



TECHNICAL DATA SHEET

**FRABOPRESS C-STEEL SECURFRABO **

GALVANIZED CARBON STEEL PRESS FITTINGS

# FRABOPRESS C-STEEL SECURFRABO M

Galvanized carbon steel press fittings



## DESCRIPTION

**FRABOPRESS C-STEEL SECURFRABO M** is a series of carbon-steel press fittings with corrosion resistant zinc-plating treatment and high-performance **EPDM** O-Ring.






These fittings comply with the requirements of **UNI 11179** standard and feature a red mark indicating they are not suitable for use with drinking water.

**FRABOPRESS C-STEEL SECURFRABO M** fittings are equipped with the **SECURFRABO** safety system, which allows any un-pressed fittings to be detected. Suitable for pressing with "M" type jaws.

## APPLICATIONS

The **FRABOPRESS C-STEEL SECURFRABO M** system can be used for the following applications and temperatures, as indicated in table A

TABLE A

APPLICATION		Pmax (bar)	Tmax °C
	Heating (closed circuit)	16	0° / +110°C
	Cooling (closed circuit)*	16	-10° / +110°C
	Sprinkler **	16	30°C
	Oil free compressed air (residual oil <5 mg/m <sup>3</sup> )	16	30°C
	Compressed air (residual oil >5 mg/m <sup>3</sup> ) (with FKM O-ring) ***	16	30°C

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

\*\* Sprinkler fire-fighting systems. Please contact our technical department for further information regarding fire protection applications;

\*\*\* for this application GREEN FKM O-RINGS must be used, which can be subjected to temporary temperature peaks of 200 °C

**NOT FOR DRINKING WATER:** this means that the tubes used with carbon-steel fittings are not suitable for household water applications.



## SECURFRABO

**FRABOPRESS C-STEEL SECURFRABO M** fittings are equipped with the new **SECURFRABO** safety system, which allows any un-pressed 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 fitting end not 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.

## THREADS

**FRABOPRESS C-STEEL SECURFRABO M** system threaded fittings are made in compliance with EN10226-1 standard.

## FRABOPRESS C-STEEL PIPES

**FRABOPRESS C-STEEL** pipes with thin walls and longitudinal welding are made of carbon steel according to UNI EN 10305-3 standard.

Hot zinc-plated and laminated tape is used for production (called "Sendzimir"). The pipe is therefore zinc-plated both externally and internally with a uniform layer of zinc at least 10 µm thick in the welding area, and about 20 µm in the others. The welding is laminated externally so as to guarantee a perfect sealing surface.

**FRABOPRESS C-STEEL** pipes are available up to diameter 54 mm both in a bare version and in a version with white polypropylene (PP) coating, 1 mm thick. All the versions of **FRABOPRESS C-STEEL** pipes are supplied in 6 metre rods

## OUTSIDE AND INSIDE GALVANISED UNALLOYED STEEL PIPES - TECHNICAL FEATURES

Material	Non alloyed carbon steel (material no. 1.0020) in compliance with EN 10305-3 standard
External diameter tolerance	EN 10305-3
Supply status	6 m ± 25 mm long rods packaged in bunches protected by PET film
Standard Marking	FRABOPRESS C-STEEL [Dimensions] EN10305-3 [Traceability code]

## OUTSIDE GALVANISED UNALLOYED STEEL PIPES - TECHNICAL FEATURES

Material	Unalloyed Steel E260 (material 1.0220)
External diameter tolerance	EN 10305-3
Anti-corrosion protection	External galvanising 8-20 µm, passivation and transparent protection layer
Supply status	6 m ± 25 mm long rods packaged in bunches protected by PET film. For the diameters 15, 18, 22 and 28 cm 2 meter rods are available.
Standard Marking	FRABOPRESS C-STEEL [Dimensions] EN10305-3 [Traceability code]

## GALVANISED (ONLY OUTSIDE AND OUTSIDE/INSIDE) UNALLOYED STEEL PIPES - DIMENSIONS AND MASSES

TABLE B

Rated diameter	Diameter x thickness [mm]	Internal diameter [mm]	Mass [ kg / m ]	Water content [ l / m ]
DN 10	12 x1,2	9,6	0,318	0,072
DN 12	15 x1,2	12,6	0,406	0,125
DN 15	18 x1,2	15,6	0,494	0,192
DN 20	22 x1,5	19	0,754	0,284
DN 25	28 x1,5	25	0,974	0,491
DN 32	35 x1,5	32	1,231	0,804
DN 40	42 x1,5	39	1,489	1,195
DN 50	54x1,5	51	1,930	2,043
DN 65	76,1 x 2,0	72,1	3,632	4,080
DN 80	88,9 x 2,0	84,9	4,259	5,660
DN 100	108 x 2,0	104,0	5,195	8,490

## CARBON STEEL PIPE WITH POLYPROPYLENE (PP) COATING

**FRABOPRESS C-STEEL** coated pipes are further protected from external corrosion by a polypropylene (PP) material with a smooth external surface and good breaking and tensile strength and resistance to impact.

Before assembly, using a specific pipe peeling tool, the PP coating must absolutely be removed for the whole insertion depth, so that the connection with the press fitting is secure. When removing the layer of polypropylene, utmost care must be taken to make sure that the underlying surface is not cut, which could potentially damage the junction seal.

## COATED PIPES – TECHNICAL FEATURES

Material	Non alloyed carbon steel (material no. 1.0020) in compliance with EN 10305-3 standard
External diameter tolerance	EN 10305-3
Supply status	6 m ± 25 mm long rods packaged in bunches protected by PET film
Standard marking	FRABOPRESS C-STEEL [Dimensions] EN10305-3 [Traceability code]

## COATED PIPES – DIMENSIONS AND MASSES

For the specifications of coated pipes refer to table B. The thickness of the coating layer is equal to 1 mm.

## REACTION TO FIRE CLASSIFICATION

**FRABOPRESS C-STEEL** pipes with PP coating are classified, according to DIN 4102-1 standard, in reaction to fire class B2, dripping non-flammable material

## PRESSING TOOLS

The **FRABOPRESS C-STEEL SECURFRABO M** 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](http://www.frabo.com).

## CORROSION

### INTERNAL CORROSION

In closed-circuit systems there is not usually any exchange of oxygen, therefore there is no risk of corrosion. Small amounts of oxygen can penetrate into the system during filling or topping up, however this has almost no effect on the system since the amount of oxygen is practically negligible with respect to the whole internal metal surface area of the pipe.

### EXTERNAL CORROSION

**FRABOPRESS C-STEEL** pipes/fittings are protected against external corrosion by zinc plating. However, if the humidity acts over a prolonged period on the system components, external corrosion may arise.

The PP coating offers effective additional protection against external corrosion for **FRABOPRESS C-STEEL** pipes, whereas the fittings can be protected with some simple steps, such as:

- Coatings with closed-cell expanded elastomer insulating materials
- Corrosion resistant bandages
- Painting

**NOTICE:** Felt coatings are not allowed as it would absorb and withhold the humidity, hence causing more corrosion.

**NOTICE:** Do not lay in corrosive environments (e.g. floors in direct contact with the soil).

**Responsibility for the correct choice of corrosion-protection solutions belongs to the designer or to the installer and must be correctly evaluated according the installation requirements and features.**



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