



TECHNICAL DATA SHEET

FRABOPRESS H2O SECURFRABO

COPPER AND BRONZE PRESS FITTING

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Copper and Bronze press fitting



DESCRIPTION

FRABOPRESS H2O SECURFRABO is a series of press fittings made of high purity copper CU-DHP (material CW024A according to EN 1412) and high purity cast bronze with **EPDM** sealing gasket equipped with the SECURFRABO system for detecting leaks on unpressed fittings.

APPLICATIONS

The **FRABOPRESS H2O SECURFRABO** system can be used for the following applications and temperatures, as indicated in table A.

TABLE A

APPLICATION		Pmax (bar)	Tmax °C
	Sanitary water / Heating	16	0°/+110°C
	Drinking water	16	0°/+110°C
	Cooling *	16	-10°/+110°C
	Oil-free compressed air (residual oil <5 mg/m ³)	16	30°C
	Oil-free compressed air (residual oil <5 mg/m ³) (with O-ring FKM) **	16	30°C
	Oils (with FKM O-ring)**	16	30°C
	Fire prevention	16	30°
	Solar systems (with FKM O-ring) ***	6	160°C
	Steam conv. systems (with FKM O-ring) ***	1	120°C
	Sprinkler		
	Naval plants		

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

**for this application RED FKM O-RINGS must be used

***for this application GREEN FKM O-RINGS must be used

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

SECURFRABO SYSTEM

FRABOPRESS H2O SECURFRABO fittings are equipped with the new SECURFRABO safety system, which allows any unpressed fittings to be detected.

The SECURFRABO system is made using an elastomeric gasket whose patented shape allows liquid to leak out if the junction has not been pressed.

Thanks to SECURFRABO when the system is tested, the point that has not been pressed can be quickly identified and action can be taken so as to reduce the possibility of mistakes or oversights that can reduce the system's effectiveness over time.

AVAILABLE DIMENSIONS

The series is available in the dimensions 12, 15, 18, 22, 28, 35, 42 and 54 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 legislation.

SUITABLE PIPES

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

The FRABOPRESS H2O SECURFRABO fittings are suitable for installation with copper pipes that comply

TABLE B

Diameter (mm)	12	15	18	22	28	35	42	54
Minimum thickness (mm)	1,0	1,0	1,0	1,0	1,0	1,0	1,2	1,5
State	Fired, Semi-finished, Raw					Raw		

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 FRABOPRESS H2O SECURFRABO system can be installed with the original system tools or using tools that have been checked and declared compatible by FRABO.

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

Internal corrosion which can affect a copper system is connected with the characteristics of the protective oxide film that forms as soon as the material comes into contact with water.

The more this film hinders the electrochemical interaction between the water and the material, the longer the copper lifetime will be. Copper and its alloys generally have excellent resistance to corrosion in normal conditions of use, but given the numerous factors influencing corrosion, it is only possible to speak in quality terms, leaving it up to the designer to make an objective detailed assessment of the factors themselves.

The components in the **FRABOPRESS H2O SECURFRABO** system are made of phosphorus deoxidised copper resistant to drinking waters with the characteristics that fall within the physicalchemical limits established by legislation in force. In waters containing oxygen, the action of copper fitting and pipe corrosion mainly depends on internal surface quality. Due to the anti-corrosion treatment **FRABOPRESS H2O SECURFRABO** press fittings guarantee effective protection against deep corrosion.

Furthermore, in cases of water treatment systems, **FRABOPRESS H2O SECURFRABO** fittings are compatible with all the domestic-use treatment processes (softeners) and are also resistant to corrosion in the presence of decarbonated, demineralised, 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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