

"GeminiFAST" SELF-FLANGING FITTINGS

DESCRIPTION

"GeminiFAST" self-flanging (no flanging tools required) brass fitting for "GEMINI" by PSP CSST pliable corrugated stainless steel tubes for thermal solar plants suitable also for drinking water.



The "GeminiFAST" self-flanging fittings are suitable only for the corrugated tubes of the "GEMINI" CSST tubing system and are NOT suitable for the corrugated tubes of the "AQUARIUS", "PEGASUS" and "GEMINIplus" CSST tubing systems <sup>(1)</sup>.

APPLICATION FIELDS

Thermal solar plants with water or water/glycol mixtures as heat carrier and plants for the supply of hot and cold fluids also for drinking water <sup>(2) (3)</sup>:

- nominal pressure (20°C): PN 10;
- maximum working pressure at 150°C: 6 bar (0,6 MPa) <sup>(4)</sup>;
- maximum working temperature: 250°C <sup>(4)</sup>;
- minimum working temperature: -50°C <sup>(4)</sup>.



The thermal solar plants must be installed in accordance with all the existing municipal, regional and national regulations and the instructions by PSP.

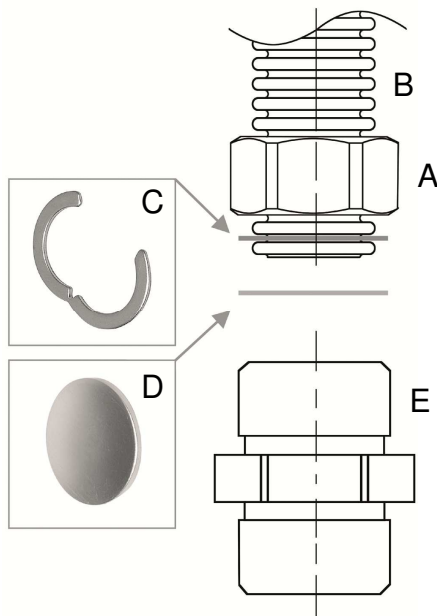
METHOD OF USE

① Insert the nut A on the tube B.

② Insert the ring C in the first corrugation of the tube B.

③ Insert the metallic disk D in the nut A.

④ Screw the nut A onto the nipple E until it stops.



The use of fittings other than those specifically supplied by PSP for the "GEMINI" CSST tubing system could not guarantee durable tightness: contact PSP to verify the suitability of fittings from other manufacturers.

THREADS

- G parallel external male conform to EN ISO 228 (class B);
- G parallel internal female conform to EN ISO 228.

MATERIALS

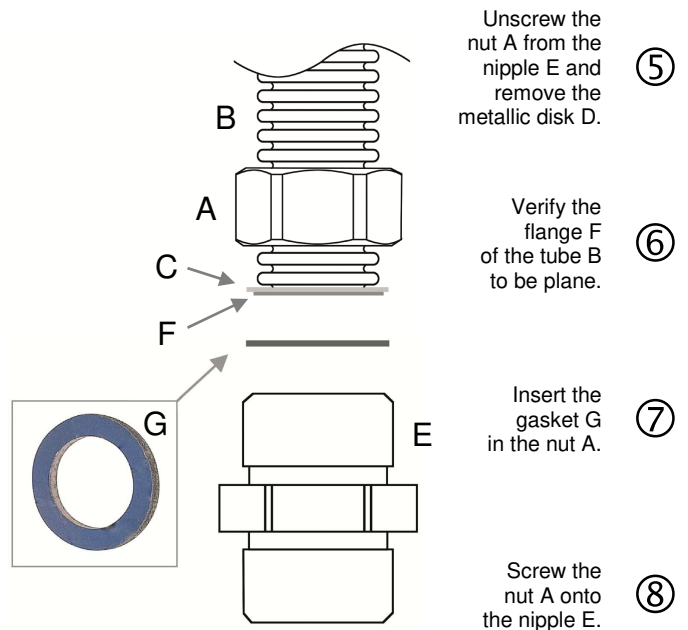
- Nuts and nipples: brass conform to EN 12164 / EN 12165 type CW614N or CW617N.
- Sealing elements: plane gaskets in synthetic fiber.

CERTIFICATIONS

The quality management system of PSP S.r.l. is certified as conform to EN ISO 9001 : 2015 (Bureau Veritas certificate nr. IT308879).

TYPE OF TIGHTNESS

The tightness of the junction is obtained through the compression of the high temperature resistant plane gasket between the plane surface of the fitting and the flange of the corrugated tube.



1) For solar thermal plants PSP offers two different systems of CSST pliable corrugated tubing, both functional and suitable:

- "GEMINI": CSST tubing system based on pliable corrugated pipes "narrow pitch" type in 1.4404 (AISI 316L) stainless steel with 0,18 / 0,20 mm thickness and nominal pressure PN 10 (operating pressure 6 bar at 150°C): this type of tubes must be joined using the "GeminiFAST" self-flanging fittings or "GeminiQUICK" metal to metal seal fittings;
- "GEMINIplus": CSST tubing system based on pliable corrugated tubes "wide pitch" type in 1.4301 (AISI 304) stainless steel with 0,3 mm thickness and nominal pressure PN 16 (operating pressure 10 bar at 150°C): this type of tubes must be joined using fittings of the flanged system or through fittings with seal on O-rings.

2) The CSST pliable corrugated tubes are not suitable for the connection of moving appliances and/or parts in relative motion each other: for these purposes use only suitable flexible hoses.

3) For fluids different from water or water/glycol mixtures, verify the chemical compatibility of all the components of the tubing system (tubes, fittings, sealing elements and so on).

4) For the maximum working temperature and pressure take into consideration all the components of the tubing system (tubes, fittings, sealing elements and so on).

"GeminiQUICK" METAL TO METAL SEAL FITTINGS

**DESCRIPTION**

"GeminiQUICK" metal to metal seal (no gaskets required) brass fitting for "GEMINI" by PSP CSST pliable corrugated stainless steel tubes for thermal solar plants suitable also for drinking water.



The "GeminiQUICK" self-flanging fittings are suitable only for the corrugated tubes of the "GEMINI" CSST tubing system and are NOT suitable for the corrugated tubes of the "AQUARIUS", "PEGASUS" and "GEMINIplus" CSST tubing systems<sup>(5)</sup>.

**APPLICATION FIELDS**

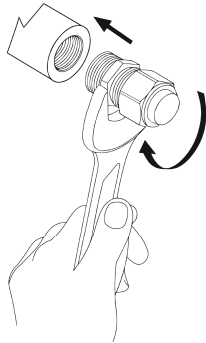
Thermal solar plants with water or water/glycol mixtures as heat carrier and plants for the supply of hot and cold fluids also for drinking water<sup>(6)</sup> (7):

- nominal pressure (20°C): PN 10;
- maximum working pressure at 150°C: 6 bar (0,6 MPa)<sup>(8)</sup>;
- maximum working temperature: 250°C<sup>(8)</sup>;
- minimum working temperature: -50°C<sup>(8)</sup>.

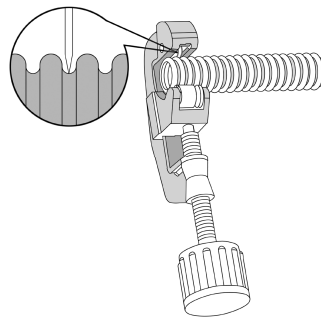


The thermal solar plants must be installed in accordance with all the existing municipal, regional and national regulations and the instructions by PSP.

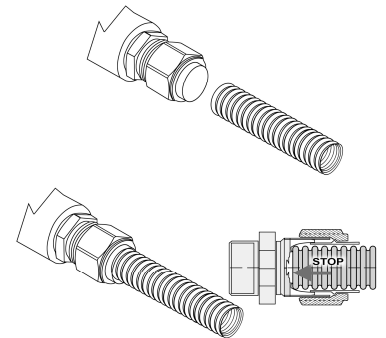
**METHOD OF USE**



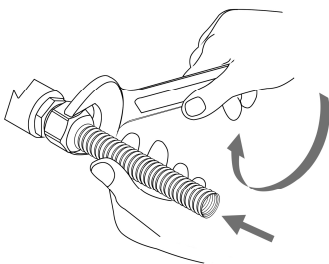
- ① Fix the assembled coupling on the end to be joined with the tube.



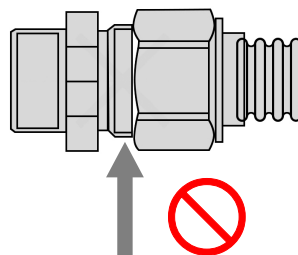
- ② Using a pipecutter, cut the tube in a valley between two corrugations (DO NOT use a hacksaw or similar).



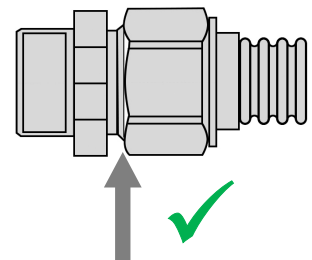
- ③ After verifying the absence of burrs, slip the tube end into the coupling making sure it reaches the bottom of the coupler.



- ④ Tighten nut B at least one turn holding the tube to the bottom of the coupling so as to secure the tube, then tighten the nut B with a spanner as far as possible.



- ⑤ After correct fixing, the thread is no longer visible.



The use of fittings other than those specifically supplied by PSP for the "GEMINI" CSST tubing system could not guarantee durable tightness: contact PSP to verify the suitability of fittings from other manufacturers.

**THREADS**

- G parallel external male conform to EN ISO 228 (class B);
- G parallel internal female conform to EN ISO 228.

**MATERIALS**

- **Nuts and nipples:** brass conform to EN 12164 / EN 12165 type CW614N or CW617N.
- **Sealing bushing:** brass.

**CERTIFICATIONS**

The quality management system of PSP S.r.l. is certified as conform to EN ISO 9001 : 2015 (Bureau Veritas certificate nr. IT308879).

**TYPE OF TIGHTNESS**

The tightness of the junction is obtained through the plastic deformation of a brass bushing without the use of gaskets.

5) For solar thermal plants PSP offers two different systems of CSST pliable corrugated tubing, both functional and suitable:  
 • "GEMINI": CSST tubing system based on pliable corrugated pipes "narrow pitch" type in 1.4404 (AISI 316L) stainless steel with 0,18 / 0,20 mm thickness and nominal pressure PN 10 (operating pressure 6 bar at 150°C): this type of tubes must be joined using the "GeminiFAST" self-flanging fittings or "GeminiQUICK" metal to metal seal fittings;  
 • "GEMINIplus": CSST tubing system based on pliable corrugated tubes "wide pitch" type in 1.4301 (AISI 304) stainless steel with 0,3 mm thickness and nominal pressure PN 16 (operating pressure 10 bar at 150°C): this type of tubes must be joined using fittings of the flanged system or through fittings with seal on O-rings.  
 6) The CSST pliable corrugated tubes are not suitable for the connection of moving appliances and/or parts in relative motion each other: for these purposes use only suitable flexible hoses.  
 7) For fluids different from water or water/glycol mixtures, verify the chemical compatibility of all the components of the tubing system (tubes, fittings, sealing elements and so on).  
 8) For the maximum working temperature and pressure take into consideration all the components of the tubing system (tubes, fittings, sealing elements and so on).