

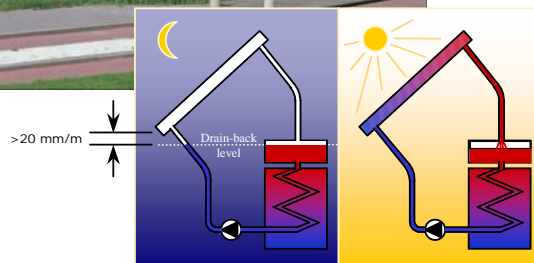
COLLECTOR TYPE: **Thermic 28 S; 42 L; 14 L; 28 L**

Collector and flat roof set Thermic:

The Thermic collector can be installed easily on flat roofs using special A-frames. With the flat roof set it's a 2-hour job for an installer to install the collector onto a flat roof.

Always make sure that, before installing, you prepare the work according to current Health and Safety Regulations. See also Health & Safety instructions at the last page of this Manual.

APPLICATIONS: Small to large domestic hot water systems, industrial process and swimming pool heating.



POSITIONING:

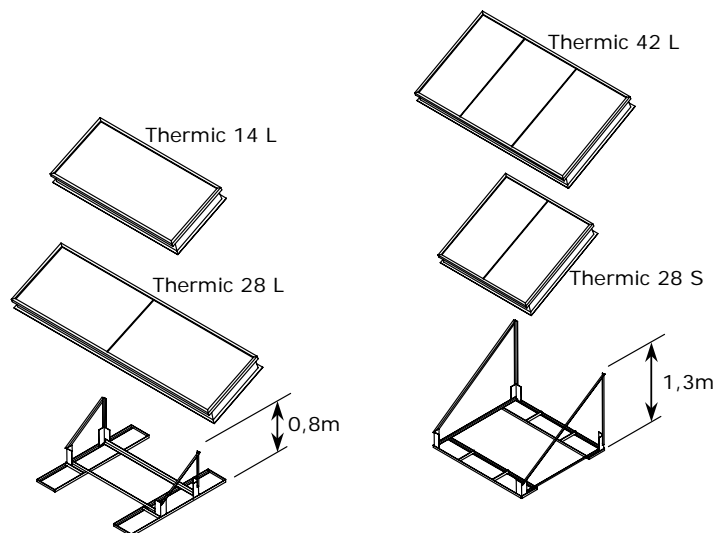
The positioning of the collector will be determined by:

- Orientation: West, south and east is acceptable. See Information sheet collector orientation.
- Drain-back level (the lower connection of the collector should always be above it).
- The distance from the drain-back tank (the collector pipes should always be installed with a slope of $>20\text{mm/m}$). This to ensure that the collector circuit will drain.
- A nice looking suitable place on the roof not too close to the edge or other obstacles on the roof. Give special attention to the position on the roof in respect to surrounded buildings and other obstacles that might shade a collector.

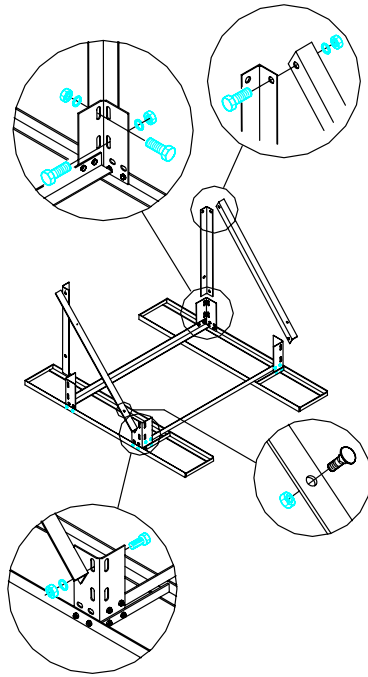
ASSEMBLING THE FLAT ROOF SETS:

There are two different Thermic flat roof sets available. One set for the **Thermic 14 L** and **Thermic 28 L** and another set for the **Thermic 28 S** and **Thermic 42 L**.

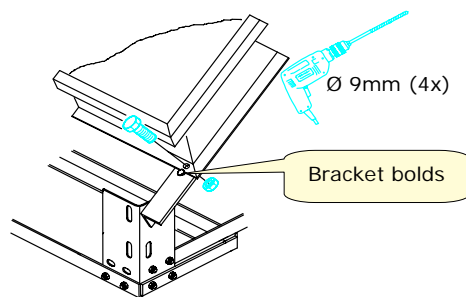
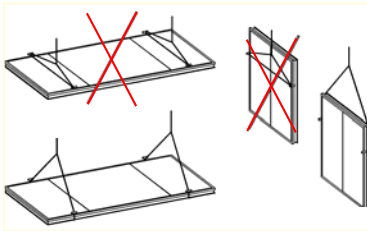
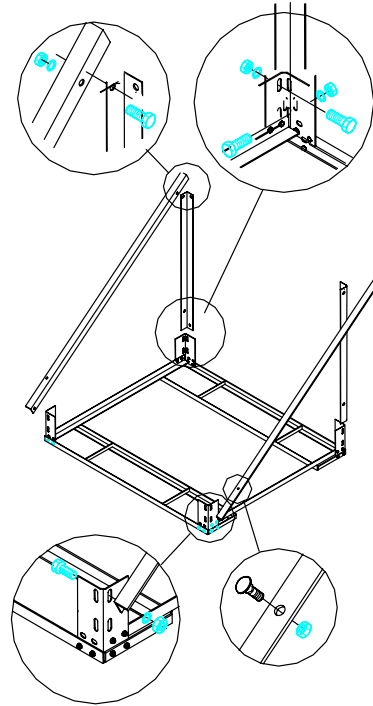
- Be sure to have the right tools to fasten the screws provided (a power screwdriver/drill is recommended).



Thermic 14 L or 28 L

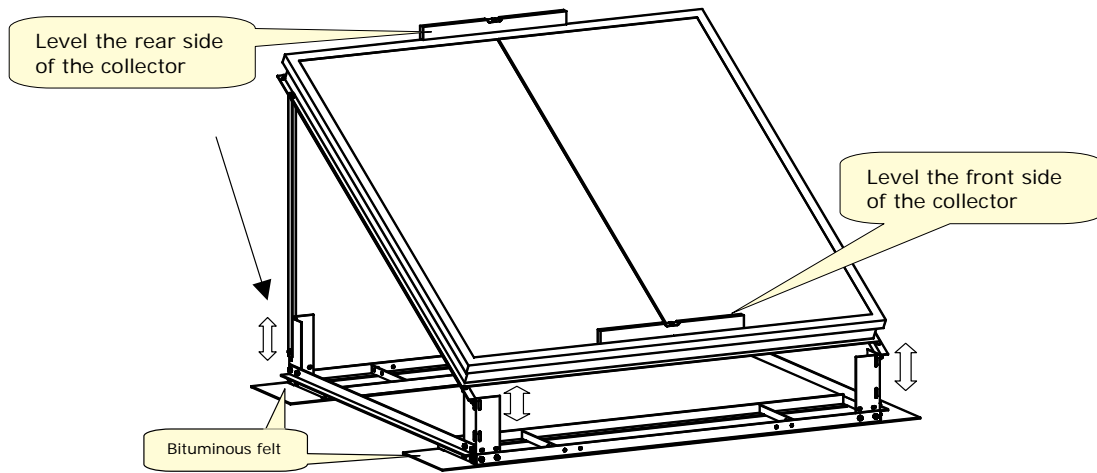


Thermic 28 S or 42 L



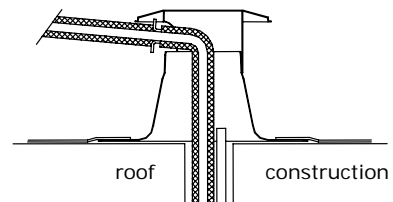
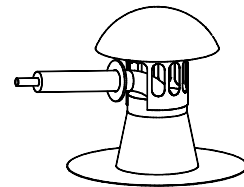
PLACING THE FRAME AND COLLECTOR:

- Put an extra sheet of bituminous felt under each of the ballast frames.
- Depending on the height and accessibility of the roof the collector can now be hoisted into position on the roof. Special attention is required to secure the straps around the collector in order to prevent them slipping during lifting.
The handles are not to be used as hoisting hooks.
- The lift weight per person should not exceed the weight limit of 25 kg per person.
- Once the collector is on the roof, slip the collector into the bracket bolts
- Level the collector at the bottom and the top of the frame by shifting the bolts in the slotted holes
- Drill 4 holes to fasten the sides of the collector with the provided stainless steel bolts.
- Remove the handles from the collector.



INSTALLING THE PIPE LEAD THROUGH:

- Search for the exact position of the pipe lead trough below the collector and above the solar storage tank.
- Drill a hole through the roof of Ø80mm (or 3 holes of Ø22mm) for a lead through of two insulated copper pipes Ø15mm and a sensor wire.
- Mount the pipe lead trough set watertight to the roof.



Feed and Return of the collector

FINISHING THE COLLECTOR INSTALLATION:

- Put the right amount of ballast on the frame (Table 1). The ballast (e.g. paving slabs) shown in the table must be distributed 2/3 to the rear and 1/3 to the front of the frame. The ballast is not included in the package.



JOB DONE:

- Starting time 09.00h (including the necessary H&S preparations). Finished job at 11.00h.
- Wish the owner a lot of solar energy.

BALLAST WEIGHT TABLE:

*Wind area	*Area I			*Area II			*Area III		
Collector Thermic	14 L	28 S/L	42 L	14 L	28 S/L	42 L	14	28 S/L	42 L
Collector weight	37	54	80	37	54	80	37	54	80
Frame weight	30	30	30	30	30	30	30	30	30
Roof height (m)	Ballast weight (kg)			Ballast weight (kg)			Ballast weight (kg)		
3	172	395	608	118	285	444	90	231	362
6	241	532	***	183	415	639	135	320	495
9	282	614	***	224	497	***	172	395	608
12	316	682	***	254	559	***	200	419	690
15	340	***	***	278	607	***	220	450	***
20	374	***	***	309	668	***	251	552	***
25	402	***	***	337	***	***	275	600	***
30	422	***	***	387	***	***	296	641	***
35	443	***	***	378	***	***	313	675	***

Tabel 1

The ballast shown in the table must be distributed 2/3 to the rear and 1/3 to the front of the frame

* Area I = costal region <10km

* Area II = windy areas

* Area III = inland not too exposed

These figures are a guide only, the ballast weight for a particular site should be calculated by a qualified engineer.

HEALTH & SAFETY PREPARATIONS:

Always make sure that, before installing, you prepare the work according to current Health and Safety Regulations. With regard to the collector installation pay special attention to:

- Scaffolding: mount the scaffolding according to the appropriate instructions. Make sure the stabilising sections are mounted and fixed. Edge protection and toe boards must always be installed around the working platform according to current health and safety legislation.
- Ladders: only use ladders, which are approved with stabilising feet. Always secure the ladders against sliding. Never carry goods onto the ladder.
- Dust Suppression: only use approved electrical machinery with adequate dust protection whilst cutting tiles or other materials.
- Personal Protection: in all cases have helmets, safety glasses, dust masks, safety shoes and ear protection ready and available. Wear them for your own safety.