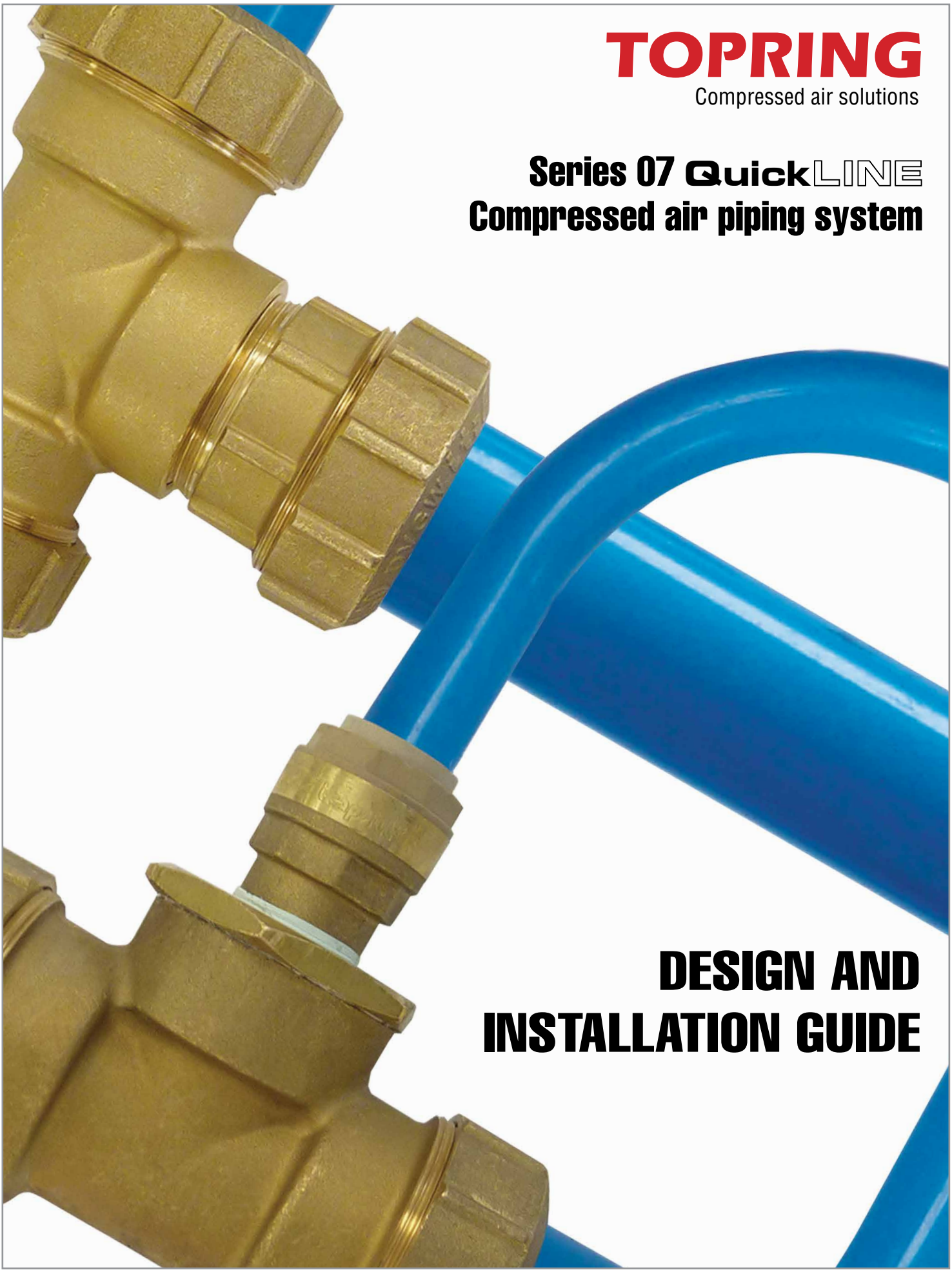
TOPRING

Compressed air solutions

Series 07 QuickLINE
Compressed air piping system



DESIGN AND INSTALLATION GUIDE

96.612_installation_guide_April_03_2018

TOPRING
Compressed air solutions

TOPRING QuickLINE COMPRESSED AIR SYSTEM



SECURITY GUIDELINES

Read this guide carefully as it provides important information and warnings relating to the safety, use, and maintenance of the unit. Please keep this guide.

- **After removing the packaging, verify the integrity of all components; in case of any doubt do not use the components and contact TOPRING.**
- **It is essential to respect the instructions contained in this guide.**
- **Any installation or use performed that is not consistent with the requirements specified in this guide may endanger the safety of the user, incur your liability and, in some cases, cause serious injury.**
- **Tubes and fittings must not be installed for outdoor use and cannot come into contact with sources of vibration, movement or thermal shock that may cause safety limits to be exceeded, as specified in the section "CONDITIONS OF USE" on page 7.**
- **Anyone who uses a TOPRING product, unit and/or network acknowledges and accepts the inherent risks of their use. Please read attentively the section "Liability of all buyers and/or users" on page 19.**

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1. BASIC INFORMATION

Prior to the installation

Prior to the installation of a **TOPRING** SicoAIR compressed air distribution system, the installer must ensure that the installation area complies with any regulations applicable to explosive hazards or others. The downstream pressure should be released prior to any repair or modifications to the system. Installers should only use **TOPRING** SicoAIR components and accessories, including pipe clips and fixture clamps. The technical features of the **TOPRING** SicoAIR components must be respected (see section 5 on page 7).

TOPRING SicoAIR aluminium pipes

Pipes should be protected from potential impacts with handling equipment such as a forklift or, when located in an environment with moving overhead loads. The pipeline system must never be welded.

Component assembly

To ensure proper operation, please follow installation instructions and recommendations from the present installation guide or contact **TOPRING** for technical assistance.

Pressurizing the system

Once the installation has been completed and prior to pressurizing, the installer should complete all tests, inspections and compliance as stated in any contract and according to sound engineering practices and current local regulations.

Expansion / Contraction factors

The system designer and/or installer must calculate the elongation and retraction factor of each system according to the recommendations in this installation guide. (see section 8 on page 10).

Situation to be avoided

- Installation integrated within a solid mass preventing the expansion of the system (concrete, foam, etc.).
- Exposure to chemicals incompatible with components.
- Use for grounding or as a support for electrical equipment (it should be only used for transportation of air or nitrogen).

Connexion at the air compressor

It is mandatory to install a flexible anti-vibration hose between the compressor and the airline system.

A flexible anti-vibration hose will extend the airline system service life by reducing stress from vibration and high temperatures generated by the compressor. See product from Series 09 on **TOPRING**.com.

Reasonable engineering practice for the optimization of a compressed air system

- The installation should be performed in accordance with good engineering practice.
- Bends and bypasses cause pressure drops. To avoid pressure loss, use a flexible hose to offset the network or to bypass obstacles. Keep in-line pipe diameter reductions to a minimum.
- Use adequate filtration at the compressor outlet and at the point of use in order to maintain good quality air.
- The diameter of the pipe will influence pressure drops at the point-of-use. Select the diameter according to the required flow rate and the acceptable pressure drop at the point of use.

2. POINT OF HIGHEST PRESSURE DROP

The point of the highest pressure drop is typically the furthest point of use in the system. All pressure drops are taken into consideration between the start point and each outlet. A high pressure drop requires a higher loading pressure on the compressor to compensate for the losses along the network.

+2 PSI = +1% energy consumption

A 2 PSI increase in operating pressure results in a 1% increase in energy consumption. Pressure drops drastically increase the electric bill.

3. ELEMENT CONTRIBUTING TO PRESSURE DROPS

To properly design a compressed air system, consider all of the following:

- **Inside diameter of pipes**
  Increasing the pipe diameter reduces pressure drops.
- **Total Required Air Flow (SCFM)**
  Air demand is directly related to the number of points of use and the air consumption of each point of use.
- **Friction factor**
  TOPRING SicoAIR aluminium pipes have a very low friction factor due to their smooth surface as opposed to galvanized pipes.
- **Length of the network**
  The longer the network, the higher the pressure drops.
- **Design of the network**
  It is recommended to build a closed loop network in order to reduce pressure drops.
- **Working pressure**
  When the working pressure is lower, the pressure drop increases.
- **Fittings**
  Every direction change, cross manifold, “T” connection or reduction in line size within the network will cause pressure drops equivalent to adding additional line length. Connections are responsible for most pressure drops. Refer to the table “Equivalent lengths for various connections” below.

Equivalent lengths for various connections

FITTINGS		DIAMETERS					
		15 mm	22 mm	28 mm	40 mm	50 mm	63 mm
Union 	in	5.1	6.7	8.7	11.8	15.7	19.7
	cm	13	17	22	30	40	50
90° Elbow 	in	13.8	16.9	21.7	31.5	37.4	49.2
	cm	35	43	55	80	95	125
“T” Union 	in	6.7	9.4	13.4	19.7	27.6	37.4
	cm	17	24	34	50	70	95
“T” Reducer 	in	21.7	26.4	37.0	55.1	66.9	90.6
	cm	55	67	94	140	170	230

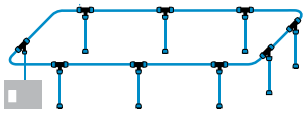
4. PRE-INSTALLATION TIPS

GUIDELINES FOR DETERMINING THE PIPE DIAMETER NEEDED FOR A COMPRESSED AIR SYSTEM

1. Identify type of network: closed loop or dead end
2. Calculate total length of the line (feet)
3. Determine total flow required (SCFM)
4. Use the tables below to determine the correct diameter

- Calculations based on total maximum pressure drop (△NUP) of no more than 3 PSIG for the entire network, at 100 PSIG and 15.5 °C
- Total flow required takes account of all flows for all compressed air powered tools and equipment
- Note that a typical compressor will produce approximately 4 SCFM per horsepower

Minimum diameter of the Pipe required for a closed-loop network

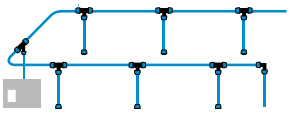


TOTAL LENGTH OF THE NETWORK (FEET)

TOTAL FLOW REQUIRED

SCFM \ FEET	100'	150'	200'	250'	300'	400'	500'	600'	700'	800'	900'	1000'	1250'	1500'	2000'
5	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
10	15	15	15	15	15	15	15	15	15	15	15	15	22	22	22
15	15	15	15	15	15	15	15	22	22	22	22	22	22	22	22
20	15	15	15	15	15	22	22	22	22	22	22	22	22	22	22
30	15	22	22	22	22	22	22	22	22	22	22	22	22	22	28
40	22	22	22	22	22	22	22	22	22	22	28	28	28	28	28
60	22	22	22	22	22	28	28	28	28	28	28	28	28	28	40
80	22	22	22	28	28	28	28	28	28	28	28	40	40	40	40
100	22	28	28	28	28	28	28	28	40	40	40	40	40	40	40
125	28	28	28	28	28	40	40	40	40	40	40	40	40	40	40
150	28	28	28	28	40	40	40	40	40	40	40	40	40	40	40
200	28	28	40	40	40	40	40	40	40	40	40	40	50	50	50
300	40	40	40	40	40	40	40	50	50	50	50	50	50	50	63
400	40	40	40	40	40	50	50	50	50	50	50	63	63	63	63
500	40	40	50	50	50	50	50	50	63	63	63	63	63	63	63
750	50	50	50	50	63	63	63	63	63	63	63	63			
1000	50	50	63	63	63	63	63								
1500	63	63	63	63											

Line sizing for a linear / dead-ended network



TOTAL LENGTH OF THE NETWORK (FEET)

TOTAL FLOW REQUIRED

SCFM \ FEET	25'	50'	75'	100'	150'	200'	250'	300'	400'	500'	600'	700'	800'	900'	1000'
5	15	15	15	15	15	15	15	15	15	15	15	22	22	22	22
10	15	15	15	15	15	22	22	22	22	22	22	22	22	22	22
15	15	15	22	22	22	22	22	22	22	22	22	22	28	28	28
20	15	22	22	22	22	22	22	22	22	28	28	28	28	28	28
30	22	22	22	22	22	28	28	28	28	28	28	28	28	40	40
40	22	22	22	22	28	28	28	28	28	40	40	40	40	40	40
60	22	28	28	28	28	28	40	40	40	40	40	40	40	40	40
80	22	28	28	28	40	40	40	40	40	40	40	40	40	40	50
100	28	28	28	40	40	40	40	40	40	40	40	50	50	50	50
125	28	40	40	40	40	40	40	40	50	50	50	50	50	50	50
150	28	40	40	40	40	40	40	50	50	50	50	50	50	63	63
200	40	40	40	40	40	50	50	50	50	63	63	63	63	63	63
300	40	40	50	50	50	50	63	63	63	63	63	63	63		
400	40	50	50	50	63	63	63	63	63						
500	50	50	50	63	63	63	63								
750	50	63	63	63											
1000	63	63													
1500	63														

5. CONDITIONS OF USE

Fluid: Compressed air, Nitrogen

Maximum working pressure:
Tubes/Fittings: 217 PSI (15 BAR)

Normal operating pressure: 181 PSI (12.5 BAR)

Working temperatures: - 20 °C / + 70 °C

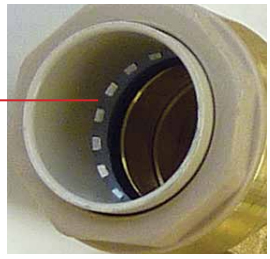
Certifications: ASME B31.3, CRN, QUALICOAT, ISO 9001 : 2008
(for more details, see **TOPRING**'s catalogue)

PUSH-TO-CONNECT FITTINGS for 15, 22 and 28 mm pipes

Brass and polyamide monobloc design fitting

One piece fitting with a fixed stainless steel locking clip inside. No need to assemble or dismantle the fitting for connection to pipe.





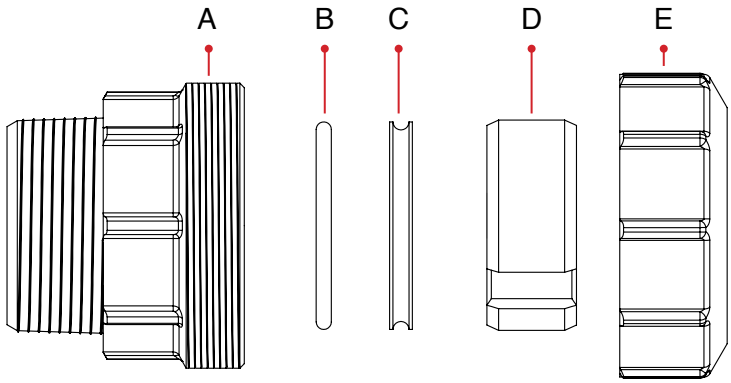
SCREW-TYPE COMPRESSION FITTINGS for 40, 50 and 63 mm pipes

Brass fitting with moving internal parts



Components

A. Body (brass)
B. O-ring (nitrile rubber)
C. Compression ring (stainless stee)
D. Locking ring (nickel plated brass)
E. Clamping nut (brass)



6. MOUNTING ACCESSORIES





STRUT ADAPTER FOR MOUNTING CLIPS

Product No	Description
07.540	For all mounting clip



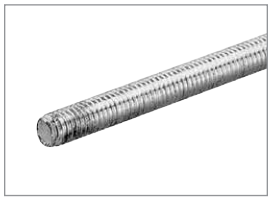
CANTILEVER ARM 1-5/8" X 1-5/8"

Product No	Length (in)
07.550	6
07.551	12



STRUT CHANNEL 1-5/8" X 1-5/8"

Product No	Length (ft)
07.555	10



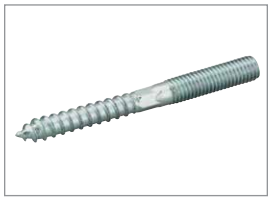
THREADED ROD / 10 FT

Product No	Size UNC
07.526	3/8



COUPLING NUT

Product No	Size UNC
07.528	3/8 U



SCREW

Product No	Size UNC
07.529	3/8



SUSPENSION PIPE CLIPS

Product No	Size mm ○	Nut Size UNC
07.508	28	3/8
07.518	40	3/8
07.520	50	3/8





SWIVEL LOOP HANGERS

Product No	Size mm ○	Threaded Rod Size UNC
07.507	28	3/8
07.517	40	3/8
07.521	50	3/8
07.522	63	3/8





I-BEAM CLAMP

Product No	Beam Thickness (in)	Threaded Rod Size UNC
07.535	1/4 - 3/4	3/8





I-BEAM MOUNTING CLIPS

Product No	Beam Thickness (in)
07.530	1/8 - 1/4
07.531	3/8 - 1/2
07.532	1/2 - 3/4

7. PRACTICAL TOOLS



PIPE CUTTER / 3 TO 30 MM

Product No	Description
07.566	Pipe cutter
07.567	Spare blade



PIPE CUTTER / 6 TO 64 MM

Product No	Description
07.568	Pipe cutter
07.569	Spare blade



DISMANTLING CLIP

Product No	Size mm
07.560	15
07.561	22
07.562	28



CHAMFER TOOL

Product No	Size mm
07.570	3 to 35
07.574	15 to 50

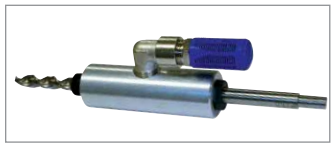


Product No	Size mm
07.579	50 to 160



DEBURRING TOOL

Product No
07.571





DRILLING TOOL FOR TWIN TAKE-OFF DROP COUPLING (PRESSURIZED SYSTEM)

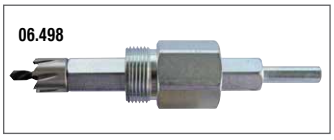
Product No	Outlet (F) BSPP	Pipe mm
06.596 *	1/2	40
06.598 **	1	50-63

* Requires brass ball valve (65.906) for each drilling.

** Requires brass ball valve (65.910) for each drilling.

- Allows installation of twin take-off drop couplings without having to depressurize the system
- Drill chips are collected in the tool reservoir preventing them from entering the main line
- Integrated drill guide for precision drilling
- Can also be used on a non-pressurized system





DRILLING TOOL FOR TWIN TAKE-OFF DROP COUPLING (DEPRESSURIZED SYSTEM)

Product No	Outlet (F) BSPP	Size mm
06.496	1/2	40
06.498	1	50-63

- For installation of twin take-off drop couplings on a depressurized system
- Integrated drill guide for precision drilling

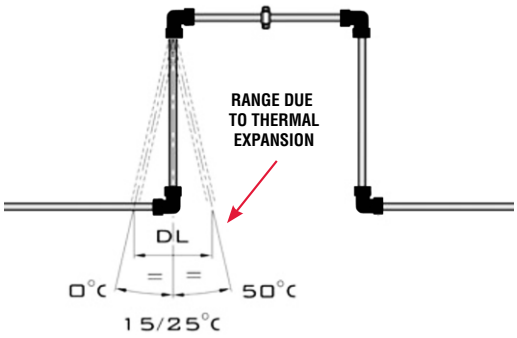
8. TECHNICAL STANDARDS FOR INSTALLATION

8.1. Thermal variations

When the piping is longer than 30 metres, you must insert the appropriate means of compensation for expansion (expansion coefficient of the aluminum K = 0.000023).

When planning the system, you should consider the minimum clearances necessary to ensure the proper expansion of the pipe.

Keywords	Description
A-B*	Unit (mm)
L-L1-L2	Length (mm)
DL	Expansion (mm)
DT	Temperature range (°c)
M	Sliding mounting bracket
F	Fixed mounting bracket

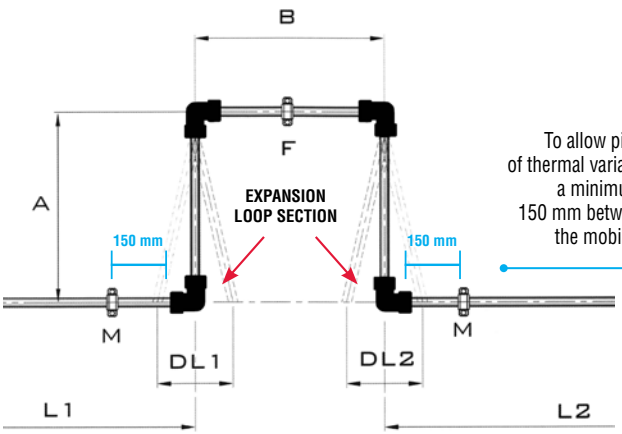


	THERMAL EXPANSION OF AN AIR NETWORK (IN) ΔT (ºC)					
LENGTH (FT)	1	2	5	10	20	25
100	0.029	0.058	0.146	0.292	0.583	0.729
150	0.044	0.087	0.219	0.437	0.875	1.094
200	0.058	0.117	0.292	0.583	1.166	1.458
250	0.073	0.146	0.365	0.729	1.458	1.823
300	0.087	0.175	0.437	0.875	1.750	2.187
400	0.117	0.233	0.583	1.166	2.333	2.916
500	0.146	0.292	0.729	1.458	2.916	3.645

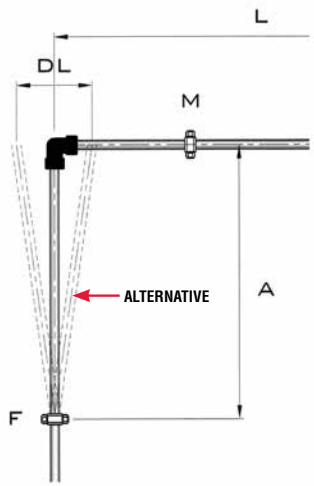
NOTE

All theoretical calculations and considerations contained in this guide are valid at an ambient temperature of an installation between 15°C and 25°C.

In the case where the installation takes place at temperatures outside the range indicated above, the necessary corrections must be made.



To allow pipe sliding due of thermal variation, calculate a minimum distance of 150 mm between fitting and the mobile support (M)



DL = DT x 0.02 x L

A = DL x 23"

L1 = 40 m L2 = 40 m DT = 50°C
DL = DT x 0.023 x L = 50 x 0.023 x 40 = 46 mm
A = DL x 23 = 40 x 23 = 920 mm
B = 0.7 x A = 0.7 x 920 = 640 mm

8.2 Expansion loops

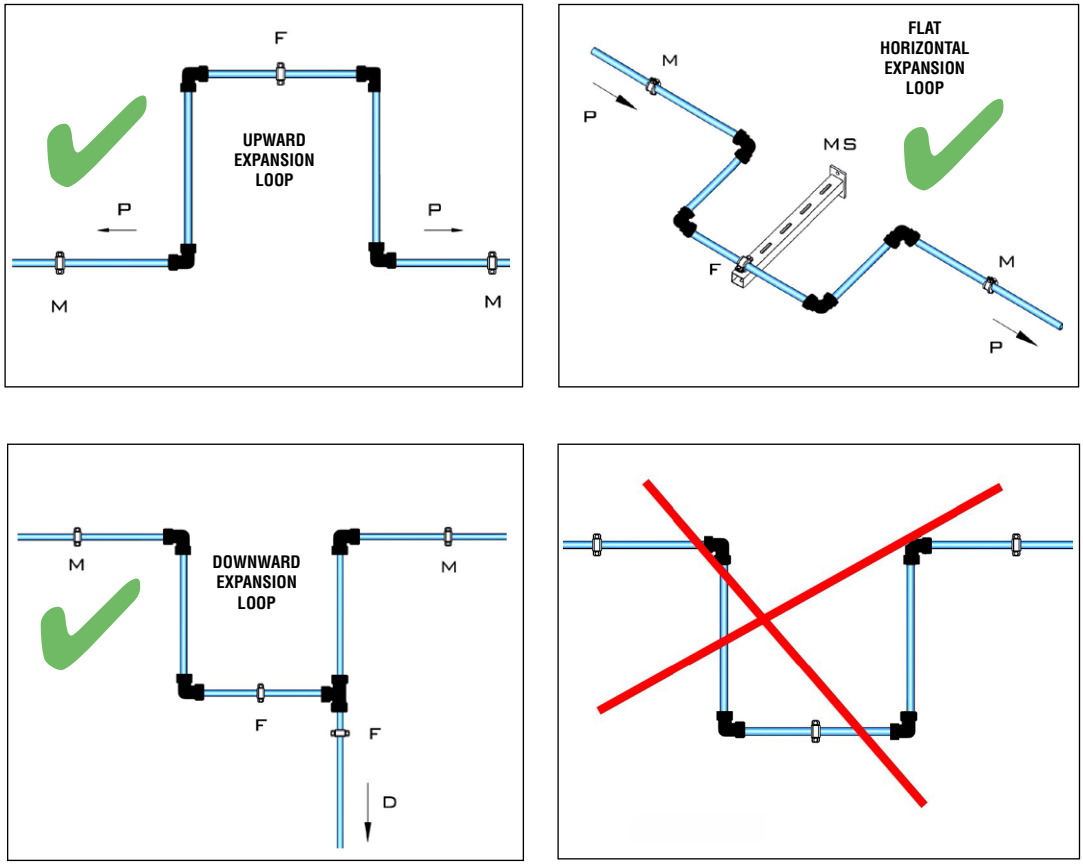
In order to allow the correct operation of the installation, it is necessary to measure out plan for absorption points and expansion loops on the long sections. These will compensate for the expansion caused by thermal variations.

Legend	Description
MS	Bracket
P	Slope
D	Drop
M	Sliding mounting bracket
F	Fixed mounting bracket

WARNING

In order to avoid the accumulation of condensate, the downward expansion loop should not be used unless there is a condensate outlet.

Application examples of expansion loops



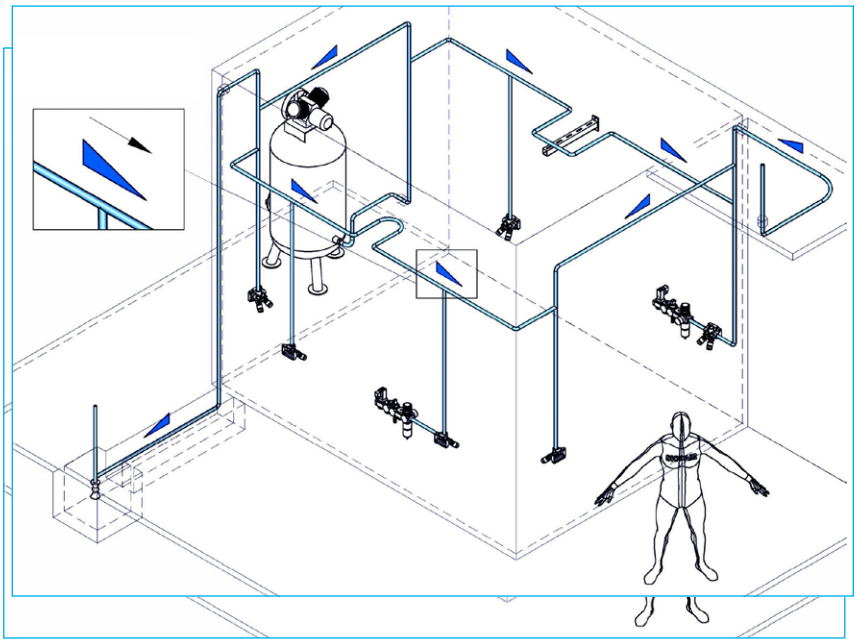
TECH TIP

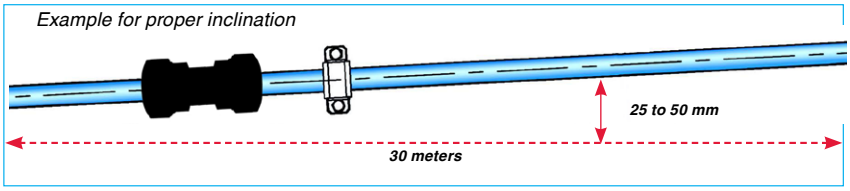
An anti-vibration hose can also be used to compensate for thermal expansion (see page 16).

8.3 Slopes

All straight lines should have a 25 to 50 mm slope for every 30-metre length for proper condensate draining.

These slopes should lead to drops with manual or automatic drains, installed as low as possible in order to eliminate condensates.

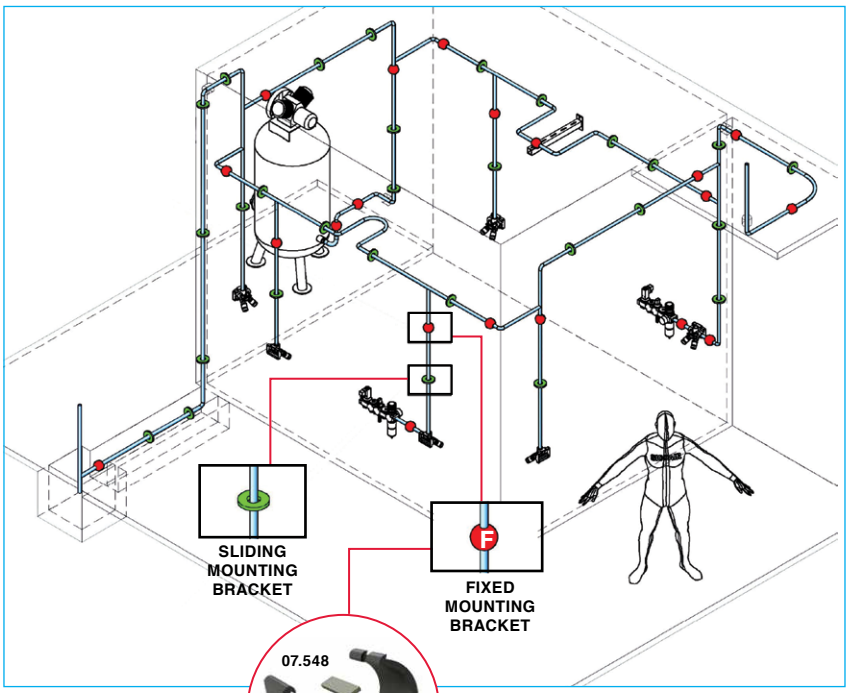




8.4 Fixed mounting brackets

Installation
In order to allow the line to expand and to avoid pressure stress points that can compromise the proper functioning of the system, you must install fixed mounting brackets at a few spots along the line (red dots “F” on the opposite draw).

Creating a fixed mounting bracket
To create a fixed mounting bracket, add the EPDM insert (product no 07.548) into the pipe clip.



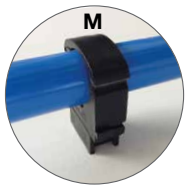


8.5 Mounting brackets and spacers

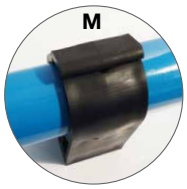
In order to eliminate the possibility of line bending, it is mandatory to follow the instructions on the mounting brackets.

A bracket also needs to be installed no more than 20 cm from every fitting along the line (downstream or upstream). To know the maximum distance between each mobile support, refer to the table.

MOUNTING BRAKETS 15-22-28 MM

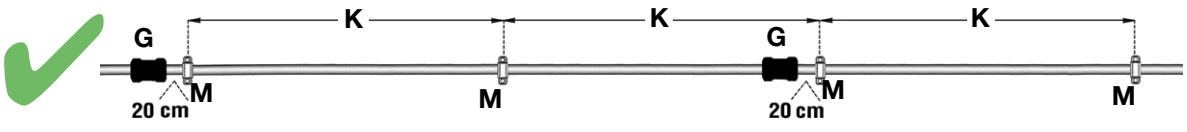


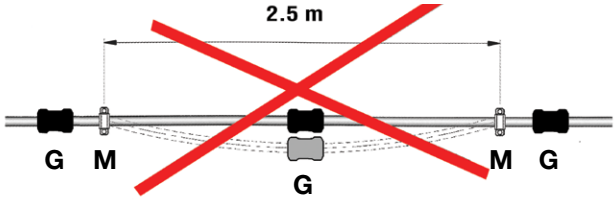
MOUNTING BRAKETS 40-50-63 MM



Legend	Description
M	Sliding mounting bracket
G	Fitting
K	Distance

MAXIMUM DISTANCE BETWEEN SLIDING BRACKETS (M)					
DIAMETER	15 / 22	28	40	50	63
K	2.5	3	3.5	4	4.5





Spacers

When installing a line with different pipe diameters or when installing manifolds, the use of spacers is recommended for optimum alignment.

CLIP AND MANIFOLD SPACER COMBINATIONS FOR OPTIMAL PIPING ALIGNMENT

CLIP SPACER FOR MOUNTING BRACKETS 15-22-28 MM



07.512 Thickness 10 mm

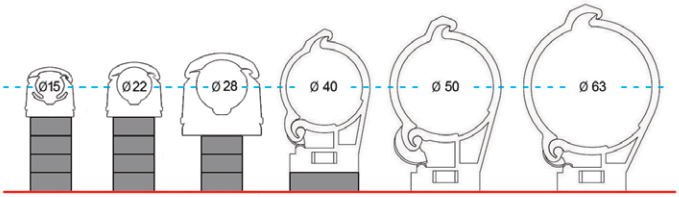
Recommended screw: round-headed screw number 8

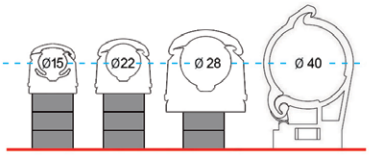
CLIP SPACER FOR MOUNTING BRACKETS 40-50-63 MM

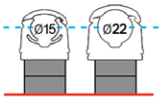


07.549 Thickness 10 mm

Recommended screw: round-headed screw number 14







SPACER FOR MANIFOLD WITH 1 OUTLET



47.122 Thickness 9 mm

SPACERS FOR MANIFOLD WITH 2 OR 3 OUTLETS

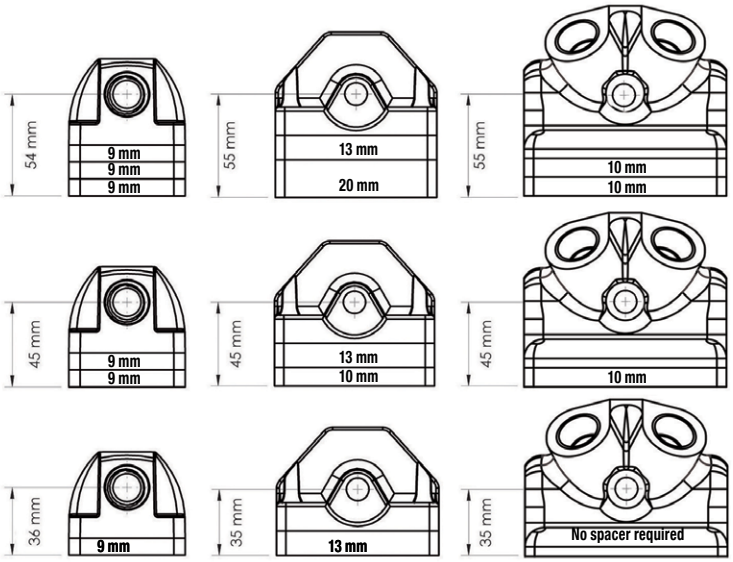


47.118 Thickness 10 mm
47.119 Thickness 13 mm
47.120 Thickness 20 mm

SPACER FOR MANIFOLD WITH 4 OUTLETS



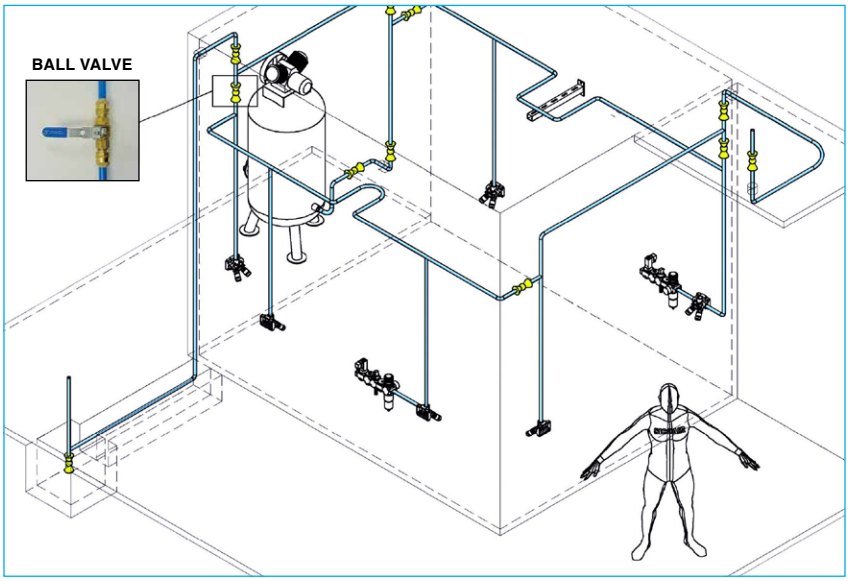
47.121 Thickness 10 mm



8.6 Ball valves

To facilitate maintenance, it is recommended to install ball valves in order to divide the airline system into sections.

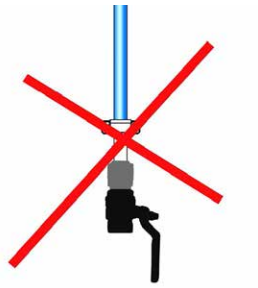


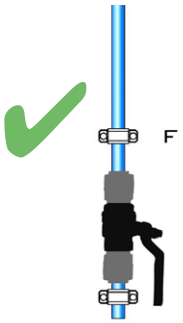


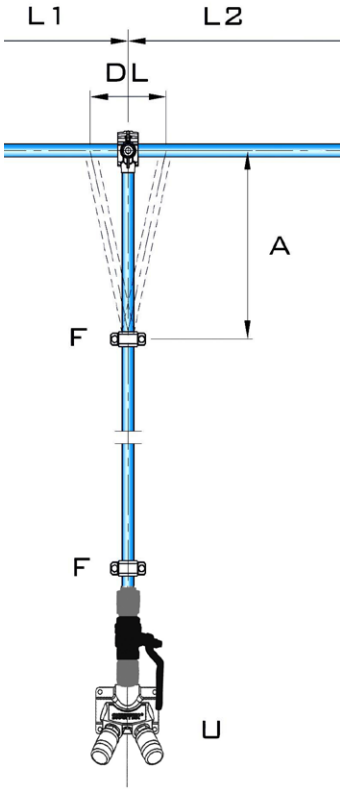
Keywords	Description
A	Spacing (mm)
L1 • L2	Length (m)
DL	Expansion (mm)
DT	Thermal range (°C)
F	Sliding mounting bracket

DL = DT x 0,023 x L
A = DL x Y

Calculation factors						
Diameter (mm)	15	22	28	40	50	63
Y	12	18	25	28	33	40







SAFETY SOLUTION

TOPRING offers lockout safety exhaust ball valves and lockout full flow safety exhaust ball valves. It is a solution to ensure that the maintenance operations are safe.



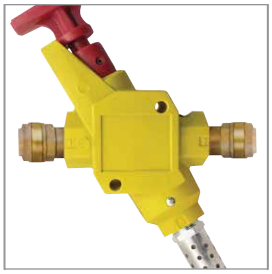






LOCKOUT SAFETY EXHAUST BALL VALVE

No de produit	Tube mm
07.401	15
07.406	22
07.411	28





LOCKOUT FULL FLOW SAFETY EXHAUST BALL VALVE

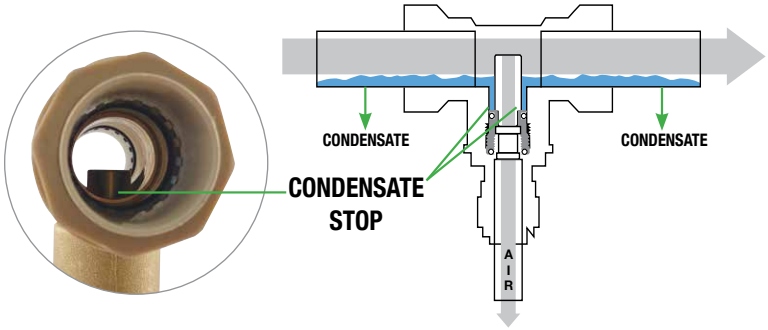
No de produit	Tube mm
07.430	15
07.435	22
07.440	28

8.7 Drops

1. Water trap "T"



- Makes drop installation fast and easy
- Prevents water in the main line from getting into drops
- Allows installation of drops on new or existing compressed air networks



2. Preformed drop legs



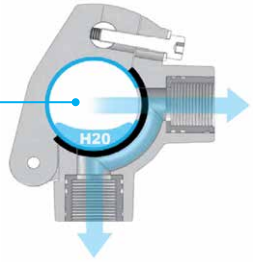
Ideal for tapping air off a main line without allowing water to get into the drop.

3. Twin take-off drop coupling



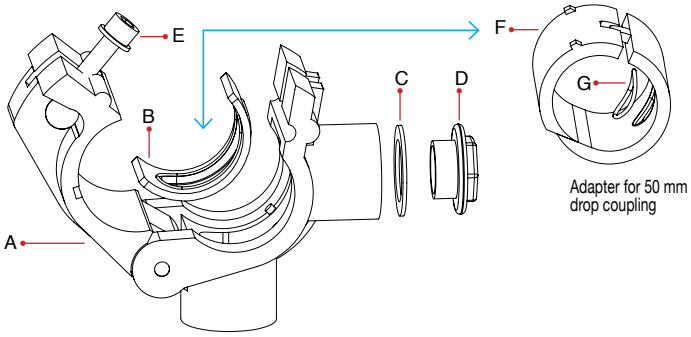
Allows quick and easy drop installation on a pressurized or non-pressurized system without disassembling the piping system with the use of appropriate drilling tools (see page 9).

Prevents water from getting into drops



Drop coupling components

A. Body (PA6 /glass reinforced / aluminium threads)
B. Seal (nitrile rubber)
C. O-ring (EPDM)
D. Plug (zinc plated steel)
E. Bolt and washer (zinc plated steel)
F. Diameter size adapter for 50 mm only (PA6)
G. O-ring (nitrile rubber)



DROP COUPLING INSTALLATION



1. Lubricate the seal on both sides with soapy water (and the O-ring in the 50 mm coupling adapter)



2. Install coupling on the main line. Do not tighten completely



3. Install the coupling and the required piping supports to immobilize the drop



4. After making sure that drop and coupling are perpendicular to the main line, tighten coupling completely

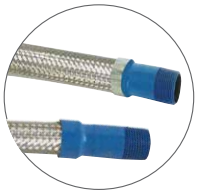


5. Remove the cap and drill the supply line using the appropriate drilling tool (see page 9)

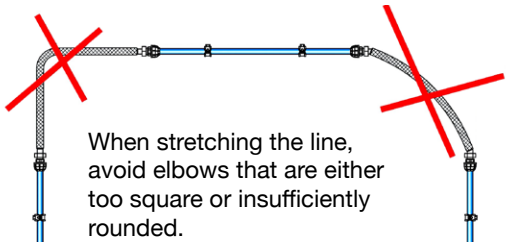
6. Replace the cap

8.8 Flexible anti-vibration hoses

TOPRING Series 09 flexible hoses not only allow directional changes and bypass obtacles, they can also be used to create an expansion loops.





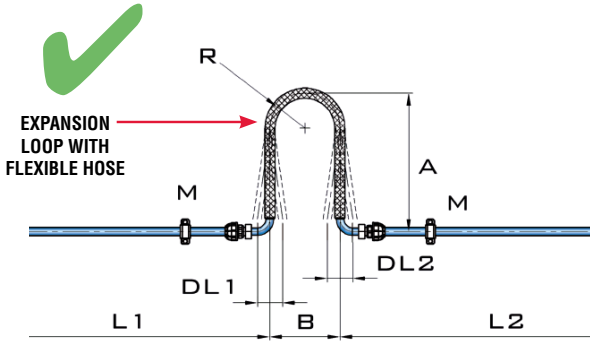


EXPANSION LOOP WITH ANTI-VIBRATION HOSE

Legend	Description
L1 • L2	Length (m)
DL1 • DL2	Expansion (mm)
DT	Thermal Range (°C)
M	Sliding mounting bracket
R	Radius (mm)
A • B	Spacing (mm)

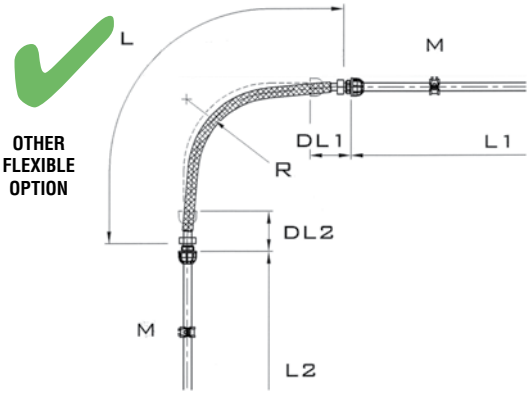
DL = DT x 0,023 x L
B= (2 x R) + DL1 + DL2

Radius option	R-A					
Diameter (mm)	20	25	32	40	50	63
R (mm)	70	85	100	130	160	200
A (mm)	370	390	500	560	600	800



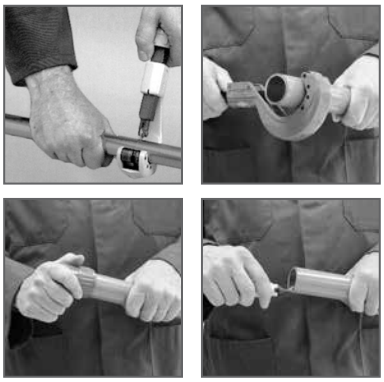
BYPASS OBSTACLES WITH ANTI-VIBRATION HOSE

L min = 1000 mm	
Legend	**Description**
L1 • L2	Length (m)
DL1 • DL2	Expansion (mm)
M	Sliding mounting bracket
R	Radius (mm)
L	Length of flexible hose (mm)



9. ASSEMBLY INSTRUCTIONS

9.1. Preparing the pipe

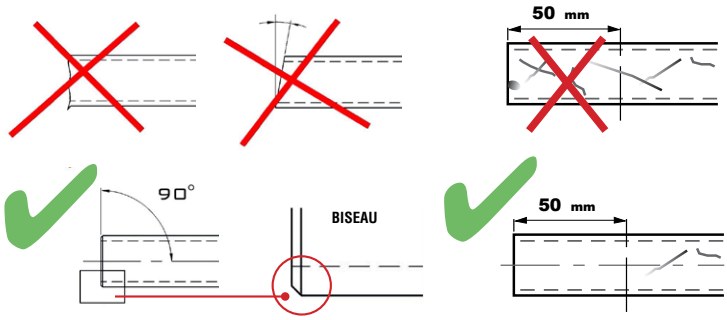


- Use pipe cutter according to the diameter of the pipe (see page 9)
- Use chamfer tool and deburring tool according to the diameter of the pipe (see page 9)
- Chamfer the tube evenly and as cleanly as possible without leaving any shavings that could affect and damage the seal

WARNING

If the pipe must be cut, the cut must be perpendicular to prevent damage to fitting joints. Use the deburring and chamfer tools.

During cutting and chamfering, avoid damaging the painted surface of the sealing area (about 50 mm from the end of the pipe).



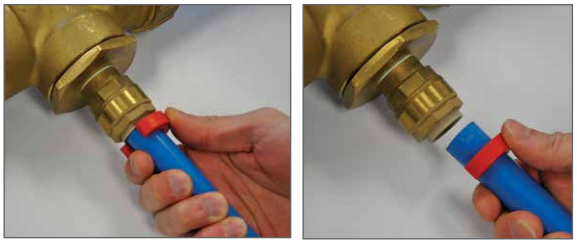
9.2. Assembling pipe – fitting

For pipe – fitting 15, 22 or 28 mm

No fitting assembly required, simply push the pipe in slightly to the bottom of the fitting.



To dissemble a connection, simply press the clamping collar using the dismantling clip with same diameter as pipe and remove the pipe.



For pipe – fitting 40, 50 or 63 mm

Place all the parts on the pipe as shown below and push the pipe to the bottom of the fitting.

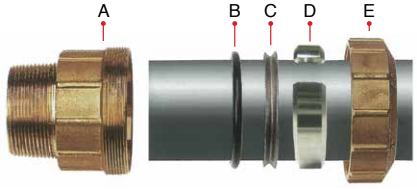


Tighten the nut with a tool until it stops. You should see less than one thread when properly tigthtened.



WARNING

An installation in the wrong order may cause breakage of the piping system and major air leaks. It is essential to respect the assembly order of the parts as shown beside.



A. Body
B. O-ring
C.Compression ring
D. Locking ring
E. Clamping nut

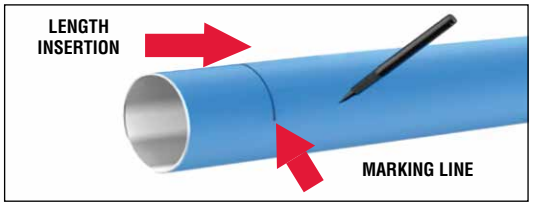
TECH TIPS

Pipe insertion

The creation of a mark on the pipe according to the measurements indicated in the table below, will make it possible to check if the pipe is inserted correctly.

	Pipe insertion length					
	Push-to-connect type fitting			Compression type fitting		
Pipe diameter	15	22	28	40	50	63
Length (mm)	36	42	45	36*	44*	57*

*Screwed nut without tightening



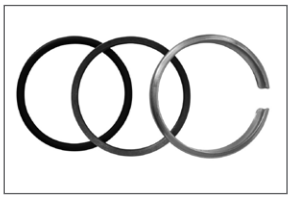
Increased sealing

It is recommanded to apply a sealant such as PTFE tape on the fitting threads or a fitting compound such as “Oatey Great White” or “Oatey Great Blue”.

IMPORTANT

Reuse of compression fittings

The locking ring, the compression ring and the O-ring must be replaced before reusing a compression fitting.

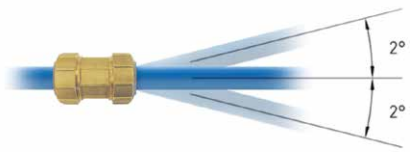


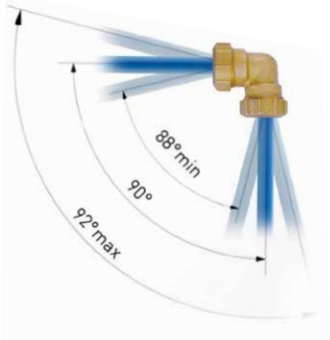
TOPRING offers replacement kits for the 3 compression fitting diameters

40 mm: 07.580
50 mm: 07.584
63 mm: 07.585

Alignment

Misalignment of more than 2 ° from the horizontal line may compromise the sealing and the strength of the fitting connections.





For push-to-connect fittings (15-22-28 mm), pull on the pipe to make sure the connection is secure. It is important to perform this operation before pressurizing the system.

10. CHECKING BEFORE PRESSURIZING

Once the system is installed, check for any anomalies and any signs of impacts, dents or abrasion. Make sure that all fittings have been correctly connected to the pipe to avoid any safety hazards. In case of non-compliance with safety information and requirements provided in these operating instructions, the system can result in:

- Risk of fluid ejections under pressure in case of disconnection of connections caused by inadequate tightening.
- Risk of ejections of fluids under pressure in the event of damage to the pipe caused by shocks.
- Risk of ejections of air or nitrogen under pressure caused by operating pressures higher than the maximum allowable pressure of 217 PSI (15 BAR).

Therefore, it is important to ensure that the assembly of all components has been done according to the standards and guidelines of this guide BEFORE PRESSURING to avoid possible risks. It is recommended to add pressure gradually when operating the network for the first time.

11. MAINTENANCE

Check list for controls recommended by **TOPRING**:

- Annually review the status of the systems
- Check the tightening of the nuts
- In case impacts check the status of the pipeline and replace any damaged parts
- Check for presence of air leaks

ATTENTION

Make sure the system has been depressurized prior to performing any intervention or maintenance (or on a depressurized section isolated by a lockout safety valve).

LIABILITY OF ALL BUYERS AND/OR USERS

In addition to carefully reading the user guidelines for the TOPRING product, 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.

Buyers and/or users acknowledge that by purchasing and using a TOPRING Product, they understand and accept that he or she is solely responsible for the installation, identification, maintenance, and use of the TOPRING Product. as well as the configuration of any system or network that uses a TOPRING Product. Subject to the limits of public policy as expressed in the law, buyers and/or users assume any risk and liability that may arise from loss, damage or injury caused by the improper installation, identification, maintenance and/or use of a TOPRING Product, or caused by a misconfiguration of any system or network using a TOPRING Product, to the extent to completely and entirely exonerate TOPRING, as well as its subsidiaries and affiliated corporations (hereinafter referred to as «TOPRING»). Buyers and/or users must take into consideration among other factors, the regulations in force, the use of any TOPRING Product, preventative measures, as well as the particular nature of the premises or location, and the activities or operations that occur therein.

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