Issued 05/2000

Air Ring Main system GB

Instruction Leaflet

GB **RS Stock No.**

340-6596, 340-6603, 340-6619, 340-6625
340-6631, 340-6647, 340-6653, 340-6669
340-6681, 340-6697, 340-6704, 340-6710
340-6748, 340-6754, 340-6782, 340-6798
340-6849, 340-6855, 340-6726

Easy to use push-in system for Air Line Ring Mains

The John Guest Air Ring Main System provides the ideal connection from the compressor receiver to air line service components through to complete ring main and take off points. using the John Guest system a compressed air ring main can be installed quickly and easily, considerably reducing the need for specialist staff and providing much reduced production time.

Applications

Pipe fitting should be kept clean and undamaged before use.
These products are designed for use with air. For other applications please refer to our Customer Services Department.
The system is not recommended for use with explosive gases, petroleum spirits and other fuels or for central heating systems.

Installation Guide - Code of Practice

When installing a compressed air ring main it is recommended that reference be made to “Approved Code of Practice - Safety of Pressure System”, available from HMSO in the United Kingdom. For installations in other countries, the appropriate Codes of Practice should apply.

Installations - Our Recommendations

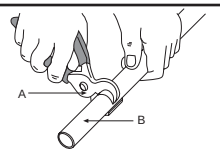
The pressure rating and installation guidelines of the tubing employed must also be considered during the design of any ring main system.
pipe should be supported at minimum 800mm to prevent excessive load being applied to the fitting. These supports should not be closer than 25mm from the end of the fitting.
John Guest fittings and pipe should only be connected after the air receiver and not direct to a compressor.
We recommend collect covers to 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 handling over to the final user.

Installation has never been easier

To make a connection, the tube is simply pushed in by hand: the unique patented John Guest collet locking system then holds the tube firmly in place without deforming it or restricting flow.

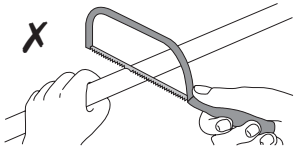
Cut pipe square

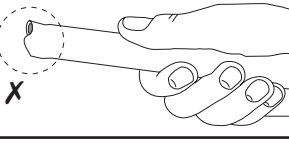
Cut the pipe square ensuring it is free of score marks. For speedfit plastic pipe we recommend use of the John Guest pipe cutters. Do not use a hacksaw. To avoid damage to the ‘O’ ring, make sure burrs and sharp edges are removed.



A. Use pipe cutter
B. John Guesty plastic tube

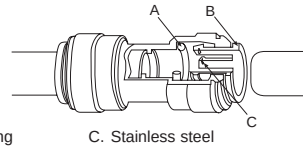
Do not use a Hacksaw





Making a connection

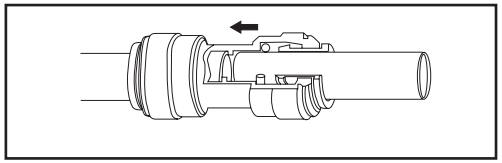
Fitting and pipe should be kept clean and undamaged before use.
Do not insert fingers into the fitting as the stainless steel teeth incorporated within the collet may cause injury.



A. ‘O’ Ring
B. Collet
C. Stainless steel teeth

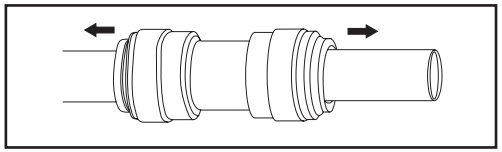
With the fitting clean and undamaged and the pipe cut square as described on the opposite page, you are now ready to make the connection.

Push up to pipe stop



Push the pipe into the fitting, to the pipe stop. The collet (gripper) has stainless steel teeth which hold the pipe firmly in position whilst the 'O' ring provides a permanent leak proof seal.

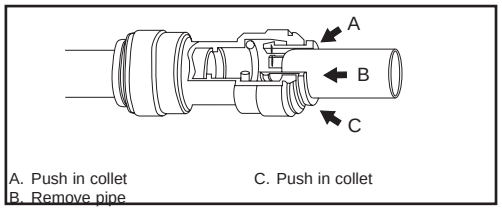
Pull to check secure



Pull on the pipe to check it is secure. It is good practice to test the system prior to leaving site and/or before use.

Disconnecting

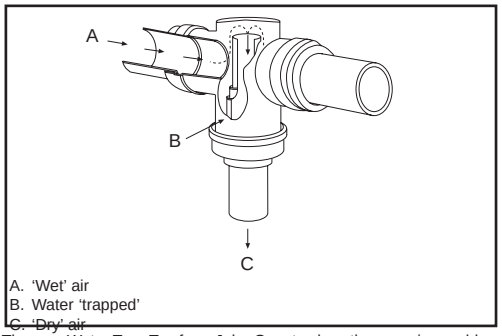
Push in collet and remove pipe



A. Push in collet
B. Remove pipe
C. Push in collet

To disconnect ensure the system is depressurise before removing fitting. Push in collet squarely against face of fitting. With the collet held in this position, the pipe can be removed. The fitting can be re-used.

Water Trap Tee



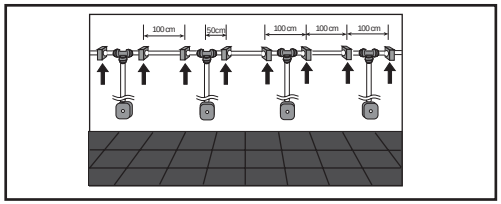
A. 'Wet' air
B. Water 'trapped'
C. 'Dry' air

The new Water Trap Tee from John Guest solves the on-going problem of moisture in a Ring Main 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 i.e. retained in the line to be drawn off at some suitable location.

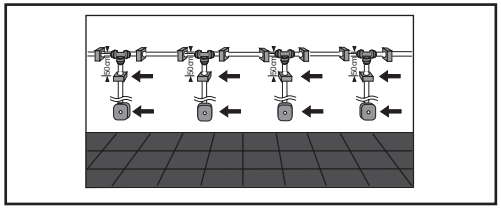
Installation

It is of vital importance for the correct function of the Water Trap Tee that the air ring main within which the Tee is installed is near horizontal and that the outlet port faces vertically downwards. Markings to indicate correct orientation have been moulded onto the body to assist installation.
When installing an Air Ring Main System, it is advisable to the first attach only the horizontal pipe clips and 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

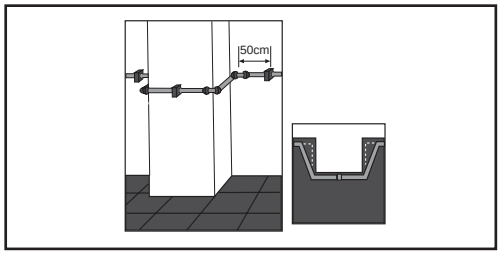


Phase 2: System with pressure



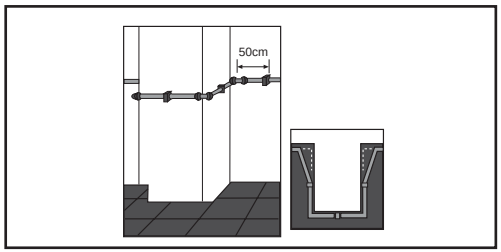
When installing around a column or pillar, maintain a distance of approximately 10cm between the wall and the pipe. Always maintain a distance of 50cm between the fittings and the pipe clip.

Column/Pillar smaller than 1 metre



Column/Pillar larger than 1 metre

On long pipe runs, it is advisable to install an expansion bend, as shown in the diagram, every 25 metres.



Note: All air ring main system should be equipped with an air line water trap. We recommend **RS** stock no. 340-6726 Water Trap Tee for this purpose.

1200001058
V10855

Technical specifications

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 Air Ring Main System is suitable for the following temperatures and pressures.

Temperature	Pressure
+23°C	10 BAR
+70°C	7 BAR

The above ratings are for air. for use with other temperatures and pressures please consult 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, Polyethene, 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 to have 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"
Tolerance	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 Speedfit fittings are dependent 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 acetyl copolymer with stainless steel teeth.

Cleaners and sanitising acetyl fittings

John Guest air ring main fittings incorporate acetyl parts. Our advice to customers is to use cleaners and sanitising agents that are above pH4 and low in hypochlorite level. Acetyl fittings and parts that are cleaned and/or sanitised should be rinsed immediately with copious amounts of clean tap water to remove all traces of the cleaners.

RS Components shall not be liable for any liability or loss of any nature (howsoever caused and whether or not due to RS Components' negligence) which may result from the use of any information provided in **RS** technical literature.