

Ingersoll Rand®

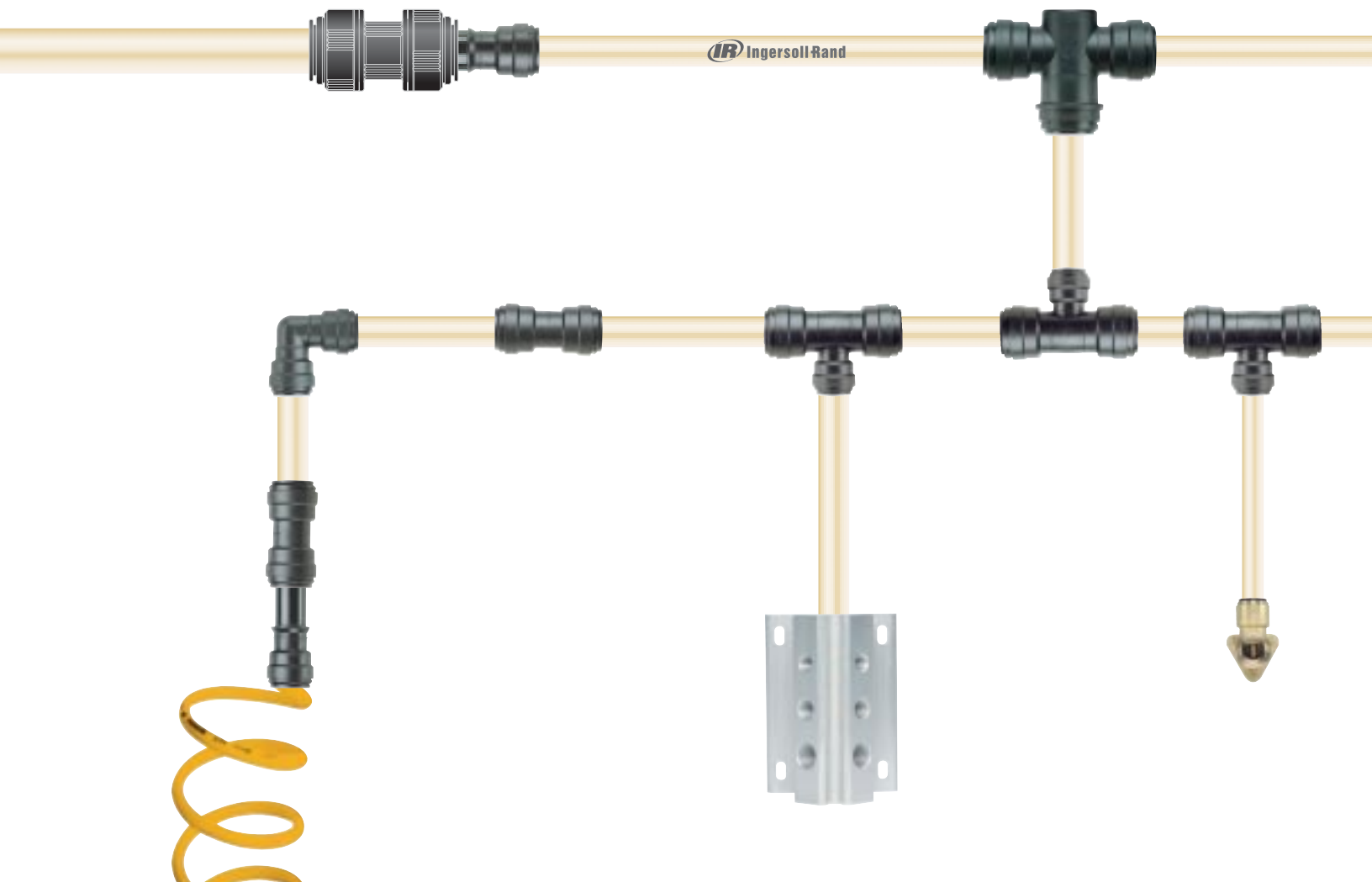
SimplAir^{EL}

Easy Line — Compressed Air Piping Systems



IR Ingersoll Rand®

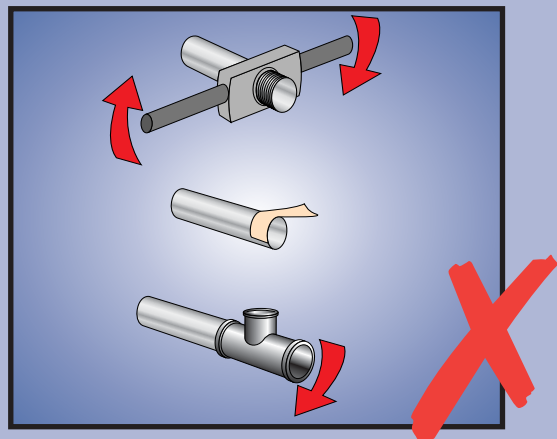
SimplAir EL



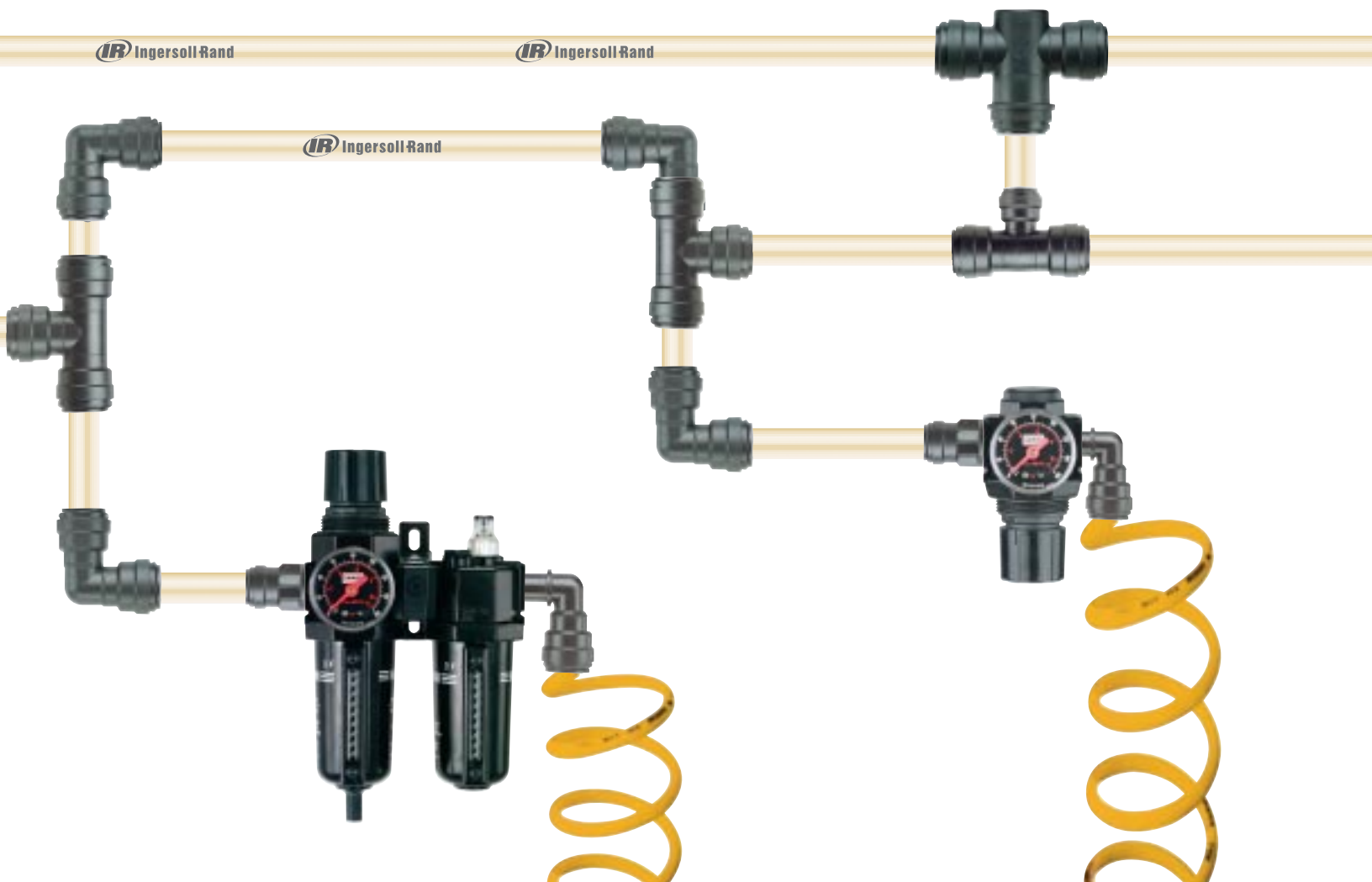
Threaded Steel Tube

A time consuming and difficult process.

- Designed for piping system applications
- Safe secure and leakproof
- Easy to install
- Easy to disconnect and reconfigure the system
- Many millions of fittings in use
- Working pressures 0-10 bar
- Tested to ANSI B31.1

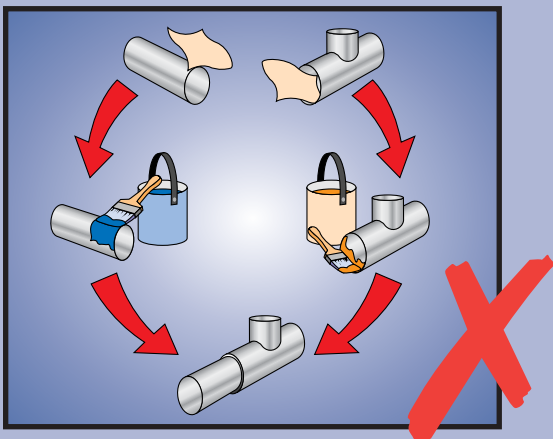


Compressed Air Piping Systems



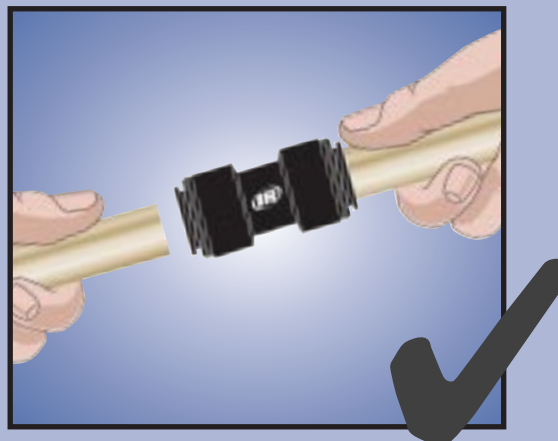
Solvent Weld

Long installation time, system needs to be shut down for drying.



The SimplAir EL Way

One simple movement provides a secure connection; system immediately ready for use.



SimplAir EL

Easy to Use Push-In System for Piping Systems

The SimplAir EL way of push-in fittings and pipe provide the ideal connection from the compressed air receiver, throughout the entire distribution system, right to the point-of-use. Using the SimplAir EL system a compressed air piping system can be installed quickly and easily, considerably reducing the need for specialist staff and reducing production downtime.

No need to prepare threaded pipe or apply 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. Since they also are easy to disconnect, systems are easy to alter or extend.



SimplAir EL Adaptability

Standard SimplAir EL products can be coupled together to form integral new fittings.



EQUAL ELBOW



PART NO.	TUBE OD
38039756	15 (5/8")
38332565	22 (1")
38332672	28 (1 1/4")

STRAIGHT CONNECTOR



PART NO.	TUBE OD
38039772	15 (5/8")
38332557	22 (1")
38332664	28 (1 1/4")

EQUAL TEE



PART NO.	TUBE OD
38039764	15 (5/8")
38332573	22 (1")
38332680	28 (1 1/4")

REDUCING TEE



PART NO.	TUBE OD	BRANCH LINE
38039814	22 (1")	15 (5/8")

STEM ELBOW



PART NO.	TUBE OD
38039780	15 (5/8")
38332623	22 (1")

REDUCER



PART NO.	STEM OD	TUBE OD
38039798	22 (1")	15 (5/8")
38039806	28 (1 1/4")	15 (5/8")
38332581	28 (1 1/4")	22 (1")

WATER TRAP TEE



PART NO.	TUBE OD
38332631	22 (1")

Reduce the problem of moisture in a piping system, see page 6.

Compressed Air Piping Systems

Brass Fittings



WATER TRAP TEE CONVERTOR

PART NO.	SIZE
38332714	28 (1 1/4")

The SimplAir EL Water Trap Tee Convertor is a simple and convenient way of converting a standard 28mm Tee, Part No. 38332680, to a Water Trap Tee.

When fitted, it will reduce condensed water within the Piping System Circuit from entering the vertical take-off spurs.

Further details are shown on page 6.



BRASS WING BACK

PART NO.	PIPE OD	THREAD BSP	THREAD NPT
38039855	15 (5/8")	1/2"	1/2"



MANIFOLD - FEMALE THREADED

PART NO.	THREAD BSP	THREAD NPT
54742721	1"	
38004339		1"

Manifolds are supplied with the following plugged outlets:

- 2 x 1/4"
- 2 x 3/8"
- 2 x 1/2"
- 1 x 1"



MALE BRASS STEM ADAPTOR

PART NO.	STEM OD	THREAD BSP	THREAD NPT
38039822	15 (5/8")	1/2"	1/2"
38332599	22 (1")	3/4"	
38332607	22 (1")	1"	
38332698	28 (1 1/4")	1"	
38332961	22 (1")		3/4"
38332615	22 (1")		1"
38332706	28 (1 1/4")		1"

Accessories



PLUG

PART NO.	TUBE OD	COLOR
38039830	15 (5/8")	BLACK
38332649	22 (1")	BLACK
38332722	28 (1 1/4")	BLACK

Accessories (continued)



PIPE CUTTER

PART NO.	TUBE SIZES
88162466	22 - 28 (1" - 1 1/4")



PIPE CLIPS AND SPACERS

CLIP PART NO.	TUBE OD	COLOR
38039848	15 (5/8")	BLACK
38332730	22 (1")	BLACK
38332755	28 (1 1/4")	BLACK



SPACER PART NO.	COLOR
38332748	22 - 28 (1" - 1 1/4") BLACK

BALL VALVES - WITH COMPRESSION ENDS



PART NO.	TUBE SIZE
88315635	15 (5/8")
88306139	22 (1")
88306402	28 (1 1/4")

SPARE NUTS FOR BALL VALVES

PART NO.	TUBE SIZE
88315650	15 (5/8")
88306410	22 (1")
88306436	28 (1 1/4")

SPARE FERRULES FOR BALL VALVES

PART NO.	TUBE SIZE
88315643	15 (5/8")
88306428	22 (1")
88306444	28 (1 1/4")

LOOP-FAST HANGING SYSTEM



PART NO.	PK QTY	LENGTH OF WIRE
38330643	10	5 ft
38330650	10	10 ft
38330668	10	15 ft
38330676	10	30 ft



HOSE REEL - 3/8" HOSE

PART NO.	MAX WORKING LENGTH
38035424	25 ft.

SimplAir EL

WATER TRAP TEE

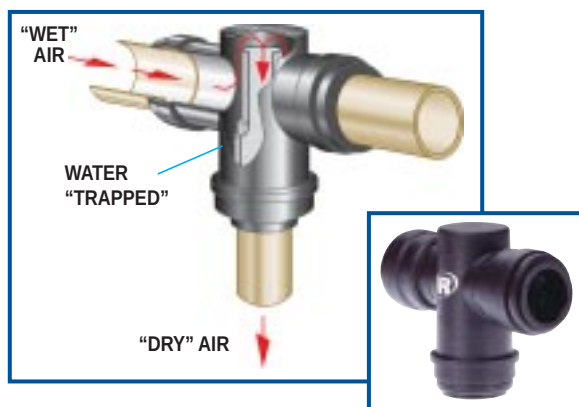
PART NO.	TUBE OD
CCN38332631	22 (1")

The unique Water Trap Tee helps reduce the on-going problem of moisture in a piping system and provides the easy alternative to installing "Swan/Goose Necks".

The ingenious inside arrangement of the fitting allows air to flow, with minimum head loss, from the distribution system to take-off points without allowing water to follow. The moisture is retained in the line to be drawn off at some suitable location.

Installation

It is vitally important to the correct function of the Water Trap Tee that the piping system within which the tee is installed be near horizontal and that the outlet port face vertically downward. To assist installation, markings indicating the correct orientation have been molded onto the body.



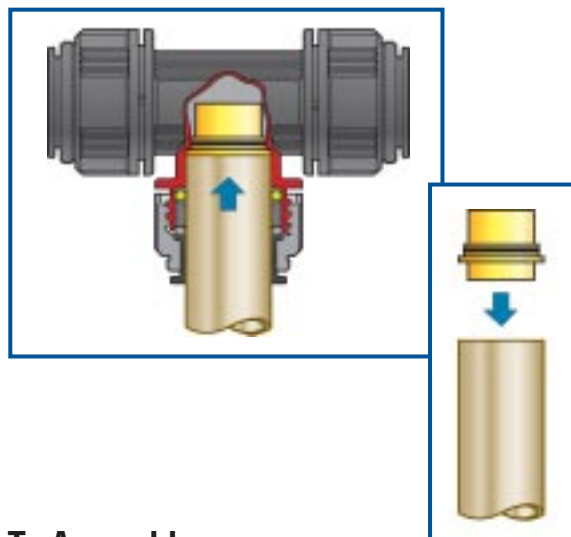
WATER TRAP TEE CONVERTOR

PART NO.	SIZE
CCN38332714	28 (1¼")

The Water Trap Tee Convertor is a simple and convenient way of converting a standard 28mm (1¼") tee, Part No. CCN38332680, to a Water Trap Tee.

When fitted, it will stop condensed water within the piping system from entering the vertical take-off spurs.

It is important that the piping system has been installed with the correct gradient, and that water drain points are properly vented.



To Assemble

The shorter spigot is pressed into the pipe.

The pipe and convertor should now be firmly inserted into the center port of the tee. Full insertion is required to correctly locate the convertor and provide a water-tight seal.

Turning the screw cap approximately 1/4 turn (two clicks can be heard,) the collet is locked in place, further compressing the 'O' ring onto the pipe.

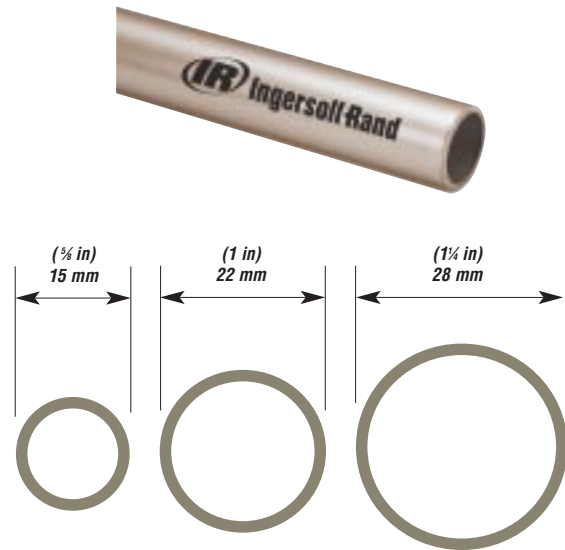
Compressed Air Piping Systems

Aluminum Piping SimplAir EL

SimplAir EL has been designed to provide an efficient, low-cost method of installing compressed air piping systems. EL is a unique round aluminum extrusion, manufactured in-line with SimplAir's advanced piping concept.

Benefits:

- Good-quality air
- More-efficient air delivery
- Reduced pressure loss
- Higher flow rates
- Easy and fast installation



SimplAir EL is available in 3 sizes: 15mm ($\frac{5}{8}$ "), 22mm (1"), and 28mm ($1\frac{1}{4}$ ").

Diameter (mm)	SCFM @ 103 PSIG	SCFM @ 118 PSIG	SCFM @ 147 PSIG
15 ($\frac{5}{8}$ ")	36	38	42
22 (1")	75	86	111
28 ($1\frac{1}{4}$ ")	126	148	175

TUBING

PART NO.	TUBE OD	TUBE LENGTH	PK QTY
22285282	15 ($\frac{5}{8}$ ")	3 meters (10 ft.)	10
38332540	22 (1")	3 meters (10 ft.)	10
38332656	28 ($1\frac{1}{4}$ ")	3 meters (10 ft.)	10

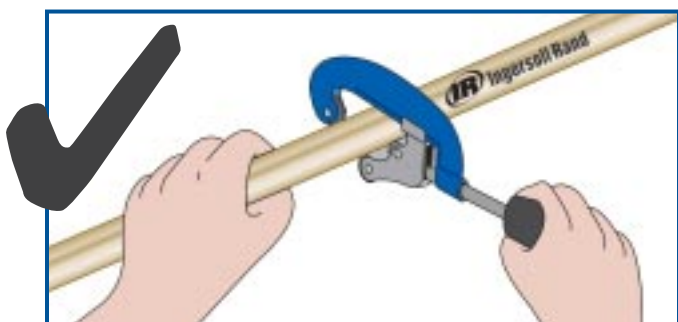
SimplAir EL

Installation has never been easier

To make a connection, the tube is simply pushed in by hand. The unique patented SimplAir EL 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 SimplAir EL aluminum pipe we recommend use of one of the SimplAir EL pipe cutters. Do not use a hacksaw. To avoid damage to the 'O' ring, make sure burrs and sharp edges are removed.



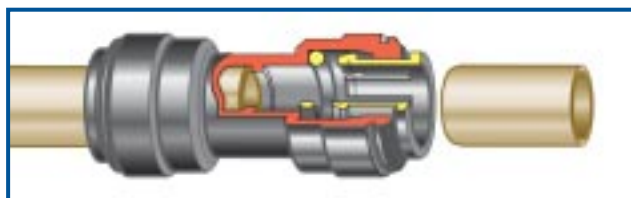
Do Not Use a Hacksaw



15mm (5/8") & 22mm (1") Fittings

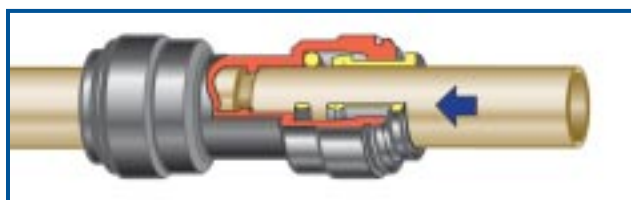
Making a connection

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



With the fitting clean and undamaged, and the pipe cut square as described on this 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 while the 'O' ring provides a permanent leak-proof seal.

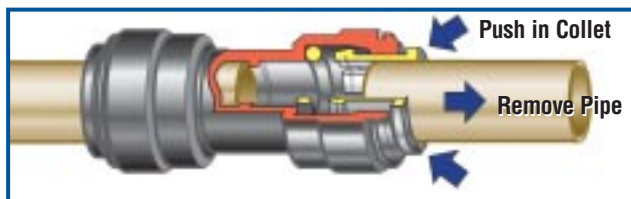
Pull to check secure



Pull on the pipe to check that it is secure. It is a requirement that the system be tested prior to leaving the site and/or before use.

Disconnecting

Push in collet and remove pipe.

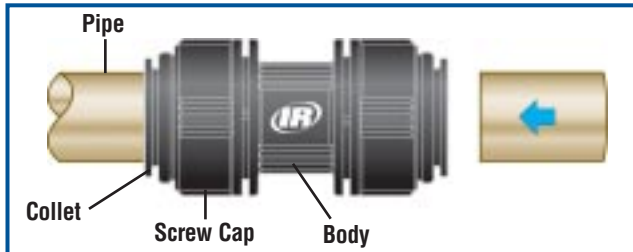


To disconnect, ensure the system is depressurized before removing fitting. Push in collet squarely against face of fitting. With the collet held in this position, the pipe can be removed. The fitting can then be reused.

Compressed Air Piping Systems

28mm (1¼") Fittings

The connection could not be easier to make.



Like the 15mm ($\frac{5}{8}$ ") and 22mm (1") fittings, the 28mm (1¼") larger size has a collet with stainless steel teeth and an 'O' ring to provide the unique grip and seal connection. The fitting can also be demounted and used again without the need for replacement parts.



As with other sizes, the pipe should be properly prepared and inserted fully into the fitting (to the end of the internal tube stop). Turning the screw cap approximately 1/4 turn (two clicks can be heard,) the collet is locked in place, further compressing the 'O' ring onto the pipe. Notice that by locking the collet in place there is reduced lateral and sideways movement of the pipe.

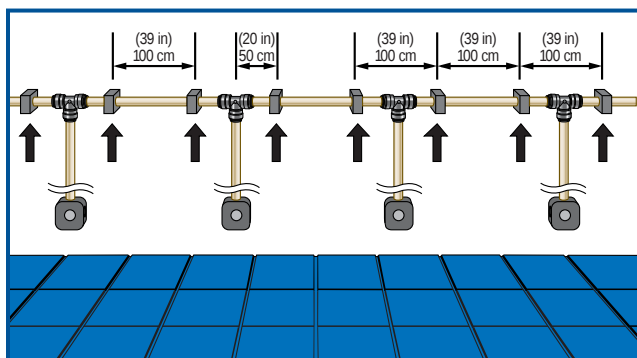
And just as easy to disconnect



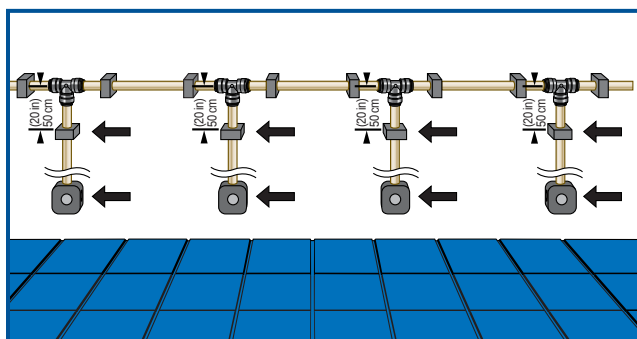
To release the pipe from the locked position, turn the screw cap counter-clockwise approximately 1/4 turn. Now it can be released like a normal SimplAir EL connection by pushing in the collet and pulling the pipe out.

SimplAir EL

When installing a piping system, it is advisable to first attach only the horizontal pipe clips and attach the clips to the vertical pipes only 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.

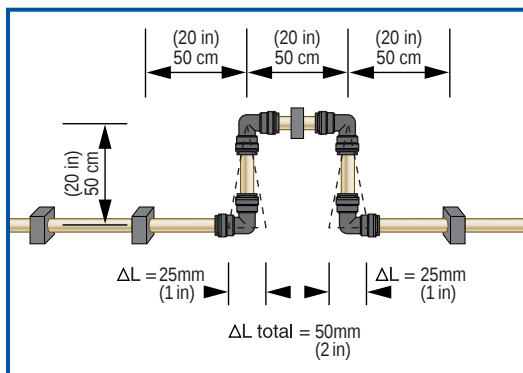


Phase 1: System without pressure

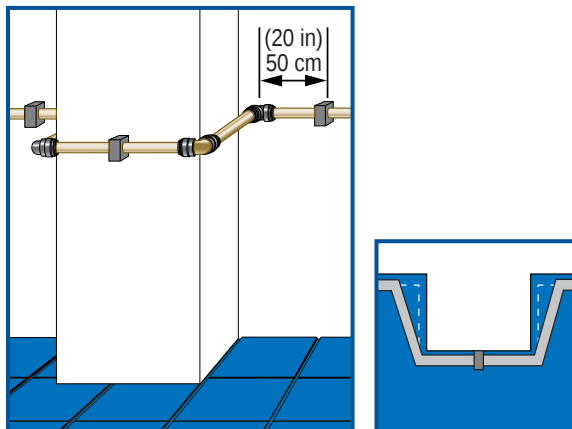


Phase 2: System with pressure

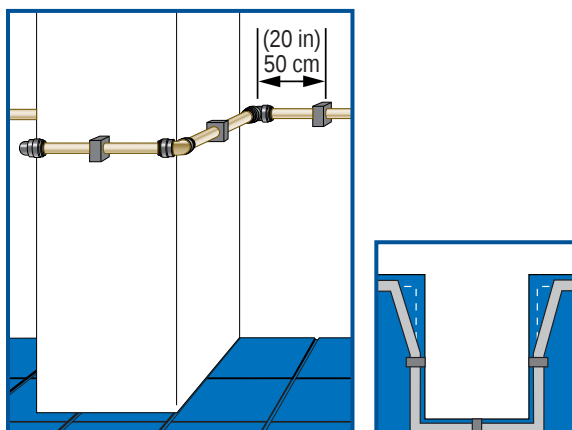
On long pipe runs, it is advisable to install an expansion bend, as shown in the diagram, every 25 meters (75 ft.).



When installing around a column or pillar, maintain a distance of approximately 10cm (4") between the wall and the pipe. Always maintain a distance of 50cm (20") between the fittings and the pipe clip.



Column/Pillar smaller than 1 meter (39")



Column/Pillar larger than 1 meter (39")

Note: All piping systems should be equipped with an air line water trap. We recommend our Water Trap Tee for this purpose (as described on page 6 of this brochure.)

Compressed Air Piping Systems

Working Temperature Range

Minimum working temperature -20°C (- 4°F)

Maximum working temperature +60°C (+140°F)

The above working temperatures apply to compressed air applications only.

Working Pressure

Maximum working pressure 150 psi (10 BAR)

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 produced in acetal copolymer with stainless steel teeth.

Standards

Tested to ANSI B31.1

Applications

Pipe and fittings should be kept clean and undamaged before use. These products are designed for use with compressed air. For other applications please refer to our Customer Services Department.

Installation Guide — Code of Practice

When installing a compressed air piping system it is recommended that reference be made to local "Approved Code of Practice — Safety of Pressure Systems".

Installations — Our Recommendations

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

Pipe should be supported at minimum 1.5 meters (59") to prevent excessive load being applied to the fitting. Supports should be installed close to the fittings, but no more than 50mm (2") from the end of the fitting.

SimplAir EL and pipe should only be connected after the air receiver and not direct to a compressor.

It is a requirement that all pipe and fitting installations are pressure-tested after installation and before handing over to the final user.

Installation Test Procedure



WARNING: BEFORE PRESSURIZING THE SYSTEM, THE FOLLOWING INSTRUCTIONS MUST BE CARRIED OUT.

1. Check that all compression and push-in connections have been properly completed and are fully engaged.
2. Insure that all wall mounting and hanging brackets are fixed securely.
3. Insure that an isolation valve is installed and closed between the compressed air supply and the pipework.
4. Insure that a safety relief valve is properly installed and is fully functional. (If a safety valve is not installed on the air receiver, one should be fitted within the piping system.)
5. Close all outlet points in the system.

Pressurizing the system

It is good/safe working practice to evacuate the entire working area before pressurizing a system.

6. Slowly open the main isolation valve while viewing the main pressure gauge in the pipework.
7. Allow the pressure in the system to increase to 1 BAR (14.5psig). CLOSE VALVE! Hold for 15 minutes.
8. Visually inspect the entire system for integrity, loose or slipping joints and leakage. If any faults are observed, depressurize the system completely and correct the problem. Repeat steps 6 through 8.
9. If the system is secure, repeat steps 6 through 8 in 1 BAR (14.5psig) increments until the maximum required working pressure is achieved. NOTE: Maximum allowable working pressure for Simplair EL is 10 BAR (150 psig). When using SimplAir EL with other SimplAir piping systems, SL or HBS, do not exceed the maximum working pressure of the EL system, 10 BAR (150 psig.)
10. When full working pressure is achieved, hold the system pressure for a duration of one hour.
11. Reinspect the system for integrity, loose or slipping joints and leakage.
12. If any faults are observed, depressurize the system completely and correct the problem. Repeat the process beginning at step 6.

NOTICE - INSURANCE REQUIREMENTS:

Insurance companies may require a test of the system to 1.5 times the required working pressure. If this is required, carry out the test procedure to the inspection requirement.

More Than Air. Solutions.

Online solutions: <http://www.air.irco.com> or call 1-800-526-3615

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