRAIN JOINTING GUIDE

A useful reference for connecting from different pipe materials products to Terrain Drainage products.



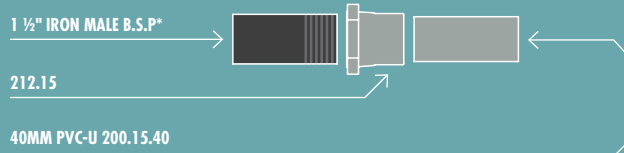
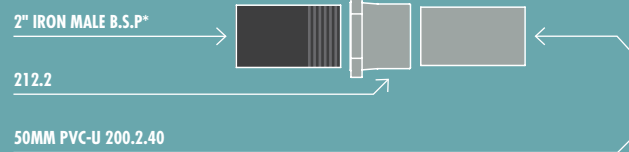
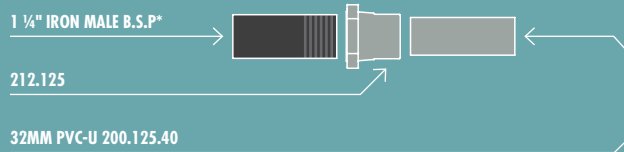
OD & ID OF DIFFERENT MATERIALS

OD	1 ¼"	1 ½"	2"	3"	4"	6"
PVC-U	36mm	43mm	56mm	82mm	110mm	160mm
PP	35mm	41mm	54mm			
FUZE (HDPE)	40mm	50mm	56mm	90mm	110mm	160mm
DB12	40mm		50mm		110mm	160mm
IRON	42mm	47.8mm	60mm			
COPPER	35mm	42mm	54mm		108mm	
CLAY					100mm	
VULCATHENE		48mm	60mm	89mm	114mm	
CAST IRON					112mm	
RIDGIDRAIN					118mm	176mm
CHROME	32mm					

ID	1 ¼"	1 ½"	2"	3"	4"	6"
PVC-U	32mm	39mm	52mm	76mm	104mm	154mm
PP	31mm	37mm	50mm			
FUZE (HDPE)	34mm	44mm	50mm	83mm	101mm	148mm
DB12	36mm		46mm		104mm	153mm
IRON	32mm	38mm	50mm			
COPPER	32mm	39mm	51mm		104mm	
CLAY					76mm	
VULCATHENE		38mm	51mm	76mm	102mm	
CAST IRON					98mm	
RIDGIDRAIN					100mm	150mm
CHROME	28mm					

75

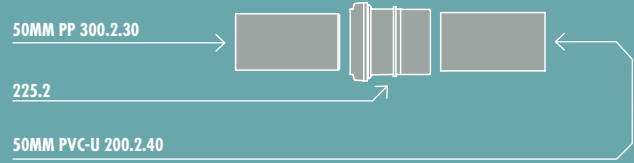
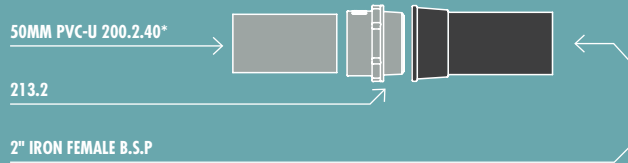
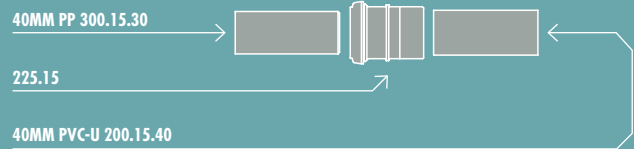
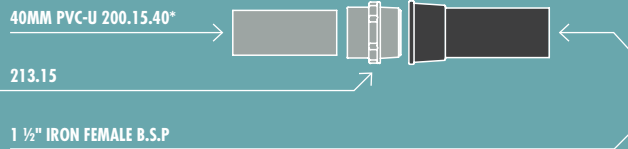
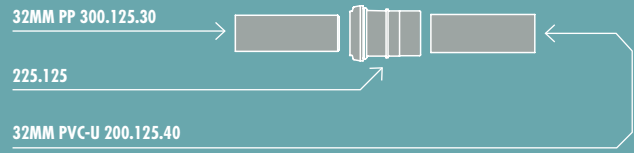
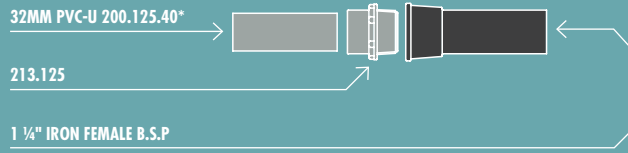
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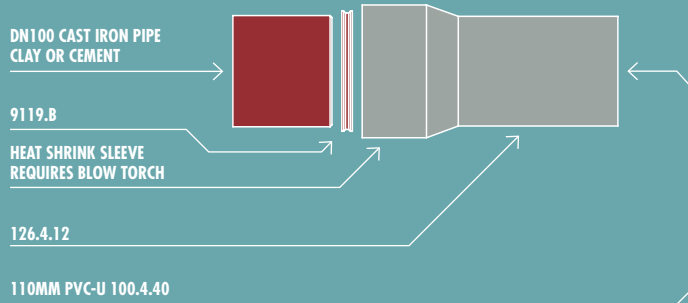
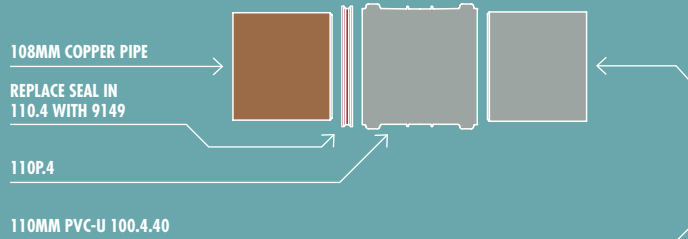
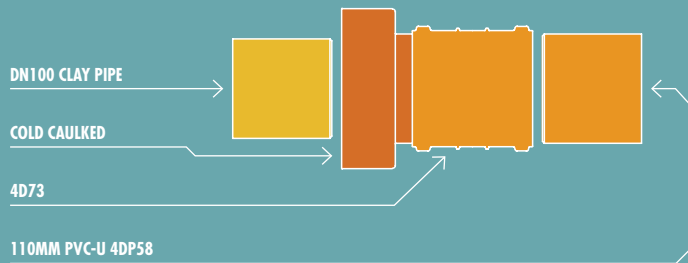
* Use PTFE on threads

TERRAIN JOINTING GUIDE

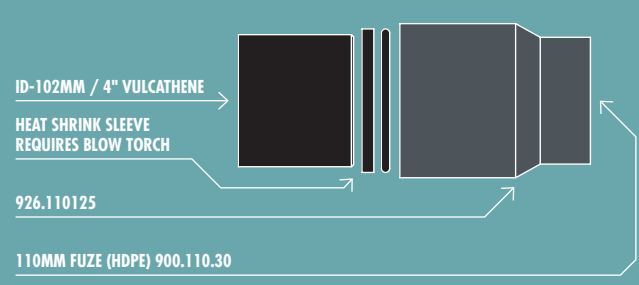
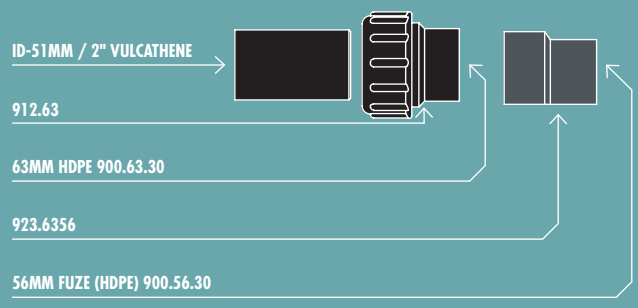
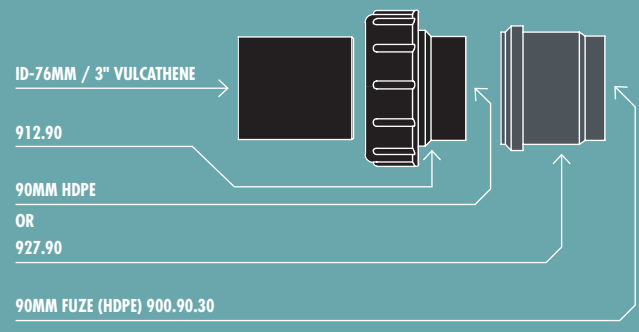
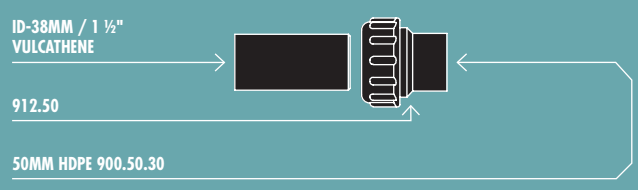
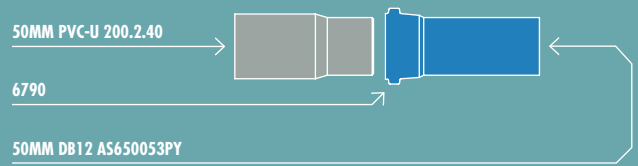
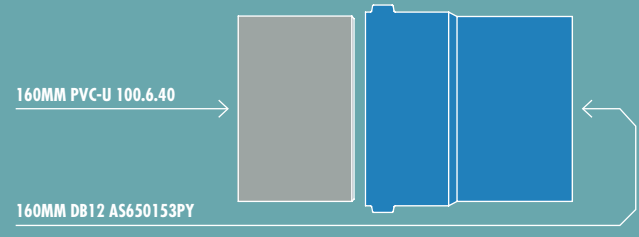
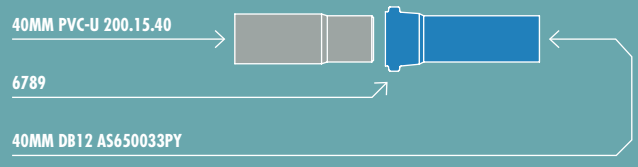
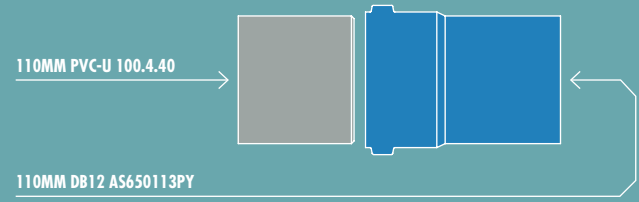
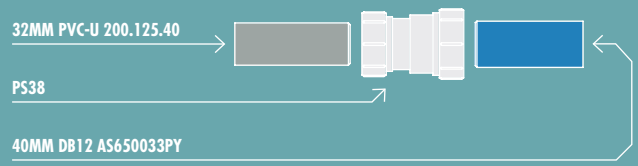
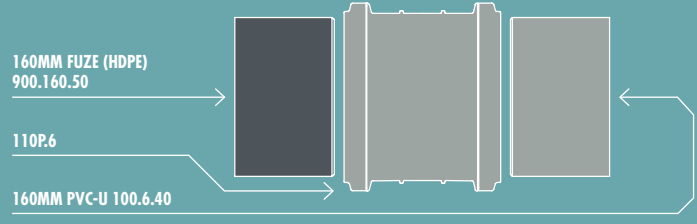
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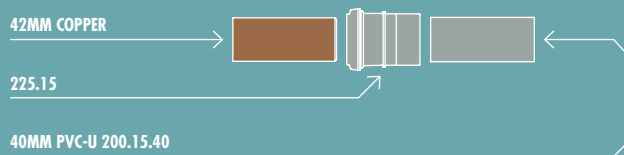
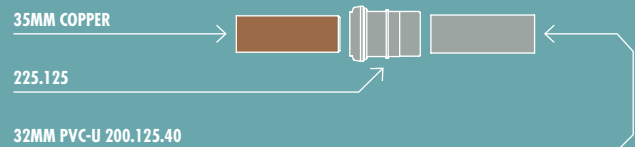
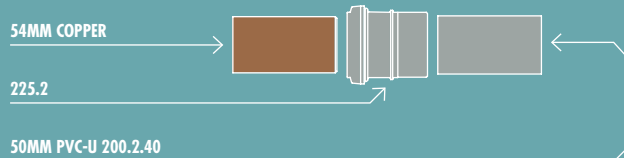
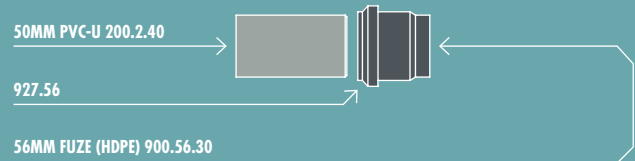
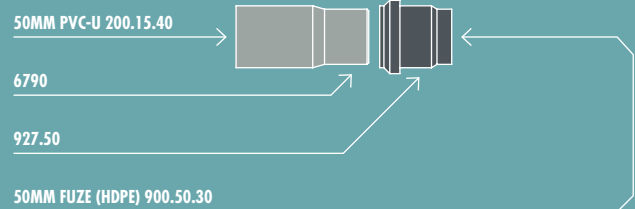
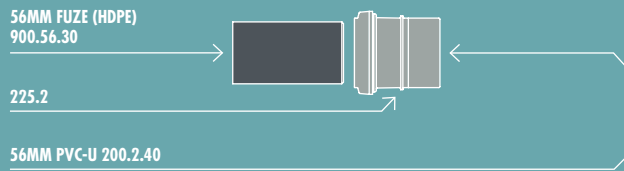
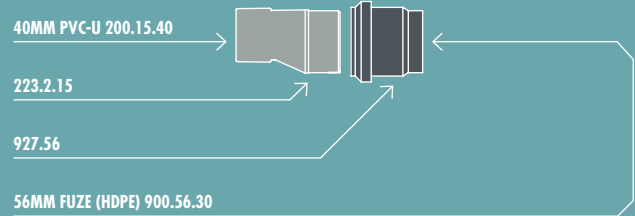
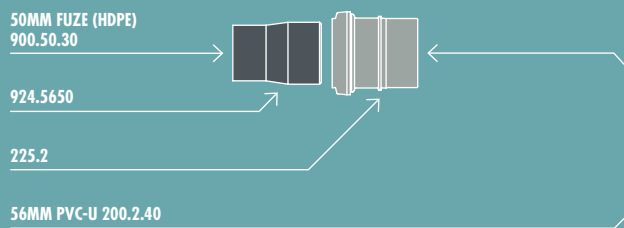
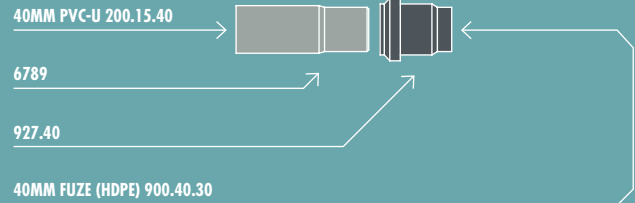
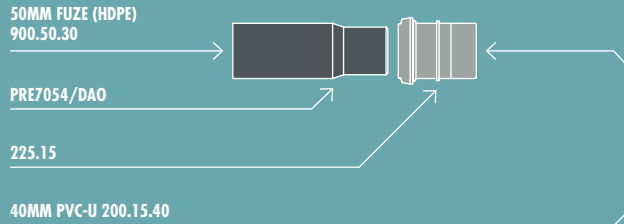
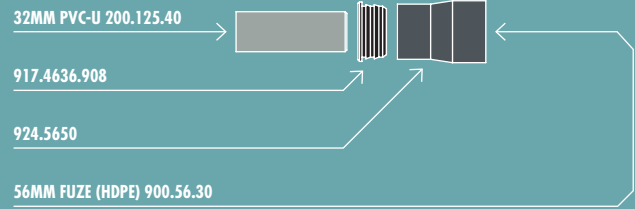
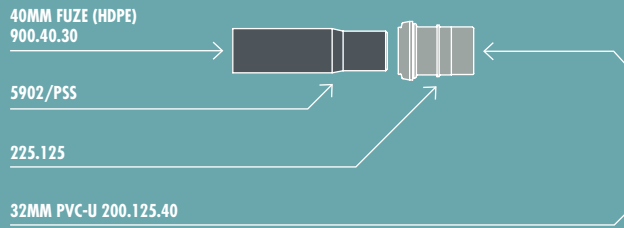
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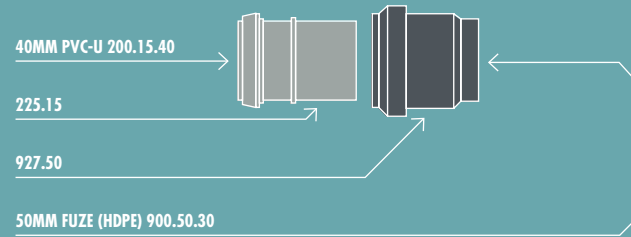
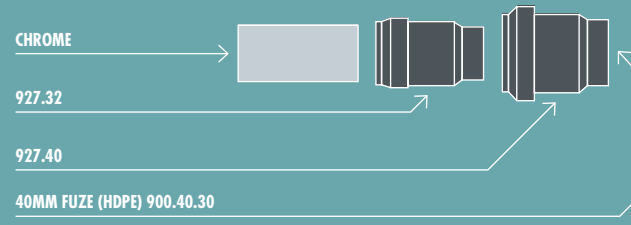
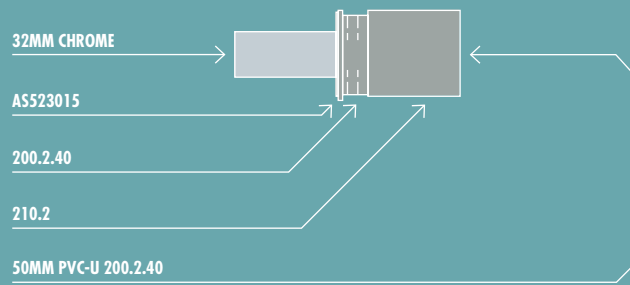
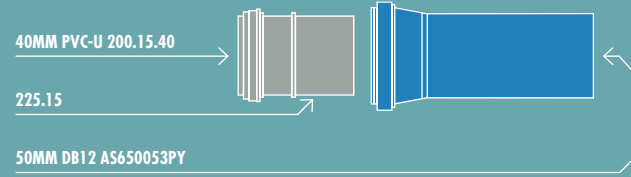
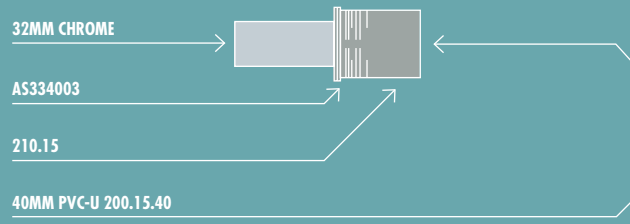
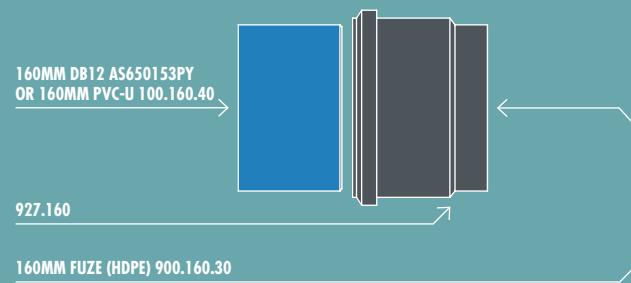
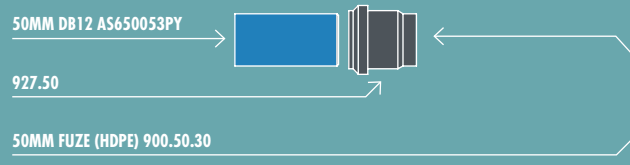
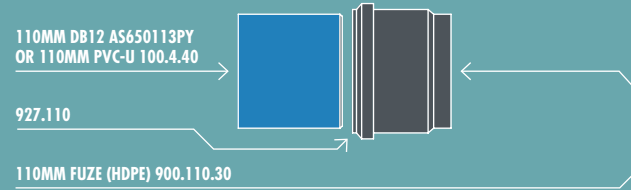
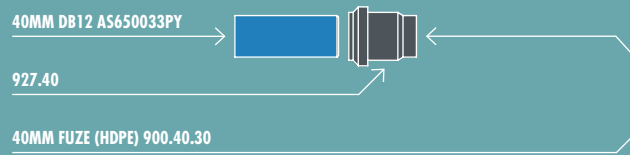


* Use PTFE on threads

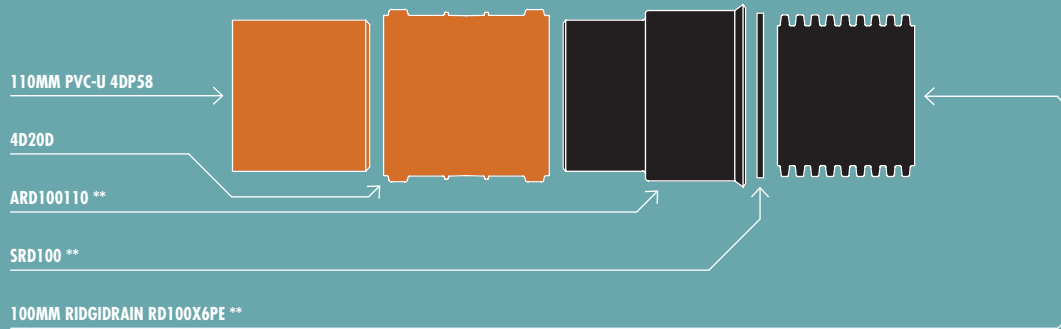
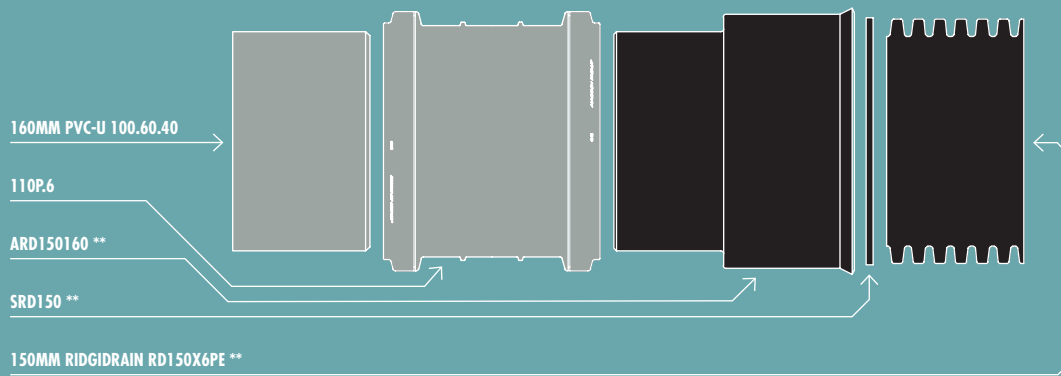
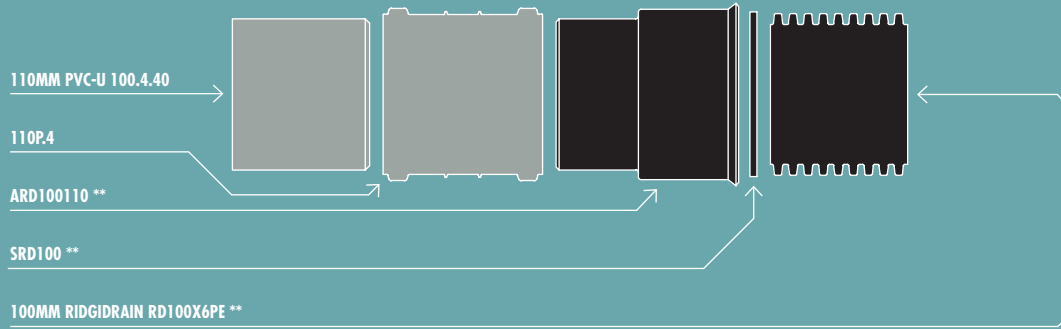


TERRAIN JOINTING GUIDE





TERRAIN JOINTING GUIDE



** PRODUCTS AVAILABLE FROM POLYPIPE CIVILS

NOTE: Pipes to be chamfered and lubricated when being used with ring seal, use 9136.250L Silicone grease. * Use PTFE on threads.

REFERENCES: 1. Terrain Soil and Waste Product Installation 2. BSEN12056 Gravity drainage systems inside buildings Sanitary pipework, layout and calculation.

If in doubt ask Terrain technical on 01622 795200 or commercialenquiries@polypipe.com

COMPARISON TABLES

MALLEABLE

PRESSURE (BAR)					SERVICE TEMPERATURE (°C)				
25					-20 TO 120				
20					120 TO 300				
CRANE	+GF+	SANHA	ITF	DESCRIPTION	CRANE	+GF+	SANHA	ITF	DESCRIPTION
140	241	241	140	Bush	185	300		185	Cap
144	280	280	144	Hex Nipple	191	3			Male Bend
145	245	245	145	Red Hex Nipple	192	1 _a	001 _a	192	M&F Bend S/R
	290	290		Beaded Plug		1	001		M&F Bend L/R
147	291		147	Hollow Plug	193	2 _a	022 _a	193	Bend S/R
148	291S		148	Solid Plug		2	002		Bend L/R
149	596		149	C/Sunk Plug	197	132			Twin Elbow
150	312	312	150	Backnut		40	121		M&F 45 Bend
151	90	90	151	Elbow	199	131		199	Sweep Tee
152	92	92	152	M&F Elbow	213	60			Return Bend
	94			Male Elbow	241	330			Union Flat Seat
155	120	120	155	45 Elbow	256	340	340	256	Union Cone Seat
156	121	121	156	45 M&F Elbow	257	341	341	257	M&F Union Cone Seat
161	130	130	161	Tee	261	96			Union Elbow
163				M&F Tee	262	98			M&F Union Elbow
171	180	180		Cross	271	342		271	Union (BR-IR)
176	270	270		Socket-Parallel	272				M&F Union (BR-IR)
177				Socket-Taper	276				Union Elbow (BR-IR)
179	240	240		Con Socket	27				M&F Union Elbow (BR-IR)
	246	246		M&F Socket	289	342 _a		289	Union (BR-BR) (Navy)
180	260			ECC Socket	290	346			Mac Union

SAFETY VALVES

FLUID	APPLICATION	NABIC
Hot Water	Vented System Unvented Heating System Unvented Supply System	542 500 500T
Cold Water	Pump Relief Pipeline Vessel Protection	542L
Steam	Boiler Pipeline Vessel Protection	500
Air	Compressor Pipeline Receiver Protection	500 542

VALVES

VALVE	SBS	HATTERSLEY	CRANE
BALL (BSP)	SBS750	H100	D171 / D171A
BALL (COMP)	SBS800	H100C	D171C / D171AC
CHECK (SWING)	SBS138	H47	D138
COMMISSIONING SET (BELOW 2" – SCREWED)	FC (or) SBS931	H1732	D931
COMMISSIONING SET (ABOVE 2" – FLANGED PN16)	SBS921 + SBS900	HM733DR + HM2000	DM941 (complete)
DOUBLE REG. (BSP)	FC (or) SBS921	H1432	D921
DOUBLE REG. (PN16)	SBS921	HM733DR	DM920
GATE (L/S)	SBS237	H33XLS	D237
GATE (PN16)	SBS63	HM541	FM63
GATE (SCREWED)	SBS151	H33X	D15
GLOBE	SBS150	H13	D151
BUTTERFLY VALVE (WATER)	SBS624	H970	F624
BUTTERFLY VALVE (GAS)	SBS614	H971	F614
METERING STATION	FC901 or SBS901	HM2000	DM900
Y-STRAINER	SBS297	H807	D297



WATER HEATERS

COMPARISON	ANDREWS/A.O SMITH MODEL	LOCHINVAR MODEL
ANDREWS STANDARD VS LOCHINVAR KNIGHT	24/39 vented p/pilot	LG30GCE
	32/40 vented p/pilot	LG40GCE
	40/61 vented p/pilot	LG50GCE
	63/62 vented p/pilot	LG75GCE
	84/87 vented p/pilot	LG85GCE

ANDREWS STANDARD AUTO VS LOCHINVAR KNIGHT	63/62 vented auto	LGA75GCE
	84/87 vented auto	LGA85GCE

ANDREWS HI-FLO PP VS LOCHINVAR CHARGER PP	32/143 vented p/pilot	CH155GCE
	65/173 vented p/pilot	CH200GCE
	81/264 vented p/pilot	CH400GCE
	62/341 vented p/pilot	CH500GCE
	54/418 vented p/pilot	CH600GCE

ANDREWS HI-FLO AUTO VS LOCHINVAR CHARGER AUTO	32/143 auto vented	CHA155GCE
	65/173 auto vented	CHA200GCE
	81/264 auto vented	CHA400GCE
	62/341 auto vented	CHA500GCE
	54/440 auto vented	CHA600GCE

ANDREWS NEOFLO VS LOCHINVAR	SC25/200	EF35/150
	SC25/300	EF35/230

ANDREWS ECOFLO VS LOCHINVAR	EC230/600	ECH32-220GCE
	EC230/700	ECH33-370GCE
	EC230/960	ECH52-370GCE
	EC380/740	ECH52-370GCE
	EC380/980	ECH63-370GCE
	EC380/1220	ECH87-480GCE
	EC380/1400	ECH87-480GCE
	EC380/1900	ECH106-480GCE

ANDREWS MAXXFLO VS LOCHINVAR	CWH30/200	SHW45-325
	CWH60/200	SHW60-325
	CWH90/200	SHW85-435
	CWH120/200	SHW115-435
	CWH30/300	SHW145-325
	CWH60/300	SHW60-325
	CWH90/300	SHW85-435
	CWH120/300	SHW115-435

A O SMITH VS LOCHINVAR	BFC28	ECH32-220GCE
	BFC30	ECH33-370GCE
	BFC50	ECH52-370GCE
	BFC60	ECH63-370GCE
	BFC80	ECH87-480GCE
	BFC100	ECH106-480GCE
	BFC120	ECH129-480GCE

COMPARISON	ANDREWS/HAMWORTHY MODEL	LOCHINVAR MODEL
HAMWORTHY VS LOCHINVAR	DR-FC EVO25	ECH32-220GCE
	DR-FC EVO30	ECH33-370GCE
	DR-FC EVO45	ECH52-370GCE
	DR-FC EVO60	ECH63-370GCE
	DR-FC EVO80	ECH87-480GCE
	DR-FC EVO100	ECH106-480GCE
	DR-FC EVO120	ECH129-480GCE

ANDREWS RSC VS LOCHINVAR LBF	RSC150 vented	LBF151
	RSC190 vented	LBF171

*ANDREWS RFF VS LOCHINVAR LBF	*RFF190 vented	LBF171
	*RFF280 vented	LBF221

ANDREWS CSC VS LOCHINVAR HIGH OUTPUT LBF	CSC39 vented	LBF160GCE
	CSC59 vented	LBF240GCE
	CSC78 vented	LBF320GCE
	CSC93 vented	LBF382GCE

ANDREWS UNVENTED KITS VS LOCHINVAR UNVENTED KITS	Standard Range Unvented Kit	WH10 (LG30 – LG50) WH15 (LG75) WH16 (LG85)
	Hi-Flo Range Unvented Kit	WH17 (Charger Range)
	RSC Range Unvented Kit	WH10 (LBF151 & LBF171)
	RFF Range Unvented Kit	WH15 (LBF221 & LBF301)
	CSC Range Unvented Kit	WH17 (High Output LBF Range)

LOCHINVAR LBF FLUE KITS		AKIT01 (LBF151, LBF171, LBF221)
		AKIT03 (LBF151, LBF171, LBF221)
		GLBFH002 (LBF160GCE)
		GLBFH003 (LBF240GCE)
		GLBFH004 (LBF320GCE & LBF382GCE)
		GLBFV002 (LBF160GCE)
		GLBFV003 (LBF240GCE)
		GLBFV004 (LBF320GCE & LBF382GCE)

NOTES: *All Lochinvar LBF units are fan assisted balanced flue. Andrews RFF models are fan assisted conventional flue. All LBF balanced flue heaters require a flue kit. For standard flue kit details refer to the Lochinvar LBF flue kit section above.

PUMP REPLACEMENT GUIDE

DAB	GRUNDFOS (HIGH EFFICIENCY)			WILO (HIGH EFFICIENCY)		
	PREMIUM	BASIC	FIXED SPEED	PREMIUM	BASIC	FIXED SPEED
Evosta 40-70/130	Alpha 2 15/60	Ups2 15/50-60	Ups 15/60	Stratos Pico 25 1-6	Yonos Pico 25 1-6	Smart B
Evosta 40-70/180						
Evotron 40/130	Alpha 2 15/50	Alpha 2L 15/50	Ups 15/50	Stratos Pico 25 1-4	Yonos Pico 25 1-4	Smart A
Evotron 60/130	Alpha 2 15/60	Alpha 2L 15/60	Ups 15/60	Stratos Pico 25 1-6	Yonos Pico 25 1-6	Smart B
Evotron 80/130						
Evotron 80/180		Ups2 25/80			Yonos Pico 25 1-8	
Evotron 80/180X		Ups2 32/80				

SINGLE THREADED LIGHT COMMERCIAL

Evoplus 40/180 M		Magna 1 25/40				
Evoplus 60/180 M		Magna 1 25/60	Ups 25/55	Stratos 25/1-6	Yonos Maxo 5/0.5-7	Top-S 25/5
Evoplus 80/180 M		Magna 1 25/80	Ups 25/80	Stratos 25/1-8		Top-S 25/7
Evoplus 110/180 M		Magna 1 25/120	Ups 25/120		Yonos Maxo 25/0.5-12	Top-S 25-10
Evoplus 40/180 XM		Magna 1 32/40		Stratos 30/1-4		Top-S 30/4
Evoplus 60/180 XM		Magna 1 32/60	Ups 32/55	Stratos 30/1-6	Yonos Maxo 30/0.5-7	Top-S 30/5
Evoplus 80/180 XM		Magna 1 32/80	Ups 32/80	Stratos 30/1-8		Top-S 30/1-10
Evoplus 110/180 XM	Magna 3 32/120	Magna 1 32/100	Ups 32/120	Stratos 30/1-10	Yonos Maxo 30/0.5-12	

SINGLE FLANGED LIGHT COMMERCIAL

Evoplus B 40/220.32 M		Magna 1 32/40 F	Ups 32/30 F			
Evoplus B 60/220.32 M		Magna 1 32/60 F	Ups 32/60 F			
Evoplus B 80/220.32 M		Magna 1 32/80 F				
Evoplus B 110/220.32 M		Magna 1 32/120 F	Ups 32/100 F			
Evoplus B 40/250.40 M			Ups 40/30 F	Stratos 40/1-4		
Evoplus B 60/250.40 M			Ups 40/50 F			
Evoplus B 80/250.40 M	Magna 3 40/80 F		Ups 40/80 F			Top-S 40/7
Evoplus B 110/250.40 M	Magna 3 40/120 F			Stratos 40/1-10		Top-S 40/10

SINGLE LIGHT COMMERCIAL ACCESSORIES

Basic Module						
Multifunctional Module						
Lon/Mod Bus Converter Module						

TWIN FLANGED LIGHT COMMERCIAL

Evoplus D 40/220.32 M			Upsd 32/30 F			
Evoplus D 60/220.32 M			Upsd 32/60 F			
Evoplus D 80/220.32 M				Stratos-D 32/1-8	Yonos Maxo D 32/0.5-7	Top-Sd 32/7
Evoplus D 110/220.32 M			Upsd 32/120 2 F		Yonos Maxo D 32/0.5-11	Top-Sd 32/10
Evoplus D 40/250.40 M			Upsd 40/30 2 F			Top-Sd 40/3
Evoplus D 60/250.40 M			Upsd 40/60 2 F			
Evoplus D 80/250.40 M						Top-Sd 40/7
Evoplus D 110/250.40 M		Magna 1 D 40/100 F	Upsd 0/120 2 F			Top-Sd 40/10

DAB	GRUNDFOS (HIGH EFFICIENCY)			WILO (HIGH EFFICIENCY)		
	PREMIUM	BASIC	FIXED SPEED	PREMIUM	BASIC	FIXED SPEED
Evoplus B 120/220.32 M	Magna 3 32/120 F	Magna 1 32/130 F	Ups 32/120 F	Stratos 32/1-12		
Evoplus B 40/220.40 M		Magna 1 40/40 F	Ups F 40/30		Yonos Maxo 40/0.5-4	Top-S 40/4
Evoplus B 60/220.40 M		Magna 1 40/60 F	Ups 40/60 2 F			
Evoplus B 80/220.40 M	Magna 3 40/80 F	Magna 1 40/80F			Yonos Maxo 40/0.5-8	
Evoplus B 100/220.40 M	Magna 3 0/100 F					Top-S 40/10
Evoplus B 120/250.40 M	Magna 3 40/120 F	Magna 1 40/120 F	Ups 40/120 F	Stratos 40/1-12	Yonos Maxo 40/0.5-12	
Evoplus B 150/250.40 M	Magna 3 40/150 F					Top-S 40/15
Evoplus B 180/250.40 M	Magna 3 40/180 F		Ups 40/180 F			
Evoplus B 40/240.50 M	Magna 3 50/40 F		Ups 50/30 F			Top-S 0/4
Evoplus B 60/240.50 M	Magna 3 50/60 F	Magna 1 50/60 F	Ups 50/60 2 F			
Evoplus B 80/240.50 M	Magna 3 50/80 F			Stratos 50/1-8	Yonos Maxo 50/0.5-8	Top-S 50/7
Evoplus B 100/280.50 M	Magna 3 50/100 F			Stratos 50/1-9	Yonos Maxo 50/0.5-9	
Evoplus B 120/280.50 M	Magna 3 50/120 F	Magna 1 50/120 F	Ups 50/120 F	Stratos 50/1-12	Yonos Maxo 50/0.5-12	Top-S 50/10
Evoplus B 150/280.50 M	Magna 3 50/150 F					Top-S 50/15
Evoplus B 180/280.50 M	Magna 3 50/180 F		Ups 50/180 F			
Evoplus B 40/340.65 M	Magna 3 65/40 F		Ups 65/30 F			
Evoplus B 60/340.65 M	Magna 3 65/60 F	Magna 1 65/60 F	Ups 65/60 2 F			
Evoplus B 80/340.65 M	Magna 3 65/80 F					Top-S 65/7
Evoplus B 100/340.65 M	Magna 3 65/100			Stratos 65/1-9	Yonos Maxo 65/0.5-9	
Evoplus B 120/340.65 M	Magna 3 65/120 F	Magna 1 65/120 F	Ups 65/120 F	Stratos 65/1-12		Top-S 65/13
Evoplus B 150/340.65 M	Magna 3 65/150 F		Ups 65/180 F			Top-S 65/15
Evoplus B 40/360.80 M	Magna 3 80/40 F		Ups 80/30 F			
Evoplus B 60/360.80 M	Magna 3 80/60 F	Upe 80/60 F Z	Ups 80/60 F			Top-S 80/7
Evoplus B 80/360.80 M	Magna 3 80/80 F					
Evoplus B 100/360.80 M	Magna 3 80/100 F					Top-S 80/10
Evoplus B 120/360.80 M	Magna 3 80/120 F	Ups 80/120 F Z	Ups 80/120 F	Stratos 80/1-12		
Evoplus B 40/450.100 M	Magna 3 100/40 F		Ups 100/30 F			
Evoplus B 60/450.100 M	Magna 3 100/60 F	Upe 100/60 F Z				
Evoplus B 80/450.100 M	Magna 3 100/80 F					
Evoplus B 100/450.100 M	Magna 3 100/100 F					Top-S 100/10
Evoplus B 120/450.100 M	Magna 3 100/120 F	Upe 100/120 F Z		Stratos 100/1-12		

PUMP REPLACEMENT GUIDE

DAB	GRUNDFOS (HIGH EFFICIENCY)			WILO (HIGH EFFICIENCY)			
	TWIN FLANGED COMMERCIAL	PREMIUM	BASIC	FIXED SPEED	PREMIUM	BASIC	FIXED SPEED
Evoplus D 120/220.32 M	Magna 3 D 32/120 F	Magna 1 D 32/120 F	Upsd 32/120 F	Stratos-D 32/1-12			
Evoplus D 40/220.40 M			Upsd 40/30 F				
Evoplus D 60/220.40 M			Upsd 40/60 2 F				Top-Sd 40/7
Evoplus D 80/220.40 M	Magna 3 D 40/80 F			Stratos-D 40/1-8	Yonos Maxo D 40/0.5-8		
Evoplus D 100/220.40 M	Magna 3 D 40/100 F						Top-Sd 40/10
Evoplus D 120/250.40 M	Magna 3 D 40/120 F	Magna 1 D 40/120 F	Ups 40/120 F	Stratos-D 40/1-12	Yonos Maxo D 40/0.5-12		
Evoplus D 150/250.40 M	Magna 3 D 40/150 F						Top-Sd 40/15
Evoplus D 180/250.40 M	Magna 3 D 40/180 F						
Evoplus D 40/240.50 M	Magna 3 D 50/40 F		Upsd 50/30 F				
Evoplus D 60/240.50 M	Magna 3 D 50/60 F	Magna 1 D 50/60 F	Upsd 50/60 2 F				
Evoplus D 80/240.50 M	Magna 3 D 50/80 F			Stratos-D 50/1-8			Top-Sd 50/7
Evoplus D 100/280.50 M	Magna 3 D 50/100 F			Stratos-D 50/1-9	Yonos Maxo D 50/0.5-9		Top-Sd 50/10
Evoplus D 120/280.50 M	Magna 3 D 50/120 F	Magna 1 D 50/120 F	Upsd 50/120 F	Stratos-D 50/1-12	Yonos Maxo D 50/0.5-12		
Evoplus D 150/280.50 M	Magna 3 D 50/150 F						Top-Sd 50/15
Evoplus D 180/280.50 M	Magna 3 D 50/180 F		Upsd 50/180 F				
Evoplus D 40/340.65 M	Magna 3 D 65/40 F		Upsd 65/30 F				
Evoplus D 60/340.65 M	Magna 3 D 65/60 F	Magna 1 D 65/60 F	Upsd 65/60 2 F				
Evoplus D 80/340.65 M	Magna 3 D 65/80 F						Top-Sd 65/7
Evoplus D 100/340.65 M	Magna 3 D 65/100 F						Top-Sd 65/10
Evoplus D 120/340.65 M	Magna 3 D 65/120 F	Magna 1 D 65/120 F	Upsd 65/120 F	Stratos-D 65/1-12			Top-Sd 65/13
Evoplus D 150/340.65 M	Magna 3 D 65/150 F		Upsd 65/180 F				Top-Sd 65/15
Evoplus D 40/360.80 M	Magna 3 D 80/40 F		Upsd 80/30 F				
Evoplus D 60/360.80 M	Magna 3 D 80/60 F		Upsd 80/60 F				Top-Sd 80/7
Evoplus D 80/360.80 M	Magna 3 D 80/80 F						
Evoplus D 100/360.80 M	Magna 3 D 80/100 F						Top-Sd 80/10
Evoplus D 120/360.80 M	Magna 3 D 80/120 F	Uped 80/120	Upsd 80/120 F	Stratos-D 80/1-12			
Evoplus D 40/450.100 M	Magna 3 D 100/40 F		Upsd 100/30 F				
Evoplus D 60/450.100 M	Magna 3 D 100/60 F						
Evoplus D 80/450.100 M	Magna 3 D 100/80 F						
Evoplus D 100/450.100 M	Magna 3 D 100/100 F						
Evoplus D 120/450.100 M	Magna 3 D 100/120 F						

DAB	GRUNDFOS			WILO		
	PREMIUM	BASIC	FIXED SPEED	PREMIUM	BASIC	FIXED SPEED
HIGH EFFICIENCY DOMESTIC SOLAR CIRCULATOR S						
Evo tron 40/130 Sol				Stratos-Eco-Stg 15/1-5		Star-Stg 5-4
Evo tron 40/180 Sol						
Evo tron 60/130 Sol						Star-Stg 15-6
Evo tron 60/180 Sol						
Evo tron 80/130 Sol						Star-Stg 15/6.5
Evo tron 80/180 Sol						

FIXED SPEED DOMESTIC SOLAR CIRCULATORS

V _{sa} 35/130				Stratos-Eco-Stg 15/1-5		Star-Stg 15-4
V _{sa} 35/180						
V _{sa} 55/130						Star-Stg 15-6
V _{sa} 55/180						
V _{sa} 65/130						Star-Stg 15/6.5
V _{sa} 65/180						

HIGH EFFICIENCY BRONZE HOT WATER CIRCULATORS

Evo tron 40/150 San	Alpha 2 15/50 N		Ups 15/50 N			Star-Z 20/4-3
Evo tron 60/150 San						Star-Z 20/7-3
Evo tron 80/150 San						

HIGH EFFICIENCY BRONZE PRESSURISED HOT WATER CIRCULATORS – BLUE ONE V HOUSING 1 ¼"

Bwo 155V SI	Up 20/14 B _{xa} P _m	Up 20/14 B _{xa}				
Bwo 155V Z		Up 20/14 B _{xu}	Up 15/13 B _{xu}		Star-Z Nova C	Star-Z 15 C
Bwo 155V Ert			Up 20/14 B _{xt}			
Bwo 155V	Up 20/14 B _x P _m	Up 20/14 B _x	Up 15/13 B _x		Star-Z Nova A	Star-Z 15 A

HIGH EFFICIENCY BRONZE PRESSURISED HOT WATER CIRCULATORS – BLUE ONE R HOUSING ½"

Bwo 155R SI	Up 15/14 B _a P _m	Up 15/14 B _a				
Bwo 155R Z		Up 15/14 B _u	Up 15/13 B _u			
Bwo 155R Ert			Up 15/14 B _t			
Bwo 155R	Up 15/14 B _o P _m	Up 15/14 B _o	Up 15/13 B _o		Star-Z Nova	Star-Z 15

STANDARD BRONZE PRESSURISED HOT WATER CIRCULATOR – BW 152/153 V HOUSING 1 ¼"

Bwz 152V Kt						
Bwz 152V Ot		Up 20/14 B _{xu}	Up 15/13 B _{xu}		Star-Z Nova C	Star-Z 15 C
Bw 153V Ert			Up 20/14 B _{xt}			
Bw 152V Kt						
Bw 152V Ot		Up 20/14 B _x	Up 15/13 B _x		Star-Z Nova A	Star-Z 15 A

STANDARD BRONZE PRESSURISED HOT WATER CIRCULATOR – BW 152/153 R HOUSING ½"

Bwz 152R Kt						
Bwz 152R Ot		Up 15/14 B _u	Up 15/13 B _u			Star-Z 15
Bw 153R Ert			Up 15/14 B _t			
Bw 152R Kt						
Bw 152R Ot		Up 15/14 B _o	Up 15/13 B _o			Star-Z Nova

FIXED SPEED BRONZE HOT WATER CIRCULATOR

V _s 65/150 B w3 Speed Bronze Pump	Alpha 2 15/50 N		Ups 15/50 N			Star-Z 20/7-3
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PUMP REPLACEMENT GUIDE

DAB	GRUNDFOS (HIGH EFFICIENCY)			WILO (HIGH EFFICIENCY)		
	PREMIUM	BASIC	FIXED SPEED	PREMIUM	BASIC	FIXED SPEED
SINGLE BRONZE COMMERCIAL HOT WATER CIRCULATORS						
Evoplus 40/180 San M						
Evoplus 60/180 San M			Ups 25/55 N			Top-Z 25-6
Evoplus 80/180 San M			Ups 25/80 N	Stratos-Z 25/1-8		
Evoplus 110/180 San M						Top-Z 25-10
Evoplus B 40/220.32 San M						
Evoplus B 60/220.32 San M						
Evoplus B 80/220.32 San M						
Evoplus B 110/220.32 San M						
Evoplus B 40/250.40 San M						
Evoplus B 60/250.40 San M			Ups 40/50 F N			Top-Z 40-7
Evoplus B 80/250.40 San M			Ups 40/80 F N			
Evoplus B 110/250.40 San M				Stratos-Z 40/1-12		
Evoplus B 120/220.32 San M	Magna 3 32/120 F N	Magna 1 32/120 F N	Ups 32/120 F B			
Evoplus B 120/250.40 San M	Magna 3 40/120 F N	Magna 1 40/120 F N	Ups 40/120 2 F B			
Evoplus B 150/250.40 San M	Magna 3 40/150 F N					
Evoplus B 180/250.40 San M	Magna 3 40/180 F N		Ups 40/80 2 F B			
Evoplus B 100/280.50 San M	Magna 3 50/100 F N	Magna 1 50/60 F N	Ups 50/60 4 F B	Stratos-Z 50/1-9		
Evoplus B 120/280.50 San M	Magna 3 50/120 F N	Magna 1 50/120 F N	Ups 50/120 2 F B			
Evoplus B 150/280.50 San M	Magna 3 50/150 F N					
Evoplus B 180/280.50 San M	Magna 3 50/180 F N		Ups 50/180 2 F B			
Evoplus B 40/340.65 San M	Magna 3 65/40 F N		Ups 65/30 4 F B			
Evoplus B 60/340.65 San M	Magna 3 65/60 F N	Magna 1 65/60 F N	Ups 65/60 4 F B			
Evoplus B 80/340.65 San M	Magna 3 65/80 F N					
Evoplus B 100/340.65 San M	Magna 3 65/100 F N			Stratos-Z 65/1-12		Top-Z 65/10
Evoplus B 120/340.65 San M	Magna 3 65/120 F N	Magna 1 65/120 F N	Ups 65/120 4 F B			
Evoplus B 150/340.65 San M	Magna 3 65/150 F N					

AIR CONDITIONING

DAIKIN UK

FANCOIL	CONDENSER
WALL MOUNTED – EMURA	
FTXG20LW	RXG20L
FTXG25LW	RXG25L
FTXG35LW	RXG35L
FTXG50LW	RXG50L
WALL MOUNTED – INVERTER	
FTXS20K	RXS20L
FTXS25K	RXS25L
FTXS35K	RXS35L
FTXS42K	RXS42L
FTXS50K	RXS50L
FTXS60G	RXS60L
FTXS71G	RXS71F8
WALL MOUNTED – LOW INVERTER	
FTX20JV	RX20JV
FTX25JV	RX25JV
FTX35JV	RX35JV
FTX50GV	RX50GV
FTX60GV	RX60GVB
FTX71GV	RX71GVB
WALL MOUNTED – SEASONAL SMART (1PH)	
FAQ71C	RZQG71L8V1
FAQ100C	RZQG100L8V1
WALL MOUNTED – SEASONAL SMART (3PH)	
FAQ71C	RZQG71L8Y1
FAQ100C	RZQG100L8Y1
WALL MOUNTED – SEASONAL CLASSIC (1PH)	
FAQ71C	RZQSG71L3V1
FAQ100C	RZQSG100L8V1
WALL MOUNTED – SEASONAL CLASSIC (3PH)	
FAQ100C	RZQSG100L8Y1
FLOOR MOUNTED – NEXURA	
FVXG25K	RXG25L
FVXG35K	RXG35L
FVXG50K	RXG50L
FLOOR MOUNTED – INVERTER	
FVXS25F	RXG25L
FVXS35F	RXG35L
FVXS50F	RXG50L
FLOOR MOUNTED – SEASONAL SMART (1PH)	
FVQ71C	RZQG71L8V1
FVQ100C	RZQG100L8V1
FVQ125C	RZQG125L8V1
FVQ140C	RZQG140L7V1
FLOOR MOUNTED – SEASONAL SMART (3PH)	
FVQ71C	RZQG71L8Y1
FVQ100C	RZQG100L8Y1
FVQ125C	RZQG125L8Y1
FVQ140C	RZQG140LY1

MITSUBISHI ELECTRIC

FANCOIL	CONDENSER
WALL MOUNTED – ZEN INVERTER	
-	-
MSZ-EF25VE-B/S/W	MUZ-EF25VE-B/S/W
MSZ-EF35VE-B/S/W	MUZ-EF35VE-B/S/W
MSZ-EF50VE-B/S/W	MUZ-EF50VE-B/S/W
WALL MOUNTED – INVERTER	
-	-
MSZ-SF25VA	MUZ-SF25VE
MSZ-SF35VA	MUZ-SF35VE
-	-
MSZ-SF50VA	MUZ-SF50VE
MSZ-GF60VA	MUZ-GF60VE
MSZ-GF71VA	MUZ-GF71VE
WALL MOUNTED – CLASSIC INVERTER	
-	-
MSZ-HJ25VA	MUZ-HJ25VE
MSZ-HJ35VA	MUZ-HJ35VE
-	-
-	-
-	-
WALL MOUNTED – POWER INVERTER (1PH)	
PKA-RP71KAL	PUHZ-RP71VHA4
PKA-RP100KAL	PUHZ-RP100VKA
WALL MOUNTED – POWER INVERTER (3PH)	
-	-
PKA-RP100KAL	PUHZ-RP100VKA
WALL MOUNTED – STANDARD INVERTER (1PH)	
-	-
PKA-RP100KAL	PUHZ-RP100VHA3
WALL MOUNTED – STANDARD INVERTER (3PH)	
PKA-RP100KAL	PUHZ-RP100YHA3
UNIQUE TO DAIKIN	
FLOOR MOUNTED – INVERTER	
MFZ-KA25VA	SUZ-KA25VA2
MFZ-KA35VA	SUZ-KA35VA2
MFZ-KA50VA	SUZ-KA50VA2
FLOOR STANDING – POWER INVERTER (1PH)	
PSA-RP71GA	PUHZ-RP71VHA4
PSA-RP100GA	PUHZ-RP100VKA
PSA-RP125GA	PUHZ-RP125VKA
-	-
FLOOR STANDING – POWER INVERTER (3PH)	
-	-
PSA-RP100GA	PUHZ-RP100YKA
PSA-RP125GA	PUHZ-RP125YKA
-	-

AIR CONDITIONING DAIKIN UK

FANCOIL	CONDENSER
FLOOR MOUNTED – SEASONAL CLASSIC (1PH)	
FVQ71C	RZQSG71L3V1
FVQ100C	RZQSG100L8V1
FVQ125C	RZQSG125L8V1
FVQ140C	RZQSG140LV1

FLOOR MOUNTED – SEASONAL CLASSIC (3PH)	
FVQ100C	RZQSG100L8Y1
FVQ125C	RZQSG125L8Y1
FVQ140C	RZQSG140LY1

FLOOR OR CEILING MOUNTED – INVERTER (1PH)	
FLXS25B	RXS25L
FLXS35B9	RXS35L
FLXS50B	RXS50L

CEILING SUSPENDED – INVERTER (1PH)	
FHQ35C	RXS35L
FHQ50C	RXS50L
FHQ60C	RXS60L

CEILING SUSPENDED – SEASONAL SMART (1PH)	
FHQ71C	RZQG71L8V1
FHQ100C	RZQG100L8V1
FHQ125C	RZQG125L8V1
FHQ140C	RZQG140L7V1

CEILING SUSPENDED – SEASONAL SMART (3PH)	
FHQ71C	RZQG71L8Y1
FHQ100C	RZQG100L8Y1
FHQ125C	RZQG125L8Y1
FHQ140C	RZQG140LY1

CEILING SUSPENDED – SEASONAL CLASSIC (1PH)	
FHQ71C	RZQSG71L3V1
FHQ100C	RZQSG100L8V1
FHQ125C	RZQSG125L8V1
FHQ140C	RZQSG140LV1

CEILING SUSPENDED – SEASONAL CLASSIC (3PH)	
FHQ100C	RZQSG100L8Y1
FHQ125C	RZQSG125L8Y1
FHQ140C	RZQSG140LY1

CEILING SUSPENDED – SIESTA (1PH)	
AHQ71C	AZQS71BV1
AHQ100C	AZQS100BV1
AHQ125C	AZQS125BV1
AHQ140C	AZQS140BV1

CEILING SUSPENDED – SIESTA (3PH)	
AHQ100C	AZQS100BY1
AHQ125C	AZQS125BY1
AHQ140C	AZQS140BY1

600X600 FULLY FLAT CASSETTE	
FFQ25C	RXS25L
FFQ35C	RXS35L
FFQ50C	RXS50L
FFQ60C	RXS60L

MITSUBISHI ELECTRIC

FANCOIL	CONDENSER
FLOOR STANDING – STANDARD INVERTER (1PH)	
-	-
PSA-RP100GA	PUHZ-RP100VHA3
PSA-RP125GA	PUHZ-RP125VHA3
-	-

FLOOR STANDING – STANDARD INVERTER (3PH)	
PSA-RP100GA	PUHZ-RP100YHA3
PSA-RP125GA	PUHZ-RP125YHA3
-	-

UNIQUE TO DAIKIN

CEILING SUSPENDED – STANDARD INVERTER (1PH)	
-	-
PCA-RP50KAQ	SUZ-KA50VA2
PCA-RP60KAQ	SUZ-KA60VA2

CEILING SUSPENDED – POWER INVERTER (1PH)	
PCA-RP71KAQ	PUHZ-RP71VHA4
PCA-RP100KAQ	PUHZ-RP100VKA
PCA-RP125KAQ	PUHZ-RP125VKA
PCA-RP140KAQ	PUHZ-RP140VKA

CEILING SUSPENDED – POWER INVERTER (3PH)	
-	-
PCA-RP100KAQ	PUHZ-RP100YKA
PCA-RP125KAQ	PUHZ-RP125YKA
PCA-RP140KAQ	PUHZ-RP140YKA

CEILING SUSPENDED – STANDARD INVERTER (1PH)	
PCA-RP71KAQ	SUZ-KA71VA2
PCA-RP100KAQ	PUHZ-P100VHA3
PCA-RP125KAQ	PUHZ-P125VHA3
PCA-RP140KAQ	PUHZ-P140VHA3

CEILING SUSPENDED – STANDARD INVERTER (3PH)	
PCA-RP100KAQ	PUHZ-P100YHA
PCA-RP125KAQ	PUHZ-P125YHA
PCA-RP140KAQ	PUHZ-P140YHA

UNIQUE TO DAIKIN

UNIQUE TO DAIKIN

4 – WAY BLOW CEILING CASSETTE (600X600)	
SLZ-KA25VAQ	SUZ-KA25VA2
SLZ-KA35VAQ	SUZ-KA35VA2
SLZ-KA50VAQ	SUZ-KA50VA2
-	-

DAIKIN UK

FANCOIL	CONDENSER
HIGHT COP ROUNDFLOW CASSETTE – SEASONAL SMART (1 AND 3PH)	
FCQHG71F	RZQG71L8V1/Y1
FCQHG100F	RZQG100L8V1/Y1
FCQHG125F	RZQG125L8V1/Y1
FCQHG140F	RZQG140L7V1/Y1
HIGHT COP ROUNDFLOW CASSETTE – SEASONAL CLASSIC (1 AND 3PH)	
FCQHG71F	RZQGS71L8V1 only
FCQHG100F	RZQGS100L8V1/Y1
FCQHG125F	RZQGS125L8V1/Y1
FCQHG140F	RZQGS140LV1/Y1
ROUNDFLOW CASSETTE – SEASONAL SMART (1PH)	
FCQG71F	RZQG71L8V1
FCQG100F	RZQG100L8V1
FCQG125F	RZQG125L8V1
FCQG140F	RZQG140L7V1
ROUNDFLOW CASSETTE – SEASONAL SMART (3PH)	
FCQG71F	RZQG71L8Y1
FCQG100F	RZQG100L8Y1
FCQG125F	RZQG125L8Y1
FCQG140F	RZQG140LY1
ROUNDFLOW CASSETTE – SEASONAL CLASSIC (1PH)	
FCQG71F	RZQSG71L3V1
FCQG100F	RZQSG100L8V1
FCQG125F	RZQSG125L8V1
FCQG140F	RZQSG140LV1
ROUNDFLOW CASSETTE – SEASONAL CLASSIC (3PH)	
FCQG100F	RZQSG100L8Y1
FCQG125F	RZQSG125L8Y1
FCQG140F	RZQSG140LY1
ROUNDFLOW CASSETTE – INVERTER	
FCQG35F	RXS35L
FCQG50F	RXS50L
FCQG60F	RXS60L
CASSETTE – SIESTA (1PH)	
ACQ71C	AZQS71BV1
ACQ100C	AZQS100BV1
ACQ125C	AZQS125BV1
CASSETTE – SIESTA (3PH)	
ACQ100C	AZQS100BY1
ACQ125C	AZQS125BY1
UNDER CEILING CASSETTE – SEASONAL SMART (1PH)	
FUQ71C	RZQG71L8V1
FUQ100C	RZQG100L8V1
FUQ125C	RZQG125L8V1
UNDER CEILING CASSETTE – SEASONAL SMART (3PH)	
FUQ71C	RZQG71L8Y1
FUQ100C	RZQG100L8Y1
FUQ125C	RZQG125L8Y1

MITSUBISHI ELECTRIC

FANCOIL	CONDENSER
UNIQUE TO DAIKIN	
UNIQUE TO DAIKIN	
4 – WAY BLOW CEILING CASSETTE – POWER INVERTER (1PH)	
PLA-RP71BA2	PUHZ-RP71VHA4
PLA-RP100BA3	PUHZ-RP100VKA
PLA-RP125BA2	PUHZ-RP125VKA
PLA-RP140BA2	PUHZ-RP140VKA
4 – WAY BLOW CEILING CASSETTE – POWER INVERTER (3PH)	
-	-
PLA-RP100BA3	PUHZ-RP100YKA
PLA-RP125BA2	PUHZ-RP125YKA
PLA-RP140BA2	PUHZ-RP140YKA
4 – WAY BLOW CEILING CASSETTE – STANDARD INVERTER (1PH)	
PLA-RP71BA	SUZ-KA71VA2
PLA-RP100BA	PUHZ-P100VHA3
PLA-RP125BA	PUHZ-P125VHA3
PLA-RP140BA	PUHZ-P140VHA3
4 – WAY BLOW CEILING CASSETTE – STANDARD INVERTER (3PH)	
PLA-RP100BA	PUHZ-P100YHA
PLA-RP125BA	PUHZ-P125YHA
PLA-RP140BA	PUHZ-P140YHA
4 – WAY BLOW CEILING CASSETTE – STANDARD INVERTER (1PH)	
PLA-RP35BA	SUZ-KA35VA2
PLA-RP50BA	SUZ-KA50VA2
PLA-RP60BA	SUZ-KA60VA2
UNIQUE TO DAIKIN	
UNIQUE TO DAIKIN	
UNIQUE TO DAIKIN	
UNIQUE TO DAIKIN	

**AIR CONDITIONING
DAIKIN UK**

FANCOIL	CONDENSER
BUILT IN DC DUCTED – INVERTER (1PH)	
FBQ35C8	RXS35L
FBQ50C8	RXS50L
FBQ60C8	RXS60L
BUILT IN DC SLIM DUCTED – INVERTER	
FDXS25F	RXS25L
FDXS35F	RXS35L
FDXS50F9	RXS50L
FDXS60F	RXS60L
BUILT IN DC DUCTED – SEASONAL SMART (1PH)	
FBQ71C8	RZQG71L8V1
FBQ100C8	RZQG100L8V1
FBQ125C8	RZQG125L8V1
FBQ140C8	RZQG140L7V1
BUILT IN DC DUCTED – SEASONAL SMART (3PH)	
FBQ71C8	RZQG71L8Y1
FBQ100C8	RZQG100L8Y1
FBQ125C8	RZQG125L8Y1
FBQ140C8	RZQG140LY1
BUILT IN DC DUCTED – SEASONAL CLASSIC (1PH)	
FBQ71C8	RZQSG71L3V1
FBQ100C8	RZQSG100L8V1
FBQ125C8	RZQSG125L8V1
FBQ140C8	RZQSG140LV1
BUILT IN DC DUCTED – SEASONAL CLASSIC (3PH)	
FBQ100C8	RZQSG100L8Y1
FBQ125C8	RZQSG125L8Y1
FBQ140C8	RZQSG140LY1
DUCTED – SIESTA (1PH)	
ABQ71B	AZQS71BV1
ABQ100A	AZQS100BV1
ABQ125A	AZQS125BV1
ABQ140A	AZQS140BV1
DUCTED – SIESTA (3PH)	
ABQ100A	AZQS100BY1
ABQ125A	AZQS125BY1
ABQ140A	AZQS140BY1
HIGH STATIC DUCTED – SEASONAL SMART (1PH)	
FDQ125C	RZQG125L8V1
HIGH STATIC DUCTED – SEASONAL SMART (3PH)	
FDQ125C	RZQG125L8Y1
HIGH STATIC DUCTED – SEASONAL CLASSIC (1PH)	
FDQ125C	RZQSG125L8V1
HIGH STATIC DUCTED – SEASONAL CLASSIC (3PH)	
FDQ125C	RZQSG125L8Y1
HIGH STATIC DUCTED – SUPER INVERTER (3PH)	
FDQ200B	RZQ200C
FDQ250B	RZQ250C

MITSUBISHI ELECTRIC

FANCOIL	CONDENSER
CEILING CONCEALED DUCTED – INVERTER	
SEZ-KD35VAQ	SUZ-KA35VA2
SEZ-KD05VAQ	SUZ-KA50VA2
SEZ-KD60VAQ	SUZ-KA60VA2
CEILING CONCEALED DUCTED – INVERTER	
SEZ-KD25VAQ	SUZ-KA25VA2
SEZ-KD35VAQ	SUZ-KA35VA2
SEZ-KD05VAQ	SUZ-KA50VA2
SEZ-KD60VAQ	SUZ-KA60VA2
CEILING CONCEALED DUCTED – POWER INVERTER (1PH)	
PEAD-RP71JQAQ	PUHZ-RP71VHA4
PEAD-RP100JQAQ	PUHZ-RP100VKA
PEAD-RP125JQAQ	PUHZ-RP125VKA
PEAD-RP140JQAQ	PUHZ-RP140VKA
CEILING CONCEALED DUCTED – POWER INVERTER (3PH)	
-	-
PEAD-RP100JQAQ	PUHZ-RP100YKA
PEAD-RP125JQAQ	PUHZ-RP125YKA
PEAD-RP140JQAQ	PUHZ-RP140YKA
CEILING CONCEALED DUCTED – STANDARD INVERTER (1PH)	
PEAD-RP71JQAQ	SUZ-KA71VA2
PEAD-RP100JQAQ	PUHZ-P100VHA3
PEAD-RP125JQAQ	PUHZ-P125VHA3
PEAD-RP140JQAQ	PUHZ-P140VHA3
CEILING CONCEALED DUCTED – STANDARD INVERTER (3PH)	
PEAD-RP100JQAQ	PUHZ-P100YHA
PEAD-RP125JQAQ	PUHZ-P125YHA
PEAD-RP140JQAQ	PUHZ-P140YHA
UNIQUE TO DAIKIN	
UNIQUE TO DAIKIN	
UNIQUE TO DAIKIN	
UNIQUE TO DAIKIN	
UNIQUE TO DAIKIN	
UNIQUE TO DAIKIN	
UNIQUE TO DAIKIN	
UNIQUE TO DAIKIN	
UNIQUE TO DAIKIN	
UNIQUE TO DAIKIN	
LARGE CEILING CONCEALED DUCTED – STANDARD INVERTER (3PH)	
PEA-RP200YGAQ	PUHZ-P200YHA3
PEA-RP250YGAQ	PUHZ-P250YHA3

INFRARED RADIANT HEATERS

ROBERTS GORDON	AMBIRAD
RADIANT DOUBLE LINEAR KITS	
BH30DLN	VS15DLS VS15DLE
BH40DLN	VS20DLS VS20DLE
BH50DLN	VS25DLS VS25DLE
BH60DLN	VS30DLS VS30DLE
BH70DLN	VS35DLS VS35DLE VS40DLS VS40DLE VS50DLS VS50DLE

RADIANT U-TUBE HEATER KITS	
BH15UTN	VS15UT
BH20UTN	VS20UT
BH25UTN	VS25UT
BH30UTN	VS30UT
BH35UTN	VS35UT
BH40UTN	VS40UT
BH45UTN	VS45UT
BH50UTN	VS50UT

RADIANT LINEAR TUBES	
BH15STN	VS15LI
BH20STN	VS20LI
BH25STN	VS25LI
BH30STN	VS30LI
BH35STN	VS35LI
BH40STN	VS40LI
BH45STN	VS45LI
BH50STN	VS50LI

HEATERS

ROBERTS GORDON	POWRMATIC	BENSON	AMBIRED
CTUA40G Natural Gas	NV40	VRA42	UDSA43
CTUA50G Natural Gas	NV50	VRA50	UDSA50 UDSA55
CTUA60G Natural Gas	NV60	VRA60	UDSA64
CTUA75G Natural Gas	NV75	VRA72	UDSA73
CTUA90 Natural Gas	NV90	VRA95	UDSA85
CTUA100G Natural Gas			URSA100
CTUA115G Natural Gas	NV120 NV140	VRA120 VRA145	
CTCUA11 Natural Gas	NV10	VRA12	UDSA11
CTCUA15G Natural Gas			UDSA15
CTCUA22G Natural Gas	NV15 NV20	VRA20	UDSA20
CTCUA27G Natural Gas	NV25		UDSA25
CTCUA32G Natural Gas	NV30	VRA30	UDSA30

CABINET HEATERS

ROBERTS GORDON		POWRMATIC	BENSON
OLD MODEL NAME	NEW MODEL NAME		
POP15ECA	MOB15	CPO45	VNO40
POP20ECA	MOB15	CPO60	VNO60
POP30ECA	MOB30	CPO90	VNO75 VNO85
POP40ECA	MOB40	CPO120	VNO120
POP50ECA	MOB50	CPO150	VNO135
POP60ECA	MOB60	CPO175	VNO180
POP70ECA	MOB70	CPO200	VNO205
POP80ECA	MOB80	CPO250	VNO235 VNO375
POP100ECA	MOB100	CPO300	VNO350 VNO375

BOILERS

HOVAL	ATAG HEATING	BOSCH	BROAG	CLYDE	FERROLI	HAMWORTHY
TOPGAS	Q	GB162	QUINTA PRO	ALKON WH	ECONCEPT 51	FLEET W
35, 40, 60, 80	25, 38, 51, 60	45, 65, 80, 100	30, 45, 65, 90, 115	50, 70	51	40-150kW
				CG/3	ENERGY TOP	MILBORNE
				60, 80, 100, 120, 150, 180	80, 125	38, 50, 76, 100
	XL					STRATTON
	70, 110, 140					45, 60, 85, 100
ULTRAGAS	N/A	GB312	GAS 110 ECO	ALKON FS	ECONCEPT 101	FLEET F
15, 20, 27, 35, 50, 70, 100, 125		90, 120	65, 115	90	101	40, 50, 60, 70, 80, 85, 100, 120
					ENERGY TOP	
					80	
						VARIHEAT C
						70, 95, 110
ULTRAGAS	N/A	GB312	GAS 210 ECO PRO	MODULEX	ENERGY TOP	FLEET F
125, 150, 200		160, 200	80, 120, 160, 200	100, 145, 190	125, 160, 250	125, 140, 150, 170, 175, 200
				XC-K		VARIHEAT C
				124, 200		140, 180
ULTRAGAS	N/A	GB312	GAS 310 ECO PRO	MODULEX	N/A	FLEET F
250, 300, 350, 400, 450, 500, 575, 650, 720, 850, 1000		240, 280	285, 355, 430, 500, 575, 650	240, 290, 340, 440, 550, 660, 770, 900		250, 300, 350, 400, 500, 600, 700, 750, 900, 1050
		GB402				
		320, 395, 470, 545, 620				
				XC-K		
				290, 400, 480, 570, 700, 900		
ULTRAGAS	N/A	N/A	GAS 610 ECO PRO	XC-K	N/A	WESSEX MODUMAX
2500, 3000, 4000, 5000, 6000, 7000, 8000, 9000, 10000, 11500, 13000, 14400, 17000, 20000			570, 710, 860, 1 000, 1150, 1300	1140, 1420, 1820, 2160		100, 120, 150, 200, 250, 400, 500, 600, 750
ULTRAOIL	N/A	N/A	N/A	N/A	N/A	ANSTY
16, 20, 25, 35, 50, 80, 110, 130, 160, 200, 250, 300, 3200, 4000, 5000, 6000						68, 81, 108, 144, 198, 243, 280, (Dual boilers: 136, 163, 218, 294, 399, 490, 580)
COMPACTGAS	N/A	N/A	N/A	N/A	N/A	N/A
1000, 1400, 1800, 2200, 2800						
UNO-3	N/A	SB325	P320	CKR5	GN2	ENSBURY
110, 125, 160, 220, 250, 280, 320, 360		50, 70, 90, 115	105, 140, 180, 230, 280, 330	75, 93, 110, 127, 145	90, 108, 126, 144, 162, 180, 198, 216, 234, 252	70, 90, 120, 145, 165, 190, 225, 260, 300, 335, 370
		SB625		CKON		
		145, 185, 240, 310		163, 195, 227, 259, 291, 323, 355		
		G315		CK10	GN4	
		105, 140, 170, 200, 230		80, 99, 119	200, 250, 300, 360	
				CK30	PREXTHERM RSHQ	
				147, 186, 221, 256, 291, 326	80, 90, 130, 160, 200, 250, 350	
		G515		TRIO STEEL		
		240, 295, 300		110, 150, 185, 225, 300, 380		

	IDEAL	LOCHINVAR	POTTERTON	STOKVIS	STREBEL	VAILLANT	VISSMANN
	EVOMAX	CP-M+	SIRIUS 2 WH	R40	SC	ECOTEC	VITODENS 200
	30, 40, 60, 80, 100, 120, 150	60, 80, 100, 120, 150, 180	50, 60, 70, 90, 110	65, 85, 100, 120, 150	15, 37, 40	46, 65, 80, 100, 120	45, 60, 80, 100, 125, 150
					S-HQ		
					25, 38, 51, 60		
			PARAMOUNT 3		S-CB		
			30, 40, 50, 80, 95, 115		60, 80, 100, 120, 150, 180		
	IMAX F XTRA	ECOKNIGHT	EUROCONDENSE 3	N/A	ML	ECOCRAFT	VITOCROSSAL 300CM3
	80, 120	45, 60, 85, 115	125		75, 95, 125	80, 120	29-142kW
		COPPER-FIN EFF+	SIRIUS FS		S-AF		
		37, 49, 62, 74	50, 70, 90, 105		115		
		COPPER-FIN MINI					
		21-119kW					
	IMAX F XTRA	ECOKNIGHT	EUROCONDENSE 3	ECONOFLAME R6000	ML	ECOCRAFT	VITORADIAL 300TVR3
	80, 120, 160, 200	145, 175, 205, 235	125, 170, 215	142, 190, 237	125, 160, 210	160, 200	101-545kW
		COPPER-FIN	SIRIUS FS		S-AF		
		123, 160, 185	130, 160		150, 200		
	IMAX F XTRA	TT	EUROCONDENSE 3	ECONOFLAME R6000	ML	ECOCRAFT	VITOCROSSAL 300CT3U
	240, 280, 320, 400, 480, 560	410, 580	260, 300	285, 380, 475, 539	270, 350, 440, 530, 610, 670	240, 280	135-630kW
		COPPER-FIN II		ECONOFLAME R3400	S-AF		VITOCROSSAL 300CT3B
		244, 310, 355, 443, 510		657, 729, 853, 965	240, 280		187-635kW
		POWER-FIN		ECONOFLAME R3600	S-CB		VITOCROSSAL 200CM2
		382, 434, 510		572, 639, 747, 846, 945, 1043	400, 550kW		87-620kW
		INTELLI-FIN					VITORADIAL 300TVR3
		427, 483, 568					101-545kW
	EVOMOD	N/A	N/A	ECONOFLAME R3400	N/A	N/A	VITOCROSSAL 300CR3B
	250, 500, 750, 1000			1078, 1189, 1309, 1496, 1683, 1870			787-1400kW
	SUPER SERIES 4						
	50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600						
	SUPER PLUS						
	200, 300, 400, 500, 600						
	N/A	N/A	N/A	N/A	N/A	N/A	VITORADIAL 300TVR3
							101-545kW
	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	HARRIER GTS	N/A	NXR31	STR	CA7S	N/A	VITOPLEX 300TX3A
	105, 140, 180, 230, 280, 330		105, 140, 180, 230	232, 291, 349, 407	61-235kW		90-390kW
			ARIZONA EVO STEEL		CAB5		VITOPLEX 200SX2A
			99, 120, 145, 175, 210, 235, 260, 320, 335, 350		92.5-320kW		90-350kW
				ECONOMATIC REX	RUI5		VITOROND 200VD2A
				70, 80, 90, 100, 120, 150, 200, 250, 300, 350	150-390kW		125-380kW
					CIS		
					103-310kW		

NOTES

TERMS & CONDITIONS OF SALE

1. DEFINITIONS:-

- A) "the Company" means Smith Brothers Stores Ltd
- B) "the Purchaser" means the person, firm or company placing an order on the Company.
- C) "Quotation" means any Quotation or terms given by the Company.

2. ORDERS:- No orders placed by the Purchaser arising as a result of a Quotation, Terms or otherwise will be considered as binding on the Company unless that order has been acknowledged by the Company in writing.

3. EFFECT OF CONDITIONS:- All orders accepted by the Company will be subject to the Conditions of Sale set out herein. The Company is not willing to contact otherwise than on these Conditions and unless otherwise expressly agreed in writing these Conditions shall apply to all contracts made between the Company and the Purchaser and any documents emanating from the Purchaser which contain printed or standard Conditions which have been or shall be sent by the Purchaser and received by the Company on the understanding that they appear on the Purchaser's documents because they are printed there on will have no legal effect whatsoever and the Purchaser waives any right which he otherwise might have to rely on such conditions.

4. VALIDITY OF OFFER:-

- A) Any prices and/or discounts quoted by the Company, whether verbally or written, will be considered to have a validity of not exceeding 30 days unless otherwise agreed by the Company in writing.
- B) If the Purchaser intends to place an order with the Company subject to the terms of a nominated or other sub-contract the prices and terms in the tender will not be binding on the Company unless the Purchaser has fully disclosed to the Company such items and conditions of the said sub-contract and that the Company has acknowledged the same in writing.
- C) If the Purchaser intends that the price for the goods should be paid to the Company by a third party (i.e. a Finance Company or similar institution) it must state on the order that it has received written confirmation from the third party that it will make payment to the Company in accordance with the terms of Clause 8 hereof and if it fails to do so, the Purchaser will be bound to make such payments.

5. PRICES:- Unless otherwise agreed in writing the price to be paid will be deemed to have been stated in the Quotation provided that the Quotation is accepted within 30 days of issue and delivery is effected within a further 14 days. Otherwise, the Company may, at its discretion, vary the price by addition upwards to reflect market conditions, labour, material and transportation costs. All prices exclude VAT unless otherwise stated.

6. SPECIFICATIONS:- Whilst all descriptions, specifications, drawings and illustrations are supplied in good faith they are only intended for guidance purposes and the Company will accept no responsibility whatsoever for any errors, omissions, loss or damage from the Purchaser's reliance on such descriptions, drawings and illustrations. Further, the Company reserves the right to amend such descriptions, specifications, drawings and illustrations without notice. The Company provides no warranty, and it shall not be implied, whether through any description or otherwise, that any Goods conform to or are suitable for any specific purpose, unless written confirmation of such a warranty as to suitability of the goods for purpose address specific goods and the Purchaser. The Company may recommend to the Purchaser, specific Goods. These recommendations are based solely upon the information received by the Company from the Purchaser. Therefore, any recommendations by the Company to the Purchaser in relation to any Goods shall be provided only as an opinion, and shall not be construed as an express or implied warranty as to any recommendation given, unless written confirmation of a warranty to that effect is provided by the Company to the Purchaser and the Purchaser is referred to the clause immediately preceding this. The suitability of specific goods for use is ultimately the decision of the Purchaser based solely upon the knowledge of the Purchaser.

7. DELIVERY:-

- A) Delivery periods are given in good faith and are based from the date of receipt of order. Whilst we will make every reasonable effort to meet delivery requirements we will not be liable for any failure to

do so, nor for any consequential loss of any kind arising from late delivery.

- B) Deliveries will be made to the destination specified on your order provided this is clearly indicated.
- C) Unless otherwise agreed the cost of carriage will be chargeable to the Purchaser. Where the Purchaser requests the Company to deliver goods within a timescale which is shorter than that covered by the Company's quoted delivery costs then the Company reserves the right to vary the price by addition upwards to reflect additional costs incurred.
- D) Unless otherwise agreed the off loading and safe storage of delivered goods are the sole responsibility of the Purchaser. Where the Purchaser requests the Company to provide offloading facilities then such facilities will be deemed to be chargeable to reflect the additional costs incurred.
- E) After delivery the goods are expressly held by the Purchaser at his own risk. The Purchaser undertakes, following delivery to maintain the goods in the pre-delivery condition and to insure the goods to their full value and against all risks until such time as payment and the title passes.
- F) The Company reserves the right to levy additional charges against the Purchaser, to cover storage, fire insurance or other costs incurred by us, in the event that the goods are held beyond reasonable period of time or should forward instructions to be withheld.

8. TERMS OF PAYMENT:-

- A) Unless otherwise agreed in writing, and only for approved accounts, all goods will be invoiced on despatch for payment at the end of month following the date of invoice.
- B) Where an approved account is not established or where the total order value, excluding delivery, is less than £50.00 then, at its discretion, the Company may seek payment prior to delivery.
- C) Time for payment shall be of the essence of the contract without prejudice to any other rights of the Company. If the Purchaser fails to pay the invoice on the due date, the Purchaser shall pay interest on any overdue amount from the date on which payment was due to that which payment was made (whether before or after judgement) on a daily basis of 4% per annum over the base rate quoted from time to time by the National Westminster Bank plc and reimburse to the Company an administration fee of £20.00 together with all costs and expenses, including legal costs, in the collection of any overdue amount.

9. PASSING OF PROPERTY AND RISK:- The risk in the Goods shall pass to the Purchaser on completion of delivery.

Title to the Goods shall not pass to the Purchaser until the Company has received payment in full (in cash or cleared funds) for:

- A) the Goods; and
- B) any other Goods that the Company has supplied to the Purchaser in respect of which payment has become due. Until title to the Goods has passed to the Purchaser, the Purchaser shall:
 - A) hold the Goods on a fiduciary basis as bailee for the Company;
 - B) store the Goods separately from all other goods held by the purchaser so that they remain readily identifiable as the Company's property;
 - C) not remove, deface or obscure any identifying mark or packaging relating to the Company;
 - D) maintain the Goods in satisfactory condition and keep them insured against all risks for their full price from the date of delivery;
 - E) notify the Company immediately if it becomes subject to the service of a Statutory Demand or any other action involved in the insolvency of the Purchaser; and
 - F) give the Company such information relating to the Goods as the Company may require from time to time.

The Purchaser may resell or use the Goods in the ordinary course of its business.

If before title to the Goods passes to the Purchaser the Purchaser is served with a Statutory Demand or any other action involved in the insolvency of the Purchaser, or the Company reasonably believes that any such event is about to happen and notifies the Purchaser accordingly then provided that the Goods have not been resold and without limiting any other right or remedy the Company may have, the Company may at any time require the Purchaser to deliver up the Goods and, if the Purchaser fails to do so promptly, enter any premises of the Purchaser or of

any third party where the Goods are stored/located in order to recover them.

10. LOSS AND DAMAGE IN TRANSIT:-

- A) It is the responsibility of the Purchaser to examine the Goods immediately on arrival and any shortage or damage be reported to us and to the carriers within 3 days of receipt.
- B) Non delivery of Goods must be reported to us within 10 days of the despatch dates given on the advice note.
- C) The Purchaser will be liable to indemnify the Company for any loss it suffers where it is unable to claim against the carriers by reason of non-fulfilment of these Conditions.

11. RETURNED GOODS:- Any Goods returned to the Company for any reason other than faulty condition will only be accepted with the prior written agreement of the Company.

- A) Where such agreement exists then the Purchaser will be responsible for the cost of safe packing and delivery of Goods including adequate insurance against damage and loss.
- B) Where such Goods are returned to the Company by agreement and provided that the Goods are received in a condition which is consistent with the condition on despatch then a credit will be issued to the value of the returned Goods less any restocking charge of not less than 15% of the invoice value of the Goods subsequently returned.

12. FITNESS FOR PURPOSE:- The Purchaser is solely responsible for suitability of the Goods for which they are bought and is reliant upon his own skill and judgement in this respect.

13. REPRESENTATION:- Any statements or claims made by the Company, its representatives, distributors and agents either prior to or during the course of executing a contract between the Purchaser and the Company are superseded by the Conditions herein and as such they are not material.

14. GUARANTEE:-

- A) The Company extends to the Purchaser the terms of warranty, guarantee and conditions that it has, in turn received from the manufacturer. Provided that all amounts due in accordance with clause 8 hereof have been received by the Company.
- B) All guarantees and warranties are subject to the equipment having been stored, installed, commissioned and maintained in accordance with good practice and the manufacturer's recommendations.
- C) To facilitate prompt replacement of any item or component we will despatch parts at the Purchaser's request on a chargeable basis. When the defective item is returned to us and provided that the fault has been verified under the terms of the guarantee then the invoice will be credited or cancelled. Where no such item or component is subsequently returned within a reasonable period then the Company reserves the right to seek payment for the goods supplied.
- D) The Company explicitly excludes any labour, consequential or other costs associated with the replacement of Goods, items or components under the terms of the guarantee.

15. EXCLUSION OF LIABILITY:- Clause 14 is intended to provide a fair means of resolving disputes about the quality of Goods supplied, and except as provided therein the Company is not liable for any loss or damage, whether consequential or otherwise, howsoever arising out of a contract for the supply of Goods to the Purchaser governed by these Conditions (except for damages for death or personal injury caused by negligence for which the Company is responsible) and all conditions or warranties which might be implied by law are hereby excluded. The Purchaser shall be responsible for ensuring that all Goods subsequently installed on the Purchaser's premises or elsewhere do not contravene existing laws and regulations and are approved by the Purchaser's insurers.

16. FORCE MAJEURE:- Any delay or failure of performance in executing our obligations shall not be determined as a fault or give rise to any claim for lock-outs, restriction of supplies, breakdown of plant or machinery, shortage of labour, war, riots, civil unrest or any other circumstances reasonably beyond our control.

17. LAW AND JURISDICTION:- These Conditions shall be subject to English Law and the exclusive jurisdiction of the English Courts.

APPROVALS

SBS are committed to making sure our stock range offers quality products which meet the latest accreditations and industry guidelines where applicable. Many of the products stocked and supplied come with both U.K. specific and European specific approvals. Throughout the product literature only U.K. applicable ratings have been stated which are highlighted below.

Please note, although many products throughout the brochure highlight particular certifications, this may only indicate part of the range comes with the 'approval' or certain brands have the accreditation. For complete accuracy, always check the product with an SBS representative.



This logo is associated with products which meet set criteria. Manufacturers with the BSI Kitemark are in an elite club along some of the world's best companies and brands, currently little more than 2,500 BSI Kitemark licences are held around the world. Each BSI Kitemark Licensee is subject to a programme of ongoing surveillance. This includes routine testing of the product or service, assessment of production quality controls and, where appropriate, mystery shopping.



The CE marking indicates that the manufacturer has met the minimum legal requirements for their products in regard to health and safety under European Directives. CE marking is not, therefore, intended to be a quality mark.



The Waste Electrical and Electronic Equipment Directive (WEEE Directive) is the European Community directive 2002/96/EC on waste electrical and electronic equipment (WEEE) which, together with the RoHS Directive 2002/95/EC, became European Law in February 2003. This directive is applicable to the merchant/seller of the product to maintain government environmental targets.



WRAS (Water Regulations Advisory Scheme) Approval is the best way to demonstrate compliance as it is granted directly by representatives of the water suppliers and is therefore accepted by every water supplier in the UK. Lookout for this logo when dealing with potable/drinking water applications. www.wras.co.uk



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Most standards published by BSI carry the status of "British Standard". This indicates that they have been developed using the processes set out in BS 0, a standard for standards. The principal characteristic of a British Standard is that it is produced by a process that involves:

A COMMITTEE – a widely-based group of experts nominated by organisations who have an interest in the content and application of the standard.

CONSULTATION – making a draft available for scrutiny and comment to anyone who might be interested in it.

CONSENSUS – the principle that the content of the standard is decided by general agreement of as many as possible of the committee members, rather than by majority voting.

This process reinforces the authority of the standard and helps to ensure that it will be accepted by a very wide range of people who might be interested in applying it. British Standards may be developed entirely within the UK by BSI committees, or, in most cases, are adoptions of international standards developed under very similar processes and, almost always, involving strong UK participation.

OTHER NON RECOGNISED UK APPROVALS

(not stated alongside products in brochure)



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W: acv.com
- ADVANTAY**
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W: advantay.co.uk
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W: albionvalvesuk.com
- ALTECNIC**
T: 01785 218200
W: altecnic.co.uk
- AQUATECHNIK**
T: 01543 418293
W: aquatechnik.it
- ARISTON**
T: 0333 2406666
W: ariston.com
- ARMAFLEX**
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W: armacell.com
- ASPEN**
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W: aspenpumps.com
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W: ambirad.co.uk
- BIDDLE**
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W: biddle-air.co.uk
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W: bond-it.co.uk
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T: 0330 0266273
W: bristan.com
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W: remeha.co.uk
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W: bwt-uk.co.uk
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W: calmaglid.com
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W: cranefs.com
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W: dabpumps.com
- DAIKIN**
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W: daikin.co.uk
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W: danfoss-randall.co.uk
- DUTY POINT**
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W: dutypoint.net
- ESPA**
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W: espa-pumps.co.uk
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W: ferrolis.co.uk
- FLOWCON**
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W: flowcon.com
- +GF+**
T: 02476 535535
W: georgefischer.co.uk
- GELDBACH**
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W: geldbach.co.uk
- GLEDHILL**
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W: hattersley.com
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W: heatraesadia.com
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W: honeywell.com
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W: hep2o.com
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W: herzvalves.com
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W: sbs.hirestation.co.uk
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W: jaga.co.uk
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T: 01895 449233
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W: kingspan.co.uk
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W: loctite.co.uk
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W: marla.co.uk
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W: nabic.co.uk
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W: pegleryorkshire.co.uk
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W: pumphousepumps.com
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W: radacontrols.com
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W: polypipe.com/terrain
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W: timoleon.co.uk
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