

PLUMBING &
HEATING SYSTEM
MAY 2022

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ABOUT RIIFO

RIIFO is a leading multinational corporation, providing one-stop piping solutions applied in residential, commercial, agricultural, industrial, and infrastructural sectors. Persistently reinventing since 1996, with over 8,000 employees, 70 branches & subsidiaries, and 300,000 distributors, we have served customers in more than 100 countries and regions.

With an integrated value chain, from R&D to manufacturing and retail distribution, we strive to fulfill our mission of offering ideal piping products and services for all environments.

8,000

Employees

300,000

Distributors worldwide

100+

Serving over 100
countries & regions

70

Branches & Subsidiaries



INNOVATION

Believing that innovation is the key to go beyond the ordinary, RIIFO has founded world-class labs recognised and certified by CNAS. Over 600 innovation talents are sparing no effort to challenge industrial boundaries, achieving 923 patents and 20 technology awards.

This passion for innovation shows in our high quality products and our ability to offer ideal piping solutions across all sectors.

SCALE

We adopt highly automated production lines with the most rigorous and comprehensive production control, and management system to facilitate such large scale capacity.

Facility

11

global production bases

5,200+

production staffs

200

hectares area
totally

4,000+

automated
production lines

Capacity

Production Capacity

- Pipe: **3.2 billion** m/yr
- Fitting: **1.3 billion** pcs/yr

Storage Capacity

- **1,735,000 m³** \approx 61,950 TEU (20 GP Containers)





SYSTEM OVERVIEW

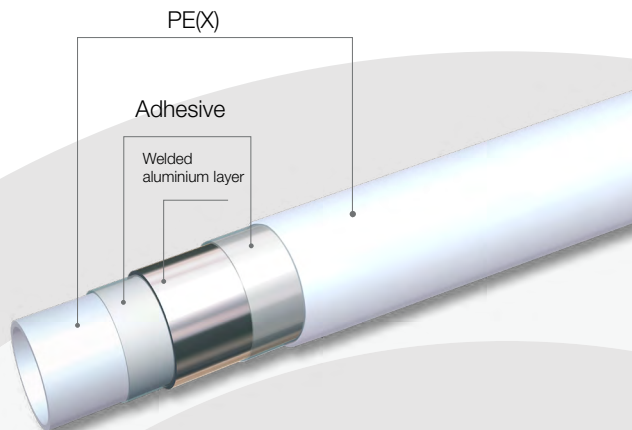


RIIFO provides multilayer pipe that unites the advantages of a plastic and metal pipe and offers a high degree of flexibility and toughness, coupled with high pressure and temperature resistance. The RIIFO multilayer pipe consists of an inner and outer layer in between which there is a layer of overlap welded or butt welded aluminum, and the three layers are made to form a permanent structure by means of special bonding layers. The aluminum layer ensures that the pipe maintains its shape and prevents the oxygen penetration from the atmosphere and gives the pipe sufficient strength and shape retention. This construction has good thermal shock resistance (due to its very low coefficient of linear expansion) and can be adapted to harsh working environments with large temperature variations, comparable to copper tubes.

The RIIFO multilayer pipes satisfy the highest demands. All pipes are food-safe and completely free of physiological risks. To ensure safety in drinking water installations, the pipes are delivered with end caps to protect against contamination during transport, storage or on site. The pipes are 100% impermeable to oxygen, which is particularly important for heating installations. RIIFO multilayer pipes are available as coils or as straight lengths.

The RIIFO PEX/AL/PEX pipe consists of a longitudinal welded aluminium pipe to which an inner and outer layer of crosslinked polyethylene (PEX) is applied.

Crosslinked means 'bound together' or 'interconnected'. Polyethylene consists of polymer chains and crosslinking is the process of forming bonds to join these polymer chains together. RIIFO applies the silane crosslinking technology to connect the polymer chains. This results in a superior mechanical performance and an increased temperature and pressure resistance.



Advantages



Corrosion resistance



Light in weight, easy to install, time saving



Resistant to temperature and pressure (95°C/10bar)



Low thermal expansion, similar to metals



Impermeable to oxygen and light



Smooth inner pipe ensures low pressure loss



Very flexible yet dimensionally stable



Hygienic



Life expectancy of 50 years

Applications

The RIIFO multilayer pipes can be used for different applications. Key applications include plumbing and heating systems for residential, commercial or industrial buildings:



Drinking water:

As a pipe for hot and cold distribution of potable and food-safe water.



Heating:

As a pipe for radiator-fed and UFH high temperature heating systems within the prescribed load values. System separation is required for specific systems such as solar and district heating.



Radiant heating and cooling systems:

As a pipe for low temperature heating and cooling systems.



Compressed air:

As a compressed air pipe in systems with preceding oil filter (oil-free).



Rainwater:

As a rainwater piping system within buildings and separately installed from the drinking water installation. The pH-value of the water must be higher than 6.



Other applications:

The pipe can be used for many other applications and with other mediums..

Acceptance

EN ISO 21003 - Multilayer Piping Systems for Hot and Cold Water Installations Inside Buildings

ASTM F1281 - Standard Specification for Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene (PEX-ALPEX) Pressure Pipe.

DVGW W 534 (P) - Pipe Connectors and Pipe Joints in Drinking Water Installation

DVGW W 542 - Compound Pipes in the Drinking Water Installation; Requirements and Testing

DVGW W 270 - A Method for the Assessment of Enhancement of Microbial Growth on Non-Metallic Materials in Contact with Drinking Water

KTW-BWGL - About Hygienic Property of Material Odor Test

UBA ELASTOM - Guideline for Hygienic Assessment of Elastomers in Contact With Drinking Water

AS 4176.2 & 3 - Multilayer Piping System for Pressure Applications - Multilayer Piping Systems for Hot and Cold Water Plumbing Applications- Pipes & Fittings

XP P41-250 - Effect of Materials on the Quality of Water Intended for Human Consumption - Organic Materials

NSF /ANSI /CAN 61 - Health Effects of Drinking Water System Components

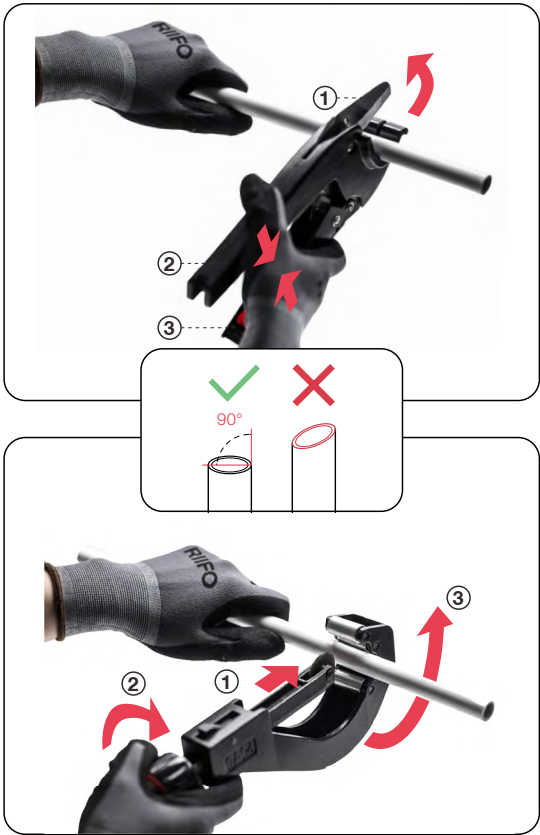
BS 6920 - Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water

CSA B137.10 –Crosslinked polyethylene/aluminum/crosslinked polyethylene (PEX-AL-PEX) composite pressurepipesystems

IS 15450 – Polyethylene/Aluminum/Polyethylene Composite Pressure Pipes for Hot and cold Water Supplies - Specification

INSTALLATION

NOTICE!



WARNING!

Risk of injury if the end stop area of the shears is operated incorrectly.

Only use the tool as described in the operating instructions.

NOTE!

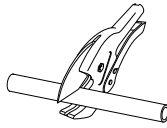
Incorrect cutting causes leakage in connection

- The end of the pipe shall be cut vertically.
- The end of the pipe shall not be damaged or distorted.

Press Fitting

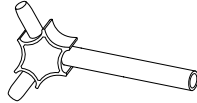
Step1:

Cut the pipe vertically using RIIFO pipe cutter. Ensure it is cut precisely.



Step2:

Use a plastic reamer to round and bevel the end holes of the pipe.



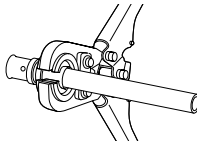
Step3:

Choose the correct size press-fitting for the pipe and aim the pipe end at the ring-shape hole of the fitting integrated with stainless steel sleeve. Push the pipe into the fitting up to the shoulder. Visually check (using the inspection holes on the sleeve shoulder) that the pipe is inserted to the correct depth.



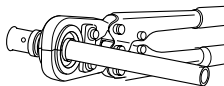
Step4:

Open the pressing tool and position the tool directly onto the stainless steel sleeve.



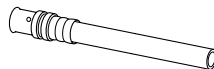
Step5:

The margin of the block must be placed against the press section.



Step6:

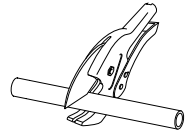
While the jaw is completely closed, the handles will be locked. Open the handles and remove the pressing tool from the fitting to complete the installation.



Compression Fitting

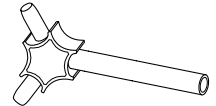
Step1:

Cut the pipe vertically using RIIFO pipe cutter. Ensure it is cut precisely.



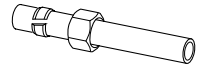
Step2:

Use a plastic reamer to round and bevel the end holes of the pipe.



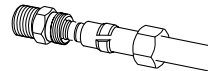
Step3:

Insert the nut and the olive into the pipe in turn, ensuring that the end of the threaded opening faces the end face of the pipe.



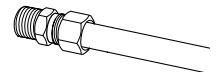
Step4:

Insert the fitting core into the tube bore along the tube axis to ensure complete insertion. During the insertion process, care must be taken not to damage the O-ring on the core.



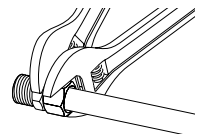
Step5:

Tighten the nut only finger tight.



Step6:

Tighten the nut with a spanner.





RIIFO B1 PEX-AL-PEX Multilayer Piping System

B1 PEX/AL/PEX Pipes



Art No.	Specification	Length	Pack Qty
1100044539	16x2.0mm	4m	120m
1100044540	20x2.0mm	4m	80m
1100044541	25x2.5mm	4m	40m
1100044542	32x3.0mm	4m	28m

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

B1 PEX/AL/PEX Pipes



Maiximun working pressure 10 bar
Maiximun working temperature 95°C

Art No.	Specification	Pack Qty
1100042672	12x1.5mm	160m
1100044543	16x2.0mm	50m
1100044544	16x2.0mm	75m
1100042673	16x2.0mm	100m
1100042674	16x2.0mm	150m
1100041605	16x2.0mm	200m
1100042675	16x2.0mm	500m
1100042676	20x2.0mm	50m
1100044545	20x2.0mm	100m
1100041606	20x2.0mm	200m
1100042677	25x2.5mm	25m
1100042678	25x2.5mm	50m
1100044546	32x3.0mm	25m
1100044547	32x3.0mm	50m

B1 PEX/AL/PEX Pipes Pre-Insulated



Maiximun working pressure 10 bar
Maiximun working temperature 95°C

Art No.	Specification	Pack Qty
1100044442	16x2.0mm Red	100m
1100044443	16x2.0mm Blue	100m
1100044444	20x2.0mm Red	50m
1100044445	20x2.0mm Blue	50m
1100030423	20x2.0mm Grey	50m
1100044954	25x2.5mm Red	50m
1100044985	25x2.5mm Blue	50m
1100044446	32x3.0mm Red	25m
1100044447	32x3.0mm Blue	25m

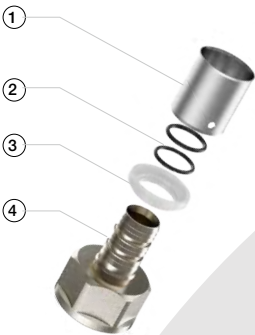
B1 PEX/AL/PEX Pipes in Corrugated Conduit



Maiximun working pressure 10 bar
Maiximun working temperature 95°C

Art No.	Specification	Pack Qty
1100042684	16x2.0mm Grey	50m
1100044448	16x2.0mm Red	50m
1100044449	16x2.0mm Blue	50m
1100044450	20x2.0mm Red	50m
1100044451	20x2.0mm Blue	50m
1100044452	25x2.5mm Red	50m
1100044453	25x2.5mm Blue	50m
1100044454	32x3.0mm Red	50m
1100044455	32x3.0mm Blue	50m

RIIFO F5 Press-Fit System



- 1 Sleeve**
Material: Stainless steel 304
- 2 O ring**
Material: EPDM
- 3 Collar**
Material: PE
- 4 Fitting main body**
Material: Brass

Advantages



U pressing profile



Excellent sealing performance with double O-ring



The stress and risk of cracking is eliminated by the annealing process



Ease and security of installation



Nickel plated contributes to good corrosion resistance



Machined with surface finish tolerance of no more than Ra3.2µm

F5 Couplers

U Profile Press Fitting



Art No.	Specification	Carton Qty
1100047876	12mm	360
1100041649	16mm	320
1100041650	20mm	224
1100042294	25mm	120
1100044456	32mm	90

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F5 Reducing Couplers

U Profile Press Fitting



Art No.	Specification	Carton Qty
1100044457	16x12mm	320
1100041895	20x16mm	280
1100042293	25x16mm	120
1100044458	25x20mm	120
1100044459	32x16mm	80
1100044460	32x20mm	80
1100044461	32x25mm	80

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F5 90° Elbows

U Profile Press Fitting



Art No.	Specification	Carton Qty
1100044462	16mm	192
1100044463	20mm	144
1100042298	25mm	80
1100042299	32mm	45

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F5 Reducing 90° Elbows

U Profile Press Fitting



Art No.	Specification	Carton Qty
1100044468	20x16mm	144
1100044470	25x16mm	96
1100044469	25x20mm	80
1100044471	32x20mm	80

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F5 Tees

U Profile Press Fitting



Art No.	Specification	Carton Qty
1100044472	16mm	120
1100044473	20mm	120
1100044982	25mm	64
1100044475	32mm	30

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F5 Reducing Tees

U Profile Press Fitting



Art No.	Specification	Carton Qty
1100044476	16x20x16mm	120
1100044983	16x25x16mm	96
1100044478	20x16x16mm	120
1100044480	20x16x20mm	120
1100044481	20x20x16mm	120
1100044984	20x25x20mm	96
1100042301	25x16x16mm	96
1100044483	25x16x20mm	96
1100042302	25x16x25mm	70
1100044484	25x20x16mm	70
1100042303	25x20x20mm	70
1100042304	25x20x25mm	70
1100042305	25x25x16mm	70
1100042306	25x25x20mm	70
1100044485	32x16x32mm	48
1100042307	32x20x32mm	48
1100044486	32x25x25mm	40
1100042308	32x25x32mm	36

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F5 Male Elbows

U Profile Press Fitting



Art No.	Specification	Carton Qty
1100044501	16mm x 1/2"	192
1100044502	16mm x 3/4"	120
1100041904	20mm x 1/2"	192
1100044503	20mm x 3/4"	120
1100044504	25mm x 1/2"	80
1100044505	25mm x 3/4"	80
1100044506	25mm x 1"	96
1100044507	32mm x 1"	60

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F5 Female Elbows

U Profile Press Fitting



Art No.	Specification	Carton Qty
1100044508	16mm x 1/2"	200
1100044509	16mm x 3/4"	120
1100041903	20mm x 1/2"	160
1100044510	20mm x 3/4"	120
1100044511	25mm x 1/2"	80
1100044512	25mm x 3/4"	80
1100044513	25mm x 1"	72
1100044514	32mm x 1"	60

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F5 Wall Plate Elbows

U Profile Press Fitting



Art No.	Specification	Carton Qty
1100042300	16mm x 1/2"(2 feet)	112
1100044515	20mm x 1/2"(2 feet)	96
1100044516	20mm x 3/4"(2 feet)	96
1100044517	16mm x 1/2"(3 feet)	80
1100044518	20mm x 1/2"(3 feet)	64
1100044519	20mm x 3/4"(3 feet)	96

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F5 Female Couplers (Swivel)

U Profile Press Fitting



Art No.	Specification	Carton Qty
1100041656	16mm x 1/2"	320
1100044496	16mm x 3/4"	200
1100044497	20mm x 1/2"	240
1100041658	20mm x 3/4"	160
1100044498	25mm x 3/4"	120
1100044499	25mm x 1"	96
1100044500	32mm x 1"	90

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F5 Female Couplers

U Profile Press Fitting



Art No.	Specification	Carton Qty
1100041897	16mm x 1/2"	280
1100044491	16mm x 3/4"	160
1100041898	20mm x 1/2"	240
1100041666	20mm x 3/4"	160
1100044492	25mm x 1/2"	120
1100042295	25mm x 3/4"	120
1100044493	25mm x 1"	96
1100044494	32mm x 1"	96
1100044495	32mm x 1 1/4"	84

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F5 Male Couplers

U Profile Press Fitting



Art No.	Specification	Carton Qty
1100041651	16mm x 1/2"	360
1100042296	16mm x 3/4"	200
1100041899	20mm x 1/2"	280
1100041663	20mm x 3/4"	200
1100044487	25mm x 1/2"	120
1100044488	25mm x 3/4"	120
1100044489	25mm x 1"	120
1100043774	32mm x 3/4"	96
1100044490	32mm x 1"	96
1100042297	32mm x 1 1/4"	90

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F5 Male Tees

U Profile Press Fitting



Art No.	Specification	Carton Qty
1100044520	16x1/2"x16mm	120
1100044521	20x1/2"x20mm	120

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F5 Female Tees

U Profile Press Fitting



Art No.	Specification	Carton Qty
1100044522	20x1/2"x20mm	80
1100044523	20x3/4"x20mm	96
1100044524	25x1/2"x25mm	72
1100044525	25x3/4"x25mm	64
1100044526	32x1/2"x32mm	48
1100044527	32x3/4"x32mm	40
1100044528	32x1"x32mm	36

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F5 Stop Ends

U Profile Press Fitting



Art No.	Specification	Carton Qty
1100041900	16mm	600
1100041901	20mm	480
1100044529	25mm	192
1100049890	32mm	128

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F5 45° Elbows

U Profile Press Fitting



Art No.	Specification	Carton Qty
1100044464	16x16mm	160
1100044465	20x20mm	144
1100044466	25x25mm	96
1100044467	32x32mm	45

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F5 MLCP to Copper Compression Tails

U Profile Press Fitting



Art No.	Specification	Carton Qty
1100042659	16x15mm Cu	360
1100044535	20x15mm Cu	280
1100042660	20x22mm Cu	144
1100042661	25x22mm Cu	96
1100044536	25x28mm Cu	96
1100042662	32x28mm Cu	96

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F5 MLCP to Copper Union Adapters

U Profile Press Fitting



Art No.	Specification	Carton Qty
1100042663	16x15mm Cu	288
1100044537	20x22mm Cu	144
1100042664	25x22mm Cu	120
1100044538	32x28mm Cu	96

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F5 Chromed Radiator Tail Elbows

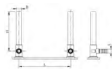
U Profile Press Fitting



Art No.	Specification	Carton Qty
1100042666	16x15Cu x310mm	50
Maiximun working pressure 10 bar Maiximun working temperature 95°C		

F5 Chromed Radiator Tail Elbows - Two ways out

U Profile Press Fitting



Art No.	Specification	Carton Qty
1100042667	16x16x15Cu x150mm	15
Maiximun working pressure 10 bar Maiximun working temperature 95°C		

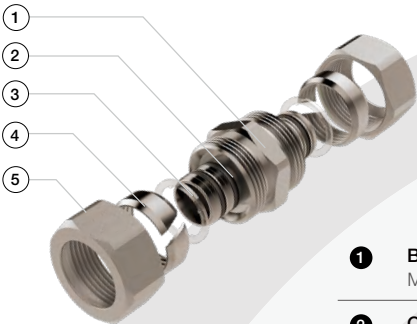
F5 Chromed Radiator Tail Tees

U Profile Press Fitting



Art No.	Specification	Carton Qty
1100050465	16xΦ15Sx16mm	30
Maiximun working pressure 10 bar Maiximun working temperature 95°C		

RIIFO F1 Compression Fitting System



- 1 Body**
Material: Brass
- 2 O ring**
Material: EPDM
- 3 Washer**
Material: PE
- 4 Olive**
Material: Brass
- 5 Nut**
Material: Brass

Advantages

-  Reusable
-  Ease and security of installation
-  Excellent sealing performance with double O-ring
-  The stress and risk of cracking is eliminated by the annealing process
-  Machined with surface finish tolerance of no more than Ra3.2µm

F1 Couplers

Compression Fitting



Art No.	Specification	Carton Qty
1100044379	12mm	336
1100044380	16mm	192
1100044381	20mm	160
1100044382	25mm	112
1100044383	32mm	96

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F1 Reducing Couplers

Compression Fitting



Art No.	Specification	Carton Qty
1100044384	20x16mm	192
1100044385	25x16mm	120
1100044386	25x20mm	120
1100044387	32x16mm	96
1100044388	32x20mm	96
1100044389	32x25mm	96

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F1 90° Elbows

Compression Fitting



Art No.	Specification	Carton Qty
1100044390	16mm	120
1100044391	20mm	120
1100044392	25mm	80
1100044393	32mm	48

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F1 Reducing 90° Elbows

Compression Fitting



Art No.	Specification	Carton Qty
1100044394	20x16mm	120
1100044395	25x20mm	80
1100044396	32x20mm	72

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F1 Male Couplers

Compression Fitting



Art No.	Specification	Carton Qty
1100044407	12mm x 1/2"	336
1100044408	16mm x 1/2"	288
1100044409	16mm x 3/4"	200
1100044410	20mm x 1/2"	192
1100044411	20mm x 3/4"	192
1100044412	25mm x 1/2"	128
1100044413	25mm x 3/4"	128
1100044414	25mm x 1"	128
1100044415	32mm x 1"	108

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F1 Reducing Tees

Compression Fitting



Art No.	Specification	Carton Qty
1100044402	16x12x12mm	96
1100044403	20x16x20mm	80
1100044404	20x25x20mm	56
1100044405	25x20x25mm	56
1100044406	32x25x32mm	44

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F1 Tees

Compression Fitting



Art No.	Specification	Carton Qty
1100044397	12mm	160
1100044398	16mm	96
1100044399	20mm	96
1100044400	25mm	48
1100044401	32mm	36

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F1 Stop Ends

Compression Fitting



Art No.	Specification	Carton Qty
1100044424	16mm	384
1100044425	20mm	288
1100044426	25mm	192
1100044427	32mm	96

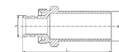
Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F1 Female Couplers
Compression Fitting



Art No.	Specification	Carton Qty
1100044416	16mm x 1/2"	240
1100044417	16mm x 3/4"	240
1100044418	20mm x 1/2"	240
1100044419	20mm x 3/4"	200
1100044420	25mm x 1/2"	160
1100044421	25mm x 3/4"	160
1100044422	25mm x 1"	128
1100044423	32mm x 1"	108

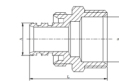
F1 MLCP to Copper Compression Tails
Compression Fitting



Art No.	Specification	Carton Qty
1100044428	16x15mm Cu	224
1100044429	20x15mm Cu	168
1100044430	20x22mm Cu	160
1100044431	25x22mm Cu	120
1100044432	25x28mm Cu	96
1100044433	32x28mm Cu	64

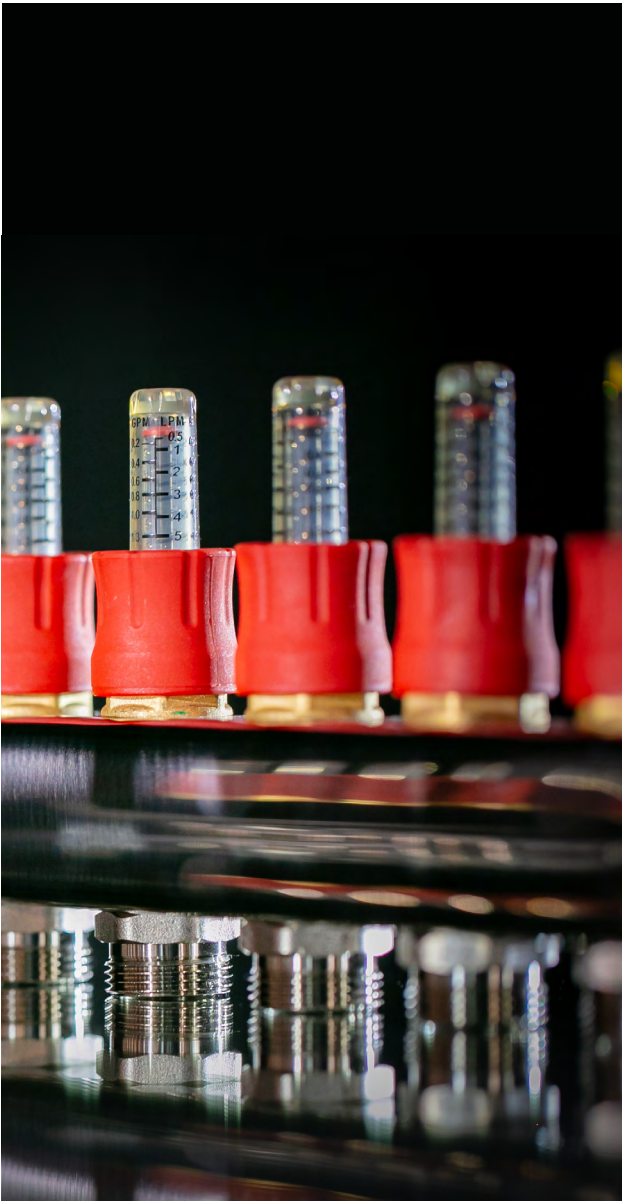
Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F1 MLCP to Copper Union Adapters
Compression Fitting



Art No.	Specification	Carton Qty
1100044434	16x15mm Cu	288
1100044435	20x15mm Cu	160
1100044436	25x28mm Cu	64
1100044437	32x28mm Cu	64

Maiximun working pressure 10 bar
Maiximun working temperature 95°C



MANIFOLDS

FS5 Plumbing Manifolds with 1" Inlet
Nickled Brass



Art No.	Specification	Carton Qty
1100044367	2 Port 1"x3/4" Blue	42
1100044368	2 Port 1"x3/4" Red	42
1100044369	3 Port 1"x3/4" Blue	24
1100044370	3 Port 1"x3/4" Red	24
1100044371	4 Port 1"x3/4" Blue	18
1100044372	4 Port 1"x3/4" Red	18

Nickel plated brass water supply manifolds with 1" connection at the inlet end and 3/4" outlet connection.

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

FS5 Plumbing Manifolds with 3/4" Inlet
Nickled Brass

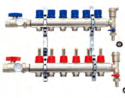


Art No.	Specification	Carton Qty
1100044373	2 Port 3/4"x1/2" Blue	60
1100044374	2 Port 3/4"x1/2" Red	60
1100044375	3 Port 3/4"x1/2" Blue	48
1100044376	3 Port 3/4"x1/2" Red	48
1100044377	4 Port 3/4"x1/2" Blue	30
1100044378	4 Port 3/4"x1/2" Red	30

Nickel plated brass water supply manifolds with 3/4" connection at the inlet end and 1/2" outlet connection.

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

FN9 Brass UFH Manifolds
Nickled Brass



Art No.	wSpecification	Carton Qty
1100042280	2 Port - Inlet 1"x3/4" Outlet	4
1100042281	3 Port - Inlet 1"x3/4" Outlet	4
1100042282	4 Port - Inlet 1"x3/4" Outlet	4
1100042283	5 Port - Inlet 1"x3/4" Outlet	4
1100042284	6 Port - Inlet 1"x3/4" Outlet	4
1100042285	7 Port - Inlet 1"x3/4" Outlet	4
1100042286	8 Port - Inlet 1"x3/4" Outlet	2
1100042287	9 Port - Inlet 1"x3/4" Outlet	2
1100042288	10 Port - Inlet 1"x3/4" Outlet	2
1100042289	11 Port - Inlet 1"x3/4" Outlet	2
1100042290	12 Port - Inlet 1"x3/4" Outlet	2

Manifolds body made of brass, the supply rail has a flow meter with a double adjustable red sleeve for 0.5-5 l/min allowing for flow regulation and isolation of individual circuits with visual flow indication.

The return rail has temperature controlled valves to accommodate one electric actuator per circuit.

The pre-assembled manifolds consists of 2 return/fill valves, 2 automatic venting valves.

Accessory parts such as connectors and ball valves can also be ordered separately.

FN9 Manifolds Assembly & Technical Data

Technical Data

Working Performance:

Max. Working Pressure:
10bar(145 psi)
Cont. Working Temperature:
32°F (0°C) ~ 158°F (70°C)
Max. Instantaneous Working
Temperature
(Max. 10 min/day): 212°F (100°C)
Max Differential Pressure: 1 bar (14.5 psi)

Working Media:

- 1: Water
- 2: 50% water and 50% ethylene glycol
- 3: 50% water and 50% propylene glycol

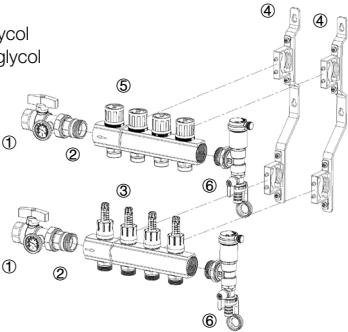
Material:

Manifolds Body: Brass
Port Connection: Nickel
coated brass
Sealing Ring: EPDM

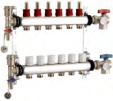
Flow:

Indication Scale - 0.5 ~ 5 L/
min, Tolerance ±10%
Kvs - 1.10

- ① Ball valve
- ② Manifolds
- ③ Flow meter
- ④ Brackets
- ⑤ Manual actuator
- ⑥ Automatic vent & drain valve



FN16S Stainless Steel UHF Manifolds



Art No.	Specification	Carton Qty
1100042446	2 Port - Inlet 1"x3/4" Outlet	4
1100042447	3 Port - Inlet 1"x3/4" Outlet	4
1100042448	4 Port - Inlet 1"x3/4" Outlet	4
1100042449	5 Port - Inlet 1"x3/4" Outlet	4
1100042450	6 Port - Inlet 1"x3/4" Outlet	4
1100042451	7 Port - Inlet 1"x3/4" Outlet	4
1100042452	8 Port - Inlet 1"x3/4" Outlet	2
1100042453	9 Port - Inlet 1"x3/4" Outlet	2
1100042454	10 Port - Inlet 1"x3/4" Outlet	2
1100042455	11 Port - Inlet 1"x3/4" Outlet	2
1100042456	12 Port - Inlet 1"x3/4" Outlet	2

Manifolds body made of Stainless Steel , the supply rail has a flow meter with a double adjustable red sleeve for 0.5-5 l/min allowing for flow regulation and isolation of individual circuits with visual flow indication.

The return rail has temperature controlled valves to accommodate one electric actuator per circuit.

The pre-assembled manifolds consists of 2 return/fill valves, 2 automatic venting valves.

Accessory parts such as connectors and ball valves can also be ordered separately.

FN16S Manifolds Assembly & Technical Data

Technical Data

Working Performance:

Max. Working Pressure: 10bar(145 psi)
Cont. Working Temperature:
32°F (0°C) ~ 158°F (70°C)
Max. Instantaneous Working
Temperature
(Max. 10 min/day): 212°F (100°C)
Max Differential Pressure: 1 bar (14.5 psi)

Working Media:

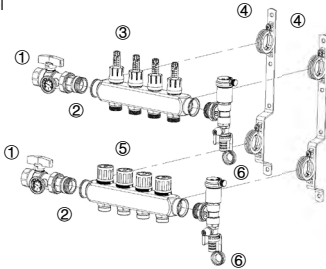
- 1: Water
- 2: 50% water and 50% ethylene glycol
- 3: 50% water and 50% propylene glycol

Material:

Manifolds Body: 304 Stainless Steel
Port Connection: Nickel coated brass
Sealing Ring: EPDM

Flow:

Indication Scale - 0.5 ~ 5 L/min,
Tolerance ±10%
Kvs - 1.10



F5 Manifolds Outlet Adaptors

U Profile Press Fitting



Art No.	Specification	Carton Qty
1100044530	16mm x 1/2"	336
1100044531	20mm x 1/2"	336
1100044532	16mm x 3/4"	224
1100044533	20mm x 3/4"	192
1100044534	25mm x 3/4"	120

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

F1 Manifolds Outlet Adaptors

Compression Fitting



Art No.	Specification	Carton Qty
1100041679	16mm x 1/2"	576
1100044438	20mm x 1/2"	320
1100042859	12mm x 3/4"	336
1100042668	16mm x 3/4"	384
1100044439	20mm x 3/4"	384
1100044440	25mm x 3/4"	160
1100044441	20mmxW11/8(14)A 320	

Maiximun working pressure 10 bar
Maiximun working temperature 95°C

Tools

Pipe Cutting Tools



Art No.	Specification	Carton Qty
1100015650	Pipe Cutting Tool III	50
1100018777	Pipe Cutting Tool IV	40

Used to cut plastic pipe and multilayer composite pipes(pipe size less than DN32)

Internal Bending Springs



Art No.	Specification	Carton Qty
1100033464	16mm	150
1100033487	20mm	90
1100033489	25mm	54
1100033490	32mm	24

The radius of the direct bend centred on the pipe axis should not be less than 5 times the size of the pipe.

External Bending Springs



Art No.	Specification	Carton Qty
1100033492	16mm	36
1100033494	20mm	24
1100033495	25mm	12
1100033497	32mm	6

The radius of the direct bend centred on the pipe axis should not be less than 5 times the size of the pipe.

Integral Manual Pressing Tools



Art No.	Specification	Carton Qty
1100018780	16mm	5
1100018779	20mm	5

U profile - Non-replaceable inserts.

Lengthened Manual Pressing Tools & Inserts
for Manual Pressing Tools



Art No.	Specification	Carton Qty
1100015725	Lengthened Manual Pressing Tool 14-32	5
1100015629	insert 12mm	100
1100015743	insert 16mm	96
1100015745	insert 20mm	96
1100015746	insert 25mm	96
1100015748	insert 32mm	96

Pressing tool and inserts available separately.

Bevelling Tools



Art No.	Specification	Carton Qty
1100015706	12/16/20mm	200
1100018270	16/20/25mm	180
1100018272	20/25/32mm	100

Used to ensure that the tube is round and free of burrs before inserting into the fitting and will not damage the O-ring of the fitting.

PROFESSIONAL INSTALLATION LIMITED WARRANTY

Subject to the conditions and limitations of this Limited Warranty, RIIFO UK Ltd ("RIIFO"), warrants to the property owner ("Owner") that the components in its RIIFO Piping Systems as described below (the "Products"), when properly installed by licensed plumbers in potable water and radiant heating systems and subject to normal conditions of use, shall be free from failure caused by manufacturing defects for the respective periods set forth below, each of which periods shall commence on the date of original purchase of the Product (whether or not by Owner).

In the event that a RIIFO Product fails during the applicable warranty period due to a manufacturing defect as determined by RIIFO and all conditions for coverage under his Limited Warranty are met, the Owner shall be entitled to the following as his or her exclusive remedy: (i) at RIIFO's sole election, either (a) the replacement of the same type, size and like quantity of non-defective Product at the original point of delivery, at no cost to Owner or (b) credits, offsets, refunds or a combination thereof, for the purchase price of the defective Product; and (ii) if the Product in question is covered by either the 10-year or 25-year limited warranty and the failure occurred during the first ten (10) years of such warranty period and was the direct cause of a leak at the Owner's property, RIIFO will reimburse the Owner for all reasonable and necessary costs of repair or replacement for physical damage to the property, including drywall, flooring and painting costs, as well as damages to personal property, resulting from the failure or leak.

Installation: This Limited Warranty applies only if the applicable Product is configured and installed by a licensed professional plumbing contractor in accordance with RIIFO's instructions, good plumbing practices, and applicable code requirements and industry standards.

FAILURE TO INSTALL THE PRODUCTS IN COMPLIANCE WITH THESE REQUIREMENTS WILL VOID THIS WARRANTY AND MAY RESULT IN SEVERE WATER DAMAGE. RIIFO DOES NOT GUARANTEE OR IN ANY WAY WARRANT THE INSTALLATION OF ITS PRODUCTS.

Exclusions From Coverage: This Limited Warranty excludes defects or failures caused after shipment of the Product by:

- (i) components not manufactured or sold by RIIFO;
- (ii) improper installation (as set forth above);
- (iii) use in improper applications or conditions or in conjunction with improper materials (including, without limitation, improper lubricants, pastes, solvents or sealants);
- (iv) exposure to damaging physical or chemical conditions, including, but not limited to, chemically corrosive or aggressive water conditions, abnormal operating conditions, accident, abuse, and misuse;

- (v) freezing or overheating of liquids within the Product, or unusual pressure surges or pulsation;
- (vi) vibration;
- (vii) exposure to temperatures and/or pressures exceeding the ranges for the Product as specified in RIIFO's design manuals and installation guides;
- (viii) exposure to ultraviolet lights or other high-energy radiation;
- (ix) failure to adhere to RIIFO instructions and/or specifications concerning the proper handling, installation, testing and use of the Product;
- (x) failure to adhere to applicable standards set forth by local laws, codes, or regulations and the applicable industry standards;
- (xi) abuse, misuse, alteration, accidental damage, Acts of God (such as flood, hurricanes, tornadoes or fire) or any other improper activities (including but not limited to repairing or attempt by anyone other than RIIFO authorized service agent) not listed above or damage caused by the fault or negligence of anyone other than RIIFO.

DISCLAIMER OF OTHER WARRANTIES: THIS LIMITED WARRANTY IS THE ONLY WARRANTY APPLICABLE TO THE PRODUCTS, WHICH ARE OTHERWISE SOLD "AS IS." THERE ARE NO OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ALL SUCH WARRANTIES ARE SPECIFICALLY DISCLAIMED. NO STATEMENT, CONDUCT OR DESCRIPTION BY RIIFO OR ITS REPRESENTATIVES, IN ADDITION TO OR BEYOND THIS LIMITED WARRANTY, SHALL CONSTITUTE A WARRANTY.

SOLE REMEDY/LIMITATION OF LIABILITY: THE SOLE AND EXCLUSIVE REMEDY FOR BREACH OF THIS LIMITED WARRANTY AND THE SOLE AND EXCLUSIVE OBLIGATION OF RIIFO WITH RESPECT TO ANY CLAIMS FOR BREACH OF THIS LIMITED WARRANTY, SHALL BE AS SET FORTH ABOVE. IN NO EVENT SHALL RIIFO BE LIABLE FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL, PUNITIVE, OR INDIRECT DAMAGES, LOST PROFITS, LOSS OF GOODWILL, LOSS OF BUSINESS OPPORTUNITIES, OR DAMAGE TO REPUTATION.

Warranty Claim Process: Any warranty claim by Owner regarding an alleged defective Product shall be made in writing to RIIFO, postmarked within the applicable warranty period and no later than ten (10) days after the date the defect is discovered, or in the exercise of ordinary care should have been discovered. Such notification should be sent to the RIIFO address indicated in www.riifo.co.uk, and must include a description of the Product (with model number, if available), date of purchase and/or date of installation (with proof of purchase, if available), and a description of alleged defect. If the Owner cannot determine the date of purchase, RIIFO will deem the production date to be the date of purchase for purposes of this Limited Warranty. Owner shall keep all Products alleged to be defective and, at RIIFO's request and expense, ship the Product(s) to RIIFO for inspection. In the event Owner is seeking the reimbursement of property damages as set forth above, Owner must detailed documentation of the claimed damages, including photographs, estimates, and invoices. RIIFO shall also have the right, but not the obligation, to inspect the site of installation/damage. Upon receipt of a complete warranty claim, RIIFO will diligently perform an investigation to determine if a manufacturing defect is present.

If RIIFO determines warranty coverage applies, it will promptly notify Owner and provide the remedy set forth in this Limited Warranty. No action by RIIFO under this warranty shall be construed as an admission of liability.

Transferability: This Limited Warranty shall apply for the full applicable warranty period with respect to the original Owner of the real property at which the Product is installed and to any subsequent owner(s) of such property, provided such ownership transfer(s) occur within 10 years of the Product purchase date. Any change in ownership of the property after such 10-year period will void any remaining warranty coverage.

Transferability: This Limited Warranty shall apply for the full applicable warranty period with respect to the original Owner of the real property at which the Product is installed and to any subsequent owner(s) of such property, provided such ownership transfer(s) occur within 10 years of the Product purchase date. Any change in ownership of the property after such 10-year period will void any remaining warranty coverage.

Product Warranty Periods

PRODCUT NAME/ TYPE	WARRANTY PERIOD (FROM DATE OF PURCHASE)	CONDITIONS
PEXa/PEX-b pipe	25 years (if connected and used with RIIFO pipe/fittings) or 10 years if otherwise (subject to written technical approval by RIIFO UK Ltd)	Must comply with ISO 15875
PEX-AL-PEX pipe	25 years (if connected and used with RIIFO pipe/fittings) or 10 years if otherwise (subject to written technical approval by RIIFO UK Ltd)	Must comply with ISO 21003
PE-AL-PE pipe	25 years (if connected and used with RIIFO pipe/fittings) or 10 years if otherwise (subject to written technical approval by RIIFO UK Ltd)	Must comply with ISO 21003
PERT-AL-PERT pipe	25 years (if connected and used with RIIFO pipe/fittings) or 10 years if otherwise (subject to written technical approval by RIIFO UK Ltd)	Must comply with ISO 21003
PPR pipe	25 years (if connected and used with RIIFO pipe/fittings) or 10 years if otherwise (subject to written technical approval by RIIFO UK Ltd)	Must comply with ISO 15874
PF5/PF15 fitting	10 years (if connected and used with RIIFO pipe/fittings) or 5 years if otherwise (subject to written technical approval by RIIFO UK Ltd)	Must comply with ISO 15875
F5 / F8/ F9 /F18 /F6 fitting	10 years (if connected and used with RIIFO pipe/fittings) or 5 years if otherwise (subject to written technical approval by RIIFO UK Ltd)	Must comply with ISO 21003
F1 fitting	2 years	Must comply with ISO 21003
PPR fitting	5 years (if used together with RIIFO pipe)	Must comply with ISO 15874
VALVE	3 years	Must be installed per installation instructions
Water Manifolds	3 years	Must be installed per installation instructions
Heating Manifolds	3 years	Must be installed per installation instructions