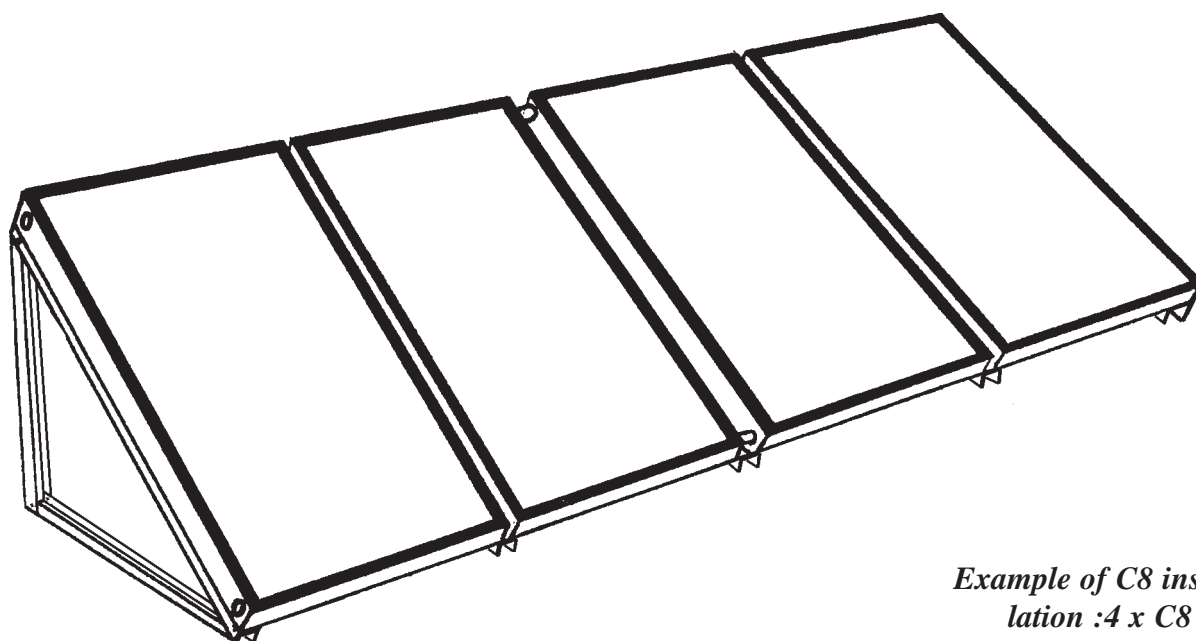


C8 SOLAR COLLECTOR

*C8/8.S- C8/12.S
C8/8S.HI- C8/12S.HI*

INSTALLATION MANUAL

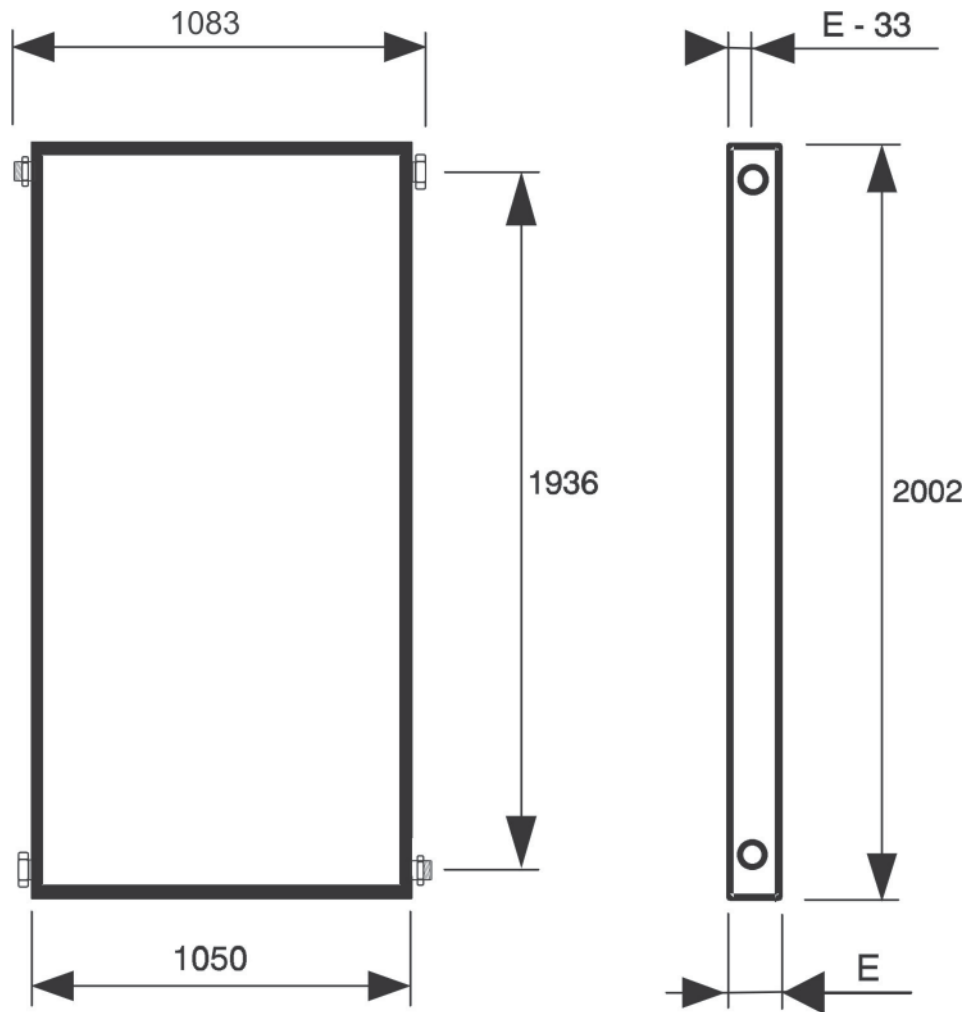


*Example of C8 instal-
lation : 4 x C8
with terrace support*

In order to operate properly your Solar Installation and avoid problems, we strongly recommend installers and users to read carefully this Installation Manual.
Our warranty will only work if the instructions in this Installation Manual as well as the current installation and plumbing regulations have been followed.

Except for special cases, when this Installation Manual talks about " **C8** ", it makes reference to all versions of "C8" available : **C8/8.S** , **C8/12.S** , **C8/8.HI** and **C8/12.HI** .

PRESENTATION



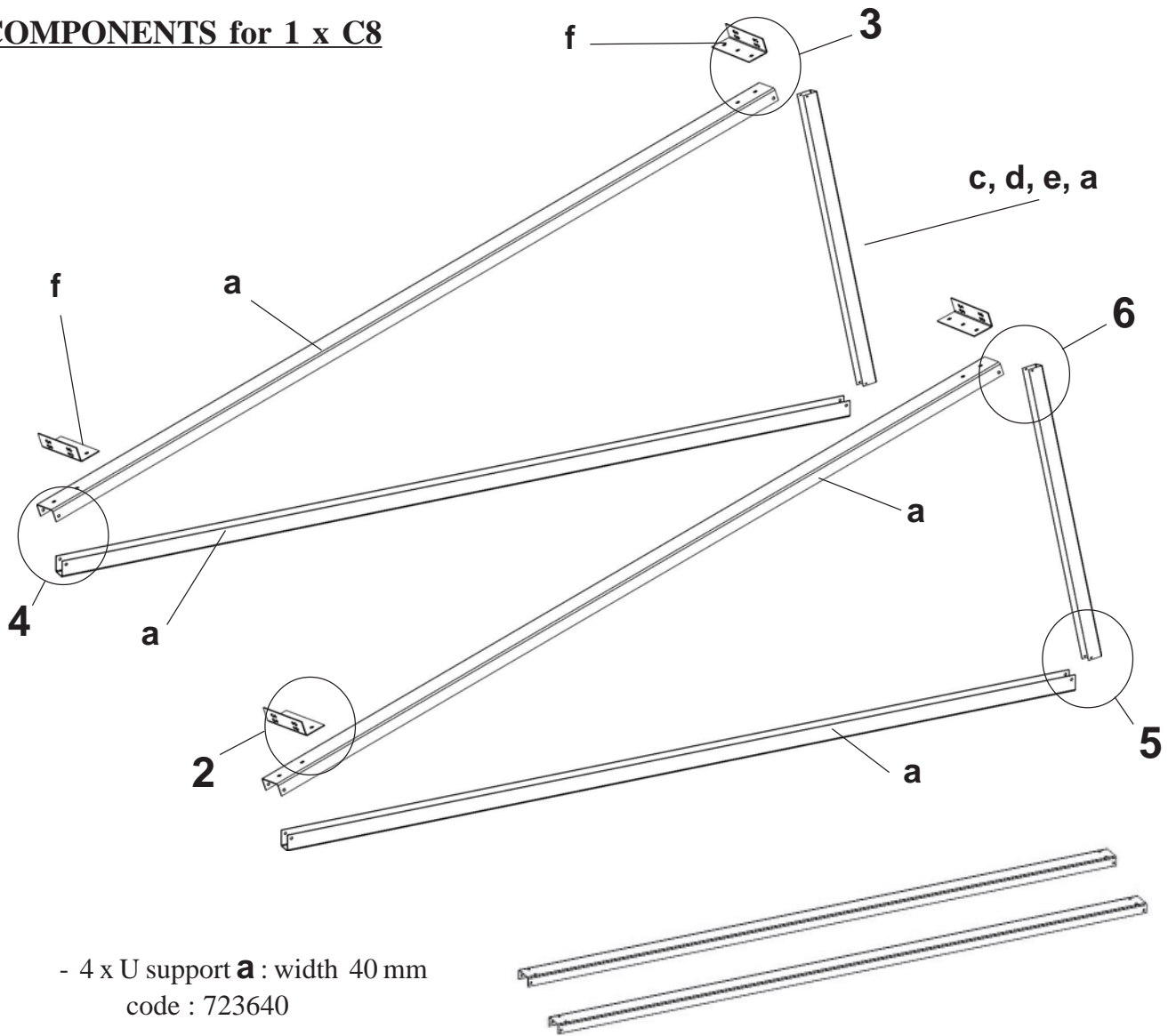
Technical features :

	C8	C8/8.S	C8/12.S	C8/8.HI	C8/12.HI
External dimensions	2002 x 1050				
External area	2.1 m ²				
Aperture area	2 m ²				
Maximum working pressure	7 bars				
Maximum test pressure	12 bars				
Hydraulic connections	4 x fittings 7/8" gas				
Glass cover	4 mm thick tempered glass : 1996 x 1044				
Thickness E	75	75	75	115	115
Weight empty	36 kg	35 kg	36 kg	36 kg	37 kg
Absorber	Alu	Cu	Cu	Cu	Cu
Absorber tube	Cu D 18	Selective Cu D 8	Selective Cu D 12	Selective Cu D 8	Selective Cu D 12
Insulation	P.U 30mm	P.U 30mm	P.U 30mm	P.U 30mm GW 45mm	P.U 30mm GW 45mm
Contents in liquid	3.25 litre	1.3 litre	2.2 litre	1.3 litre	2.2 litre

TERRACE SUPPORT

GROUND FASTENING

COMPONENTS for 1 x C8



- 4 x U support **a** : width 40 mm
code : 723640

- 2 x Rear leg **15°** **c** : width 35 mm x Length. 564 code : 723510
 30° **d** : width 35 mm x Length. 1100 code : 723530
 45° **e** : width 35 mm x Length. 1618 code : 723570
 60° **a** : width 40 mm x Length. 2108 code : 723640

- 1 x Assembly jig **b** :
code : 729490

- 2 x Steel Angle bags code : 477960

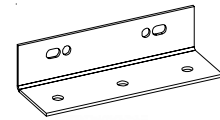
including:

- 2 x steel angles **f** code : 723650

- 2 x screw of 8 code : 474420

- 2 x nut of 8 code : 472080

- 2 x washer of 8 code : 474460



- 2 x Support fastening bags code : 477640

including:

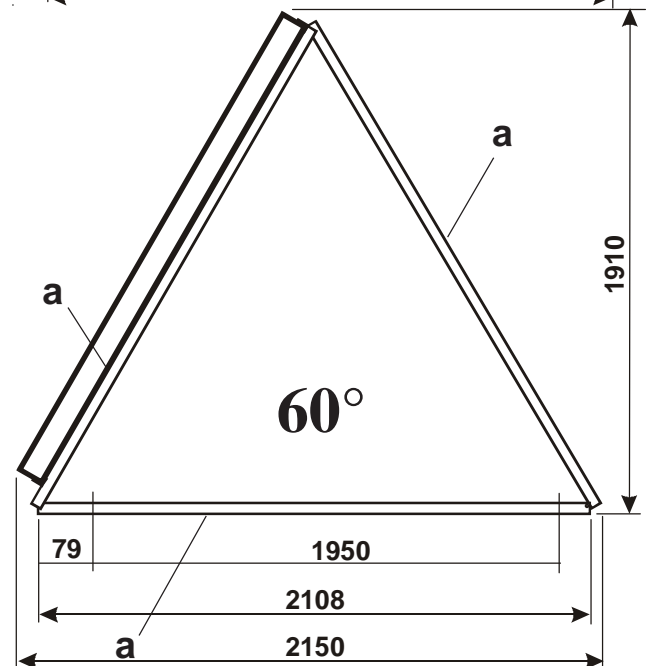
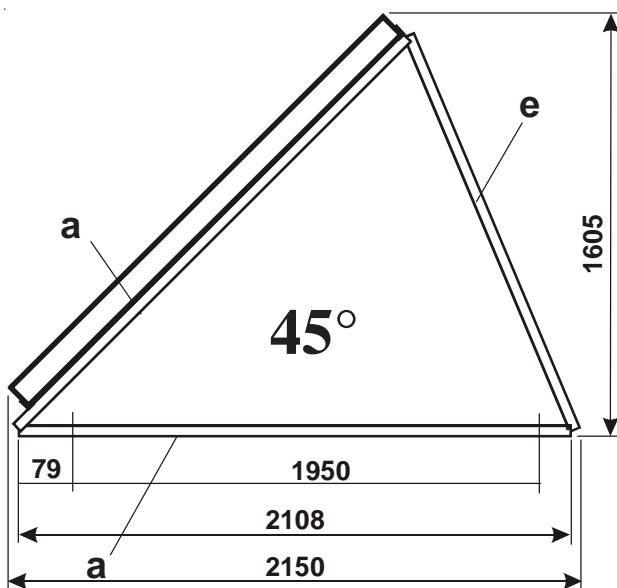
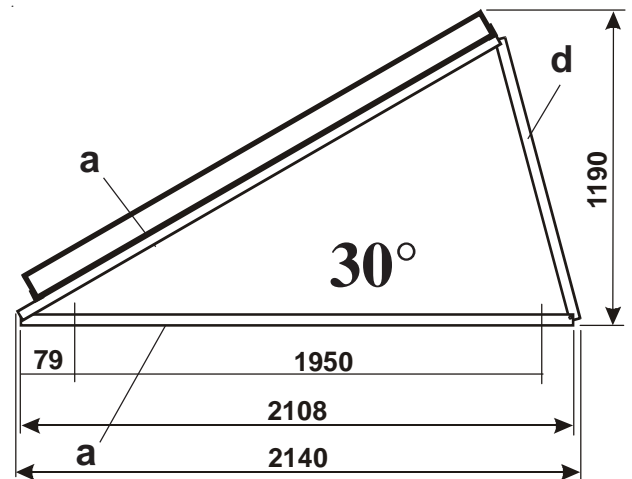
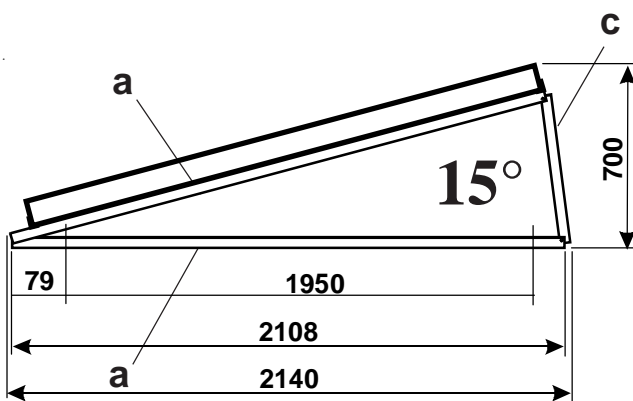
- 8 x screw of 6 code : 475800

- 8 x nut of 6 code : 472060

- 8 x washer of 6 code : 474540



DIMENSIONS



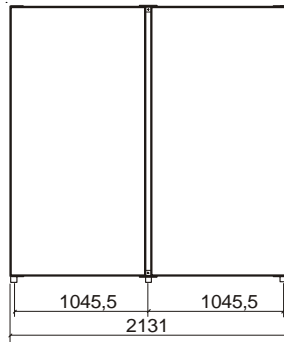
POSITIONING DIMENSIONS :

LAYOUT : Draw the layout for the assembly of the solar collectors and supports with the use of the Engineering Company's drawings. Lay out the lower alignment of the solar collectors normally facing South (in the Northern Hemisphere) or with another orientation according to the Engineering Company's specifications. .

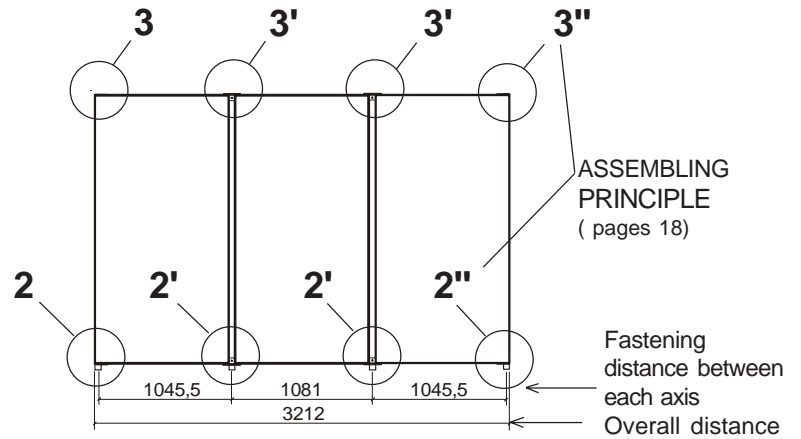
- *The required distance between each axis -*



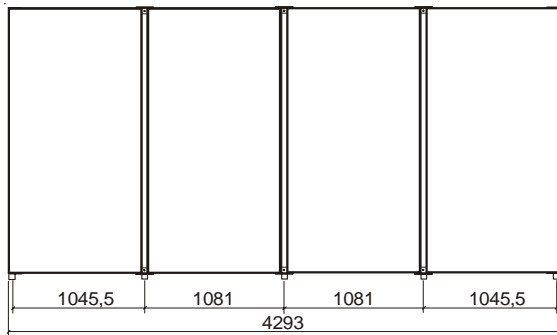
1 x C8 = 2 m²



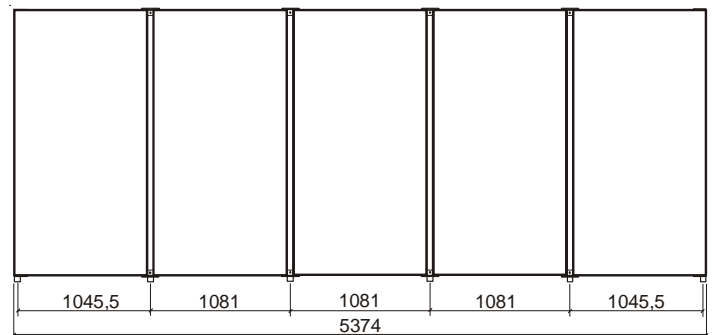
2 x C8 = 4 m²



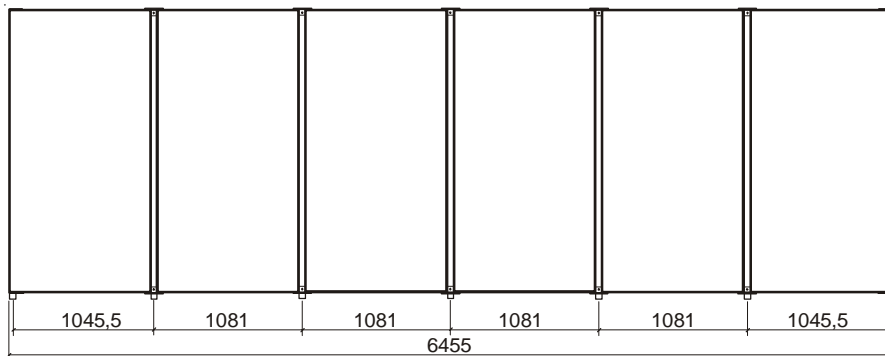
3 x C8 = 6 m²



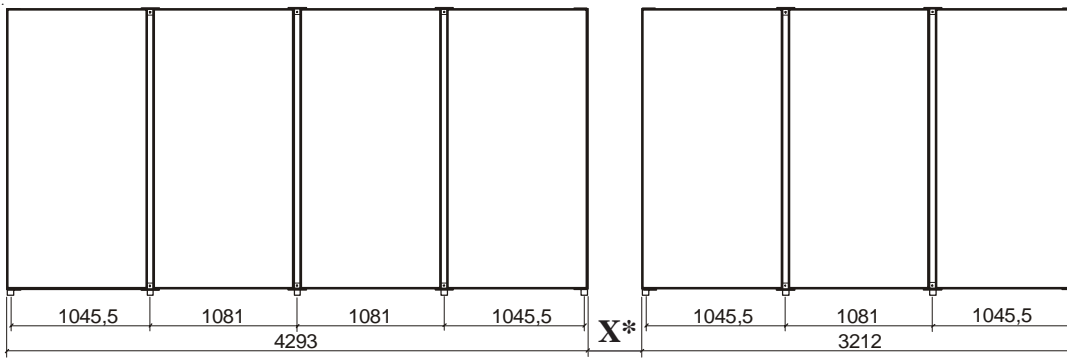
4 x C8 = 8 m²



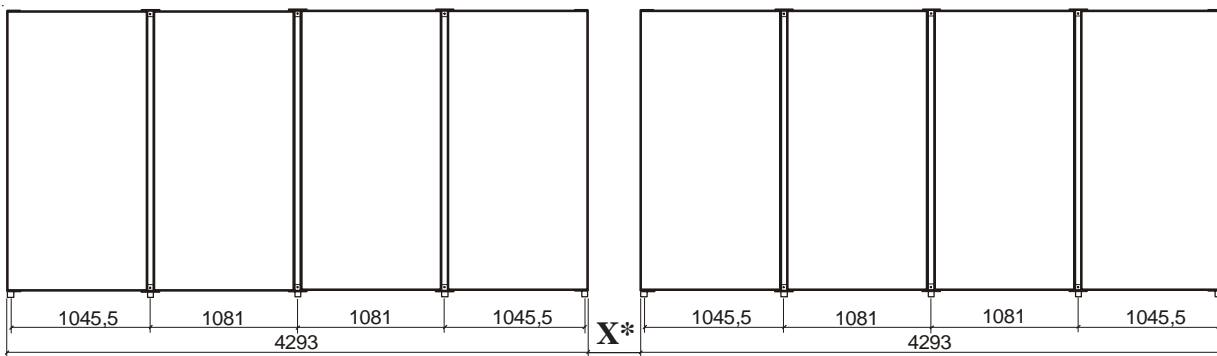
5 x C8 = 10 m²



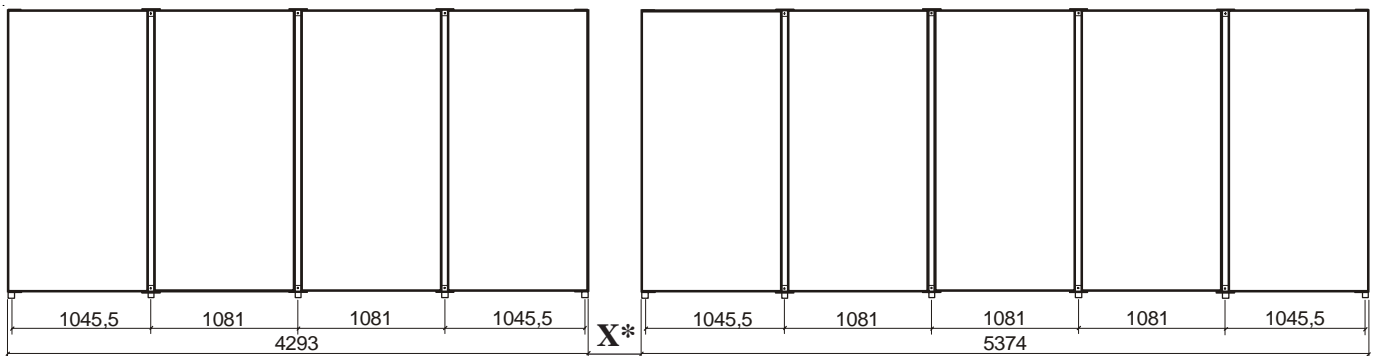
6 x C8 = 12 m²



7 x C8 = 14 m²



8 x C8 = 16 m²

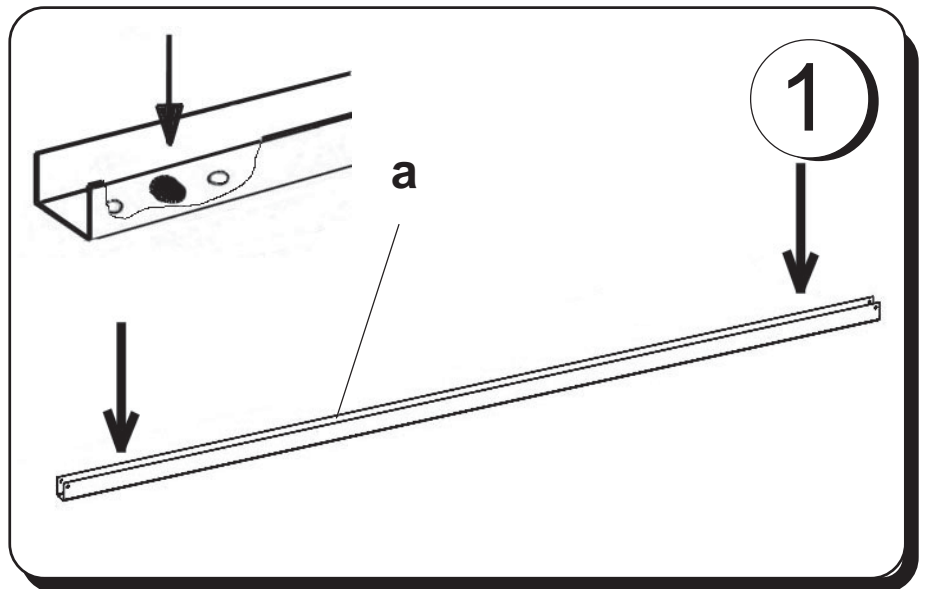


9 x C8 = 18 m²

X* : The distance between two sets of solar collectors is 250 and 300 mm

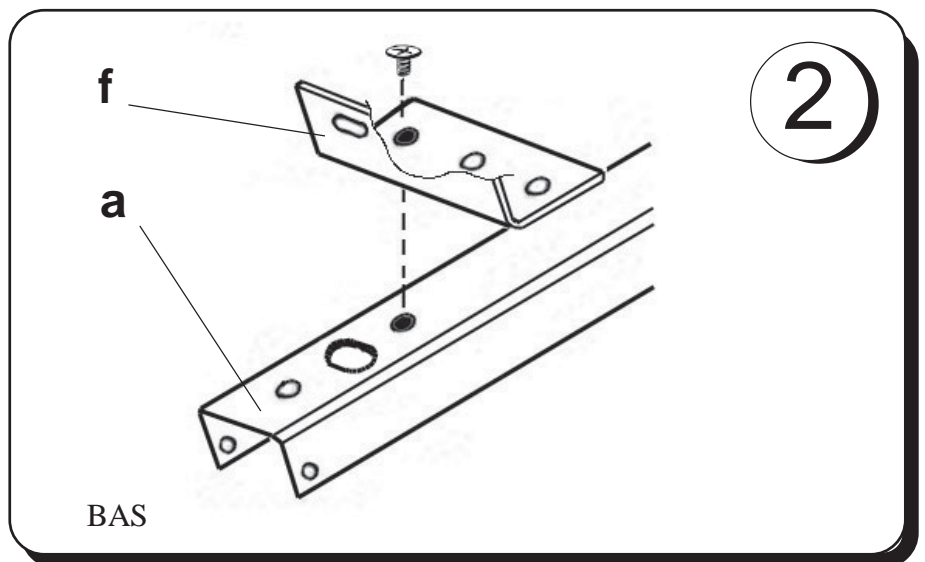
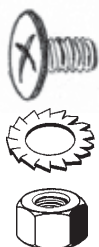
**ASSEMBLING
PRINCIPLE
GROUND
FASTENING**

- Fit the legs **a**. Make sure you respect the distance between each axis *page 6 to 8*.
Use the D12 oblong holes and the provided washers.
Make sure you do not damage the watertightness of the support.



Make sure you use the right holes and the direction of the U a

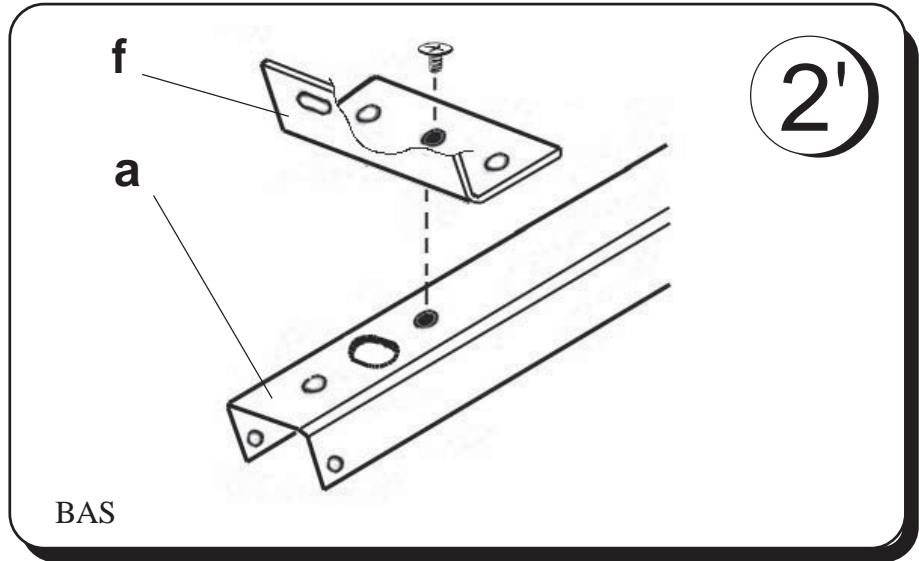
1 x





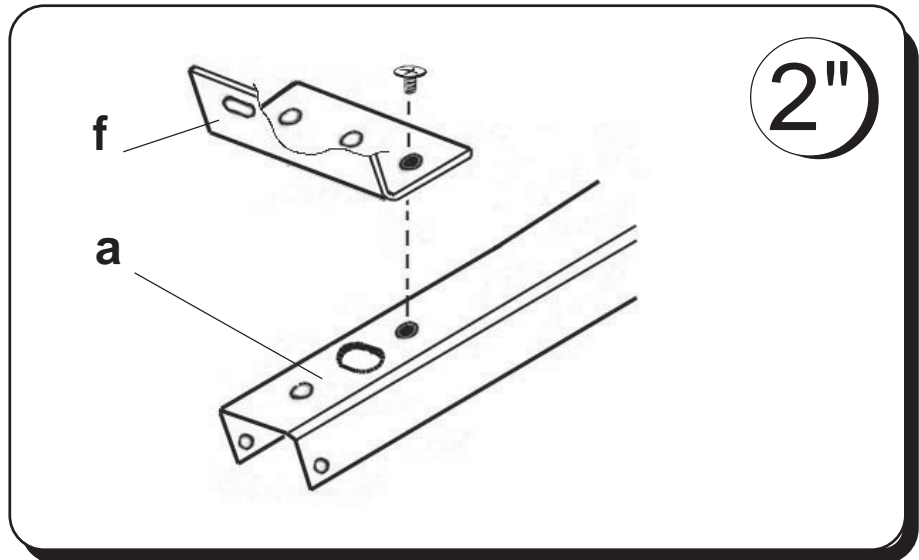
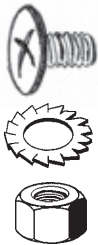
Make sure you use the right holes and the direction of the U a

1 x



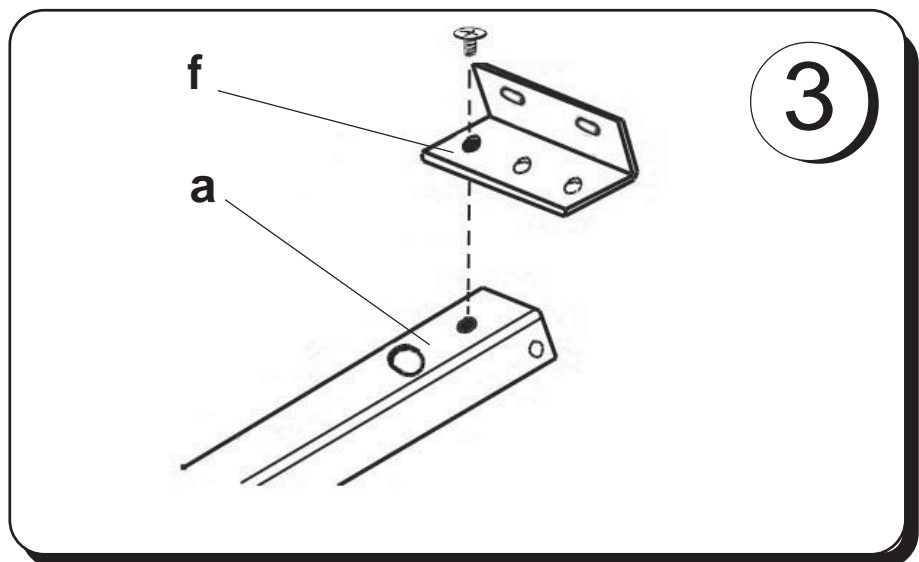
Make sure you use the right holes

1 x



Make sure you use the right holes

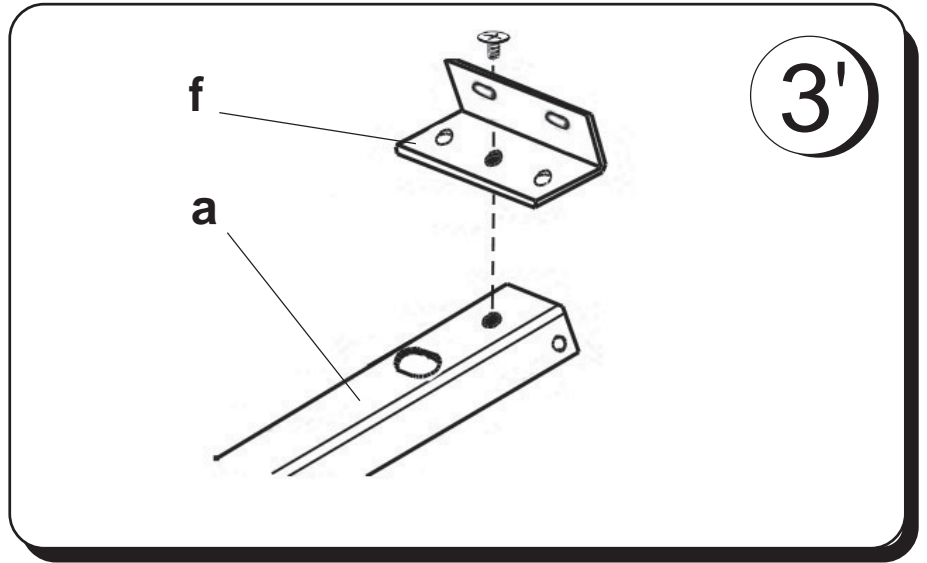
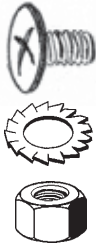
1 x





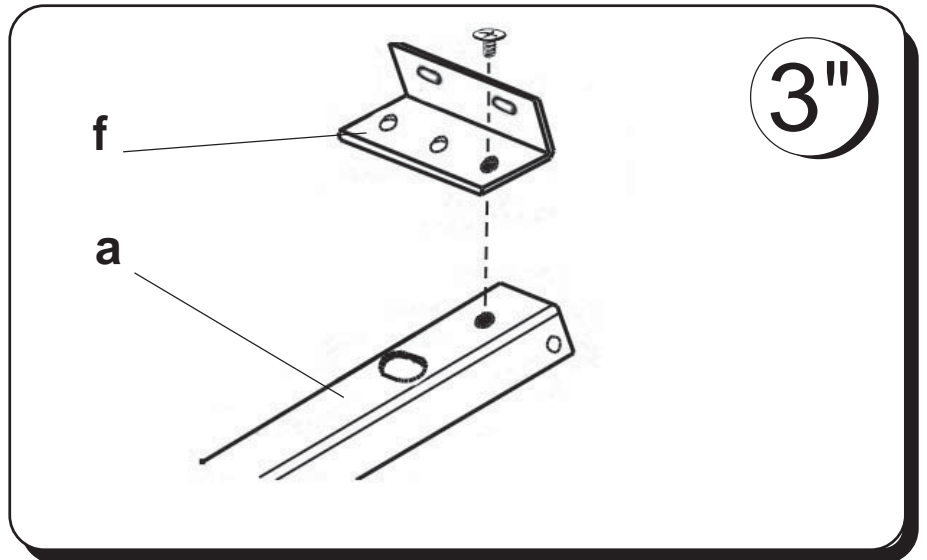
Make sure you use the right holes

1 x

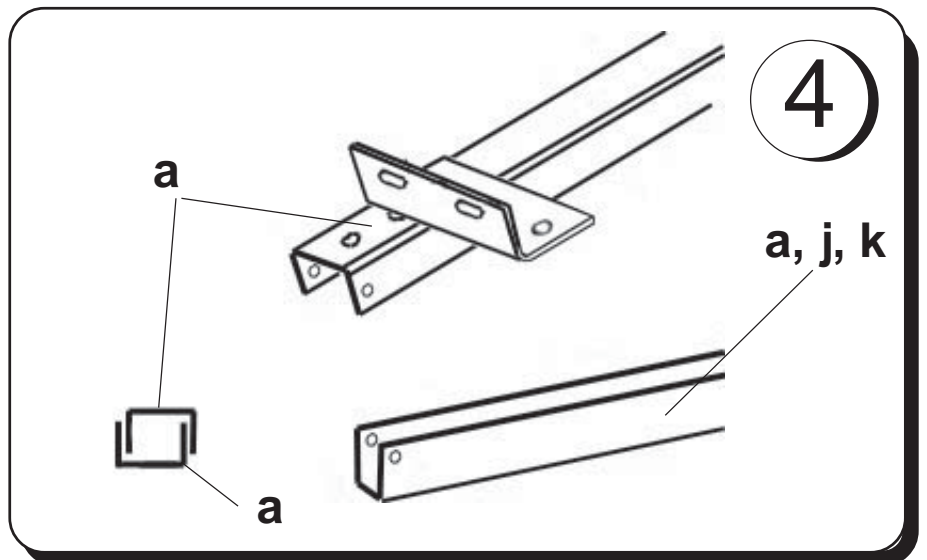
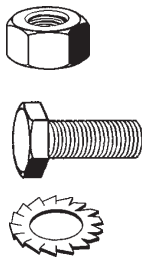


Make sure you use the right holes

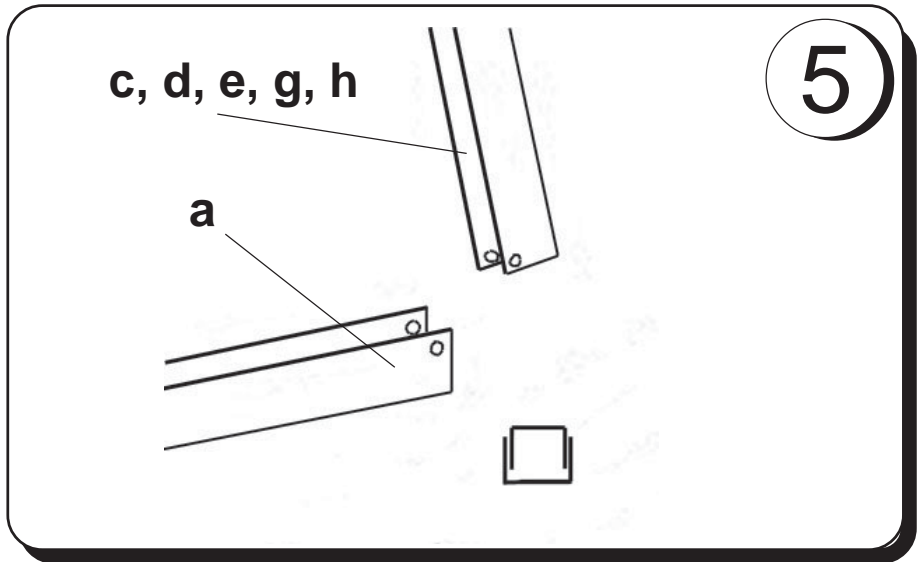
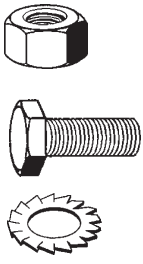
1 x



2 x

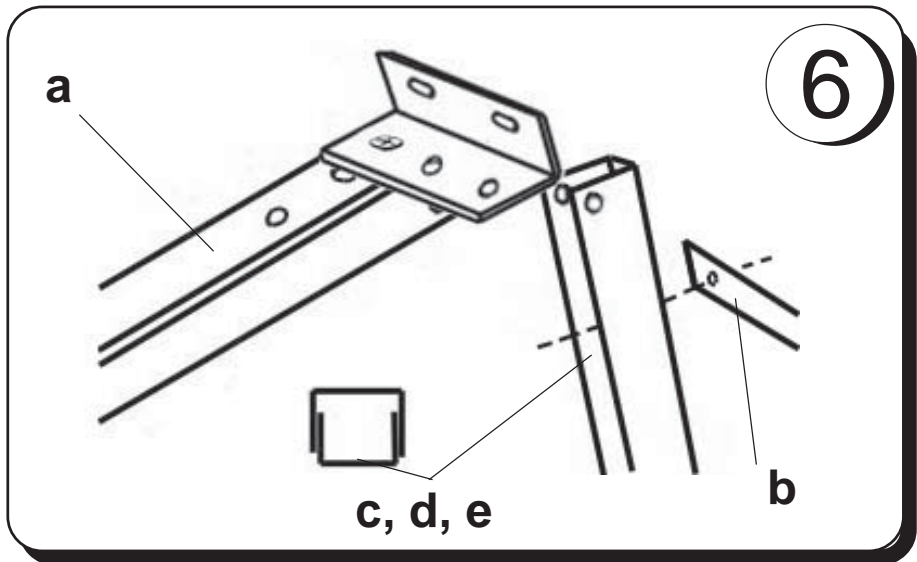
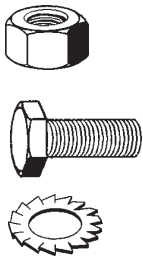


2 x

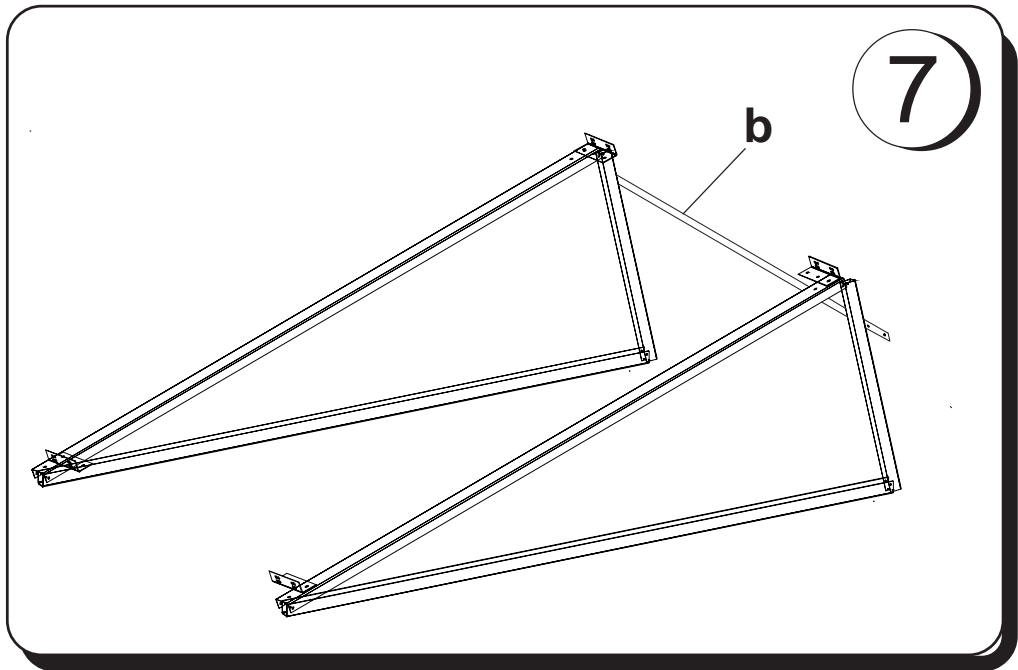


THE DRAWINGS 6, 7 and 8, ONLY CONCERNS GROUND FASTENING

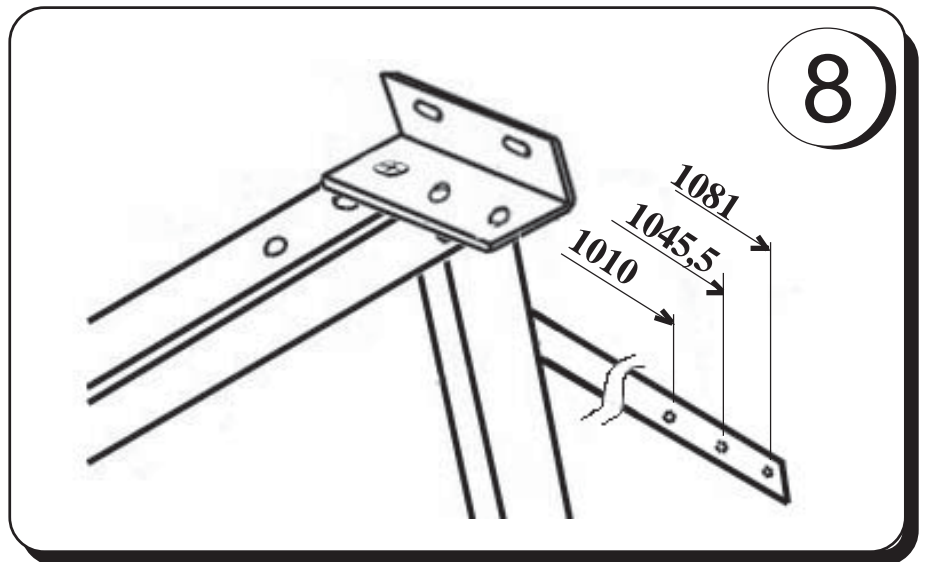
3 x



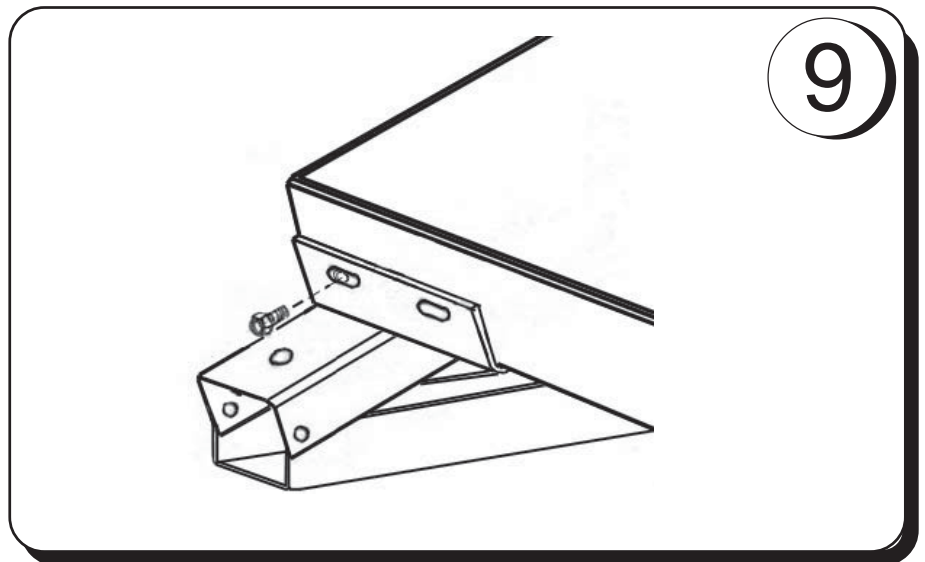
Start again step 1 to 6 for the second leg.



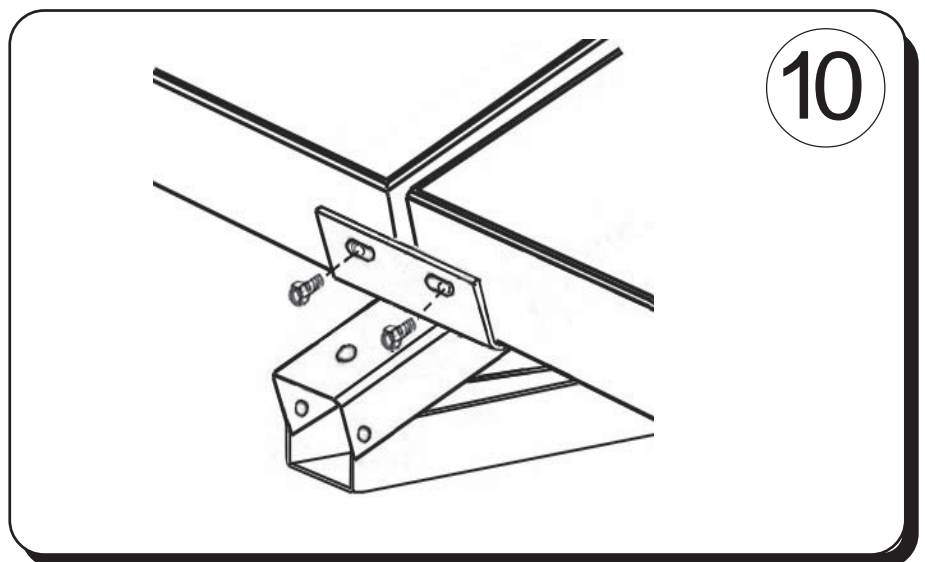
To fit the second leg, use the assembling jig **b** and chose the right distance between each axis, according to the drawings page 6 and 8.



4 x 

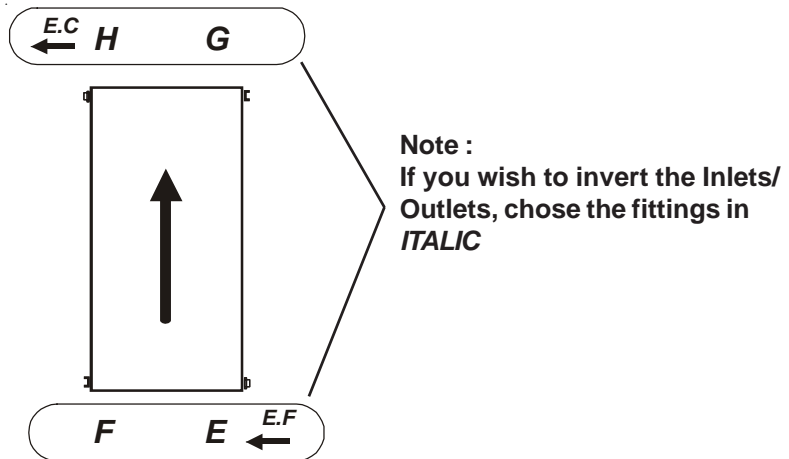
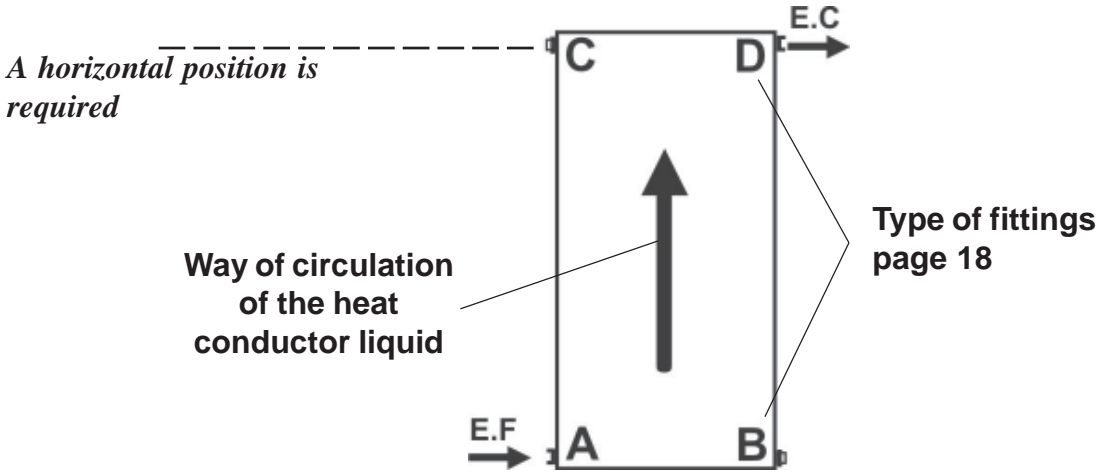


Connection between 2 collectors

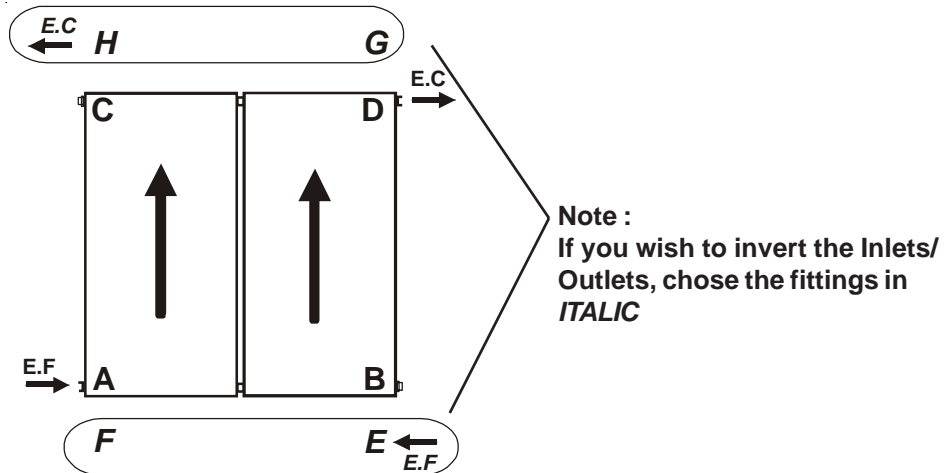


HYDRAULIC CIRCUITS

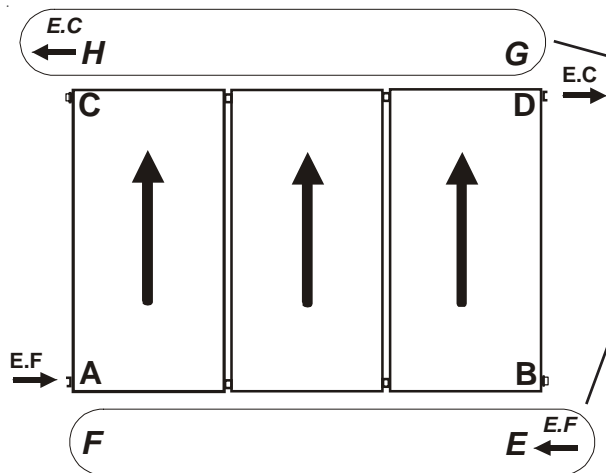
1 x C8 solar collector = 2 m²



2 x C8 solar collector = 4 m²

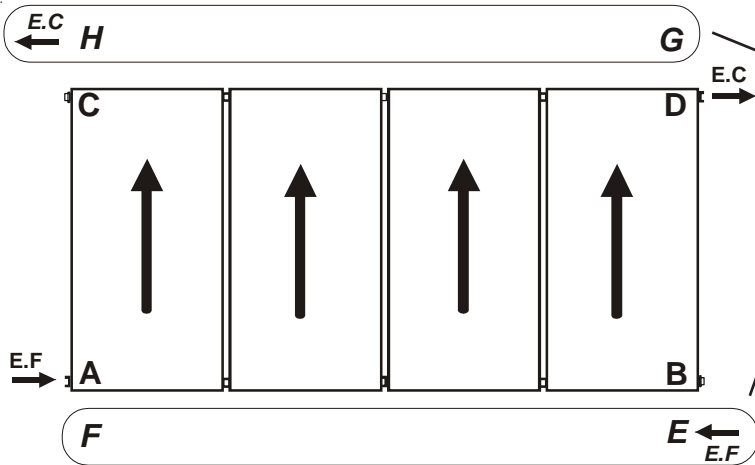


3 x collector C8 = surface 6 m²



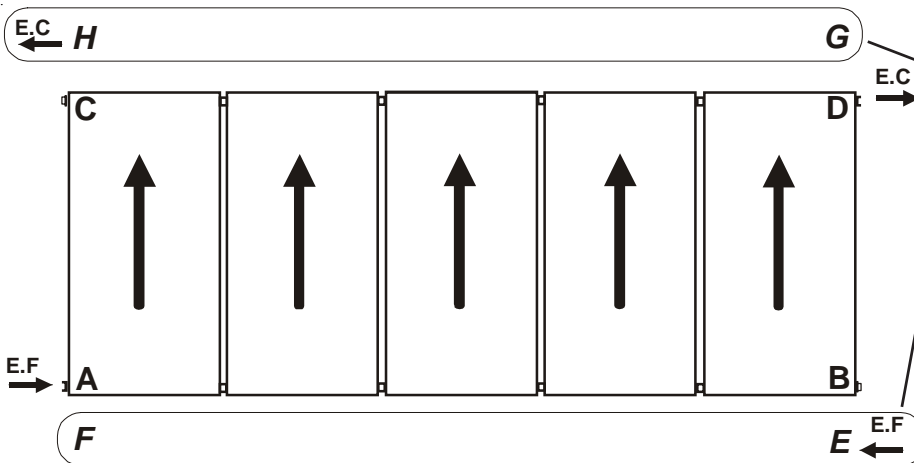
Note :
If you wish to invert the Inlets/Outlets, chose the fittings in *ITALIC*

4 x collector C8 = surface 8 m²



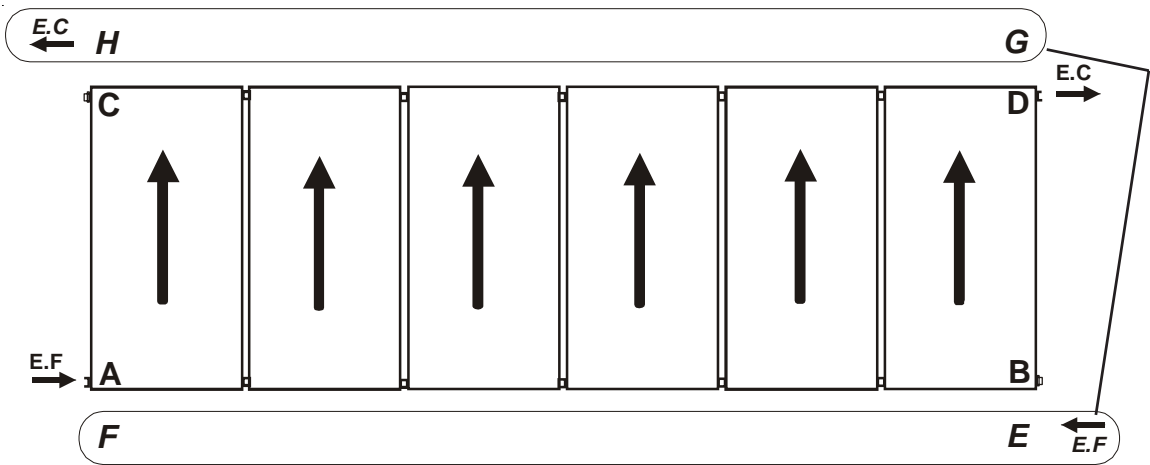
Note :
If you wish to invert the Inlets/Outlets, chose the fittings in *ITALIC*

5 x collector C8 = surface 10 m²



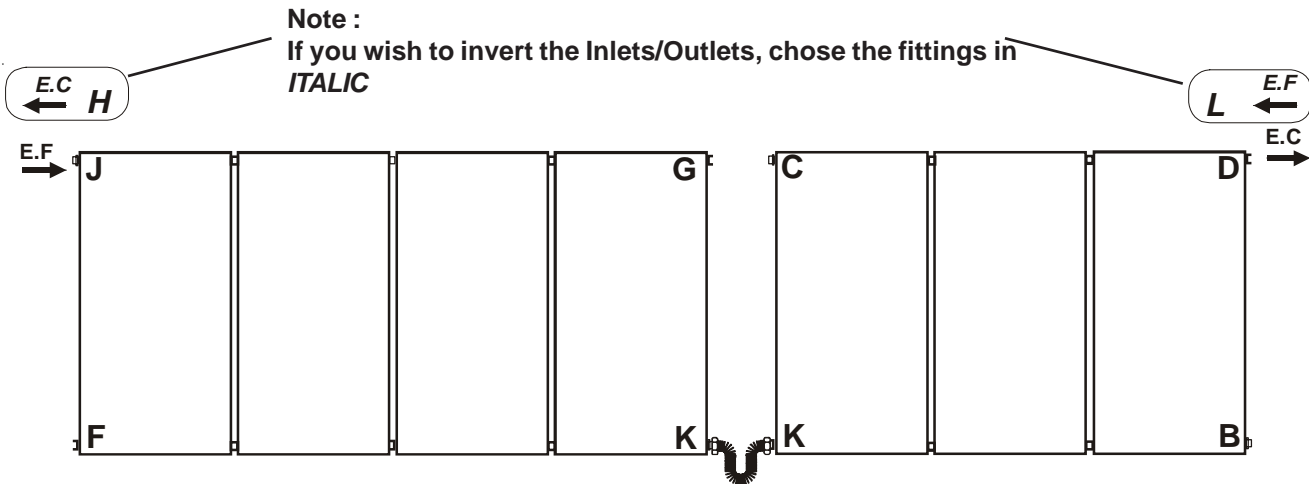
Note :
If you wish to invert the Inlets/Outlets, chose the fittings in *ITALIC*

6 x C8 solar collectors = 12 m²



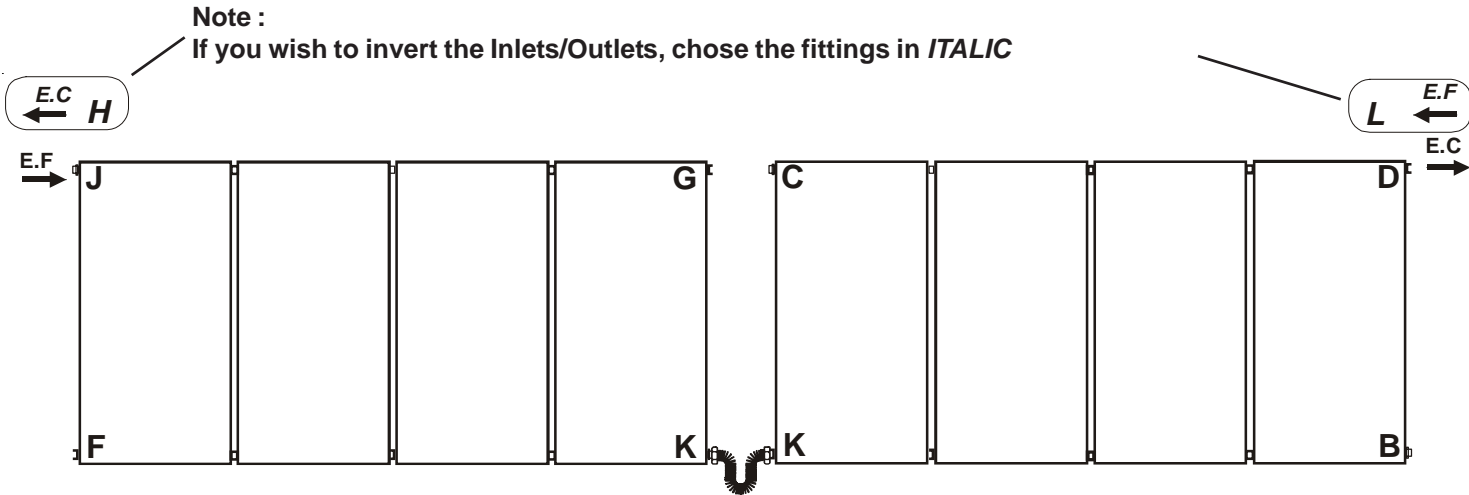
Note :
If you wish to invert the Inlets/Outlets, chose the fittings in *ITALIC*

7 x C8 solar collectors = 14 m²



Note :
If you wish to invert the Inlets/Outlets, chose the fittings in *ITALIC*

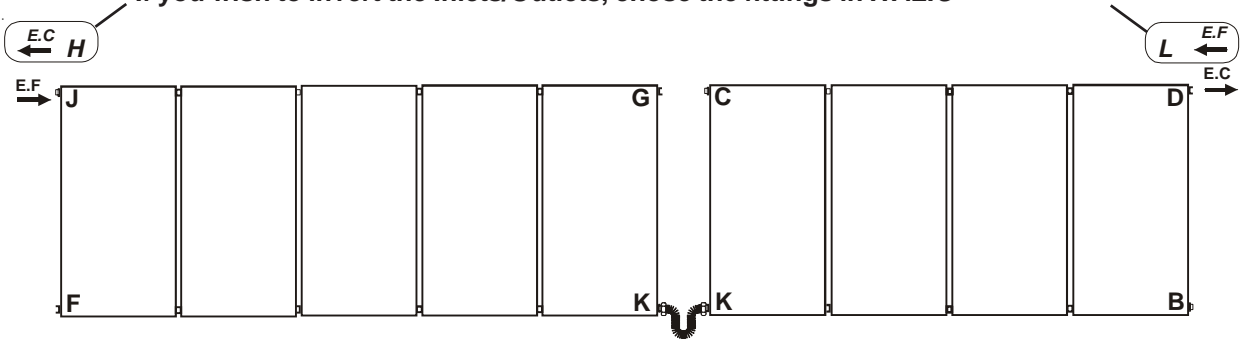
8 x C8 solar collectors = 16 m²



Note :
If you wish to invert the Inlets/Outlets, chose the fittings in *ITALIC*

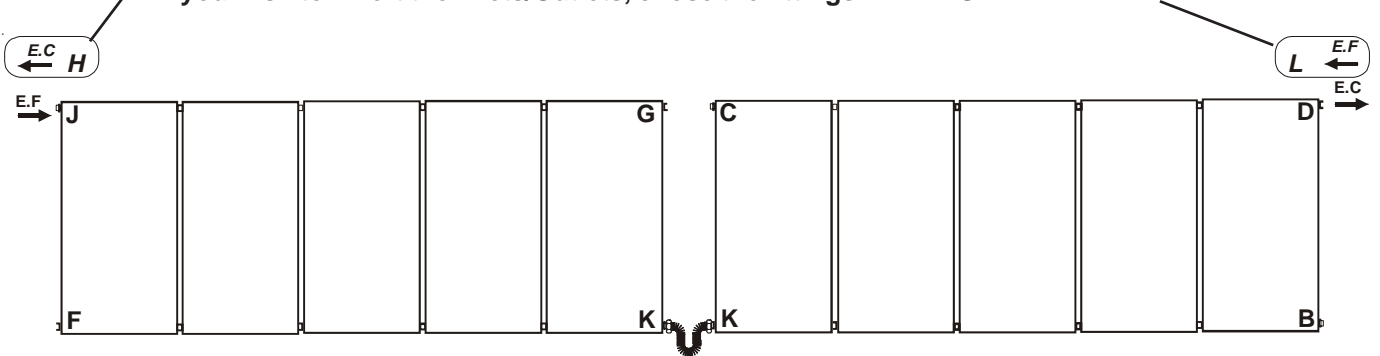
9 x collector C8 = 18 m2

Note :
If you wish to invert the Inlets/Outlets, chose the fittings in *ITALIC*



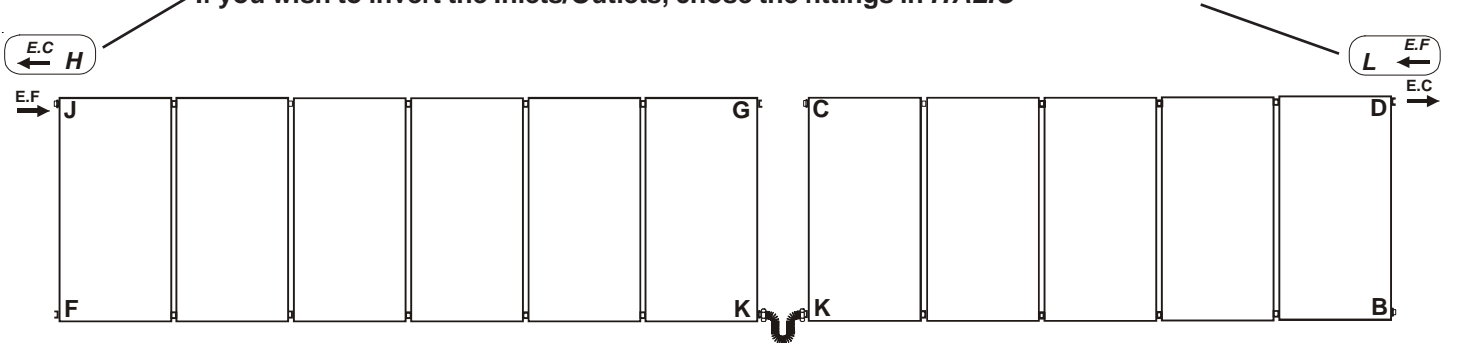
10 x collector C8 = 20 m2

Note :
If you wish to invert the Inlets/Outlets, chose the fittings in *ITALIC*



11 x collector C8 = 22 m2

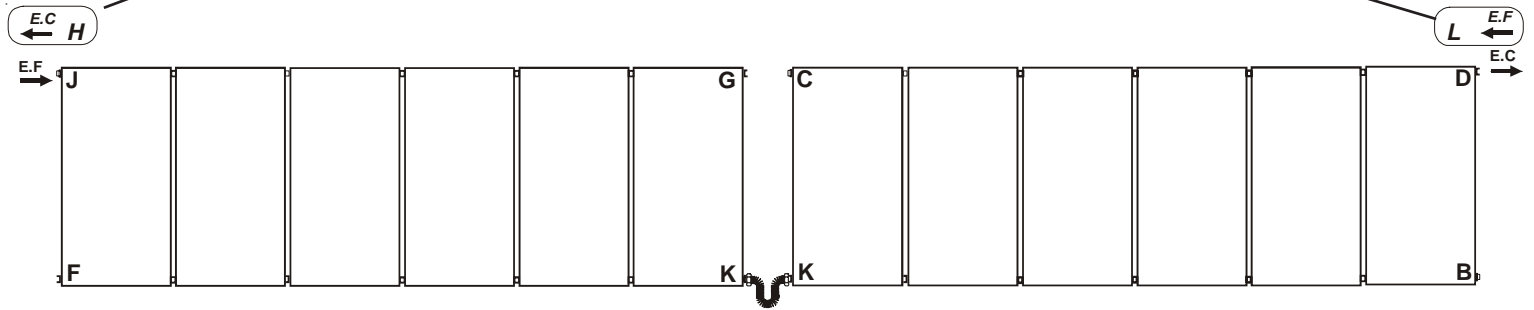
Note :
If you wish to invert the Inlets/Outlets, chose the fittings in *ITALIC*



12 x collector C8 = surface 24 m²

Note :

If you wish to invert the Inlets/Outlets, chose the fittings in *ITALIC*



You have just made a traditional hydraulic circuit. Once you have checked that the solar collectors and the inlet / outlet main manifolds have been installed in a **perfect horizontal position**, you will have to fit :

- 1 air drain plug on the highest points .
- 1 plug or fluid drain plug on the lowest points.

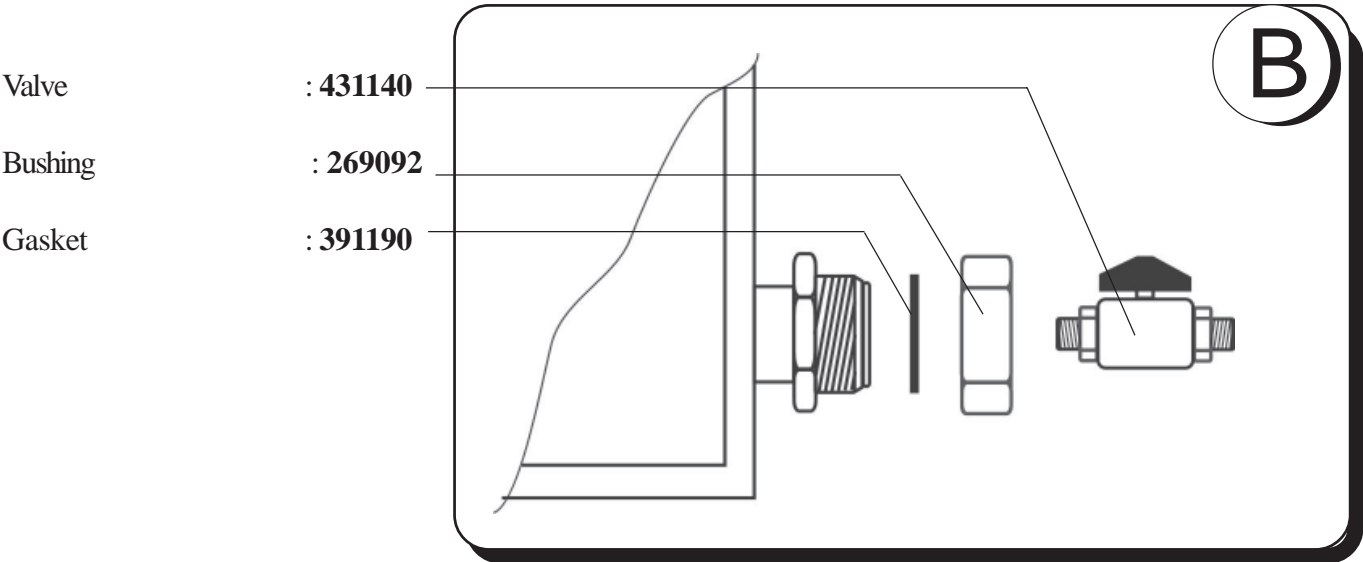
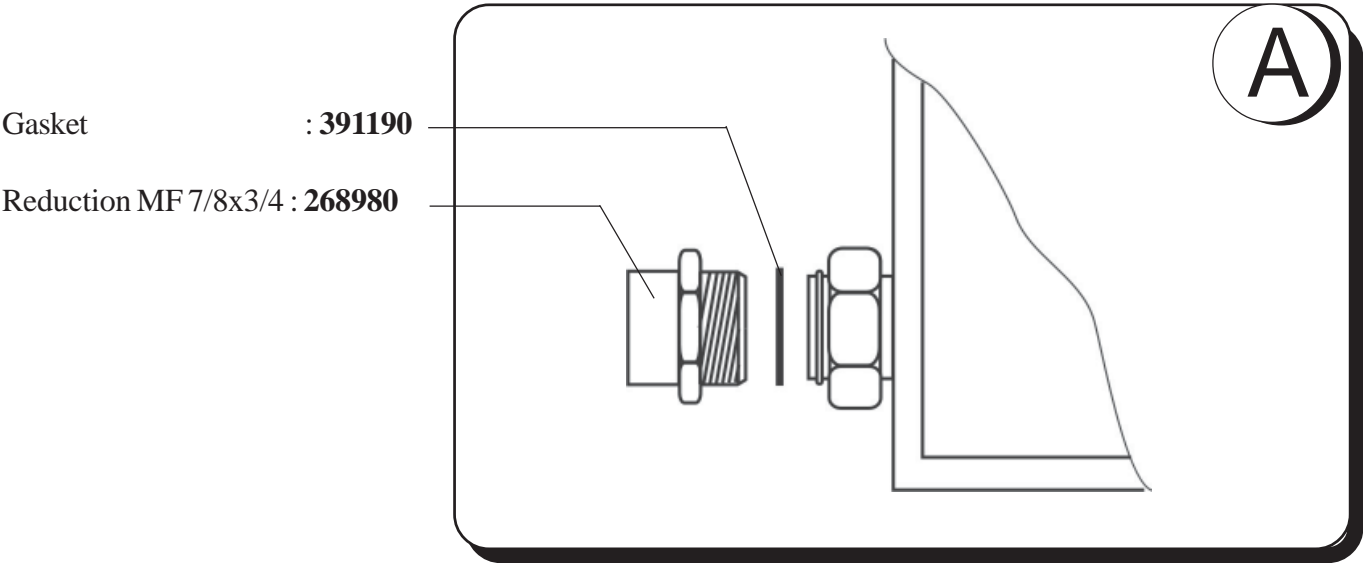
The connection of 1 or several sets of solar collectors to the the main inlet or outlet manifolds has to be made so that a perfect expansion of fluid is possible (flexible gas pipe fitted for example).

HYDRAULIC CONNECTIONS

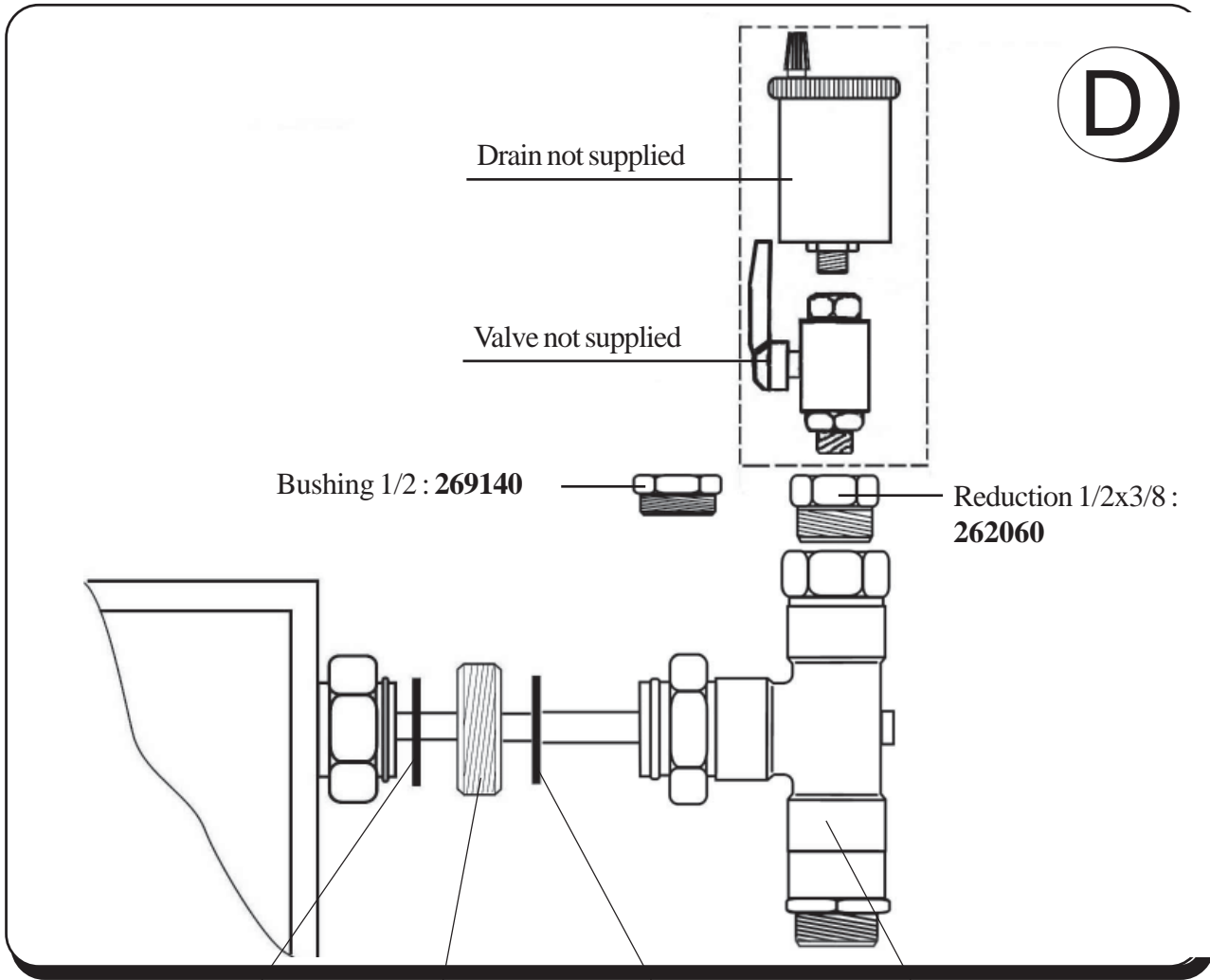
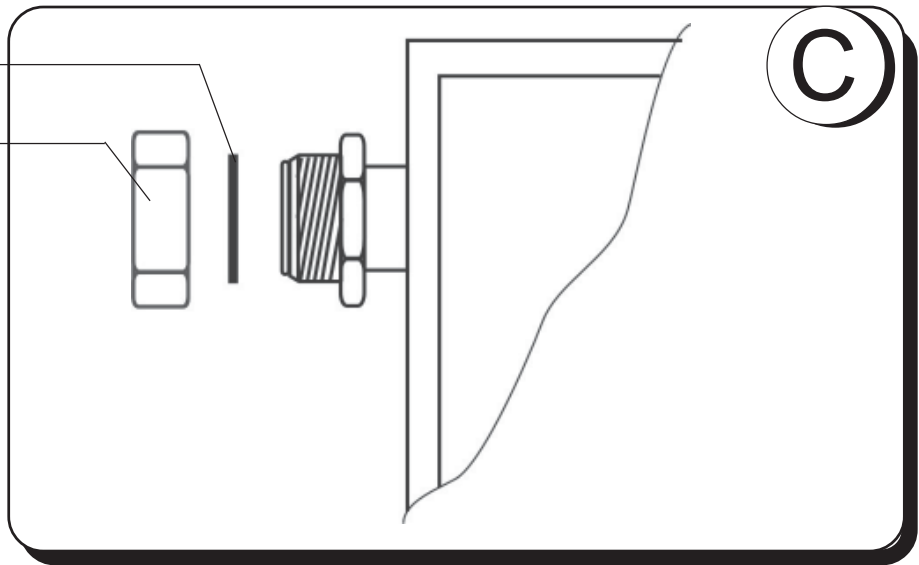
C8 solar collectors are connected to each other in parallel, and a set of solar collectors in parallel can be connected to another set in series.

Due to the expansion of the fluid inside of the solar collectors, it is possible to make sets of **6 solar collectors as a maximum**. Yet, it is possible to connect 2 sets to each other with our Flexible Fitting, *code : 26202*. 1 C8 solar collector has 2 copper manifolds with 2 rotating nuts of 7/8" each, 1 on each end. With these 4 rotating nuts on each end of the solar collector, you can do whatever you want provided that you take into account problems linked with fluid expansion and drain. The examples shown underneath are not restrictive.

CAUTION : *In the case of terrace supports, the hydraulic circuits mentioned in sheets 14 - 16 vary according to the number of legs, steel angles 1 or 2 C8 and according to the components of the hydraulic fittings bag you have. For any different hydraulic circuit, it is necessary to make sure that the fittings can be used with the new hydraulic circuit.*



Gasket : 391190
 Bushing 7/8 : 269091

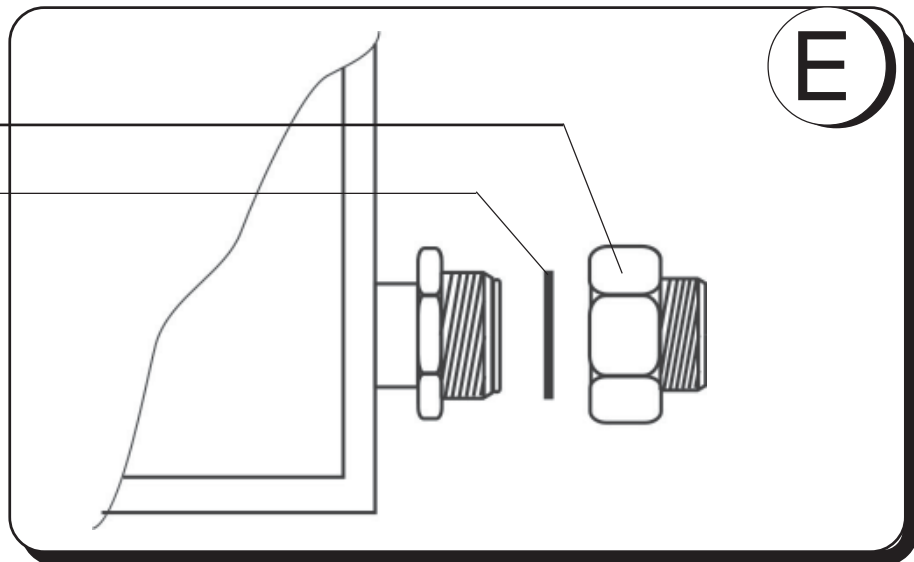


Gasket : 391190 Casing 7/8 : 261830 Gasket: 391190 T-square/probe/drain : 260413

E

Reduc. FM 7/8x3/4 : **268982**

Gasket : **391190**

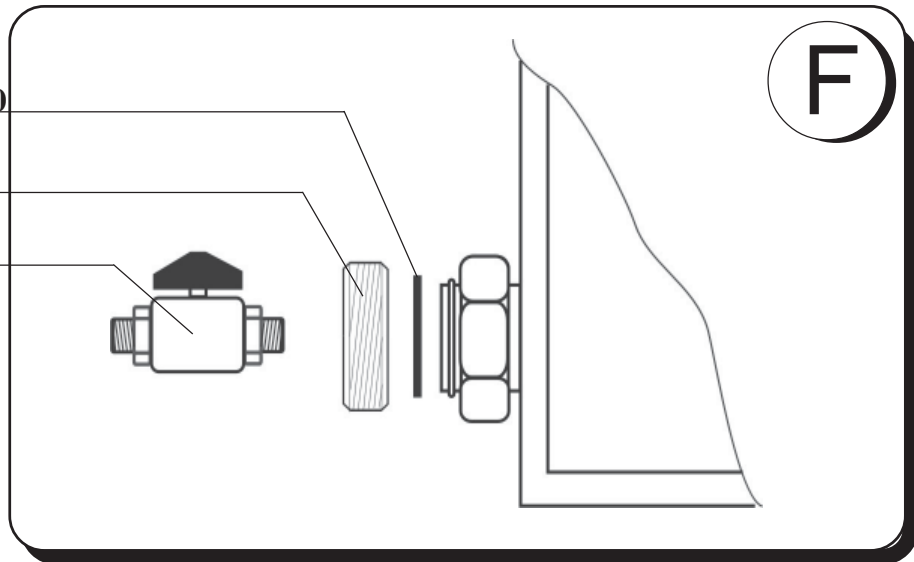


F

Gasket : **391190**

Reduction 7/8x1/4 : **268940**

Valve : **431140**

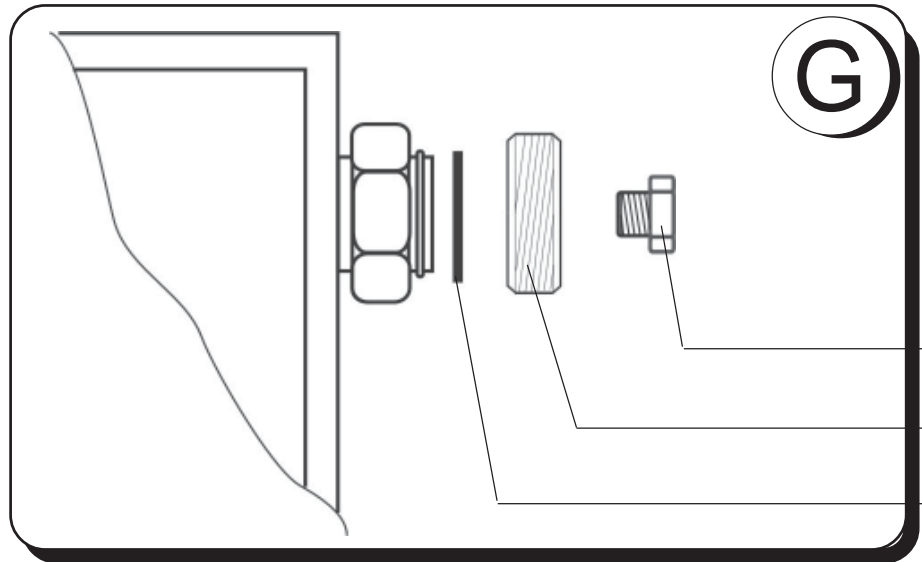


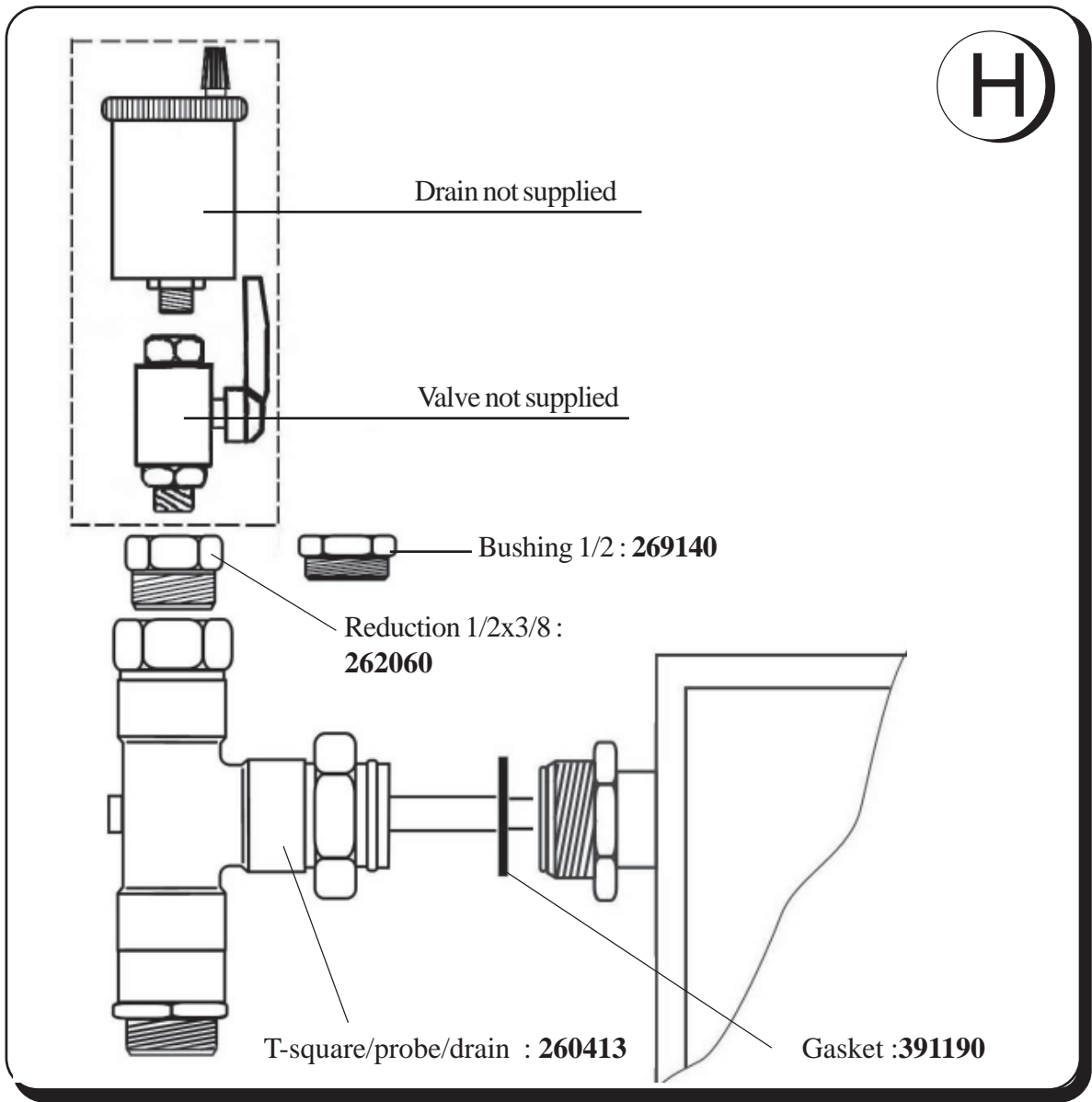
G

Bushing 1/4 : **268930**

Reduc. 7/8x1/4 : **268940**

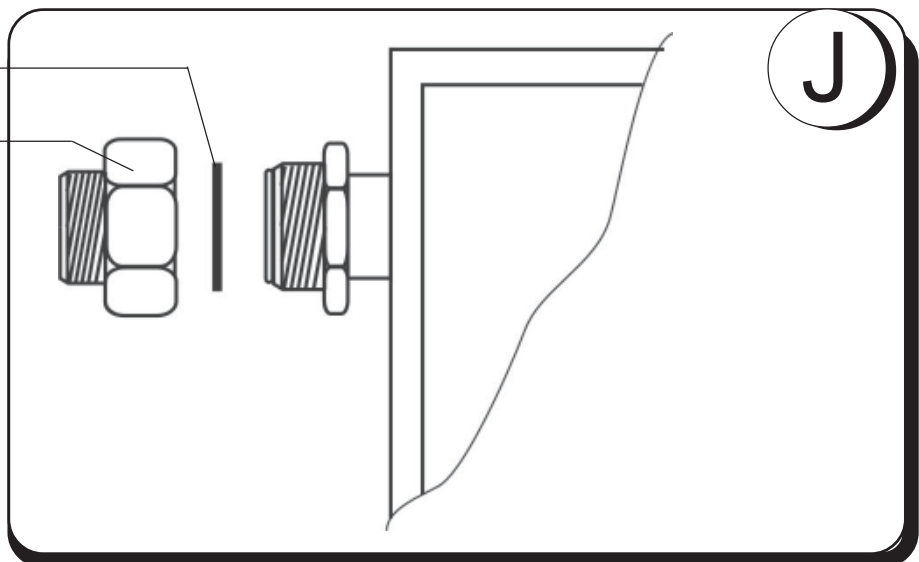
Gasket : **391190**





Bushing 1/4 : 391190

Reduction 7/8x3/4 : 268982



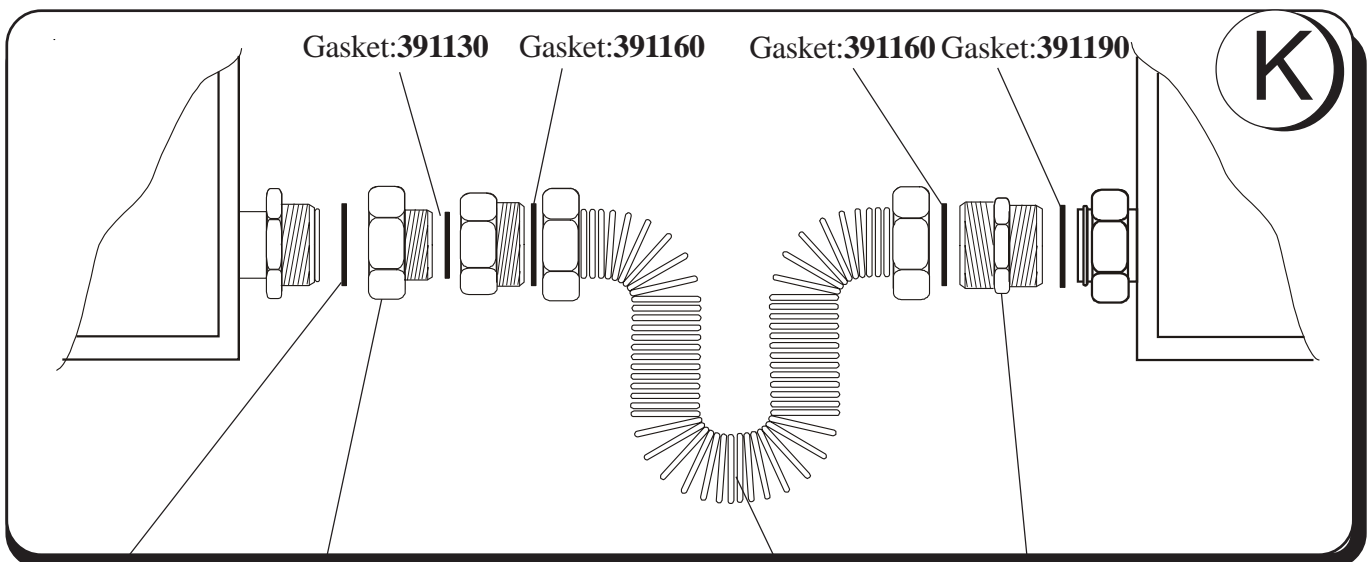
J

Gasket:391130

Gasket:391160

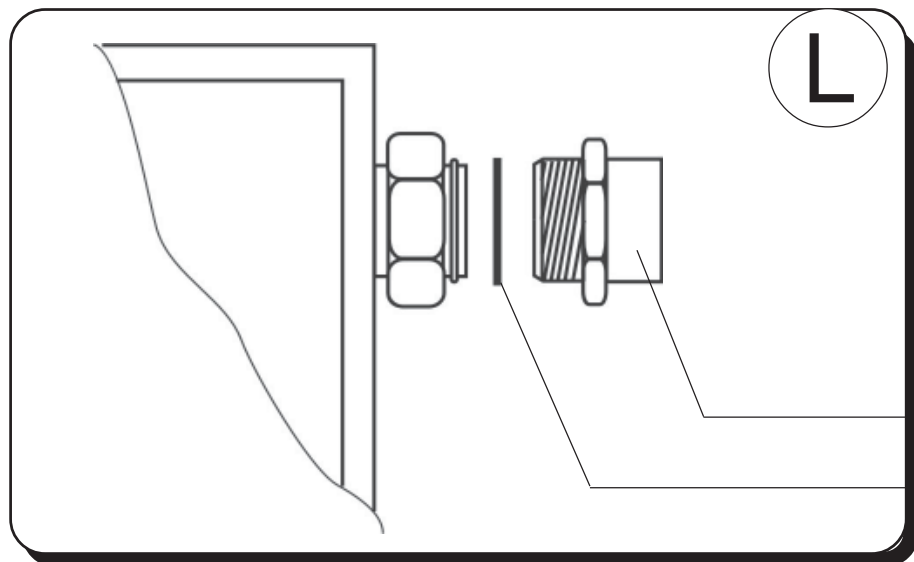
Gasket:391160

Gasket:391190



K

Gasket:391190 Red.7/8x3/4:268982 Red 3/4x1 : 269180 Flexible gas pipe :261160 Nipple.1x7/8 : 261810



L

Reduction 7/8x3/4 : 268980

Gasket : 391190

NOTE :

The kind of hydraulic circuit you may have depends on the number of solar collectors you have, whatever the support : Terrace Support, Corrugated Sheet Metal Roof Support, Tile Roof Support.

For each hydraulic circuit, 1 Hydraulic Kit is supplied with all the necessary fittings and hydraulic accessories.

The solar absorbers and therefore the solar collectors may reach very high temperatures, which causes important expansion phenomena of the fluid used. **In order to avoid these problems, you must use flexible connecting pipes (type flexible gas pipe 1") for each Inlet and Outlet of 1 set of solar collectors as well as to connect 1 set of solar collectors to another.**

LEAKAGE AND PROTECTION TEST

Once all hydraulic connections are made, it is necessary to check the tightness of the hydraulic circuits.

Maximum test pressure of the solar collectors = 12 bars

Maximum working pressure = 7 bars

Proceed as if it were for a central heating system, that is to say with a test pump or connect directly to the network water mains.

CAUTION :

During the tests, the pressure may be higher than the maximum test pressure with the temperature rise of the solar collectors. These over-pressures have to be avoided as they may damage seriously the solar collectors. Therefore, in order to take into account the expansion of the fluid inside the solar collectors and thus the over-pressure, 1 expansion vessel and 1 relief valve have to be fitted before the test.

If the test has to be carried out under freezing temperatures, use antifreeze liquid inside the solar collectors.

We remind you that you must protect the installation against freeze hazards.

We wish to point out that there is a freeze hazard by inverted radiation with positive temperatures above 0°C: +1° o +2° C .

Insulate the Inlet and Outlet pipes as well as the flexible pipe used to connect 1 set of solar collectors to another.

X* (page 15 and 16) : The distance between 2 sets of solar collectors is 250 - 300 mm

**The GIORDANO company thank you for
trusting them and wish you to fully enjoy your
solar system .**