



PEX-a PRODUCT CATALOG



RIFENG ENTERPRISE GROUP CO. LTD.

No.16, Zumiao Road, Foshan, Guangdong, PR China 528000
E: overseas@rifeng.com

NORTH AMERICAN MARKET

Flexible | Durable | Affordable

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ABOUT RIFENG

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

8,000

employees

300,000

distributors worldwide

100+

servicing over 100
countries & regions

70

branches & subsidiaries



Innovation

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

This innovative passion has translated perfectly into high-quality products and excellent service. RIFENG has been certified by TÜV Rheinland to ISO 9001, and always strive to provide ideal piping solutions for everyone.

Scale

We've adopted highly automated production lines with the most rigorous and comprehensive production controls/management systems.

Facility

9

global production bases

5,200+

production staff

494.2

acres area total

4,000+

automated production lines

Capacity

Production Capacity

- Tubing: 10.5 billion ft/yr
- Fittings: 1.3 billion pcs/yr

Storage Capacity

- 61,271,048 cubic feet ≈ 61,950 TEU
(1 TEU = 1x20 GP container)

* The above statistics are as of 2023.



RIFENG Approvals

RIFENG adheres to the concept of prioritizing quality. All RIFENG products are produced under rigorous quality control systems. RIFENG currently has earned over 50 global certifications. Some examples are:

- NSF (certification of public health standards, USA)
- DVGW (certification for products for water and gas, Germany)
- AENOR (standardization and quality certification for companies, Spain)
- WRAS (certification for connections against leaks, residues, good function, pollution, UK)
- WATERMARK (health and safety certification, Australia)

Honors



Certificates



PEX-a PLUMBING SYSTEMS



As a world leading plumbing systems manufacturer, RIFENG offers a comprehensive range of PEX-a products, which are highly regarded by installers for their chlorine resistance, freeze resistance, flexibility, and ease of installation. These systems are widely used in residential, commercial, and industrial applications for hot and cold potable water supply.

• 1.3 billion pcs/year

Fittings Production Capacity

• 164 million ft/year

PEX-a Tubing Production Capacity

* The above statistics are as of 2023.

Compatible Fittings:



F1807



F1960



F2159



F1960



• 50-year Service Life

PPI-listed raw materials with excellent chemical and mechanical properties support a 50-year service life.

• Safety and Hygiene

RIFENG PEX-a tubing is certified to NSF 14 and 61, and also tested to achieve the highest level of chlorine-resistance.

• Cost-efficiency and Comfort

RIFENG PEX-a tubing is flexible enough to require fewer fittings for long runs, thereby consuming fewer fittings, shortening installation time, resulting in cost savings, as well as a reduced risk of leaks.

The F1960 cold expansion fittings also have a full-flow design to minimize pressure loss and provide an excellent water experience.

• Reliable Connections

F1960 connection method has been proven to be simple, quick and reliable.



PEX-a Tubing

Technical Data

Material: PEX-a cross-linked high density polyethylene
Max. Pressure & Temperature: 73.4°F at 160 psi, 180°F at 100 psi
Chlorine Resistance: ASTM F2023 – tested and listed to the Class-5 chlorine resistance listing
Minimum UV Resistance: 1 month

Standards and Approvals

- NSF/ANSI 14 & 61
- ASTM F876/F877/F1960/F1807/F2159/F2098
- CSA B137.5
- ASTM F2023

Certificates



Specifications

PEX-a Tubing Coils



Size	Length (ft)	Color
1/2	100/250/300/500/1000	Red/Blue/White
5/8	100/250/300/500/1000	Red/Blue/White
3/4	100/250/300/500/1000	Red/Blue/White
1	100/250/300/500	Red/Blue/White

PEX-a Tubing Sticks



Size	Length (ft)	Color
1/2	5/10/20	Red/Blue/White
5/8	5/10/20	Red/Blue/White
3/4	5/10/20	Red/Blue/White
1	5/10/20	Red/Blue/White





F1960 Cold Expansion Fittings

(Brass & PPSU)

Technical Data

Working Temperature:
5°F (-15°C) ~ 200°F (93°C)*

*Note: According to ASTM F876 temperature and pressure ratings for SDR9 PEX-a

- Material:**
- EcoBrass UNS C69300
 - Lead-free brass UNS C46500
 - PPSU (polyphenylsulfone)

Standards and Approvals

- ASTM F1960
- CSA B137.5

Certificates



Specifications

F1960 Cold Expansion Fittings (Brass)

Straight Couplings



Size	Carton Qty
3/8x3/8	750
1/2x1/2	600
5/8x5/8	360
3/4x3/4	240
1x1	120

Reducers



Size	Carton Qty
1/2x3/8	600
3/4x1/2	360
1x3/4	240

Female Threaded Adapters



Size	Carton Qty
1/2x1/2 FPT	480
1/2x3/4 FPT	360
3/4x1/2 FPT	360
3/4x3/4 FPT	240
3/4x1 FPT	180
1x1 FPT	90

Male Threaded Adapters



Size	Carton Qty
1/2x1/2 MPT	480
1/2x3/4 MPT	360
5/8x1/2 MPT	360
3/4x1/2 MPT	360
3/4x3/4 MPT	240
3/4x1 MPT	180
1x3/4 MPT	180
1x1 MPT	90

Female Sweat Adapters



Size	Carton Qty
1/2x1/2 CUF	600
5/8x1/2 CUF	360
1/2x3/4 CUF	360
3/4x1/2 CUF	360
3/4x3/4 CUF	240
1x3/4 CUF	180
1x1 CuF	90

Male Sweat Adapters



Size	Carton Qty
3/8x1/2 CU	750
1/2x1/2 CU	480
1/2x3/4 CU	360
3/4x1/2 CU	360
3/4x3/4 CU	180

Elbows



Size	Carton Qty
3/8x3/8	750
1/2x1/2	480
5/8x5/8	360
3/4x3/4	180
1x1	90

Elbow Reducers



Size	Carton Qty
3/4x1/2	360

Female Sweat Elbows



Size	Carton Qty
1/2x1/2 CUF	480
1/2x3/4 CUF	360
3/4x5/8 CUF	360
3/4x1/2 CUF	360
3/4x3/4 CUF	180

Male Sweat Elbows



Size	Carton Qty
1/2x1/2 CU	450
1/2x3/4 CU	360
5/8x3/4 CU	360
3/4x3/4 CU	180

Male Threaded Elbows



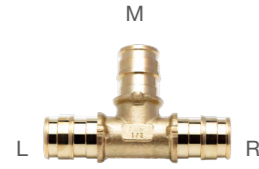
Size	Carton Qty
1/2x1/2 MPT	240
1/2x3/4 MPT	180
5/8x3/4 MPT	180
3/4x3/4 MPT	120
3/4x1 MPT	90

Drop Ear Elbows



Size	Carton Qty
1/2x1/2 FPT	180
3/4x3/4 FPT	180

Tees



Size (L/R/M)	Carton Qty
3/8x3/8x3/8	360
1/2x1/2x1/2	240
3/4x3/4x3/4	120
1x1x1	90

Tee Reducers



Size (L/R/M)	Carton Qty
1/2x1/2x3/4	180
3/4x1/2x1/2	180
3/4x1/2x3/4	120
3/4x3/4x1/2	120
3/4x3/4x1	120
1x1/2x3/4	120
1x1/2x1	90
1x3/4x1/2	90
1x3/4x3/4	90
1x3/4x1	90
1x1x1/2	90
1x1x3/4	90

Plugs



Size	Carton Qty
3/8	1500
1/2	1000
3/4	1000
1	500

F1960 Cold Expansion Fittings (PPSU)

Straight Couplings



Size	Carton Qty
1/2x1/2	800
3/4x3/4	500
1x1	200

Reducers



Size	Carton Qty
3/4x1/2	500
1x1/2	400
1x3/4	300

Male Threaded Adapters



Size	Carton Qty
1/2x1/2 MPT	500
1/2x3/4 MPT	500
1x1 MPT	150
3/4x1/2 MPT	200
3/4x3/4 MPT	300

Elbows



Size	Carton Qty
1/2x1/2	500
3/4x3/4	200
1x1	100

Elbow Reducers



Size	Carton Qty
3/4x1/2	300
1x3/4	100

Tees



Size (L/R/M)	Carton Qty
1/2x1/2x1/2	400
3/4x3/4x3/4	200
1x1x1	100

Tee Reducers



Size (L/R/M)	Carton Qty
1/2x1/2x3/4	300
3/4x1/2x1/2	200
3/4x1/2x3/4	200
3/4x3/4x1/2	200
3/4x3/4x1	150
1x3/4x3/4	150
1x3/4x1	100
1x1x1/2	150
1x1x3/4	150

Plugs



Size	Carton Qty
1/2	1500
3/4	1000
1	500

Accessories

Expansion Rings



Size	Carton Qty
3/8	720
1/2	600
3/4	480
1	800

Installation

PEX-a + F1960 Cold Expansion Fittings



Step 1:

Cut the tubing vertically and precisely with a tubing cutter.



Step 2:

Choose the appropriate size expansion ring and place it onto the end of the tubing.



Step 3:

Using an approved manual or cordless expansion tool, slide the tubing onto the tool head until it stops. Expand until the tubing/sleeve are snug with the expander tool.

Note: Ensure to stop and rotate tubing 1/8 turn between expansions if using a manual tool or a battery tool without automatic rotation.



Step 4:

Remove the tool from the tubing and sleeve. Immediately insert the fitting into the expanded tubing until its shoulder touches the sleeve end.



Step 5:

Tubing may take up to two minutes to fully seal around the fitting. Twist the fitting to ensure the ring is fully sealed.

Recommended Tool Brands and Models

- RIFENG PEX-a Expander Tool with 3/8", 1/2", 3/4", 1" Heads
- Milwaukee M12 ProPEX Expansion Tool with M12 ProPEX Expansion Head
- Milwaukee M12 FUEL ProPEX Expander with M12 ProPEX Expansion Head/(RAPID SEAL)
- Dewalt 20V Max Lithium Ion Cordless PEX-a Expansion Tool with Heads

PEX-a RADIANT FLOOR HEATING SYSTEMS

Radiant floor heating offers unparalleled benefits in terms of comfort, cleanliness, and efficiency. It surpasses baseboard heating and radiators in terms of efficiency and comfort, evenly distributing heat throughout the room. Compared to other systems, it reduces energy loss through ventilation ducts and decreases concerns regarding dust and allergens.

Furthermore, radiant heating can be seamlessly integrated with various energy systems such as gas boilers, solar hot water systems, and heat pump systems. The circular laying system provides a stable and evenly distributed heat source, giving you an optimal comfort experience.



- **High-quality and Complete Systems**

RIFENG offers radiant floor heating systems which consist of PEX-a tubing and manifolds.

- **Higher Precision and Superior Durability**

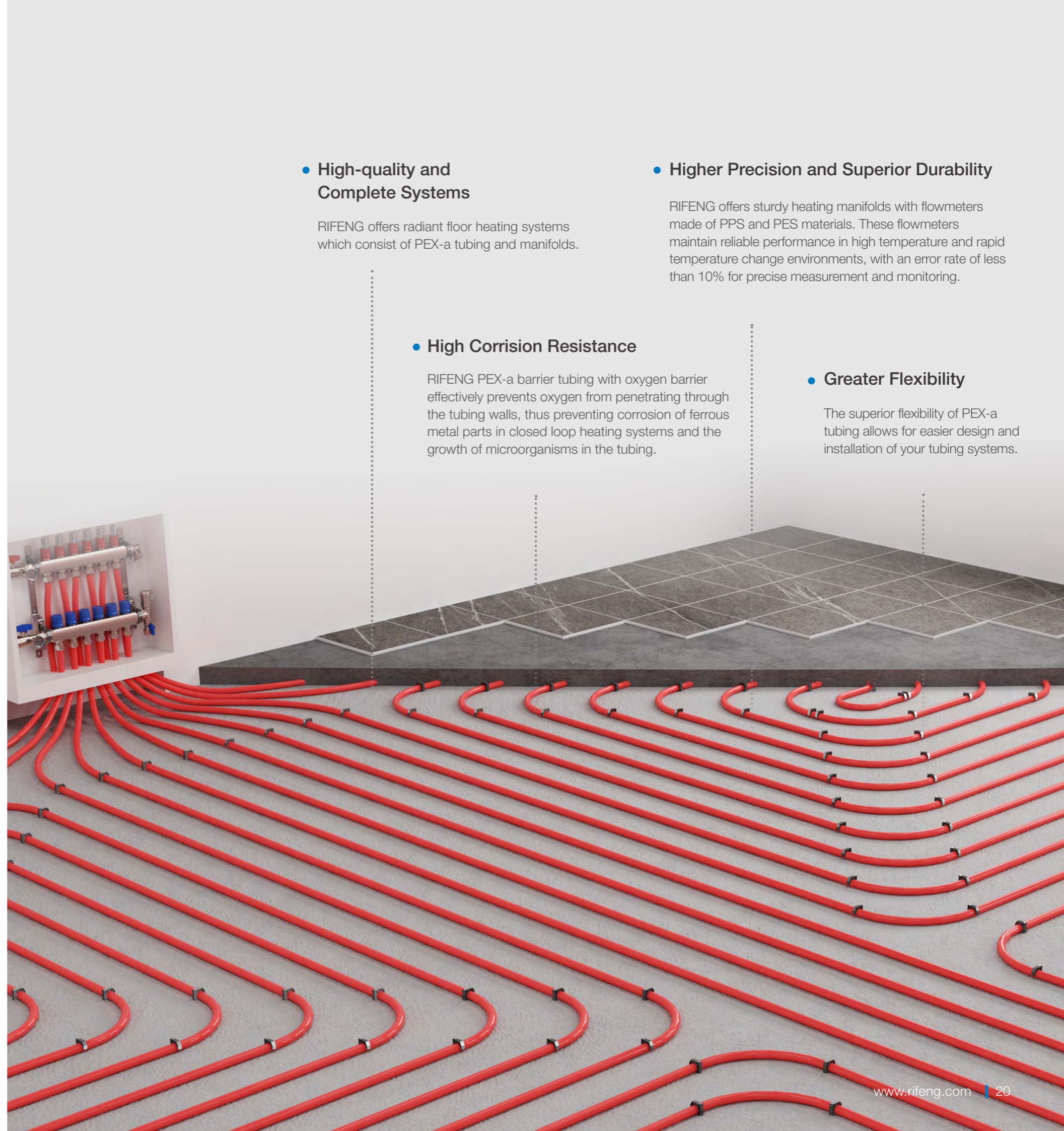
RIFENG offers sturdy heating manifolds with flowmeters made of PPS and PES materials. These flowmeters maintain reliable performance in high temperature and rapid temperature change environments, with an error rate of less than 10% for precise measurement and monitoring.

- **High Corrosion Resistance**

RIFENG PEX-a barrier tubing with oxygen barrier effectively prevents oxygen from penetrating through the tubing walls, thus preventing corrosion of ferrous metal parts in closed loop heating systems and the growth of microorganisms in the tubing.

- **Greater Flexibility**

The superior flexibility of PEX-a tubing allows for easier design and installation of your tubing systems.





PEX-a Barrier Tubing

Technical Data

Material: PEX-a cross-linked high density polyethylene
Oxygen Barrier: Ethylene vinyl alcohol (EVOH)
Max. Pressure & Temperature: 73.4°F at 160 psi, 180°F at 100 psi
Chlorine Resistance: ASTM F2023 – tested and listed to the Class-5 chlorine resistance listing

Standards and Approvals

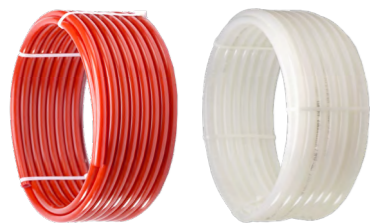
- ASTM F876/F877/F1960/F1807/F2159/F2098
- CSA B137.5
- ASTM F2023

Certificates



Specifications

PEX-a Barrier Tubing Coils



Size	Length (ft)	Color
1/2	100/250/300/500/1000	Red/Natural
5/8	100/250/300/500/1000	Red/Natural
3/4	100/250/300/500/1000	Red/Natural
1	100/250/300/500	Red/Natural

PEX-a Barrier Tubing Sticks



Size	Length (ft)	Color
1/2	5/10/20	Red/Natural
5/8	5/10/20	Red/Natural
3/4	5/10/20	Red/Natural
1	5/10/20	Red/Natural



Heating Manifolds and Accessories

Standards and Approvals

- CSA B137.5
- ASTM F877
- ASTM F1807

Certificates



Technical Data

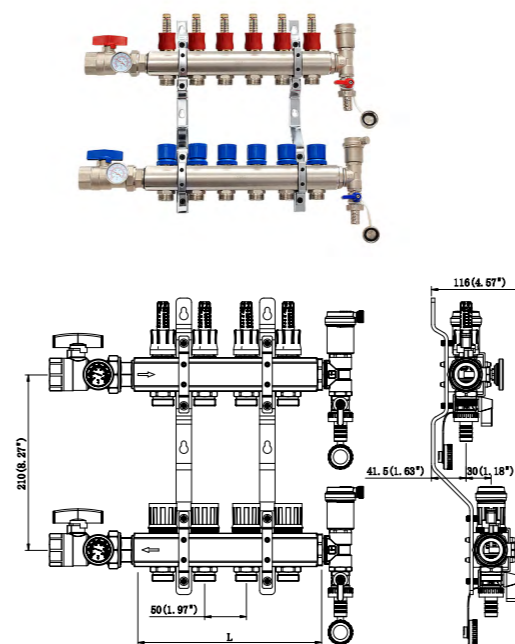
FN9 Brass Manifolds

Materials	Manifold Body	Brass
	Port Connection	Brass
	Seal	EPDM
Working Performance	Permissible Maximum Continuous Working Temperature: 82°C (180°F) at 6.9bar (100psi)	
Working Media	Media 1	Water
	Media 2	Water/Ethylene Glycol 50/50%
	Media 3	Water/Propylene Glycol 50/50%
Flow	Indication Scale	0.5-5 L/min (0.13-1.32 G/min)
	Indication Tolerance	± 10%
	Kvs	1.10
Connection	Supply/Return	G1" Female
	Circuit Connection	G3/4" Male
	Flowmeter Connection	G1/2" Male

Specifications

Manifolds

FN9 Brass Manifolds



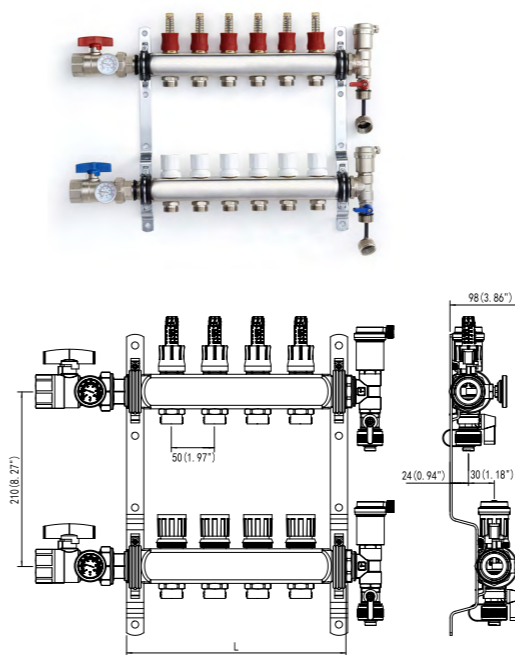
Size	Connections	Loops	L/mm	L/in	Carton Qty
1F-3/4*2	G1"x3/4"	2	120	4.72	4
1F-3/4*3	G1"x3/4"	3	170	6.69	4
1F-3/4*4	G1"x3/4"	4	220	8.66	4
1F-3/4*5	G1"x3/4"	5	270	10.63	4
1F-3/4*6	G1"x3/4"	6	320	12.6	4
1F-3/4*7	G1"x3/4"	7	370	14.57	4
1F-3/4*8	G1"x3/4"	8	420	16.54	2
1F-3/4*9	G1"x3/4"	9	470	18.5	2
1F-3/4*10	G1"x3/4"	10	520	20.47	2
1F-3/4*11	G1"x3/4"	11	570	22.44	2
1F-3/4*12	G1"x3/4"	12	620	24.41	2



FN16 Stainless Steel Manifolds

Materials	Manifold Body	Stainless Steel
	Port Connection	Brass
	Seal	EPDM
Working Performance	Permissible Maximum Continuous Working Temperature: 82°C (180°F) at 6.9bar (100psi)	
Working Media	Media 1	Water
	Media 2	Water/Ethylene Glycol 50/50%
	Media 3	Water/Propylene Glycol 50/50%
Flow	Indication Scale	0.5-5 L/min (0.13-1.32 G/min)
	Indication Tolerance	± 10%
	Kvs	1.10
Connection	Supply/Return	G1" Female
	Circuit Connection	G3/4" Male
	Flowmeter Connection	G1/2" Male

FN16 Stainless Steel Manifolds



Size	Connections	Loops	L/mm	L/in	Carton Qty
1F-3/4*2	G1"x3/4"	2	155	6.1	4
1F-3/4*3	G1"x3/4"	3	205	8.07	4
1F-3/4*4	G1"x3/4"	4	255	10.04	4
1F-3/4*5	G1"x3/4"	5	305	12.01	4
1F-3/4*6	G1"x3/4"	6	355	13.98	4
1F-3/4*7	G1"x3/4"	7	405	15.94	4
1F-3/4*8	G1"x3/4"	8	455	17.91	2
1F-3/4*9	G1"x3/4"	9	505	19.88	2
1F-3/4*10	G1"x3/4"	10	555	21.85	2
1F-3/4*11	G1"x3/4"	11	605	23.82	2
1F-3/4*12	G1"x3/4"	12	655	25.79	2



Manifold Accessories

Manifold Auto Air Vent



Size	Carton Qty
1" Male	24

Manifold Manual Air Vent



Size	Carton Qty
1" Male	24

Angled Manifold Ball Valve with Temperature Gauge



Size	Carton Qty
1" Female-1" Male, Swivel	12

Manifold Ball Valve with Temperature Gauge



Size	Carton Qty
1" Female-1" Male, Swivel	15

Powered Actuator for Heating Manifolds



Size	Carton Qty	Remarks
A4004-80-1 N	50	2-Wire
A4024-80-1 N	60	4-Wire

Manifold End Piece with Drain Set



Size	Carton Qty
1" Male	120

Manifold Compression Adapter for PEX Tubing



Size	Carton Qty
3/8x3/4	400
1/2x3/4	350
5/8x3/4	350
3/4x3/4	240

U-clip



Size	Carton Qty
KU-14-20	3000

Installation



Step 1:

Make a clean straight cut perpendicular to the tubing as close to 90 degrees as possible.

Note: Please use a PEX tubing cutter which is specifically designed to cut PEX smoothly. Do not use reciprocating cutting tools like saws, as the uneven tubing ends may cause leaks.



Step 2:

When connecting a manifold with a compression adapter, the fitting body should be installed and pushed into the manifold connection first.



Step 3:

Ensure that the nut and compression ring are properly placed on the tubing before connecting tubing. Then ensure the tubing is pushed all the way into the fitting.



Step 4:

Use a wrench to tighten the fitting.

Note: Do not over-tighten the compression adapter or over-twist the tube.

TOOLS AND ACCESSORIES

Specifications

J-Hook Pipe Support



Size	Carton Qty
KM2-1/2	5000
KM2-3/4	5000

Bend Support PEX



Size	Carton Qty
WK-1/2 II	600
WK-5/8 II	256
WK-3/4 II	120
WK-1 II	120

PEX Tubing Cutter



Size	Carton Qty
KJW-1 1/8-3/4	60
GJ IV 3/8-1	40

PEX-a Expander Tool



Size	Carton Qty
SYQ-10 3/8-1	30

HANDLING & STORAGE

PEX-a Tubing



In transporting, storing and handling the product, please note the following precautions.

- PEX-a tubing may be damaged by prolonged exposure to chemicals, including but not limited to:
 - Chlorine: PEX-a tubing is generally resistant to chlorine, but exposure to high levels of chlorine over an extended period may cause degradation.
 - Strong Acids and Bases: PEX-a tubing can be damaged by strong acids (e.g., hydrochloric acid, sulfuric acid) and bases (e.g., sodium hydroxide, potassium hydroxide). Avoid using these substances in direct contact with PEX-a tubing.
 - Petroleum-based Products: PEX-a tubing is not compatible with petroleum-based products like gasoline, diesel fuel, or oil. Prolonged exposure to these substances can cause deterioration or damage to the tubing.
 - Oxygenated Solvents: PEX-a tubing should not come into direct contact with oxygenated solvents, such as acetone, methanol, ethanol, or isopropyl alcohol.
- Avoid using sharp tools to open the RIFENG PEX-a tubing package, which can damage the tubing.
- Avoid storing or installing the tubing where it will be directly or indirectly exposed to UV rays (e.g., sunlight).
- RIFENG PEX-a tubing is for plumbing only and is not approved or intended for any other use. Do not use with natural gas, propane, gasoline, diesel fuel or other liquid chemicals.
- Do not use defective tubing and inspect tubing before and after installation.
- Avoid exposure to high temperatures or contact with flammable materials.

Brass Fittings



In transporting, storing and handling the product, please note the following precautions.

- Brass fittings may be damaged by prolonged exposure to chemicals, including but not limited to:
 - Alkaline Solutions: Highly alkaline solutions, such as sodium hydroxide (NaOH) or potassium hydroxide (KOH), can also corrode brass fittings over time.
 - Acids: Strong acids, such as hydrochloric acid (HCl) or sulfuric acid (H₂SO₄), can corrode brass fittings and cause damage.
 - Ammonia: Ammonia can react with brass fittings and lead to corrosion or deterioration.
 - Oxidizing Agents: Strong oxidizing agents, such as hydrogen peroxide (H₂O₂) or potassium permanganate (KMnO₄), can attack brass fittings and cause damage.
- Fittings should be protected from rain or water during transportation and storage.
- Avoid using external forces to squeeze the package, which may cause damage to the fittings.

PPSU Fittings



In transporting, storing and handling the product, please note the following precautions.

- PPSU products may be damaged by prolonged exposure to chemicals, including but not limited to:
 - Butanone can cause severe erosion or fracture of the material.
 - Tubing thread sealing compounds that are anaerobic adhesive such as: Lox Eal, Loctite, liquid sealant.
 - Fire wall penetration sealing compounds and caulking such as: non water clean-up silicone, butyl, polyurethane-based foam & caulk sealants, synthetic rubber sealants & caulks, acrylic latex sealants & caulks.
 - Petroleum-based materials or sealants such as: kerosene, benzene, petrol, solvents, fuel oils, cutting oils, asphaltic paint, and asphaltic road materials, acetone, toluene, and/or xylene.

PPSU Fittings Continued

- Long-term exposure of PPSU to direct sunlight significantly reduces the material's ductility, elongation at break and impact strength.
- Fittings should be protected from rain or water during transportation and storage.
- Avoid using external forces to squeeze the package, which may cause damage to the fittings.
- Avoid exposure to high temperatures or contact with flammable materials.

PEX-a Barrier Tubing



In transporting, storing and handling the product, please note the following precautions.

- PEX-a tubing may be damaged by prolonged exposure to chemicals, including but not limited to:
 - Chlorine: PEX-a tubing is generally resistant to chlorine, but exposure to high levels of chlorine over an extended period may cause degradation.
 - Strong Acids and Bases: PEX-a tubing can be damaged by strong acids (e.g., hydrochloric acid, sulfuric acid) and bases (e.g., sodium hydroxide, potassium hydroxide). Avoid using these substances in direct contact with PEX-a tubing.
 - Petroleum-based Products: PEX-a tubing is not compatible with petroleum-based products like gasoline, diesel fuel, or oil. Prolonged exposure to these substances can cause deterioration or damage to the tubing.
 - Oxygenated Solvents: PEX-a tubing should not come into direct contact with oxygenated solvents, such as acetone, methanol, ethanol, or isopropyl alcohol.
- Avoid using sharp tools to open the RIFENG PEX-a tubing package, which can damage the tubing.
- Avoid storing or installing the tubing where it will be directly or indirectly exposed to UV rays (e.g., sunlight).
- RIFENG PEX-a barrier tubing is for UFH only and is not approved or intended for any other use. Do not use with natural gas, propane, gasoline, diesel fuel or other liquid chemicals.
- Do not use defective tubing and inspect tubing before and after installation.
- Do not drag or install tubing in areas with rocks or sharp objects, there is a high risk of damage to the oxygen barrier.
- Avoid exposure to high temperatures or contact with flammable materials.

WARRANTY AND LIABILITY INSURANCE

Up to **25** Years
Warranty

Our products are warranted for up to 25 years. We guarantee high quality and support you with a long-term warranty.

10 Million Liability
Insurance

We protect the legal rights and interests of our customers. Therefore, we have taken out a product liability insurance policy with Allianz, one of the world's leading insurers, with a coverage amount of 10 million USD.

Further details about warranty terms and liability insurance are available in our official documents. To learn more, please contact our company at www.rifeng.com or overseas@rifeng.com.