KWD globalpipe

KWD Market Report

Fittings and Pipe Connections
Europe 2016

Situation and Trends for Heating & Plumbing Pipe Systems

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Consumption of Fittings in Europe and detailed listing of fittings as Excel file.
940,- € for subscribers of KWD-SHK or KWD-globalpipe, 1.190,- € for all others

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Author of this KWD Report are the chief-editor of the KWD newsletters
Dipl.-Ing. Jutta Hix and the consultant for plastic pipes Achim Seydel.
Fittings and pipe connections Europe 2016 – report on situation and trends

The aim of this report is to provide an overview of major developments, the trends and changes in the recent past as well as of the major European suppliers of pipe connecting products.

The latest report on the market situation and trends for fittings and pipe connections in Europe was published by KWD-globalpipe in 2012. In this time again the development of connecting techniques for pipe systems has been rapid with no end in sight. The drive of the pipe systems industry creating new or improved fitting constructions is unabated, as well as the advancing use of polymeric materials instead of metal. But this does not mean that metal will be out of the game soon.

This has led to numerous more or less convincing fitting solutions mostly aimed at simplifying the connecting process and/or shortening the installation time. From tool-free compression joints and „raxial“press fittings to push fittings in a variety of different designs – there seem to be no limits to imagination. But it looks that especially the push fit constructions will make the running among all other novelties – indeed in a relatively small market niche!

As predicted the almost old-fashioned radial press fitting has achieved to be accepted as a worldwide industrial standard. Sophisticated designs, large quantities and increasing compatibility of pressing tools have paved the way for that.

In light of this stream of innovations it is increasingly difficult even for experts to keep track of things.

Which fitting made of which material is best suited for which type of pipe and application? What is the difference between the joining techniques available and which are the most important suppliers?

Special attention of the new report is focused on trends and developments of the main fitting types like press-, push -or screw fits in major European markets, as well as the possible development of the main fitting material like metal versus plastic in the next years.

Terms and definitions

The term „fitting“ originates in the English language and has several meanings, for example accessories, connections, fastening fixtures or clamp.

In this context fittings can be described as „accessories or parts for pipelines“ or even more commonly used „parts for pipe systems“ and „pipe connections“ . Fittings in pipelines can be used as:

- Connections of pipes made either of the same or of different materials
- Change in direction through pipe
- Branches by T-pieces or pipe crossings
- Change in diameter through pipe reducers
- Connections for accessories, for example valves

Thus, the standard function of fittings is to adapt the design and course of a pipe system to the structural environment. This report focuses mainly on fittings to connect pipes of the same or different materials as well as those to connect accessories.
8 Detailed listing of Fittings in Europe 2016

8.1 Compression Screw fittings ........................................... 136
8.2 Press fittings - radial ..................................................... 139
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Chapter 3  A brief look back

3.1 Fitting-Development

Over many years the fittings and joining technology world has been straightforward. For heating and plumbing installations steel and copper pipes were almost exclusively used and those pipes were predominantly manually welded or brazed. For changes of direction in the pipe system fittings with threads were used for steel pipes and solder fittings for copper pipes.

With the market introduction of alternative pipe materials in the 1960s new joining techniques adapted to the specific properties of those pipes were often required. In supply pipeline systems for example the more frequently used PE pipes were welded. For specific applications, e.g. for detachable connections, metal clamp fittings were already used. PVC pipes on the other hand also gained market share in supply and disposal pipe systems around that time. Those pipes were bonded with special adhesives.

Modern times in pipe joining technology began in the 1970s and 1980s with the increasing use of plastic pipe in hot water applications.

Pipe installations for heating or potable water impose high requirements on the permanent leak tightness of the pipe connection even in difficult to access areas like screed or flush-mounted installations.

The (winning streak) increasing market penetration of cross-linked Polyethylene pipes (PE-X) - which is a thermoplastic elastomer not prone to welded joints - particularly fostered mechanical pipe connections.

3.2 Sliding Sleeve - Axial Compression

3.3 Press Fitting - Radial Compression

3.4 Push Fitting

3.5 Welding fittings

3.6 Fitting developments outside Europe
Chapter 4  Basic designs of pipe connections

In this chapter the different connection types are described by

- Application
- Pipe types
- Design and materials
- Operating principle
- Fitting materials
- Installation
- Pros and Cons
- Examples

The then following photos with description show examples of the described connection type.

<table>
<thead>
<tr>
<th>4  Basic designs of pipe connections</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Axial compression / sliding sleeve</td>
</tr>
</tbody>
</table>

**Application**

The sliding sleeve joint was one of the first compression joints ever used in hot water installations and is still used today by leading system suppliers, often times alongside other connecting technologies. Utilization only for plastic and metal-composite pipes in potable water, heating and gas installations.

**Pipe types**

Available for PE-X, PE-RT or PB plastic and for metal-composite pipes from 10 – 63 mm in diameter.

**Design and materials**

Design for plastic and metal-composite pipes

Fitting body made of brass alloys, red brass, PPSU or PVDF with support bushing, proprietary profiling usually without O-ring seals. Unpressed-untight function not necessary because sleeves not properly slid on can clearly be seen. For metal-composite pipe brass fitting and cut surface must be disconnected. Sliding sleeve made of brass, PPSU, PVDF, PA or combinations of those materials.

**Operating principle**

Design for plastic and metal-composite pipes

The sliding of a sleeve onto the expanded pipe increases the resilience properties of certain plastic resins so that the plastic material is pressed into the profiling of the support bushing. A permanent and safe connection is formed without rubber gaskets.

**Installation**

Cut pipe properly to required length, remove flash from cut surface. Slide sleeve with recommended tools onto the evenly widened pipe end. The correct enlargement ratio and lengths are automatically produced with the proprietary tools. Insert fitting into the expanded pipe end. A gap remains many times between pipe end and fitting waist. The axial sliding of the sleeve to the fitting waist is done with a manual or electrical sliding tongs and the required system jaw according to the installation recommendations of the manufacturers.

**Pros and Cons**

+ Safe joining technology without additional sealing
+ Through expansion none or very little cross-section reduction
+ Permanent connection
+ Unpressed fittings are clearly noticeable

- More tools necessary
- Extensive Installation
- Risk of overexpansion, cracking or delamination during expansion process with metal-composite pipe
4 Basic designs of pipe connections

Some examples of Press Fittings Axial / Sliding Sleeve

Blansol Barbi
Blansol is proud of being the inventor of the sliding sleeve system (Barbi system) for cross-linked polyethylene pipes (PEX pipes) in 1983. Blansol Barbi system includes an extensive range of brass sliding sleeve fittings exclusively designed by Blansol for plumbing and heating installations in a fast and safe way with very competitive costs. The exclusive design of Barbi fittings will guarantee a total hermetic joint of the union and a superior resistance than the resistance of the pipe, without needing to use O-rings or bicones, elements always subject to ageing.

REHAU RAUTITAN PX, RX, SX, MX and LX
RAUTITAN is a universal system for drinking water and heating. The compression sleeve jointing technique works without O-ring. The pressure loss is low thanks to the expansion technology. The connections are immediately resistant to compression stress. RAUTITAN fittings are available as RAUTITAN PX (PPSU with PVDF sleeve), RX (red brass with PVDF sleeves), SX (stainless steel with PVDF sleeve), MX (dezincification brass with PVDF or brass sleeves) or LX (brass with PVDF or brass sleeves).

4.1 Mechanical pipe connections
   4.1.1 Compression and Screw fittings
   4.1.2 Press fittings
   4.1.3 Push fittings

4.2 Integrally-joined connections
   4.2.1 Welded connections for plastic pipes

4.3 Special designs
Chapter 5  Analysis of used fittings by connection type

5.1 Austria

For more information please see our report

For more information please see our report

5.2 Belgium and Netherlands
5.3 France
5.4 Germany
5.5 Great Britain
5.6 Italy
5.7 Spain and Portugal
5.8 Scandinavia (Finland, Norway and Sweden)
Chapter 6  Fitting Trends 2016

Seven Trends about connection types and the fitting market development.

Chapter 7  Consumption of fittings by pipe material

7  Consumption of fittings by pipe material
7.1 Preliminary remarks
7.2 Conversion factors

7.3 Consumption of fittings in Europe 2014 - 2018

7.3.1 Consumption of Fittings - Austria
7.3.2 Consumption of Fittings – Belgium
7.3.2 Consumption of Fittings - Belgium
7.3.3 Consumption of Fittings - Switzerland
7.3.4 Consumption of Fittings - Czech Republic
7.3.5 Consumption of Fittings - Germany
7.3.6 Consumption of Fittings - Denmark
7.3.7 Consumption of Fittings - Spain
7.3.8 Consumption of Fittings - Finland
7.3.9 Consumption of Fittings - France
7.3.10 Consumption of Fittings - Great Britain
7.3.11 Consumption of Fittings - Hungary
7.3.12 Consumption of Fittings - Ireland
7.3.13 Consumption of Fittings - Italy
7.3.14 Consumption of Fittings - Netherlands
7.3.15 Consumption of Fittings - Norway
7.3.16 Consumption of Fittings - Poland
7.3.17 Consumption of Fittings - Portugal
7.3.18 Consumption of Fittings - Slovakia
7.3.19 Consumption of Fittings - Sweden
7.3.20 Consumption of Fittings - Europe
7.3 Consumption of fittings in Europe 2014 - 2018

7.3.1 Consumption of Fittings - Austria

Floor Heating / Surface Heating & Cooling - Austria

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>+/-</th>
<th>+/-</th>
</tr>
</thead>
<tbody>
<tr>
<td>metal pipes(^1)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PP-R pipes</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>flexible pipes(^2)</td>
<td>0.25</td>
<td>0.25</td>
<td>0.00</td>
<td>0.26</td>
<td>0.26</td>
<td>0.26</td>
<td>0.27</td>
</tr>
<tr>
<td>Alu-Multilayer pipes(^3)</td>
<td>0.04</td>
<td>0.05</td>
<td>25.00</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
</tr>
<tr>
<td>Total</td>
<td>0.29</td>
<td>0.30</td>
<td>3.45</td>
<td>0.31</td>
<td>0.31</td>
<td>0.00</td>
<td>0.32</td>
</tr>
</tbody>
</table>

1. Carbon steel/steel, copper + stainless steel
2. PEX, PE-RT + PB pipes
3. PEX or PE-RT/Al/...

Floor Heating / Surface Heating & Cooling - Austria

Austria: Fittings for Floor / Surface Heating & Cooling

![Diagram showing consumption of fittings by pipe material in Austria from 2014 to 2018]
### Radiator Connection - Austria

<table>
<thead>
<tr>
<th>Fittings for</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>metal pipes(^1)</td>
<td>1.84</td>
<td>1.86</td>
<td>1.91</td>
<td>1.92</td>
<td>1.92</td>
</tr>
<tr>
<td>PP-R pipes</td>
<td>0.00</td>
<td>0.00</td>
<td>-%</td>
<td>0.00</td>
<td>-%</td>
</tr>
<tr>
<td>flexible pipes(^2)</td>
<td>0.71</td>
<td>0.72</td>
<td>0.73</td>
<td>0.73</td>
<td>0.74</td>
</tr>
<tr>
<td>Alu-Multilayer pipes(^3)</td>
<td>1.63</td>
<td>1.67</td>
<td>1.71</td>
<td>1.72</td>
<td>1.74</td>
</tr>
<tr>
<td>Total</td>
<td>4.18</td>
<td>4.25</td>
<td>4.35</td>
<td>4.37</td>
<td>4.40</td>
</tr>
</tbody>
</table>

\(^1\)Carbon steel/steel, copper + stainless steel  
\(^2\)PEX, PE-RT + PB pipes  
\(^3\)PEX or PE-RT/Al/...

#### Austria: Fittings for Radiator Connection

![Graph showing consumption of fittings by pipe material in Austria](image)

---

1. Consumption of fittings by pipe material  
2. www.kwd-globalpipe.com
### Sanitary / Hot & Cold Water Systems - Austria

<table>
<thead>
<tr>
<th>Fittings for</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>+/– Previous Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>metal pipes¹</td>
<td>3.76</td>
<td>3.82</td>
<td>3.87</td>
<td>3.88</td>
<td>3.89</td>
<td>1.60 %</td>
</tr>
<tr>
<td>PPR pipes</td>
<td>2.05</td>
<td>2.07</td>
<td>2.10</td>
<td>2.11</td>
<td>2.12</td>
<td>0.98 %</td>
</tr>
<tr>
<td>flexible pipes²</td>
<td>1.38</td>
<td>1.39</td>
<td>1.41</td>
<td>1.41</td>
<td>1.41</td>
<td>0.72 %</td>
</tr>
<tr>
<td>Alu-Multilayer pipes³</td>
<td>4.02</td>
<td>4.08</td>
<td>4.16</td>
<td>4.18</td>
<td>4.22</td>
<td>1.49 %</td>
</tr>
<tr>
<td>Total</td>
<td>11.21</td>
<td>11.36</td>
<td>11.54</td>
<td>11.58</td>
<td>11.64</td>
<td>1.34 %</td>
</tr>
</tbody>
</table>

¹Carbon steel/steel, copper + stainless steel  
²PEX, PE-RT + PB pipes  
³PEX or PE-RT/Al/...

### Austria: Fittings for Sanitary / Hot & Cold Water Systems

![Graph showing the consumption of fittings by pipe material in Austria](image-url)
### Heating & Plumbing Pipes - Austria

<table>
<thead>
<tr>
<th>Fittings for</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>metal pipes¹</td>
<td>5.60</td>
<td>5.68</td>
<td>5.78</td>
<td>5.80</td>
<td>5.81</td>
</tr>
<tr>
<td>PP-R pipes</td>
<td>2.05</td>
<td>2.07</td>
<td>2.10</td>
<td>2.11</td>
<td>2.12</td>
</tr>
<tr>
<td>flexible pipes²</td>
<td>2.34</td>
<td>2.36</td>
<td>2.40</td>
<td>2.40</td>
<td>2.42</td>
</tr>
<tr>
<td>Alu-Multilayer pipes³</td>
<td>5.69</td>
<td>5.80</td>
<td>5.92</td>
<td>5.95</td>
<td>6.01</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15.68</strong></td>
<td><strong>15.91</strong></td>
<td><strong>16.20</strong></td>
<td><strong>16.26</strong></td>
<td><strong>16.36</strong></td>
</tr>
</tbody>
</table>

¹ Carbon steel/steel, copper + stainless steel  
² PEX, PE-RT + PB pipes  
³ PEX or PE-RT/Al/...
7.3.2 Consumption of Fittings - Belgium

Floor Heating / Surface Heating & Cooling - Belgium

<table>
<thead>
<tr>
<th>Fittings for</th>
<th>metal pipes&lt;sup&gt;1&lt;/sup&gt;</th>
<th>PP-R pipes</th>
<th>flexible pipes&lt;sup&gt;2&lt;/sup&gt;</th>
<th>Alu-Multilayer pipes&lt;sup&gt;3&lt;/sup&gt;</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>0.00</td>
<td>0.00</td>
<td>0.15</td>
<td>0.06</td>
<td>0.21</td>
</tr>
<tr>
<td>2015 Previous Year</td>
<td>0.00</td>
<td>0.00</td>
<td>0.14</td>
<td>0.05</td>
<td>0.19</td>
</tr>
<tr>
<td>2016 +/-</td>
<td>0.00</td>
<td>0.00</td>
<td>0.14</td>
<td>0.05</td>
<td>0.19</td>
</tr>
<tr>
<td>2017 Previous Year</td>
<td>0.00</td>
<td>0.00</td>
<td>0.14</td>
<td>0.05</td>
<td>0.19</td>
</tr>
<tr>
<td>2018 +/-</td>
<td>0.00</td>
<td>0.00</td>
<td>0.15</td>
<td>0.06</td>
<td>0.21</td>
</tr>
<tr>
<td>2018 Previous Year</td>
<td>0.00</td>
<td>0.00</td>
<td>0.15</td>
<td>0.06</td>
<td>0.21</td>
</tr>
</tbody>
</table>

1 Carbon steel/steel, copper + stainless steel
2 PEX, PE-RT + PB pipes
3 PEX or PE-RT/Al/...

Floor Heating / Surface Heating & Cooling - Belgium

![Chart showing consumption of fittings for floor/surface heating and cooling in Belgium](chart.png)
Chapter 8  Detailed listing of Fittings in Europe 2016

This list is focused on European manufacturers. We cannot guarantee its correctness and completeness.

<table>
<thead>
<tr>
<th>Company</th>
<th>Brand</th>
<th>Fitting material</th>
<th>for pipes made of</th>
<th>diameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>APE</td>
<td>700 L Series</td>
<td>Brass nicideled</td>
<td>Multi layer</td>
<td>14, 16, 18, 20, 26, 32</td>
</tr>
<tr>
<td>APE</td>
<td>700 F Series</td>
<td>Brass nicideled</td>
<td>Multi layer</td>
<td>16, 20, 26</td>
</tr>
<tr>
<td>APE</td>
<td>200 Series</td>
<td>Brass</td>
<td>Copper</td>
<td>10, 12, 14, 16, 18, 22, 28</td>
</tr>
<tr>
<td>aquatechnik</td>
<td>safety-pol</td>
<td>PPSU (body) and PA-M (cap)</td>
<td>Multi layer</td>
<td>14, 16, 18, 20, 26, 32, 40, 50, 63, 75</td>
</tr>
<tr>
<td>aquatechnik</td>
<td>safety-metal</td>
<td>Brass (body) and PA-M (cap)</td>
<td>Multi layer</td>
<td>16, 20, 26, 32</td>
</tr>
<tr>
<td>aquatechnik</td>
<td>safety-gas</td>
<td>Brass (body) and PA-M (cap)</td>
<td>Multi layer</td>
<td>16, 20, 26, 32</td>
</tr>
<tr>
<td>aquatechnik</td>
<td>safety-clima</td>
<td>PA-M (body and cap)</td>
<td>Multi layer</td>
<td>14, 16, 18, 20, 26, 32</td>
</tr>
<tr>
<td>BEULCO</td>
<td>DEU Product group A1, series 66</td>
<td>Brass</td>
<td>PE, PE-X, PE-Xc, PE-RT, PE-RC, PP</td>
<td>16-110</td>
</tr>
<tr>
<td>BEULCO</td>
<td>DEU Product group A2, series 77</td>
<td>Brass</td>
<td>PE, PVC</td>
<td>16-75</td>
</tr>
<tr>
<td>BEULCO</td>
<td>DEU Product group A3, series 88</td>
<td>Brass</td>
<td>PE, PE-Xa, PVC</td>
<td>16-75</td>
</tr>
<tr>
<td>BEULCO</td>
<td>DEU Product group A4, BlackLine</td>
<td>PP</td>
<td>PE</td>
<td>20-43</td>
</tr>
<tr>
<td>BEULCO</td>
<td>DEU Product group R, BEULCO Repair</td>
<td>PP</td>
<td>All materials</td>
<td>15-43</td>
</tr>
<tr>
<td>Brass Form</td>
<td>GRC Compression Fittings</td>
<td>Brass</td>
<td>Copper, PE-X, Multi layer</td>
<td>15, 16, 18, 20</td>
</tr>
<tr>
<td>Caleffi</td>
<td>ITA Mechanical fitting</td>
<td>Brass with O-ring seal</td>
<td>Copper, Brass, Stainless steel, Soft steel</td>
<td>6, 10, 12, 14, 15, 16, 18, 22, 28</td>
</tr>
<tr>
<td>Comap</td>
<td>FRA Sudo (Avaco)</td>
<td>Brass</td>
<td>Copper</td>
<td>10-108</td>
</tr>
<tr>
<td>Comap</td>
<td>FRA TurboPex</td>
<td>Brass</td>
<td>PE-X</td>
<td>14-12</td>
</tr>
<tr>
<td>Comisa</td>
<td>ITA Unik</td>
<td>Brass plated</td>
<td>Multi layer</td>
<td>16, 20, 26, 32</td>
</tr>
<tr>
<td>Comisa</td>
<td>ITA Compression</td>
<td>Brass</td>
<td>Copper</td>
<td>8, 10, 12, 15, 18, 22, 28, 35, 42, 54</td>
</tr>
<tr>
<td>Comisa</td>
<td>ITA Compression Nickel-plated</td>
<td>Brass nickel-plated</td>
<td>Copper</td>
<td>10, 12, 15, 18, 22, 28, 35, 42, 54</td>
</tr>
<tr>
<td>Comisa</td>
<td>ITA Compression DZR</td>
<td>Brass DZR</td>
<td>Copper</td>
<td>10, 12, 15, 18, 22, 28, 35, 42, 54</td>
</tr>
</tbody>
</table>

8.1 Compression Screw fittings
8.2 Press fittings - radial
8.3 Press fittings axial / Sliding sleeve
8.4 Push fittings
8.5 Welding or Gluing fittings
## Chapter 9  Company profiles alphabetical

In this chapter company profiles to European producer and distributor of fittings can be found.

### 9 Company profiles alphabetical

<table>
<thead>
<tr>
<th>Company</th>
<th>Address</th>
<th>Corporate Profile</th>
<th>Keywords for pipes and fittings</th>
<th>Brands for pipes and fittings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Uponor AB</strong>&lt;br&gt;SWEDEN - Vinsbo&lt;br&gt;www.uponor.se&lt;br&gt;Member of: Uponor Corporation - FINLAND</td>
<td>Company profile: 1982 Finnish companies Asko Oy and Neste Oy founded Oy Uponor Ab for the manufacture of PVC pipes and acquired the Lubomyl business in Sweden, later named Uponor AB. 1970 Vinsbo commercialises the cross-linking process, and introduces the PE-Xs tubing and 1972 Vinsbo PE-X pipe production started in Sweden. Merger of Asko Oy and Oy Uponor Ab, company’s name Uponor Corporation in 2000. Today Uponor has operations in 30 countries, and 10 manufacturing facilities in five countries: Finland, Sweden, Germany, Spain, and the United States.</td>
<td><strong>Fittings, Distributor of:</strong>&lt;br&gt;- Compression screw fittings&lt;br&gt;- Press fittings, radial</td>
<td><strong>Application / Others:</strong>&lt;br&gt;- Corrugated Pipes&lt;br&gt;- District/local heating&lt;br&gt;- Drainage, sanitary sewer&lt;br&gt;- Gas&lt;br&gt;- Large diameter pipes e.g. sewage pipes&lt;br&gt;- preinsulated pipes&lt;br&gt;- Sprinkler system&lt;br&gt;- Surface heating and cooling components&lt;br&gt;- Surface heating and cooling, warm water</td>
<td>Q&amp;E Quick &amp; Easy (Vinsbo PE-Xs piping system)&lt;br&gt;MLC PE-RT/AI/PE-RT pipe system&lt;br&gt;RTM (PPSU or brass fitting with integrated press function for multi layer pipe)&lt;br&gt;Uponor PSS Aqua Pipe RIR green sprinkler system&lt;br&gt;Website: Profuse Gas PE pipe&lt;br&gt;Wetherothm PE pipe</td>
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| **Uponor GmbH**<br>GERMANY - Hassfurt<br>www.uponor.com<br>Member of: Uponor Corporation - FINLAND | Company profile: Uponor Corporation is a leading international provider of plumbing and indoor climate solutions for residential and commercial building markets across Europe and North America. In northern Europe, Uponor is also a prominent supplier of infrastructure pipe systems. Today Uponor has operations in 30 countries, and 10 manufacturing facilities in five countries: Finland, Sweden, Germany, Spain and the United States. | **Fittings, Manufacturer of:**<br>- Compression screw fittings<br>- Press fittings, radial | **Application / Others:**<br>- Compressed air<br>- Concrete core activation<br>- Control technology and equipment<br>- Cooling-ceiling; other systems<br>- Fastening technology<br>- Gas<br>- Manifolds<br>- preinsulated pipes<br>- Snow melting systems, sport grounds heating, road de-icing<br>- Surface heating and cooling components<br>- Surface heating and cooling, warm water | Uponor MLC (PE-RT/AI/PE-RT pipe)<br>Uponor MLC-G System (Gas installation system including PE-Xb/AI/PE-Xb pipe)<br>Uni Pipe PLUS (PE-RT/AI/PE-RT pipe without krit line)<br>Uponor Q&E Quick & Easy System (PE-Xa pipe with expansion/shrink back fitting)<br>Upnor S-Press Brass fitting<br>Upnor S-Press Composite fitting (FPSU)<br>Uponor RS Adapter S-Press brass fitting for multi layer rising system pipe<br>Uponor Compression fitting (brass)<br>Uponor Q&E PPSU expansion/shrink back fitting<br>Uponor Q&E Brass expansion/shrink back fitting<br>Uponor RTM Brass fitting with integrated press function<br>Uponor RTM PPSU fitting with integrated press function |
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<tr>
<td><strong>KWD Market Report &quot;Fittings and Pipe Connections Europe 2016&quot;</strong>&lt;br&gt;Fitting types, Volumes and Trends for Heating&amp;Plumbing Systems, CD + Print&lt;br&gt;19 Countries, 220 pages, all tables and charts as Excel file, in English language</td>
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<td><strong>KWD Market + Charts &quot;Heating &amp; Plumbing Pipes Europe 2015&quot;</strong>&lt;br&gt;19 Countries, 344 pages, printed book and digital version as pdf-file, all tables and charts as Excel file, additional PIVOT table, in English language</td>
<td>1.140,-</td>
<td>□ 890,- □</td>
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<td><strong>KWD Summary &quot;Pipes in and around Russia 2015&quot;</strong>&lt;br&gt;Markets for Heating&amp;Plumbing and District Heating Pipes, PE, PP +PVC Pipes&lt;br&gt;156 pages, with coloured graphics, CD + Print, in English language</td>
<td>895,-</td>
<td>□ 695,- □</td>
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<td><strong>KWD Market Report &quot;PEX, PE-RT and PB worldwide 2014&quot;</strong>&lt;br&gt;Flexible Pipes for Heating&amp;Plumbing Installations, 396 pages, in English language&lt;br&gt;printed book and digital version as pdf-file, all tables and charts as Excel file</td>
<td>1.150,-</td>
<td>□ 920,- □</td>
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<td><strong>KWD-Sanitär, Heizung, Dämmung</strong> - Jahresabonnement in deutscher Sprache&lt;br&gt;Märkte, Unternehmen, Trends (40 Ausgaben im pdf-Format)</td>
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<td><strong>KWD-Fenster, Türen und Umfeld</strong> - Jahresabonnement in deutscher Sprache&lt;br&gt;Märkte, Unternehmen, Trends (40 Ausgaben im pdf-Format)</td>
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<td><strong>KWD-globalpipe</strong>, Fittings + Pipes - Yearly Subscription in english language&lt;br&gt;Markets, Companies, Trends (40 Issues per Year as pdf-file)</td>
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