

COMPRESSED AIR FITTINGS

A push-fit system of fittings and pipe which means a compressed air system can be installed quickly and easily with much reduced production down time. It is also easy to rearrange and extend a system.

STRAIGHT ADAPTOR



PART NO.	PIPE OD	THREAD BSP
PM011213E	12	x 3/8
PM011214E	12	x 1/2
PM011513E	15	x 3/8
PM011514E	15	x 1/2
PM011516E*	15	x 3/4
PM011814E	18	x 1/2
PM012216E	22	x 3/4
PM012818E	28	x 1

*No thread seal

EQUAL ELBOW



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

STRAIGHT CONNECTOR



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

Speedfit® Air Products

EQUAL TEE



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

REDUCING TEE



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

STEM ADAPTOR



Converts push-fit end
to male thread

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

John Guest Adaptability

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



TWO WAY DIVIDER



PART NO.	TUBE OD
PM2315E	15

REDUCER



PART NO.	STEM OD	PIPE OD
PM061510E	15	- 10
PM061512E	15	- 12
PM061815E	18	- 15
PM062215E	22	- 15
PM062218E	22	- 18
PM062815E	28	- 15
PM062822E	28	- 22

STEM ELBOW



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

Stem can swivel in any direction, see page 11.

WATER TRAP TEE



PART NO.	PIPE OD ENDS
PMTT22E	22

Solves the problem of moisture in a compressed air system, see page 11.

U-BEND



PART NO.	SIZE
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PMUB15E	15
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END STOP



Provides permanent or temporary shut off, see page 12.

PART NO.	PIPE OD
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PM4612E	12
PM4615E	15
PM4618E	18 NEW
PM4622E	22

PORTING BLOCK



Supplied with blanking plugs.

PART NO.

JG-L-WSK	5 x 1/2" Connections
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ALUMINIUM WALL BOX



1/2 or 3/4 female thread on the top.
Both products have 3 x 1/2" female threads on the side.
Supplied with blanking plugs.

PART NO.	SIZE
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JGWALLBOX1/2	1/2
JGWALLBOX3/4	3/4

PLUG



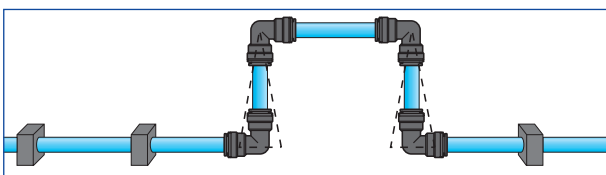
PART NO.	STEM OD	COLOUR
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PM0812R	12	RED
PM0815E	15	BLACK
PM0818E	18	BLACK
PM0822E	22	BLACK
PM0828E	28	BLACK

INSTALLING A SYSTEM

Thermoplastics have different properties to steel pipes and so different techniques need to be employed for the installation of the system. For example plastic pipe expands considerably more than metallic pipe, so the method of constraining the pipe needs to be suitable for this expansion to take place. If the pipe is constrained at both ends it will buckle and generate side loads and stress in the pipe. This can be alleviated by an expansion bend in the pipe work. Pipe should be able to slide through mounting brackets. Plastic pipe work is much lighter than that of steel pipe work and so the mountings do not need to be as robust and using John Guest connectors means that the system can be easily modified to any new requirements quickly and without significant specialist tools such as threading equipment and pipe benders. Using John Guest connectors means that no solvents or adhesives need to be employed in the installation. The coefficient of linear expansion of Rigid Nylon pipe is approximately 0.00012 metre per metre length per °C.

John Guest compressed air equipment is suitable to use above ground and below ground but we would strongly suggest that if it is installed below ground that it is installed in conduit so that the pipe can expand with temperature fluctuations and can easily be removed for service or maintenance. John Guest Ltd. would remind all persons involved with installation and service of compressed air systems that reference should be made to “Approved Code of Practice - Safety of Pressure Systems” available from HMSO in the United Kingdom. For installation in other countries, the appropriate Codes of Practice should apply.

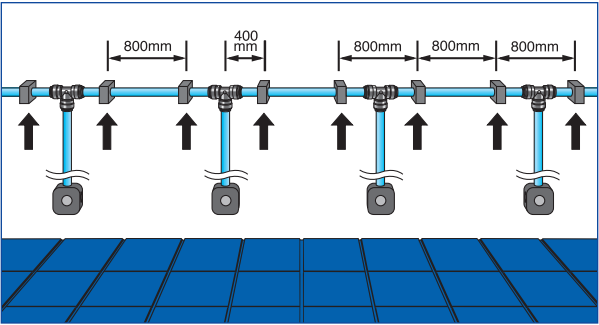


On long pipe runs, it is advisable to install an expansion bend, as shown in the diagram.

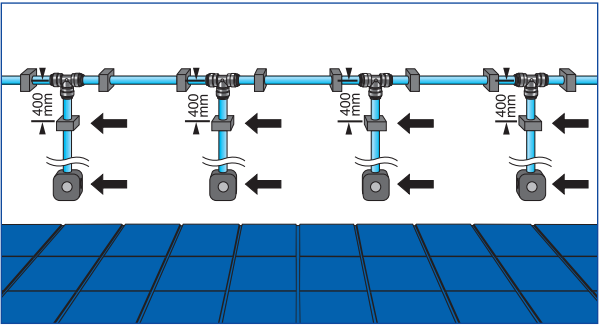
Condensate and dirt in the system

It is always desirable to have clean dry air at the outlets of a compressed air system, as condensate and dirt will affect the performance and life of ancillary equipment. We would strongly recommend that a filter be fitted to the system to clean the air and that John Guest Water Trap Tees be used to trap any residue condensate and this should be taken to a “drain off” facility to extract it from the system.

When installing a compressed air system, it is advisable to first attach 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.

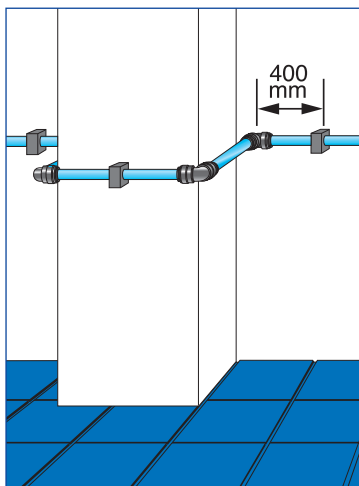


Phase 1: System without pressure

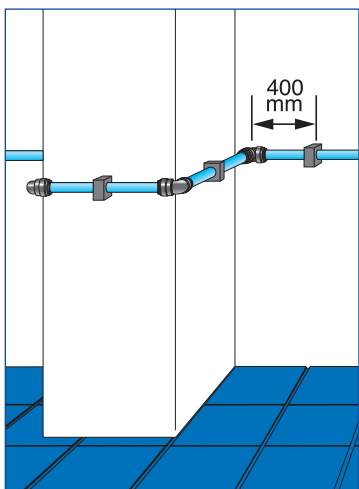
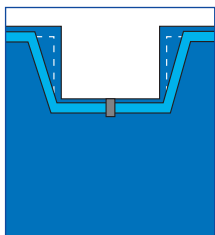


Phase 2: System with pressure

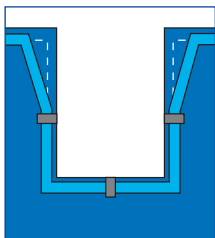
When installing around a column or pillar, maintain a distance of approximately 10cm between the wall and the pipe. Always maintain a distance of 400mm between the fittings and the pipe clip.



Column/Pillar
smaller than 1 metre



Column/Pillar larger
than 1 metre



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 11 of this brochure).

TECHNICAL SPECIFICATION - COMPRESSED AIR SYSTEM

Working Temperature Range

Minimum Working Temperature -20°C

Maximum Working Temperature +70°C

The above is for use with air. For below 0°C

Please consult our Customer Service Department.

Working Pressure

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

Temperature

+ 23°C

+ 70°C

Pressure

10 BAR

7 BAR

The above ratings are for air. For use with other fluids or at other temperatures and pressures please contact our Customer 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 UPVC, ABS, Polyethylene, Nylon, mild steel 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 brochure 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.

Size

3/8"

1/2"

3/4"

1"

Plastic threads

3.0Nm

3.0Nm

4.0Nm

4.0Nm

Metal threads

N/A

4.0Nm

5.0Nm

5.0Nm

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.