John Guest Companies

John Guest USA, a world-leading supplier of Fluid System Products, located in Northern New Jersey, is part of a progressive and professional organization with multiple locations worldwide. For over 30 years the John Guest organization has built its reputation by providing high quality products and high levels of customer service.

Through a strong commitment to growth and innovation, John Guest USA will continue to serve its community and customers well into the future.

John Guest USA, Inc. distributes its products across North, Central, and South America, the Caribbean, and the US Virgin Islands.

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John Guest®

Compressed Air Systems

www.johnguest.com

Z2105/274/11/10

November 2010

John Guest®

World Connections

The John Guest Group has a long established reputation as a world leading manufacturer of push-in fittings, tube and other fluid control products. A reputation built on producing consistently high quality products with an ongoing commitment to value engineering and product development.

Quality Manufacture

Both design and manufacture are carried out in John Guest's modern, purpose-built facilities in the United Kingdom.

Maintaining control over the entire process - from initial tool design and tool-making to final assembly and testing - ensures that only products of the highest quality are produced.

It is this commitment to quality that has resulted in the Company receiving prestigious awards from many of the world's leading testing and approvals organizations.

John Guest is a preferred supplier to many international companies.

ISO 9001 Since 1989

GENUINE John Guest 14001

COMPRESSED AIR SYSTEMS

1. Cut pipe square

2. Push pipe into fitting

3. Easy to use in confined spaces

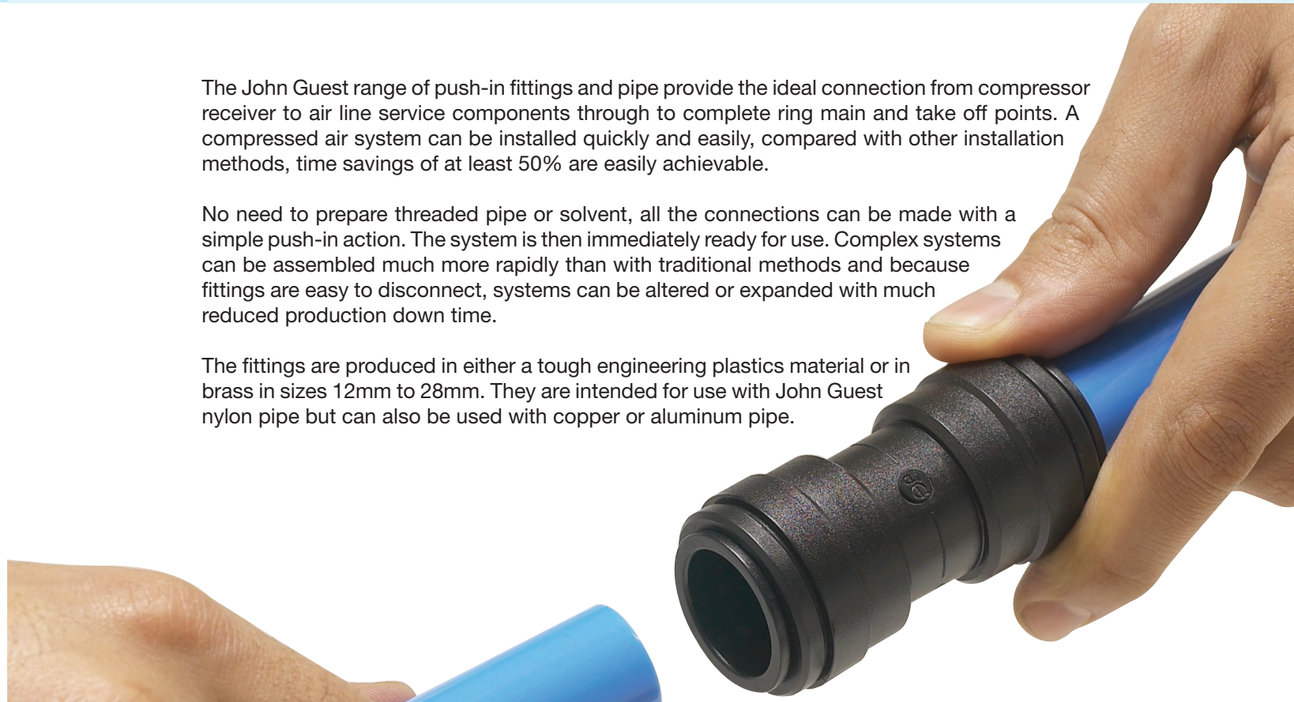
4. Complex systems

5. System complete in just hours

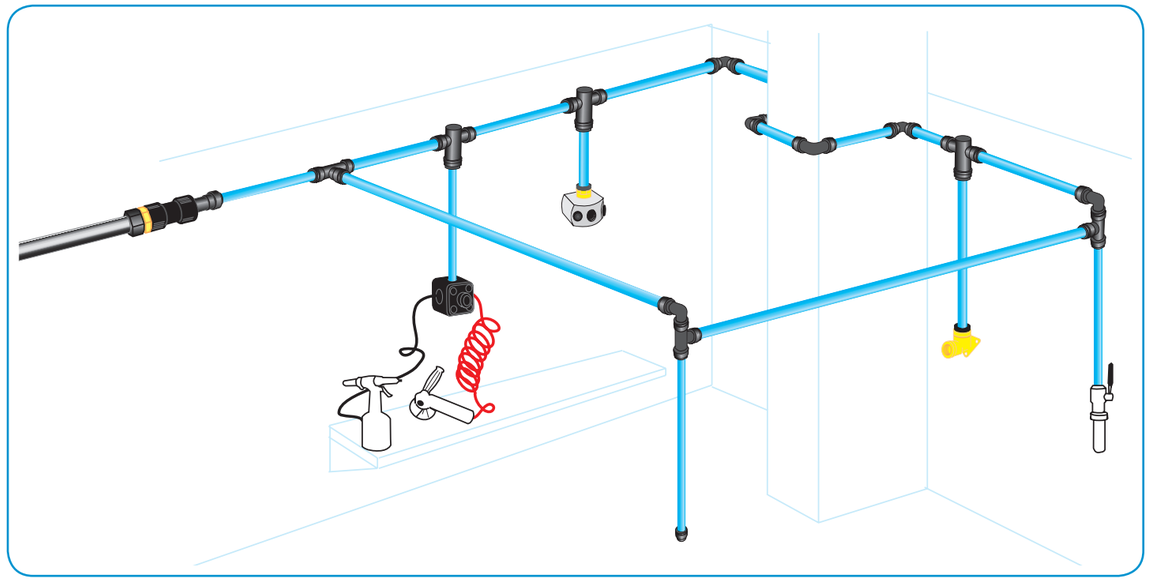
The John Guest range of push-in fittings and pipe provide the ideal connection from compressor receiver to air line service components through to complete ring main and take off points. A compressed air system can be installed quickly and easily, compared with other installation methods, time savings of at least 50% are easily achievable.

No need to prepare threaded pipe or solvent, all the connections can be made with a simple push-in action. The system is then immediately ready for use. Complex systems can be assembled much more rapidly than with traditional methods and because fittings are easy to disconnect, systems can be altered or expanded with much reduced production down time.

The fittings are produced in either a tough engineering plastics material or in brass in sizes 12mm to 28mm. They are intended for use with John Guest nylon pipe but can also be used with copper or aluminum pipe.

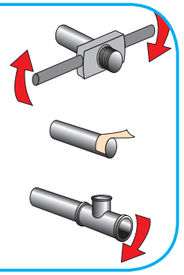


John Guest®

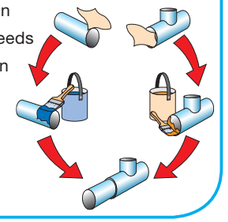


- *Installation time reduced by at least 50%*
- *Safe, secure, leakproof*
- *Easy to alter or expand a system*
- *Lightweight and easy to handle*
- *No corrosion, reduced maintenance*

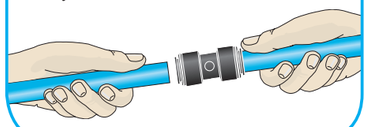
Threaded steel tube
A time consuming and difficult process.



Solvent Weld
Long installation time, system needs to be shut down before drying.



The John Guest Way
One simple movement provides a secure connection system immediately ready for use.



MALE CONNECTOR

PART NO.	PIPE OD mm	THREAD BSP
PM011213E	12	3/8”
PM011214E	12	1/2”
PM011513E	15	3/8”
PM011514E	15	1/2”
PM011516E	15	3/4”
PM011814E	18	1/8”
PM012216E	22	1/4”

ELBOW

PART NO.	PIPE OD mm
PM0312E	12
PM0315E	15
PM0318E	18
PM0322E	22
PM0328E	28

UNION CONNECTOR

PART NO.	PIPE OD mm
PM0412E	12
PM0415E	15
PM0418E	18
PM0422E	22
PM0428E	28

TEE

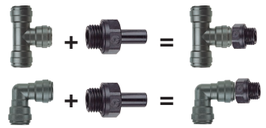
PART NO.	PIPE OD mm
PM0212E	12
PM0215E	15
PM0218E	18
PM0222E	22
PM0228E	28

REDUCING TEE

PART NO.	PIPE OD ENDS mm	PIPE OD BRANCH mm
PM3018AE	18	15
PM3022AE	22	15

STEM ADAPTER

PART NO.	PIPE OD mm	THREAD BSP
PM051213E	12	3/8”
PM051214E	12	1/2”
PM051513E	15	3/8”
PM051514E	15	1/2”
PM051814E	18	1/2”
PM052214E	22	1/2”
PM052216E	22	3/4”



John Guest Adaptability Standard ***Super Speedfit***® products can be coupled together to form integral new fittings.

STEM ELBOW

PART NO.	PIPE OD mm	STEM OD mm
PM221212E	12	12
PM221515E	15	15
PM221818E	18	18
PM222222E	22	22

Designed to simplify pipe connections in restricted spaces, the Stem Elbow gives an instant stem fitting so a pipe can be orientated in any direction.

Can be used with an elbow to make a ‘U’ turn connection.

Can be used with a Tee.

Please note a collet cover cannot be used on a Speedfit end assembled with the stem of a 22mm Stem Elbow.

REDUCER

PART NO.	STEM OD mm	PIPE OD mm
PM061512E	15	12
PM061815E	18	15
PM062215E	22	15
PM062218E	22	18
PM062815E	28	15
PM062822E	28	22

PORTING BLOCK

PART NO.	SIZE BSP
JG-L-WSK	5 1/2” Connections

ALUMINUM WALL BOX

PART NO.	SIZE BSP
JGWALLBOX 1/2	1/2”
JGWALLBOX 3/4	3/4”

1/2” or 3/4” female thread on the top. Both products have 3 x 1/2” female threads on the side.

END STOP

PART NO.	PIPE OD mm
PM4612E	12
PM4615E	15
PM4622E	22

The End Stop can be used to provide a permanent connection but because it is easy to disconnect from the pipe it serves a useful purpose as a means of providing a temporary shut off which can be removed at a later date to allow a system to be expanded or modified.

METRIC TO INCH ADAPTOR

PART NO.	STEM OD	PIPE OD
NC2164	15mm	3/8”
NC2173	1/2”	15mm
NC908	1/2”	18mm

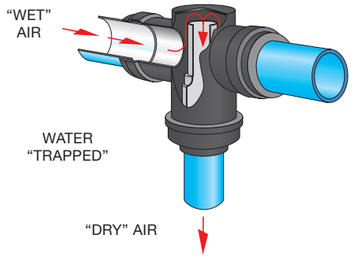
MALE CONNECTOR

PART NO.	TUBE OD mm
PMUB15E	15

John Guest®

WATER TRAP TEE

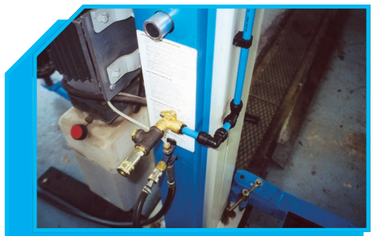
PART NO.	PIPE OD ENDS mm
PMTT22E	22



The new Water Trap Tee from John Guest solves the on-going problem of moisture in a compressed air system and provides the easy alternative to the need to install "Swan Necks". The ingenious inside arrangement of the fitting allows air to flow, with minimum head loss, from the main to take-off point without allowing water to follow. The moisture is retained in the line to be drawn off at some suitable location.

Installation

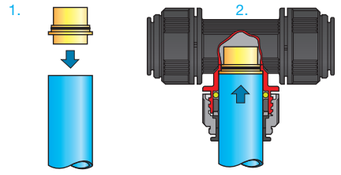
It is of vital importance for the correct function of the Water Trap Tee that the air supply within which the Tee is installed is near horizontal and that the outlet port faces vertically downwards. Markings to indicate correct orientation have been molded onto the body to assist installation.



Complex systems are easy to achieve.

WATER TRAP TEE CONVERTER

PART NO.	SIZE mm
WTC28	28



The Water Trap Tee Converter is a simple convenient way of converting a standard John Guest 28mm Tee to a Water Trap Tee. This will stop condensing water from entering the vertical take off spur. The air supply needs to be installed with the correct fall and water drain points regularly vented.

To Assemble

Use either John Guest 28mm Nylon Pipe or 28mm copper pipe. The pipe must be cut square and be free of burrs.

Press the shorter spigot into the pipe. The fit on copper pipe will be loose, this will not affect the function.

Push the pipe and converter up to the pipe stop of the center leg of the tee.

Turn the screw cap approx 1/4 turn to lock the pipe in position.

BRASS WING BACK ELBOW

PART NO.	PIPE OD mm	THREAD
PM15WB-1/2NPT	15	1/2" NPT
PM15WB	15	1/2" BSP
PM22WB	22	3/4" BSP

BRASS STRAIGHT CONNECTOR

PART NO.	PIPE OD mm	THREAD
MM011504N	15	1/2" BSPT
MM012206N	22	3/4" BSPT
MM012808N	28	1" BSPT

BRASS MALE STEM ADAPTER

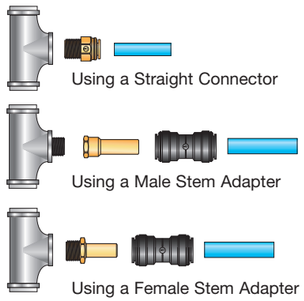
PART NO.	PIPE OD mm	THREAD
MM052226N	22	3/4" NPT
MM052228N	22	1" NPT
MM052828N	28	1" NPT
MM051504N	15	1/2" BSPT
MM052206N	22	3/4" BSPT
MM052818N	28	1" BSP

BRASS FEMALE STEM ADAPTER

PART NO.	PIPE OD mm	THREAD
MM501514N	15	1/2" BSP
MM502216N	22	3/4" BSP

EASY TO EXTEND A GALVANIZED SYSTEM

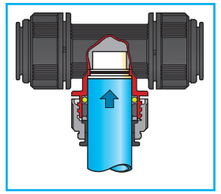
John Guest fittings and pipe can form a stand alone system or be used to modify or extend an existing galvanized system.



RIGID NYLON PIPE

John Guest's new rigid unplasticized nylon 12 pipe is especially suitable for compressed air situations. It is offered in BLUE in packs of 20 x 3 meter lengths (28mm in packs of 10 lengths). It can easily be cut to length using the John Guest pipe cutters and is capable of withstanding temperatures and pressures well in excess of normal working conditions.

Relevant sizes are to DIN 73378



Part No.	Size OD - ID (mm)	Pack Quantity
PA-RM1209-3M-20B	12 x 9	20
PA-RM1512-3M-20B	15 x 12	20
PA-RM1814-3M-20B	18 x 14	20
PA-RM2218-3M-20B	22 x 18	20
PA-RM2823-3M-10B	28 x 23	10

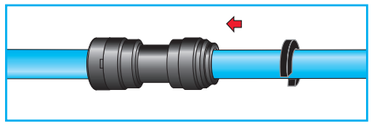
COPPER & ALUMINUM PIPE

While we recommend the use of John Guest Rigid Nylon Pipe. John Guest Fittings can also be used with copper or aluminum pipe.

ACCESSORIES

REALEASE AID

PART NO.	PIPE OD mm
15RA	15
22RA	22
28RA	28

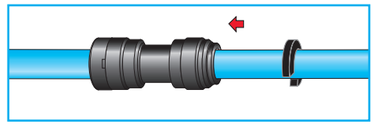


The action of pressure in a system could increase the grip of the collet.

The Release Aid allows a firmer grip on the collet while removing the pipe.

COLLET COVERS

PART NO.	PIPE OD mm	COLOURS
PM1912E	12	BLACK
PM1915E	15	BLACK
PM1918E	18	BLACK
PM1922E	22	BLACK



Collet Covers prevent accidental removal or tampering with piping. The pipe can be inserted with the Collet Cover already attached to the fitting or the cover can slide into position afterwards.

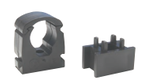
We recommend covers be fitted when pipework is hidden inside walls, ceilings etc.

Collet Covers can be removed to allow the pipe to be disconnected as and when required.

PLUG

PART NO.	PIPE OD mm	COLOURS
PM0812R	12	RED
PM0815E	15	BLACK
PM0818E	18	BLACK
PM0822E	22	BLACK
PM0828E	28	BLACK

PIPE CLIPS AND SPACERS



CLIP PART NO.	PIPE OD mm	COLOURS
PC15E	15	BLACK
PC18E	18	BLACK
PC22E	22	BLACK
PC28E	28	BLACK

SPACER PART NO.	COLOURS
PCSE	BLACK

PIPE CUTTER

PART NO.
JG-TS

For up to and including 22mm pipe

HEAVY DUTY PIPE CUTTER

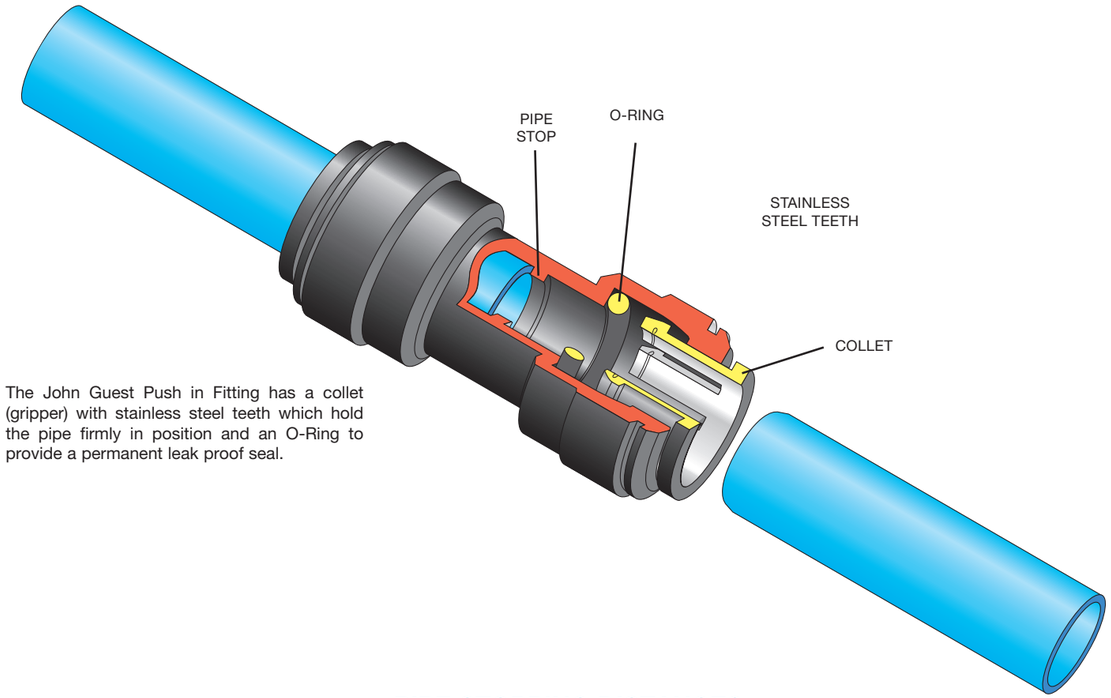
PART NO.
HDC
BLADE JGHDC (Blade only)

For up to and including 28mm pipe

The John Guest System is light and easy to handle

John Guest®

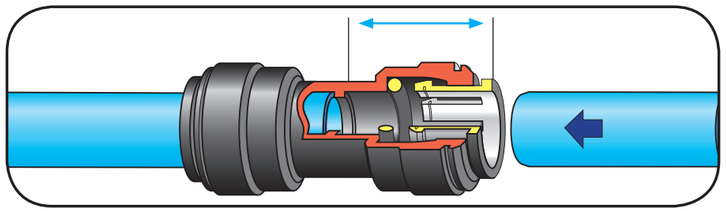
Easy to Make a Connection



The John Guest Push in Fitting has a collet (gripper) with stainless steel teeth which hold the pipe firmly in position and an O-Ring to provide a permanent leak proof seal.

PIPE STOPPING DISTANCES

Stops are located at the following distances from the end of the fitting.



A line is molded onto the fitting to show the position of the pipe stop.

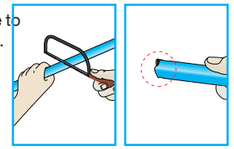
SIZE	STOP DISTANCES
12mm	26mm
15mm	30mm
22mm	35mm
28mm	44mm

THREE EASY STEPS

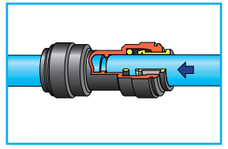
Fittings and pipe should be kept clean and undamaged before use.

Cut the pipe square.
We recommend the use of the JG Pipe Cutter.

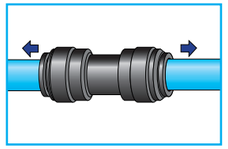
DO NOT use a hacksaw. To avoid damage to the O-ring remove burrs and sharp edges.



Push up to pipe stop.

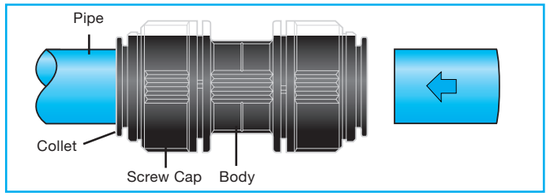


Pull to check secure.
Test the system before use.



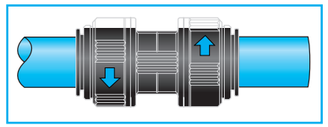
To disconnect, ensure the system is depressurized. Push the collet towards the fitting and remove the pipe. The fitting can be reused.

28MM FITTINGS

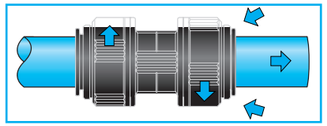


28mm fittings also have a collet with stainless steel teeth and an O-Ring.

After inserting the pipe, a screw cap is turned approx 1/4 turn. This locks the collet in place and reduces lateral and sideways movement of the pipe.

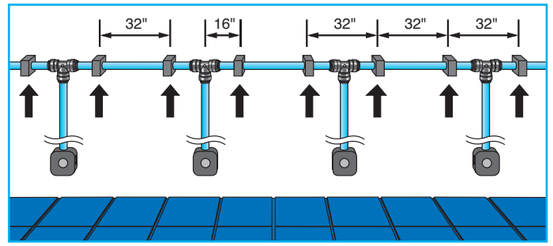


To disconnect, turn the screw cap 1/4 turn, push in the collet and remove the pipe. The fitting and pipe can be reused.

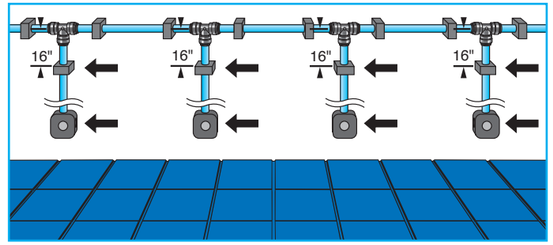


THREE EASY STEPS

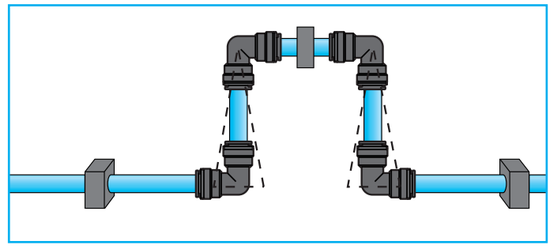
When installing a compressed air system, it is advisable to first attach only the horizontal pipe clips and only attach the clips to the vertical pipes after a small amount of pressure has been applied to the system. This will ensure that the vertical pipes have positioned themselves correctly before they are clipped.



Phase 1: System without pressure



Phase 1: System with pressure



On long pipe runs, it is advisable to install an expansion bend, as shown in the diagram.

Note: All compressed air systems should be equipped with an air line water trap, we recommend our PMTT22E Water Trap Tee for this purpose (as shown on page 5 of this catalog).

Technical Specifications

Working Temperature Range

Minimum Working Temperature -4°F (-20°C)
Maximum Working Temperature +158°F (+70°C)
The above is for use with air. For below 0°C
please consult our Technical Service Department.

Working Pressure

The John Guest Compressed Air System is suitable for the following temperatures and pressures

Temperature	Pressure
+ 73°F	150 psi (10 BAR)
+ 158°F	100 psi (7 BAR)

The above ratings are for air. For use with other fluids or at other temperatures and pressures please consult our Technical Service Department.

Pipe Types

John Guest fittings are intended for use with John Guest nylon pipe but are also suitable for use with a wide range of plastic and soft metal pipes including Polyethylene, Nylon, mild steel, aluminum and copper to the tolerances set out below. Soft plastic pipe, such as Nylon to have a minimum wall thickness of 1.5mm. The pipe must have a good quality surface and be damage free.

Pipe Tolerances

The John Guest fittings featured in this catalog are intended for pipes with outside diameters to the following tolerances

Size	12mm to 28mm OD
Tolerance	+0.05 to -0.10mm OD

Maximum Torque Values

The following maximum torque values should be applied. Do not over tighten plastic fittings as this could cause undue stress and eventual failure. Recommended torque figures shown below must be adhered to.

Size	3/8''	1/2''	3/4''	1''
Plastic threads	3.0Nm	3.0Nm	4.0Nm	N/A
Metal threads	N/A	4.0Nm	5.0Nm	N/A

It is recommended that all installations are checked prior to use to determine that a seal has been made. The maximum torque figures quoted for use with John Guest fittings are dependant on the mating thread conforming to the relevant British or International thread standard.

Material Specification

The fittings are made up of three components:

Bodies are produced in strong engineering plastic or in brass.

O-Rings are Nitrile rubber.

Collets are produce in acetal copolymer with stainless steel teeth.

Applications

Pipe and fittings should be kept clean and undamaged before use. These products are designed for use with air. For other applications please contact our Technical Service Department.

The system is not recommended for use with explosive gases, petroleum spirits and other fuels or for central heating systems.

Installations - Our Recommendations

The pressure rating and installation guidelines of the tubing employed must also be considered during the design of compressed air system.

Pipe should be supported at minimum 32" to prevent excessive load being applied to the fitting. These supports should not be closer than 1" from the end of the fitting.

John Guest fittings and pipe should only be connected after the air receiver and not direct to a compressor.

We recommend collet covers be fitted when pipework is hidden inside walls and ceilings.

It is recommended that all pipe and fittings installations are pressure tested after installation and before handing over to the final user.

Side Loads

Fittings should not be subject to excessive side loads and should not be used as support brackets. Tubing and fittings should be adequately supported to prevent excessive side loads.

Cleaners and Sanitizing Acetal Fittings

Our advice to customers is to use cleaners and sanitizing agents that are above pH4 and low in hypochlorite level. Acetal fittings and parts that are cleaned and/or sanitized should be rinsed immediately with copious amounts of clean tap water to remove all traces of the cleaners.

Details of which products are made from acetal are shown in our catalogs but generally John Guest products incorporating acetal are designated by the part number prefix PI, PM, CI, CM and RM. Polypropylene fittings offer greater resistance to aggressive chemicals than acetal fittings. Polypropylene does not have the same mechanical properties as acetal and John Guest polypropylene fittings are generally designated by the part number prefix PP. Our material suppliers recommend ECOLAB Oasis 133 as a suitable external cleaner for acetal products manufactured by John Guest.

Warranty

While we give a warranty against defects in manufacture or materials, it is the responsibility of the specifier to ensure that fittings and related products are suitable for their application. The installation must be carried out correctly in accordance with our recommendations, complying with recognized codes of practice and relevant national standards, and be properly maintained. Please refer to our terms and conditions of sale.

The fittings shown in this catalog are selected from John Guest's Range of Super Speedfit® Push-in Fittings.

The full range of fittings, all produced in tough engineering polymers, are offered in 4mm to 28mm sizes, in numerous different patterns. They are suitable for a wide variety of applications, but being manufactured in food grade materials, can be used in potable drinking water and drinks dispense, food and medical locations.

For further information on the John Guest Product Range, please consult our Technical Service Department.

The company has a policy of continuous research and development and reserve the right to amend without notice the specification and design of all products illustrated in this catalog.

Product Selection and Installation

John Guest fittings and related products are specifically designed and manufactured by John Guest to the Technical Specifications set out in the John Guest's Products Catalogs. All John Guest fittings and related products should be selected, installed, used and maintained in accordance with these Technical Specifications. It is the customer's/user's responsibility to ensure that John Guest fittings and related products are suitable for their intended applications, are properly installed and maintained, and are used in accordance with the Technical Specifications. It is also the customer's/user's responsibility to provide its customers with relevant technical information about John Guest products it supplies to them.