

TOPRING **AIR LINE**

INSTALLATION GUIDE **SERIES 5**



FOR MORE INFORMATION,
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TOPRING

Compressed air solutions

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IMPORTANT NOTICE

All product codes, photos and technical specifications can be found in the **AIR LINE** catalogue. Please refer to our **AIR LINE** design guide available in the “Piping Systems” section of our website, before proceeding with the installation.

1

CUT THE PIPE

Use the pipe cutter (36.100). The cut must be straight and perpendicular to the pipe, maximum of $\leq 7^\circ$ is tolerated for cuts.



PIPE CUTTER

Product No	Description
36.100	Pipe cutter

Allows effortless straight, even and accurate cutting of nylon pipes up to 36 mm (1-13/32 in) O.D.



WARNING:

To ensure a proper seal, the pipe must be smooth and free of scratches, impacts or distortions.



2

VERIFY THE CUT

Remove all sharp edges inside and outside of the pipe. Pipe surface must not be sanded or scratched.

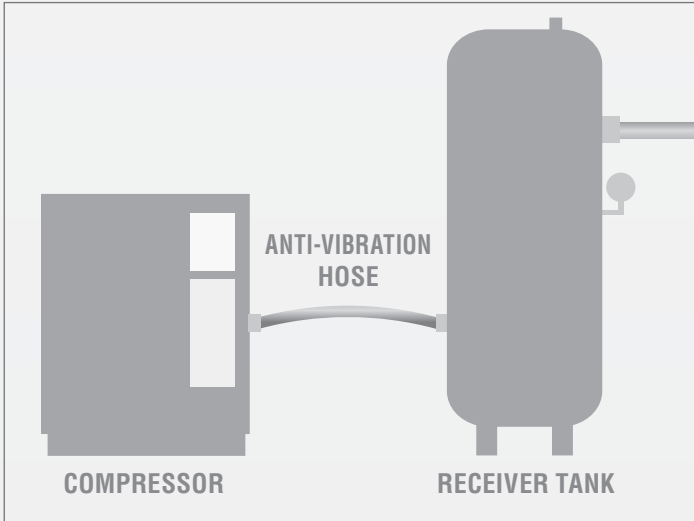




CAUTION

The **AIR LINE** piping system must never be connected directly to the compressor outlet.

An anti-vibration hose and a receiver tank must be installed before the **AIR LINE** piping system to protect the system from excessive heat and the effects of thermal variations.



3

CLEAN THE PIPE AND FITTING

Eliminate all residue, dirt and dust inside the pipe to avoid any potential equipment problems.

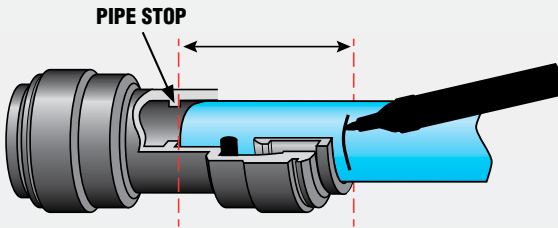


It is strongly recommended to clean the ends of the pipe and the inside of the fitting with a clean cloth.

4

MARK THE PIPE

To avoid air leaks, the insertion depth of the pipe into the fitting must be determined (see chart below). You can mark the insertion depth directly on the pipe.



INSERTION DEPTH			
Pipe diameter (mm)	15	22	28
Depth (in)	1	1-3/4	1-3/4

5

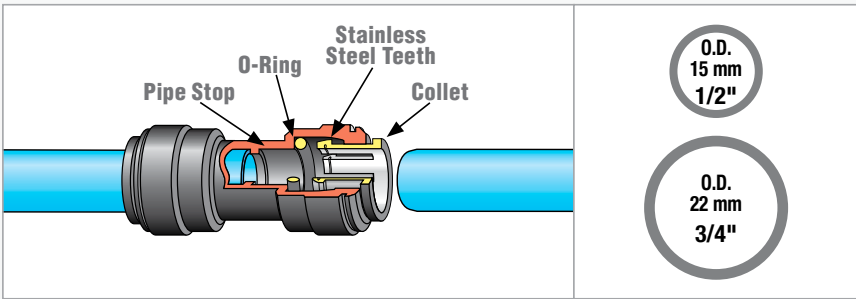
PIPE AND FITTING ASSEMBLY (15 AND 22 MM)

The installation is very simple, easy to modify and no special equipment required. For a high-performing and long-lasting system, you only need to take a few simple precautions.

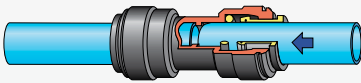
⚠ WARNING: Lubricants, grease, and oil must not be used for the pipe and fitting connection. The presence or use of lubricants may result in improper sealing and pipe connection.

WITH 15 TO 22 MM PUSH-TO-CONNECT FITTINGS

PIPE SIZE

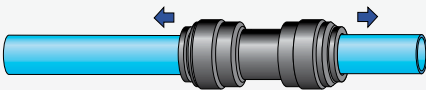


THREE EASY STEPS TO MAKE A CONNECTION



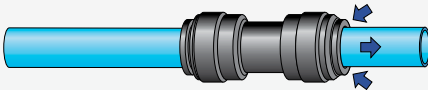
STEP 1

Push in to pipe stop.



STEP 2

Pull to make sure that pipe is secure. Test the system before use.



STEP 3

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

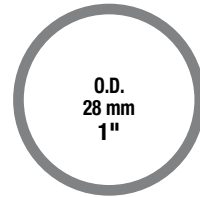
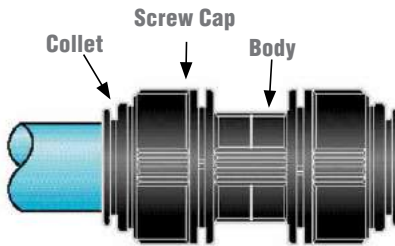
5

**PIPE AND FITTING ASSEMBLY
(28 MM)**

⚠ WARNING: Lubricants, grease, and oil must not be used for the pipe and fitting connection. The presence or use of lubricants may result in improper sealing and pipe connection.

WITH 28 MM PUSH-TO-CONNECT FITTING

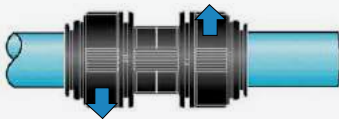
PIPE SIZE



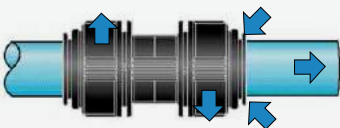
THREE EASY STEPS TO MAKE A CONNECTION



STEP 1
Push in to pipe stop.



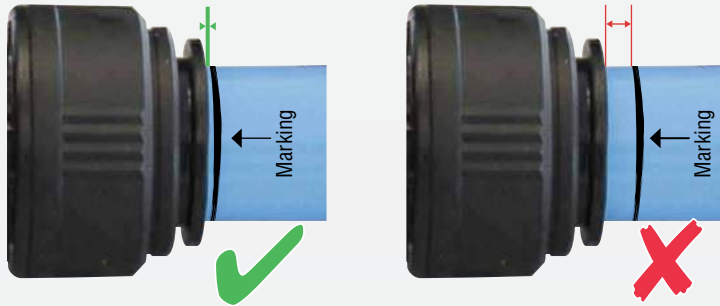
STEP 2
After inserting the pipe, turn screw cap approx 1/4 turn. This locks the collet in place and reduces lateral and sideways movement of the pipe.



STEP 3
To disconnect, turn the screw cap 1/4 turn, push in the collet and remove the pipe. The fitting and pipe can be reused.

6

INSPECT IF THE FITTING IS TIGHT



7

MOUNTING CLIPS AND SPACERS INSTALLATION

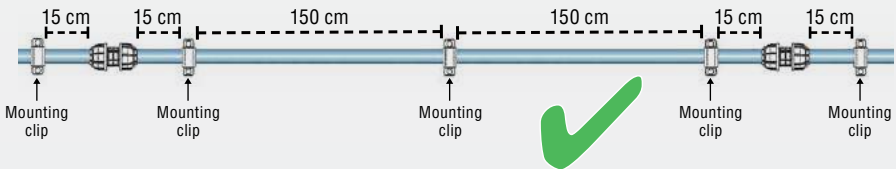
Main line:

In order to eliminate the possibility of line bending, it is mandatory to follow the mounting clips instructions.

The mounting clips must be installed at a maximum of 15 cm, on each side of the fitting, and the chart below indicates the maximum distance between each mounting clip.

Pipe diameter	Maximum distance between each mounting clip
15 mm	90 cm
22 mm	120 cm
28 mm	150 cm

Example with a 28 mm pipe



Drops:

The mounting clips installation for drops must be done after the system is pressurized to allow the effects of thermal variations to take place. Thereby, the drops will be positioned at a 90° to the horizontal piping.

CHECKING BEFORE PRESSURIZING / RESIDUAL RISK

Without respecting the safety information and requirements provided in this document, an inadequate assembly of the system can result in:

- Under pressure fluid ejections, in case of disconnection caused by inadequate tightening.
- Under pressure fluid ejections, in case of damage to the pipe caused by shocks.
- Under pressure fluid ejections, if the operating pressure is higher than 145 PSI (10 BAR) at 23 °C and 100 PSI (6.9 BAR) at 70 °C.

When identified, defective parts must be repaired immediately.

PRESSURIZING (TWO PHASES)

- 1- Run a preliminary test by gradually raising the pressure to a maximum of 43.5 PSI (3 BAR). This will allow the operator to identify leaks or faulty connections and make the necessary corrections. Gradual pressurization will also remove all the aluminium residue in the system.
- 2- Gradually and continuously increase the pressure, 14.5 PSI (1 BAR) every 5 seconds, until it reaches the working pressure.

PRESSURIZING VERIFICATION

- 1- Once the working pressure has been reached, maintain working pressure for at least 10 minutes (slight dips are tolerated).
- 2- After the first 48 to 72 hours, check all seals and verify that nuts are secured.

⚠ CAUTION

THE PIPING SYSTEM SHOULD NEVER SUPPORT LOADS OTHER THAN ITS OWN WEIGHT, OR BE EXPOSED TO MOVEMENT OTHER THAN THE NORMAL EXPANSION OF ITS COMPONENTS. WHEN PLANNING THE LAYOUT OF A WORKSTATION, FLEXIBLE HOSES SHOULD BE CONNECTED THROUGH STURDILY ATTACHED HOSE REELS OR MANIFOLDS TO ISOLATE PIPING FROM TOOL WEIGHT AND MOVEMENT.

MAINTENANCE

Here is a list of recommended checks and controls by TOPRING:

- Review the status of the installation on an annual basis.
- Check the tightening of the nuts.
- In the event of an impact, check the condition of the pipe and replace any damaged parts.
- Check for air leaks.

⚠ WARNING: ANY TYPE OF INTERVENTION MUST BE CARRIED OUT ON A DEPRESSURIZED SYSTEM OR DEPRESSURIZED SECTION (USING A QUARTER TURN BALL VALVE OR A LOCKABLE SAFETY VALVE).

LIABILITY OF ALL BUYERS AND/OR USERS

In addition to carefully reading the TOPRING design guide, product guidelines, system and/or network (hereinafter referred to as « TOPRING Product(s) »), purchasers and/or users of a TOPRING Product that involves compressed air must inquire, prior to its use, about the health and safety risks associated with compressed air.

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96.721_INSTALLATION_GUIDE_AIR_LINE_S5_OCTOBER_2019