

## KWD Market Report

### **Fittings and Pipe Connections Europe 2025** for Heating & Plumbing Systems

- Consumption of Fittings 2023 – 2027
- Basic Designs of Pipe Connections
- Analysis of used Fittings by Connection Type

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Update 11/2025

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#### **Price Information:**

19 European Countries, 212 pages, in English language, digital version  
in pdf format, all charts and tables as Excel file

970,- € for subscribers of KWD-SHK or KWD-globalpipe  
1.200,- € for all others (always plus VAT in Germany)

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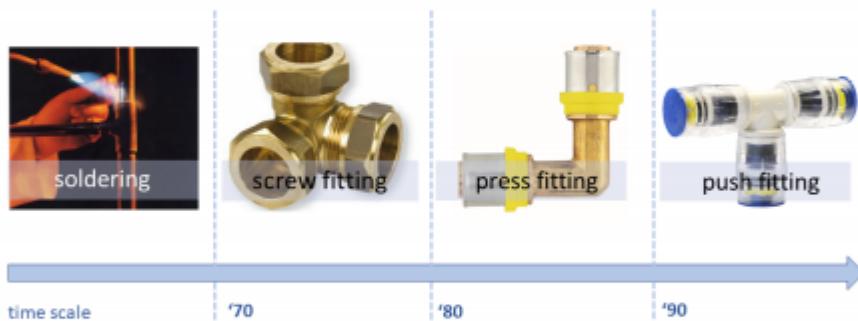
## Chapter 3 The Development of Fittings - a brief look back

page sample

### 3 The Development of Fittings – a brief look back

For many years, the world of fittings and connection technology was overseable. For heating and sanitary installations almost exclusively steel and copper pipes were used and these pipes were connected by mainly manual welding or soldering. For directional changes in the pipe system, threaded fittings were used for steel pipes and soldering fittings were used for copper pipes.

With the introduction of alternative pipe materials to the market beginning in the 1960s, new jointing techniques adapted to the specific properties of these pipes were often required. For example, in supply piping systems, the increasingly used plastic pipes, such as PVC or PE were plugged or even welded. For special applications that required detachable connections, clamp connectors made of metal were already available.



The modern time in pipe jointing technology began in the 70s and 80s with the increasing use of plastic pipes in hot water applications.

Pipe installations for heating or drinking water place high demands on the permanent tightness of the pipe connection, even in areas that are difficult to access, such as concrete or flush-mounted installations.

The increasing market penetration of pipes made of cross-linked polyethylene (PE-X) - a thermoelastic resin, at that time not reliably weldable - favoured the popularity of mechanical pipe joints.

Pipe joints, specially adapted to the dimensions and properties of these newly developed pipes, became more and more an integral part of this new generation of complete pipe systems, e.g. for underfloor heating. In addition, the often excellent flexibility of the new pipe materials allowed the pipe to be bent or bends to be formed without tools or fittings.

### Further subchapters to chapter 3:

- 3.1 Sliding Sleeve - Axial Compression
- 3.2 Press Fitting - Radial Compression
- 3.3 Push Fitting
- 3.4 Welding Fitting
- 3.5 Fitting developments outside Europe
- 3.6 Latest Fitting Developments
  - 3.6.1 Universal Connectors
  - 3.6.2 More Fitting Developments

## Chapter 4 Basic designs of pipe connections

This chapter describes the different connection types on basis of the following points: application, pipe types, designs and materials, operating principle, installation, pros and cons. Next to the explanation of the fitting type, various examples of fittings are shown.

### The chapter is divided into the following points

#### 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

page samples

**4 Basic Designs of Pipe Connections**

<b>b. Axial compression / sliding sleeve</b>	
<b>Application</b>	The sliding sleeve joins water installations and alongside other connections composite pipes in plastic.
<b>Pipe types</b>	Available for PE-X, PEX, PE-RT – 63 mm in diameter.
<b>Design and materials</b>	Design for plastic axial compression. Fitting body made of brass with a proprietary profiling unique to the system. It is necessary because sleeves are made of composite pipe brass and PPSU. The sleeves are made of brass, PPSU, PVDF or stainless steel.
<b>Operating principle</b>	Design for plastic axial compression. The sliding of a sleeve with a certain plastic resin into the support bushing with gaskets.
<b>Installation</b>	Cut pipe properly to the required length with recommended to the diameter ratio and length. Insert fitting into the pipe end and fitting with a sleeve done with a manual or automatic tool according to the installation instructions.
<b>Pros and Cons</b>	<ul style="list-style-type: none"> <li>+ Safe joining technique</li> <li>+ Through expansion</li> <li>+ Permanent connection</li> <li>+ Unpressed fittings</li> <li>-- More tools necessary</li> <li>-- Extensive installation</li> <li>-- Risk of overexpansion</li> <li>-- Metal-composite pipe</li> </ul>

**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 sleeve) or LX (brass with PVDF or brass sleeves).



## Chapter 5 Analysis of used Fittings by Connection Type

### 5.1 Comments on the Fitting Markets

This chapter explains the development of the fitting market and the individual types of fittings.

### 5.2 Structure of the market survey

The data for analysis of the types of fittings were collected and analyzed as a percentage in a survey, carried in autumn 2025. The quantity of fittings by connection type has been calculated based on the collected percentage and the consumption of fitting (see chapter 6).

**In an anonymous survey, we asked the following questions:**

- Which country do you come from?
- In your opinion, which 3 types of fitting are most used in your country?
- How high do you estimate the percentage of metal or plastic fittings in your country?

**The analysis of the survey results is available for:**

- Austria
- Belgium and Netherlands
- Germany
- Great Britain
- Italy
- Poland
- Spain

However, we would like to point out once again that this was an anonymous survey and that the projections presented are merely an evaluation of the responses received. There is no guarantee that these results correspond to reality.

**Please note the following information regarding the evaluation of the survey:**

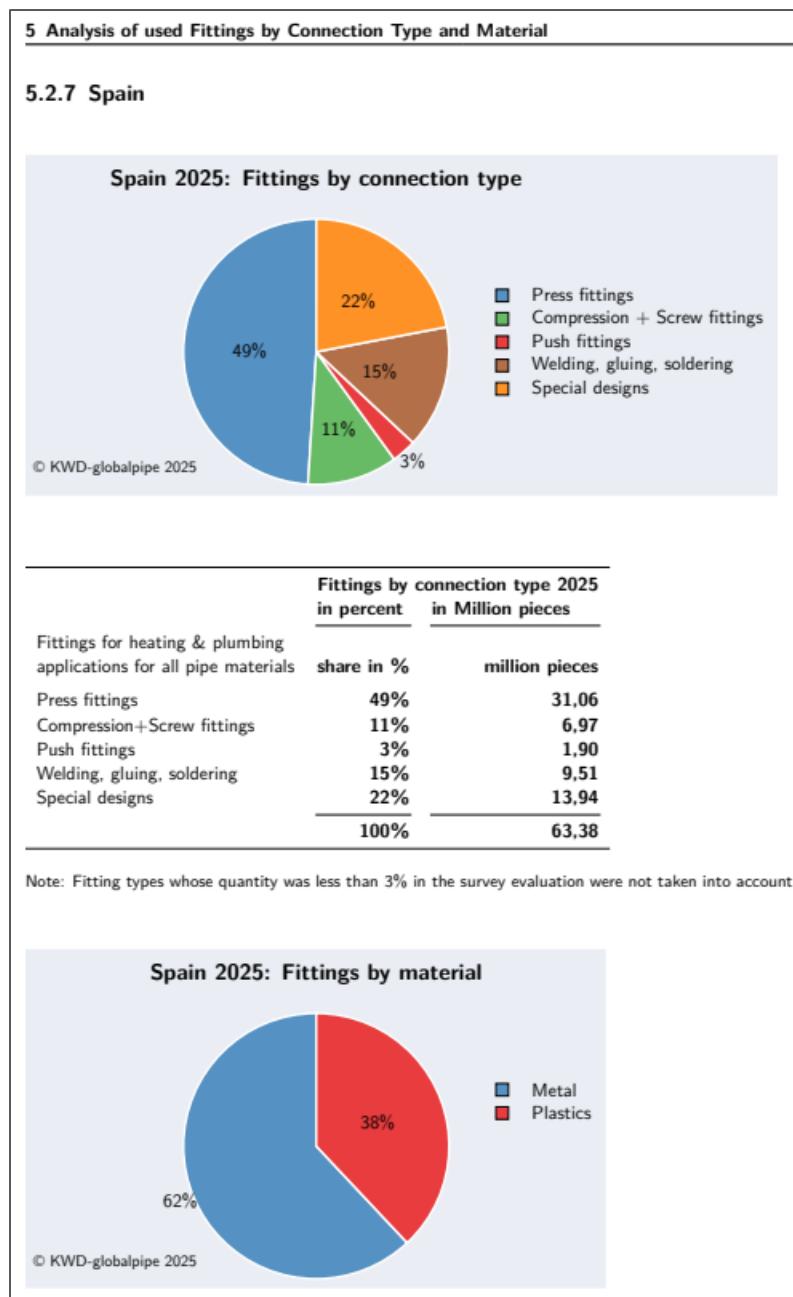
- The data for analysis of the types of fittings were collected and analyzed as a percentage in an anonymous survey.
- We only give whole numbers in the evaluation. For this purpose, the calculated results were rounded up or down.
- The quantity of fittings by connection type has been calculated based on the collected percentage and the consumption of fitting.
- The analysis refers to all fittings used in heating & plumbing applications for all pipe materials.
- Fitting types whose quantity was less than 3% in the survey evaluation were not taken into account.

## The Analysis by connection type and by material (metal or plastic) is available for:

Austria, Belgium and Netherlands, Germany, Great Britain, Italy, Spain and Poland.  
The data requested was for the year 2025.

The quantity of fittings by connection type has been calculated based on the collected percentage and the consumption of fitting (see chapter 6).

At this point, we would like to show the evaluation for Spain as an example. The principle of the evaluation is the same for all countries listed.



## Chapter 6 Consumption of Fittings by Pipe Material Europe 2023 - 2027

- 6.1 Preliminary remarks
- 6.2 Conversion factors
- 6.3 Consumption of fittings in Europe 2023 - 2027

**This chapter is the heart of the study.** It shows the consumption volumes of fittings in million pieces by pipe material on 4 pages per country:

- Floor heating (surface heating)
- Radiator connection
- Sanitary installation
- Total (Heating & Plumbing Pipes)

page sample

6 Consumption of Fittings by Pipe Material										
Fittings for	2023		+/- Year		2025		+/- Year		2027	
	2023	2024	Previous	2025	2026	Previous	2027	Previous	2027	Previous
metal pipes <sup>1</sup>	0.01	0.01	0.00 %	0	-100.00 %	0	- %	0	- %	
PP-R pipes	0	0	- %	0	- %	0	- %	0	- %	
flexible pipes <sup>2</sup>	0.47	0.43	-8.51 %	0.41	-4.65 %	0.39	-4.88 %	0.4	2.56 %	
Alu-Multilayer pipes <sup>3</sup>	0.08	0.08	0.00 %	0.07	-12.50 %	0.07	0.00 %	0.07	0.00 %	
<b>Total</b>	<b>0.56</b>	<b>0.52</b>	<b>-7.14 %</b>	<b>0.48</b>	<b>-7.69 %</b>	<b>0.46</b>	<b>-4.17 %</b>	<b>0.47</b>	<b>2.17 %</b>	

Fittings in million pieces  
<sup>1</sup>Carbon steel/steel, copper + stainless steel  
<sup>2</sup>PEX, PE-RT + PB pipes  
<sup>3</sup>PEX or PE-RT/Al/...

**Floor Heating / Surface Heating & Cooling - Austria**

**Austria: Fittings for Floor / Surface Heating & Cooling**

Year	metal pipes	ppr pipes	flexible pipes	alml pipes
2023	0.01	0.00	0.48	0.08
2024	0.01	0.00	0.43	0.08
2025	0.00	0.00	0.41	0.07
2026	0.00	0.00	0.39	0.07
2027	0.00	0.00	0.40	0.07

**Available for  
19 European  
countries:**

- Austria,
- Belgium,
- Switzerland,
- Czech Republic,
- Germany,
- Denmark,
- Spain,
- Finland,
- France,
- Great Britain,
- Hungary,
- Ireland,
- Italy,
- Netherlands,
- Norway,
- Poland,
- Portugal,
- Slovakia,
- Sweden und
- Europe.

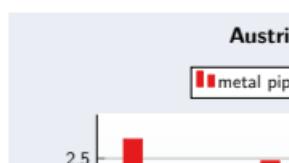
## Radiator Connection - Austria

Fittings for	2023	2024	+/-		2025	Previous	+/-		2026	Previous	+/-		2027	Previous
			Year	Year			Year	Year			Year	Year		
metal pipes <sup>1</sup>	2,71	2,47	-8,86 %		2,32	-6,07 %	2,19	-5,60 %	2,19	0,00 %				
PP-R pipes	0	0			0		0		0					
flexible pipes <sup>2</sup>	0,96	0,87	-9,											
Alu-Multilayer pipes <sup>3</sup>	2,42	2,22	-8,											
<b>Total</b>	<b>6,09</b>	<b>5,56</b>	<b>-8,7</b>											

Fittings in million pieces

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

## Radiator Connection - Austria



## Sanitary / Hot &amp; Cold Water Systems - Austria

Fittings for	2023	2024	+/-		2025	Previous	+/-		2026	Previous	+/-		2027	Previous
			Year	Year			Year	Year			Year	Year		
metal pipes <sup>1</sup>	5.49	5.14	-6.38 %		4.88	-5.06 %	4.68	-4.10 %	4.63	-1.07 %				
PP-R pipes	0	0	- %		0	- %	0	- %	0	- %				
flexible pipes <sup>2</sup>	2.54	2.38	-6.30 %		2.24	-5.88 %	2.18	-2.68 %	2.15	-1.38 %				
Alu-Multilayer pipes <sup>3</sup>	8.15	7.65	-6.13 %		7.23	-5.49 %	6.97	-3.60 %	6.91	-0.86 %				
<b>Total</b>	<b>16.18</b>	<b>15.17</b>	<b>-6.24 %</b>		<b>14.35</b>	<b>-5.41 %</b>	<b>13.83</b>	<b>-3.62 %</b>	<b>13.69</b>	<b>-1.01 %</b>				

Fittings in million pieces

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

## Heating &amp; Plumbing Pipes - Austria

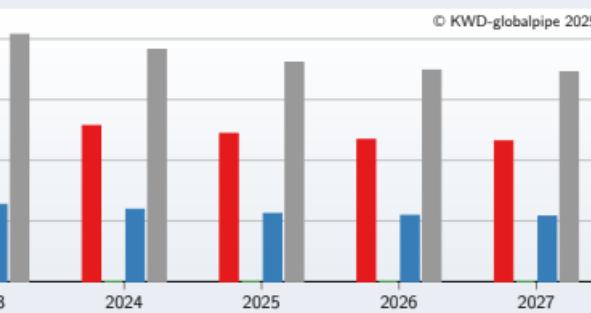
Fittings for	2023	2024	+/-		2025	Previous	+/-		2026	Previous	+/-		2027	Previous
			Year	Year			Year	Year			Year	Year		
metal pipes <sup>1</sup>	8.21	7.62	-7.19 %											
PP-R pipes	0.00	0.00	- %											
flexible pipes <sup>2</sup>	3.97	3.68	-7.30 %											
Alu-Multilayer pipes <sup>3</sup>	10.65	9.95	-6.57 %											
<b>Total</b>	<b>22.83</b>	<b>21.25</b>	<b>-6.92 %</b>		<b>20.83</b>	<b>19.83</b>	<b>-5.00 %</b>		<b>19.23</b>	<b>18.23</b>	<b>-5.40 %</b>		<b>17.63</b>	<b>16.63</b>

Fittings in million pieces

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

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

Legend: metal pipes (red), ppr pipes (green), flexible pipes (blue), alml pipes (grey)

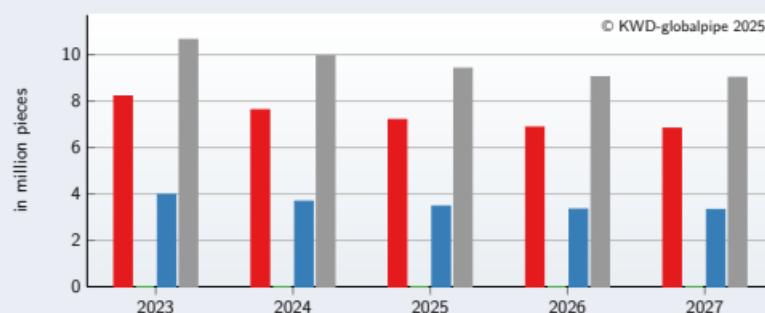


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## Heating &amp; Plumbing Pipes - Austria

## Austria: Fittings for Heating &amp; Plumbing Pipes

Legend: metal pipes (red), ppr pipes (green), flexible pipes (blue), alml pipes (grey)



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## Chapter 7 Company profiles alphabetical

This chapter contents company profiles to European producers and distributors of fittings.

In addition to the address and a brief description of the company, keywords such as fitting or pipe manufacturer or distributor are used to describe the company.

7 Company profiles alphabetical	
<b>7 Company profiles alphabetical</b>	<i>page sample</i>
<b>A.T.P. - Advanced Plastic Technologies S.r.l.</b> Avanzate Tecnologie Plastiche ITALY - Barletta (BT) <a href="http://www.atpsrl.net">www.atpsrl.net</a>	<p><b>Fittings, Manufacturer of:</b></p> <ul style="list-style-type: none"> <li>Welding, gluing or electrofusions fittings</li> </ul> <p><b>Pipes, Manufacturer of:</b></p> <ul style="list-style-type: none"> <li>PE</li> <li>Pipes / PP-R composite fibre</li> <li>PP-R</li> </ul> <p><b>Application / Others:</b></p> <ul style="list-style-type: none"> <li>Irrigation</li> </ul>
<b>Acome</b> FRANCE - Paris <a href="http://www.acome.fr">www.acome.fr</a>	<p><b>Fittings, Manufacturer of:</b></p> <ul style="list-style-type: none"> <li>Press fittings, radial</li> </ul> <p><b>Pipes, Manufacturer of:</b></p> <ul style="list-style-type: none"> <li>PE-Xc</li> </ul> <p><b>Application / Others:</b></p> <ul style="list-style-type: none"> <li>Surface heating and cooling, electrical</li> <li>Surface heating and cooling, warm water</li> </ul>
<b>AIS - Advanced Installation Solutions</b> SPAIN - Alcorcón, Madrid <a href="http://www.ais-concept.com">www.ais-concept.com</a>	<p><b>Fittings, Manufacturer of:</b></p> <ul style="list-style-type: none"> <li>Press fittings, radial</li> </ul> <p><b>Application / Others:</b></p> <ul style="list-style-type: none"> <li>OEM fitting manufacturer</li> </ul>