



CSI: DIVISION: 22 00 00—PLUMBING  
Section: 22 11 16—Domestic Water Piping

DIVISION: 23 00 00—HEATING, VENTILATING AND AIR CONDITIONING (HVAC)  
Section: 23 21 13—Hydronic Piping

**Product certification system:**

The ICC-ES product certification system includes testing samples taken from the market or supplier's stock, or a combination of both, to verify compliance with applicable codes and standards. The system also involves factory inspections, and assessment and surveillance of the supplier's quality system.

Products: REHAU RAUPEX, UV-SHIELD, MUNICIPEX, and O<sub>2</sub> Barrier Tube and REHAU Fittings (EVERLOC+ and compression nut)

Listee: REHAU Construction LLC  
1501 Edwards Ferry Road  
Leesburg, Virginia 20176  
[www.rehau.com](http://www.rehau.com)

**Compliance with the following codes:**

2024, 2021, 2018, 2015, 2012 and 2009 *International Plumbing Code*® (IPC)  
2021, 2018, 2015, 2012 and 2009 *International Residential Code*® (IRC)  
2024, 2021, 2018, 2015, 2012 and 2009 *International Mechanical Code*® (IMC)  
2024, 2021, 2018, 2015, 2012 and 2009 *Uniform Plumbing Code*® (UPC)\*  
2024, 2021, 2018, 2015, 2012 and 2009 *Uniform Mechanical Code*® (UMC)\*  
2022, 2019, 2016, 2013 and 2010 *California Plumbing Code* (CPC)  
2022, 2019, 2016, 2013 and 2010 *California Mechanical Code* (CMC)  
2023, 2020, 2017 *City of Los Angeles Plumbing Code*  
2023, 2020, 2017 *City of Los Angeles Mechanical Code*  
2021, 2017 and 2007 *Code of Massachusetts Regulation 248 CMR 10.00: Uniform State Plumbing Code*  
2021, 2017 *Massachusetts State Building Code 780 CMR Ninth Edition: Chapter 28*  
2021, 2018 and 2015 *Uniform Solar, Hydronics and Geothermal Code*® (USHGC)\*

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**Compliance with the following standards:**

ASTM F876-2023, Specification for Cross-linked Polyethylene (PEX) Tubing  
ASTM F877-2023, Specification for Cross-linked Polyethylene (PEX) Plastic Hot and Cold Water Distribution Systems  
ASTM E84-2023c, Standard Test Method for Surface Burning Characteristics of Building Materials

ULC S102-2018, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies  
NSF/ANSI 14-2022, Plastic Piping System Components and Related Materials  
NSF/ANSI/CAN 61-2023, Drinking Water System Components – Health Effects  
ICC-ES LC1004-2009 (Editorially revised June 2010), PMG Criteria for PEX, PEX-AL-PEX and PP-AL-PP Piping, Tubing and Fittings Used in Radiant Heating and Water Supply Systems

**Identification:**

**Tubing:** The tubing must be marked at a minimum intervals of 5 feet (1524 mm) with the following: REHAU company name, product name, nominal tube size, material designation, potable water designation (when applicable), standard dimension ratio (SDR9), temperature and pressure ratings, ASTM designation, production code, and the ICC-ES PMG listing mark.

**Fittings:** The fittings are marked with the following: Manufacturer's name or trademark, nominal diameter, and standard designation. Marking on packaging shall include manufacturer's name, fitting size, ASTM designation and ICC-ES PMG listing mark.

**Installation:**

REHAU tubing and fittings must be installed in accordance with the manufacturer's published installation instructions, the applicable codes and this listing.

When used with REHAU tubing and when installed in accordance with this listing, the REHAU EVERLOC+ fittings or the compression fittings complying with ASTM F877 shall be used. Additional fitting are available that REHAU recommends for use with the PEX tubing in potable water applications (such as ASTM F1960, ASTM F1807, ASTM F2080 and ASTM F2159).

**Water Distribution:** Horizontally-laid pipe must be secured in such a manner that temperature-induced expansion and contraction are accommodated. In jurisdictions enforcing the UPC, PEX tubing must not be installed within the first 18 inches (457 mm) of piping connected to a water heater.

**Inspection of Water Distribution Tubing:** Installed piping must be pressure-tested and inspected as required by IPC Section 312, IRC Section P2503.7 or UPC Sections 105 and 609.4.

**Radiant Heating Systems:** The tubing must be pressure-tested for leaks before installation of the cover, as noted in IRC Section M2103.4, IMC Section 1208, USHGC Section 405 or UMC Section 1205, as applicable. The leak test must be witnessed by the code official.

Clearance from heat-producing equipment must be in accordance with IFGC Section 503.7.8, IRC Section M1306 USHGC Section 417.5 or UMC Section 802.10.4, as applicable.

Combustible piping may be installed in areas required to be of noncombustible construction. The REHAU RAUPEX cross-linked polyethylene (PEX) tubing products were tested to ASTM E84 and ULC S102 and were found to have a flame-spread (FS) rating of not more than 25 and a smoke-developed index (SD) rating of not more than 50 when tested. The RAUPEX tubing products have been evaluated for installation in either horizontal or vertical orientations in return-air plenums. Ratings for tubing larger than ½" nominal tube size apply when tube is field insulated with fiberglass insulation meeting the following requirements: ASTM E84 listed and having a Flame Spread Index of <25 and a Smoke Developed Index of <50, a Wall thickness of not less than ½" and there shall be no exposed tubing.

**Models:**

**Tubing:** REHAU tubing products are manufactured from cross linked polyethylene (PEX) materials.

RAUPEX tube is white.

O<sub>2</sub> Barrier is similar to RAUPEX but has an added red-colored oxygen barrier coating.

RAUPEX UV SHIELD and MUNICIPEX are similar to RAUPEX but have an added white-, red- or blue-colored polyethylene coating.

Class 5 RAUPEX UV shield pipe is red, is suitable for commercial hot (180 °F / 82 °C) drinking water applications.

RAUMAT is a pre-assembled roll of RAUPEX O<sub>2</sub> Barrier pipe intended for radiant heating and cooling systems to be installed in large, open slab areas.

The tube is available in 3/8-, 1/2-, 5/8-, 3/4-, 1-, 1 1/4-, 1 1/2- and 2-inch (10, 13, 16, 19, 25, 32, 38 and 51 mm) nominal diameter sizes, and in coils 100, 300, 500 and 1000 feet (30.4, 91.4, 152.4 and 304.8 m) long, or in straight lengths 20 feet (6.2 m) long. REHAU tube and fitting products are pressure-rated for 100 psi (689 kPa) at 180°F (82°C), and 160 psi (1100 kPa) at 73°F (23°C), for a standard dimension ratio of 9. Standard dimension ratio is the ratio of outside diameter to wall thickness and is constant for all REHAU tube sizes.

#### Fittings:

Two REHAU compression fitting types are utilized: compression sleeve fittings (known as EVERLOC+) and compression nut fittings.

The permanent compression sleeve fittings, identified as EVERLOC+, listed in table 1 are used to join tubes for couplings, elbows, tees and adapters, and consist of fittings and sleeves. The compression sleeve fittings are evaluated to comply with NSF/ANSI 61 for commercial hot (180 °F / 82 °C) drinking water applications. The compression sleeve fitting requires proprietary equipment for installation.

Compression nut fittings are used for adapters and to connect tubing to manifolds, and consist of an insert, a split brass compression ring and a compression nut.

When used with RAUPEX tubing and when installed in accordance with this listing, the REHAU compression fittings described above comply with ASTM F877. The compression fittings are illustrated in Figure 1.

**Table 1 – EVERLOC+ Compression Sleeve Fittings**

Description	Part number
<b>Sleeves</b>	
EVERLOC+ 3/8 PEX Sleeve	104815
EVERLOC+ 1/2" PEX Sleeve	104816
EVERLOC+ 5/8" PEX Sleeve	104817
EVERLOC+ 3/4" PEX Sleeve	104818
EVERLOC+ 1" PEX Sleeve	104819
EVERLOC+ 1-1/4" PEX Sleeve	104820
EVERLOC+ 1-1/2" PEX Sleeve	104821
EVERLOC+ 2" PEX Sleeve	104822
<b>Fittings</b>	
EVERLOC+ LF Coupling 3/8" x 3/8"	317138
EVERLOC+ P Coupling 1/2" x 1/2"	104824
EVERLOC+ P Coupling 3/4" x 1/2"	104830
EVERLOC+ LF Coupling 5/8" x 5/8"	317142
EVERLOC+ LF Coupling 3/4" x 5/8"	426294
EVERLOC+ P Coupling 3/4" x 3/4"	104825
EVERLOC+ LF Coupling 1" x 1/2"	426297
EVERLOC+ P Coupling 1" x 3/4"	104831
EVERLOC+ P Coupling 1" x 1"	104826
EVERLOC+ LF Coupling 1-1/4" x 3/4"	425026

EVERLOC+ P Coupling 1-1/4" x 1"	104832
EVERLOC+ P Coupling 1-1/4" x 1-1/4"	104827
EVERLOC+ LF Coupling 1-1/2" x 3/4"	425028
EVERLOC+ P Coupling 1-1/2" x 1"	104833
EVERLOC+ LF Coupling 1-1/2" x 1-1/4"	422233
EVERLOC+ P Coupling 1-1/2" x 1-1/2"	104828
EVERLOC+ LF Coupling 2" x 1/2"	425029
EVERLOC+ LF Coupling 2" x 3/4"	425031
EVERLOC+ LF Coupling 2" x 1"	317139
EVERLOC+ LF Coupling 2" x 1-1/4"	317140
EVERLOC+ LF Coupling 2" x 1-1/2"	317141
EVERLOC+ P Coupling 2" x 2"	104829
EVERLOC+ P Elbow 1/2" x 1/2"	104859
EVERLOC+ LF Elbow 5/8" x 5/8"	317163
EVERLOC+ P Elbow 3/4" x 3/4"	104860
EVERLOC+ P Elbow 1" x 1"	104861
EVERLOC+ P Elbow 1-1/4" x 1-1/4"	104862
EVERLOC+ P Elbow 1-1/2" x 1-1/2"	104863
EVERLOC+ P Elbow 2" x 2"	104864
EVERLOC+ P Tee 1/2" x 1/2" x 1/2"	104835
EVERLOC+ P Tee 3/4" x 3/4" x 3/4"	104836
EVERLOC+ P Tee 1" x 1" x 1"	104837
EVERLOC+ P Tee 1-1/4"x1-1/4"x1-1/4"	104838
EVERLOC+ P Tee 1-1/2"x1-1/2"x1-1/2"	104839
EVERLOC+ P Tee 2" x 2" x 2"	104840
EVERLOC+ P Tee 1/2" x 1/2" x 3/4"	104854
EVERLOC+ P Tee 3/4" x 1/2" x 1/2"	104851
EVERLOC+ P Tee 3/4" x 1/2" x 3/4"	104841
EVERLOC+ P Tee 3/4" x 3/4" x 1/2"	104844
EVERLOC+ P Tee 3/4" x 3/4" x 1"	104855
EVERLOC+ P Tee 1" x 3/4" x 3/4"	104852
EVERLOC+ P Tee 1" x 3/4" x 1"	104842
EVERLOC+ P Tee 1" x 1" x 1/2"	104846
EVERLOC+ P Tee 1" x 1" x 3/4"	104845
EVERLOC+ LF Tee 1-1/4" x 1" x 3/4"	424989
EVERLOC+ P Tee 1-1/4" x 1" x 3/4"	336922
EVERLOC+ P Tee 1-1/4" x 1" x 1"	104853
EVERLOC+ LF Tee 1-1/4" x 1" x 1-1/4"	317143
EVERLOC+ LF Tee 1-1/4" x 1-1/4" x 1/2"	424991
EVERLOC+ LF Tee 1-1/4" x 1-1/4" x 3/4"	322832
EVERLOC+ P Tee 1-1/4" x 1-1/4" x 1"	104847
EVERLOC+ LF Tee 1-1/2" x 1" x 3/4"	424992
EVERLOC+ LF Tee 1-1/2" x 1" x 1"	317152
EVERLOC+ LF Tee 1-1/2" x 1" x 1-1/2"	317144
EVERLOC+ LF Tee 1-1/2" x 1-1/4" x 3/4"	425025
EVERLOC+ LF Tee 1-1/2" x 1-1/4" x 1"	317153
EVERLOC+ LF Tee 1-1/2" x 1-1/4" x 1-1/4"	317154

EVERLOC+ LF Tee 1-1/2"x1-1/4"x1-1/2"	317145
EVERLOC+ LF Tee 1-1/2" x 1-1/2" x 1/2"	425024
EVERLOC+ LF Tee 1-1/2" x 1-1/2" x 3/4"	322833
EVERLOC+ P Tee 1-1/2" x 1-1/2" x 1"	104848
EVERLOC+ LF Tee 1-1/2"x1-1/2"x1-1/4"	317149
EVERLOC+ LF Tee 2" x 1-1/4" x 2"	317146
EVERLOC+ LF Tee 2" x 1-1/2" x 3/4"	424994
EVERLOC+ LF Tee 2" x 1-1/2" x 1"	317156
EVERLOC+ LF Tee 2" x 1-1/2" x 1-1/4"	317161
EVERLOC+ LF Tee 2" x 1-1/2" x 1-1/2"	317155
EVERLOC+ LF Tee 2"x 1-1/2" x 2"	317147
EVERLOC+ LF Tee 2" x 2" x 1/2"	424995
EVERLOC+ LF Tee 2" x 2" x 3/4"	322834
EVERLOC+ P Tee 2" x 2" x 1"	104849
EVERLOC+ LF Tee 2" x 2" x 1-1/4"	317150
EVERLOC+ LF Tee 2" x 2" x 1-1/2"	317151
EVERLOC+ LF 45° Elbow 1-1/2" x 1-1/2"	425021
EVERLOC+ LF 45° Elbow 2" x 2"	425022
EVERLOC+ LF FIREPEX Tee 3/4" x 3/4" x 1/2" FPT	421744
EVERLOC+ LF FIREPEX Tee 1" x 1" x 1/2" FPT	421878
EVERLOC+ LF FIREPEX Elbow 3/4" x 1/2" FPT	422004
EVERLOC+ LF FIREPEX Elbow 1" x 1/2" FPT	422005
EVERLOC+ P Plug 1/2"	104856
EVERLOC+ LF Plug 5/8"	317157
EVERLOC+ P Plug 3/4"	104857
EVERLOC+ P Plug 1"	104858
EVERLOC+ LF Plug 1-1/4"	317158
EVERLOC+ LF Plug 1-1/2"	317159
EVERLOC+ LF Plug 2"	317160
EVERLOC+ LF Elbow 1/2"x1/2"CM or 3/8"CF	317164
EVERLOC+ LF Elbow 1/2" x 1/2"CF	317165
EVERLOC+ LF Elbow 1/2" x 1/2" MPT	428824
EVERLOC+ LF Elbow 3/4" x 3/4"CM	317166
EVERLOC+ LF Elbow 3/4" x 3/4"CF	317167
EVERLOC+ LF D/E Elbow 1/2" x 1/2"FPT	317170
EVERLOC+ LF D/E Elbow 1/2"x1/2"MPT	317168
EVERLOC+ LF D/E Elbow 3/4" x 3/4" FPT	422006
EVERLOC+ LF D/E Elbow 3/4" x 3/4" MPT	425476
EVERLOC+ LF D/E Elbow 1" x 1" FPT	422007
EVERLOC+ LF Elbow 3/4" x 3/4"MPT	317169
EVERLOC+ LF Adapter 3/8" x 1/2"MPT	317174
EVERLOC+ LF Adapter 1/2" x 1/2"MPT	317171
EVERLOC+ LF 5/8" x 1/2"MPT	317175
EVERLOC+ LF 5/8" x 3/4"MPT or 1/2"CF	317176
EVERLOC+ LF Adapter 3/4" x 3/4"MPT	317172
EVERLOC+ LF Adapter 3/4" x 1"MPT	317177
EVERLOC+ LF Adapter 1" x 1"MPT	317178

EVERLOC+ LF Adapter 1-1/4" x 1-1/4"MPT	317179
EVERLOC+ LF Adapter 1-1/2" x 1-1/2"MPT	317180
EVERLOC+ LF Adapter 2" x 2"MPT	317181
EVERLOC+ LF Adapter 1/2" x 1/2"FPT	317173
EVERLOC+ LF Adapter 3/4" x 3/4"FPT	317182
EVERLOC+ LF Adapter 1" x 3/4" MPT	323708
EVERLOC+ LF Adapter 1" x 3/4" FPT	329227
EVERLOC+ LF Adapter 1" x 1"FPT	317183
EVERLOC+ LF Adapter 1/2" x 1/2" Soc CPVC	455700
EVERLOC+ LF Adapter 1/2" x 1/2" Spig CPVC	455701
EVERLOC+ LF Adapter 3/4" x 3/4" Soc CPVC	455702
EVERLOC+ LF Adapter 3/4" x 3/4" Spig CPVC	455703
EVERLOC+ LF Adapter 1" x 1" Spig CPVC	455704
EVERLOC+ LF Adapter 1" x 1" Soc CPVC	455705
EVERLOC+ LF Adapter 1-1/4" x 1-1/4" Spig CPVC	455706
EVERLOC+ LF Adapter 1-1/4" x 1-1/4" Soc CPVC	455707
EVERLOC+ LF Adapter 1-1/2" x 1-1/2" Spig CPVC	455708
EVERLOC+ LF Adapter 1-1/2" x 1-1/2" Soc CPVC	455709
EVERLOC+ LF Adapter 2" x 2" Spig CPVC	455710
EVERLOC+ LF Adapter 2" x 2" Soc CPVC	455711
EVERLOC+ LF Adapter Elbow 1/2" x 1/2" CM Press	337006
EVERLOC+ LF Adapter 1/2" x 1/2" CM Press	337007
EVERLOC+ LF Adapter 3/4" x 1/2" CM Press	337008
EVERLOC+ LF Adapter Elbow 3/4" x 3/4" CM Press	337009
EVERLOC+ LF Adapter 3/4" x 3/4" CM Press	337010
EVERLOC+ LF Adapter 1" x 1" CM Press	337011
EVERLOC+ LF Adapter 1-1/4" x 1-1/4" CM Press	337012
EVERLOC+ LF Adapter 1-1/2" x 1-1/2" CM Press	337013
EVERLOC+ LF Adapter 2" x 2" CM Press	337014
EVERLOC+ LF 1/2" x 1/2" CF	317184
EVERLOC+ LF 1/2" x 3/4" CF	322835
EVERLOC+ LF 3/4" x 1/2" CF	325164
EVERLOC+ LF 3/4" x 1/2" CM	325165
EVERLOC+ LF Adapter 3/4" x 1" CF	317189
EVERLOC+ LF 1/2" x 1/2"CM or 3/8"CF	317185
EVERLOC+ LF 3/4" x 3/4"CM	317186
EVERLOC+ LF Adapter 3/4" x 3/4"CF	317187
EVERLOC+ LF Adapter 1" x 1"CM	317190
EVERLOC+ LF Adapter 1" x 1"CF	317191
EVERLOC+ LF 1-1/4" x 1-1/4"CM	317192
EVERLOC+ LF 1-1/4 x 1-1/4CF	317193
EVERLOC+ LF 1-1/2 x 1-1/2CM	317194
EVERLOC+ LF 1-1/2" x 1-1/2"CF	317195
EVERLOC+ LF Adapter 2" x 2"CM	317196
EVERLOC+ LF Adapter 2" x 2"CF	317197
EVERLOC+ x R20, 3/8"	431459
EVERLOC+ x R20, 1/2"	431461

EVERLOC+ x R20, 5/8"	431462
EVERLOC+ x R20, 3/4"	431463
<b>Manifolds</b>	
EVERLOC+ P Mfld CE 3/4" x (3)1/2"Out	104867
EVERLOC+ P Mfld CE 3/4" x (4)1/2"Out	104868
EVERLOC+ P Mfld FT (2)3/4In, (2)1/2Out	104869
EVERLOC+ P Mfld FT (2)3/4In, (3)1/2Out	104870
EVERLOC+ P Mfld FT (2)3/4In, (4)1/2Out	104871
EVERLOC+ P Mfld EFT (2)3/4In,(3)1/2Out	104872
EVERLOC+ P Mfld EFT (2)3/4In,(4)1/2Out	104873
EVERLOC+ P Mfld CE 3/4" x (6)1/2" Out	108807
EVERLOC+ P Mfld CE 1" x (4)1/2" Out	108808
EVERLOC+ P Mfld CE 1" x (6)1/2" Out	108809
EVERLOC+ P Mfld FT (2) 3/4In, (6)1/2Out	108804
EVERLOC+ P Mfld FT (2) 1In, (6)1/2Out	108805
EVERLOC+ P Mfld FT 1x3/4In, (4)1/2Out	108806
EVERLOC+ LF Mfld CE 1In, (4)1/2Out	104892
EVERLOC+ LF Mfld CE 3/4"In, (6)1/2"Out	104893
EVERLOC+ LF Mfld CE 1"In, (6)1/2"Out	104894
EVERLOC+ LF Mfld CE 1"In, (8)1/2"Out	108465
EVERLOC+ LF Mfld CE 1"In, (10)1/2"Out	108466
EVERLOC+ LF Mfld FT 1x3/4In, (4)1/2Out	104895
EVERLOC+ LF Mfld FT 1"x1"In, (4)1/2"Out	104896
EVERLOC+ LF Mfld FT 3/4x3/4In,(6)1/2Out	104897
EVERLOC+ LF Mfld FT 1 x3/4In, (6)1/2Out	104898
EVERLOC+ LF Mfld H, (3)3/4In, (4)1/2Out	104899
EVERLOC+ LF Mfld CTL, 1Hdr, (24)1/2Out	104902
<b>Swivel Adapters</b>	
1/2" EVERLOC+ x 1/2" NPS Female Swivel	418463
3/4" EVERLOC+ x 3/4" NPS Female Swivel	418464
<b>Mini Ball Valves</b>	
1/2" EVERLOC+ x 3/8" Comp Angle Valve, Plated	418438
1/2" EVERLOC+ x 3/8" Comp Straight Valve, Plated	418437
1/2" x 1/2" EVERLOC+ Valve	418435
3/4" x 3/4" EVERLOC+ Valve	418434
1/2" EVERLOC+ x 1/2" C Female (Sweat) Valve	418433
3/4" EVERLOC+ x 3/4" C Female (Sweat) Valve	418429
1/2" EVERLOC+ x 3/8" Comp (Dual) Valve, Plated	418428
<b>Stub Outs</b>	
Tub/Shower Diverter Ell, 1/2" EVERLOC+	418664
Stub Out Ell, 1/2" EVERLOC+ x 8" Long	418665
Stub Out Ell, 1/2" EVERLOC+ x 8" Long with mounting plate	424864
Stub Out Ell, 3/4" EVERLOC+ x 8" Long	418668
Stub Out Ell, 3/4" EVERLOC+ x 8" Long with mounting plate	329229
8" Straight Copper Stub, 1/2" EVERLOC+	418669



## Conditions of Listing:

1. Details on the design and installation of the heating system must be submitted to the code official for approval.
2. During placement of cover over the tubing, the tube must be maintained at the greater of 1½ times the working pressure or 100 psi (689.4 kPa).
3. The tubing installation must be pressure-tested for leaks in the presence of the code official or the code official's designated representative.
4. When installation is in fire-resistance-rated assemblies, evidence of compliance with IBC Section 713 (penetrations) must be provided to the code official.
5. The potable water connections must be protected against backflow from the hydronic heating system.
6. The tubing must not be used as a source of electrical ground.
7. The minimum cold bending radius is six times the outside tube diameter for cold-bent tube and three times the outside diameter for hot-bent tube. The outside diameter is the nominal diameter plus 1/8 inch (3.2 mm).
8. The tubing serving as a component of radiant systems is limited to applications using potable water as the transfer fluid.
9. When the system is embedded in concrete, tubing must be covered a minimum of 3/4 inch (19.1 mm) and installation must comply with IBC Section 1906.3.
10. REHAU tubing and fittings must be protected from exposure to direct sunlight. Tubing and fittings must be protected from physical damage with an oversized flexible corrugated sleeve at structural mass penetrations and when the tube is uncovered. Annular spaces between sleeves and pipes must be filled or tightly caulked in an approved manner.
11. The tubing and fittings recognized in this listing are manufactured under a quality control program with inspections by ICC-ES.

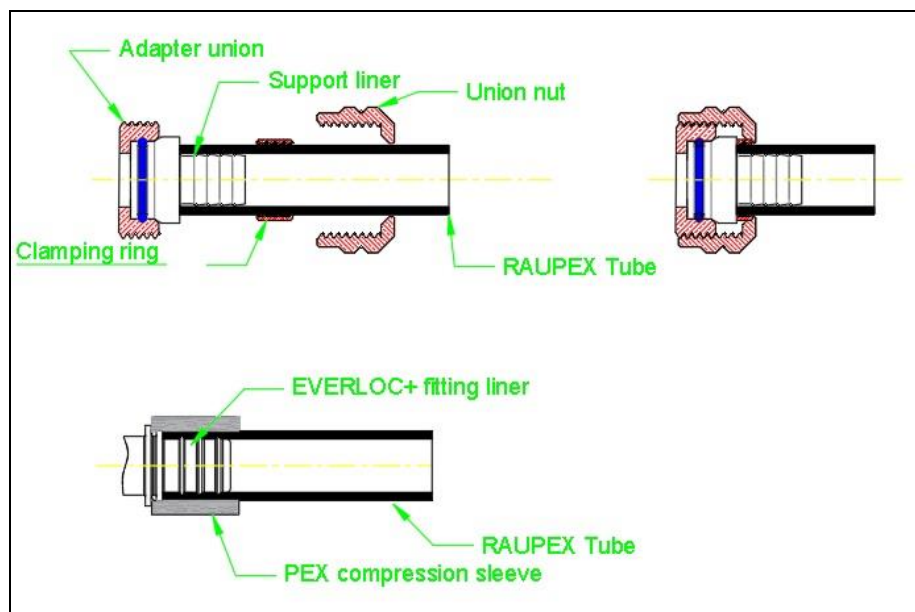


FIGURE 1-- REHAU FITTINGS