



TECHNICAL DATA SHEET

FRABOPRESS BIG-SIZE

COPPER AND BRONZE PRESS FITTINGS

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Copper and Bronze press fittings








DESCRIPTION

FRABOPRESS BIG-SIZE is a series of large diameter (> 76 mm) high purity copper (Cu-DHP) and high purity bronze press fittings, with high performance EPDM sealing gasket. Suitable for pressing with “M” type jaws.

APPLICATIONS

The **FRABOPRESS BIG-SIZE** system can be used for the following applications and temperatures, as indicated in table A.

TABLE A

APPLICATION		P _{max} (bar)	T _{max} °C
	Sanitary water	10	0°/+110°C
	Heating	10	0°/+110°C
	Drinking water	10	0°/+110°C
	Cooling *	10	-10°/+110°C
	Oil-free compressed air (residual oil <5 mg/m ³)	10	30°C

*any additives contained in the cooling media must be compatible with the EPDM O-rings

For uses other than those mentioned thus far, please request the maximum operating conditions from the FRABO technical support office

AVAILABLE DIMENSIONS

The series is available in the dimensions 76,1, 88,9 and 108 mm. For the list of available shapes refer to the catalogue.

THREADED CONNECTIONS

Mixed connection fittings to other systems are made using bronze threaded parts with press ends. The threads comply with UNI EN 10226-1 standard.

SUITABLE PIPES

The reference standard for the copper pipes suitable for sanitary applications is EN 1057.

The **FRABOPRESS BIG-SIZE** fittings are suitable for installation with copper pipes that comply with the above standard, according to the prescribed minimum wall thickness indicated in table B below.

TABLE B

Diameter (mm)	76,1	88,9	108
Minimum thickness (mm)	2,0	2,0	2,0

Particular attention must be paid to the choice of the pipe and the quality of the internal surface for systems that carry drinking water.

PRESSING TOOLS

The pressing profile chosen by Frabo for **FRABOPRESS BIG-SIZE** is, unlike the lower diameters, "M" shaped.

Some of the most widely-spread on the market machines and tools can be safely used for installing the series.

For a full list of compatible tools, please see the documentation available on the website: www.frabo.com.

CORROSION

The corrosion that can affect copper systems and its alloys is described in standards **UNI EN 125021** and **UNI EN 12502-2** to which it is necessary to refer for detailed information on the phenomenon and for the correct choice of materials during design and installation.

It is also necessary to refer to the product's technical manual.

The known types of corrosion that mainly affect copper alloys include uniform internal corrosion and bimetallic corrosion.

INTERNAL CORROSION

The components in the **FRABOPRESS** system are made of phosphorus deoxidised copper resistant to drinking waters with the characteristics that fall within the physical-chemical limits established by legislation in force.

In water containing oxygen, the action of copper fitting and pipe corrosion mainly depends on internal surface quality.

Due to the anti-corrosion treatment **FRABOPRESS BIG-SIZE** press fittings guarantee effective protection against deep corrosion.

With the **FRABOPRESS BIG-SIZE** fittings that use the press technique it can also be assured that in drinking water installations risks of deep corrosion caused by the welding stage are avoided. In fact, the action of temperatures over 400 °C, which are inevitable in strong brazing, can lead to a clear increase in the risk of corrosion, in the presence of unfavourable conditions.

With the installation of press fittings, any negative effect due to heat is avoided. In cases of water treatment systems, **FRABOPRESS BIG-SIZE** fittings are compatible with all the domestic-use treatment processes (softeners) and are also resistant to corrosion in the presence of decarbonated, demineralized, or distilled water.

BIMETALLIC CORROSION

The installation of different materials next to each other is a common practice envisaged by the above legislation. For copper and its alloys, there are no particular bimetallic corrosion problems in the event of installation with stainless steel parts.

However, the same cannot be said for mixed installation with zinc-plated steel products. In this case, it is necessary at least to ensure that the copper section of the system is connected downstream from the steel part with respect to the water flow.

On these occasions, it is also important to consider that the speed of the corrosion and therefore its negative effect on the system is a function of the mass and surface area ratio between the noble and the less noble material. Hence, whereas when a small part made of copper or copper alloys is inserted in a zinc-plated steel system, it has no effect, the opposite cannot be said to be true.

The designer and/or installer is responsible for choosing and applying the corrosion resistant protection and for evaluating the most effective protection methods in relation to the environment where the piping will be located.



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