

Fresco solar air collector
Open-loop operation



Installation manual



General 2

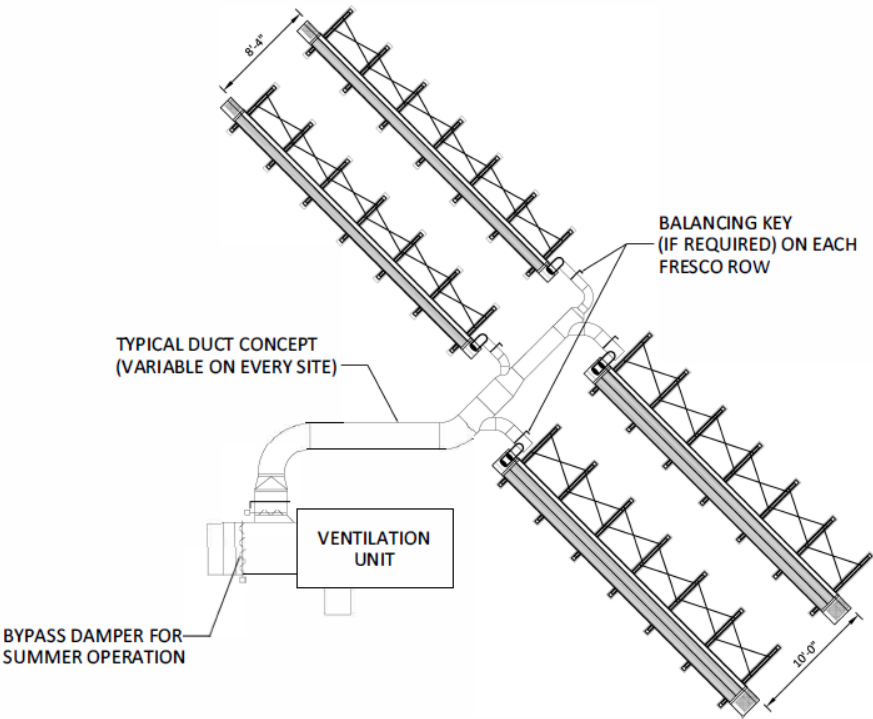
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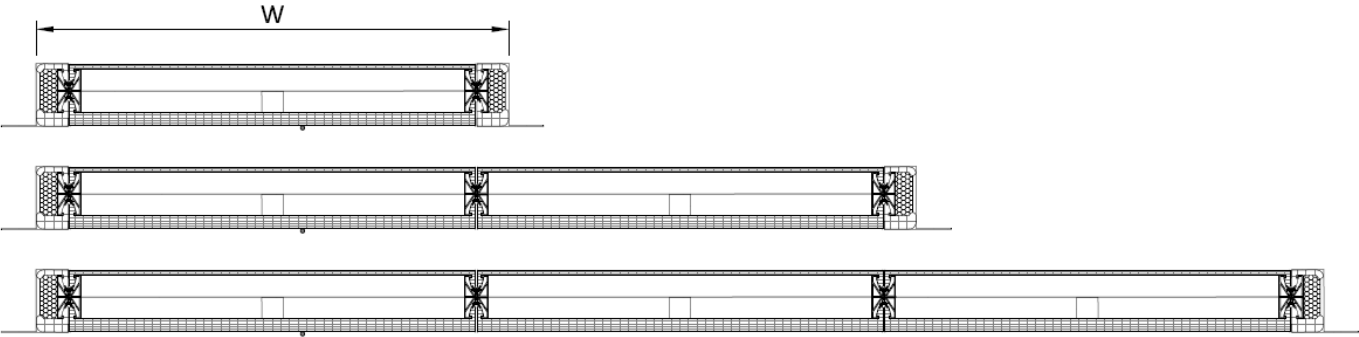
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General



Typical configuration of Fresco collectors connected to a MAU



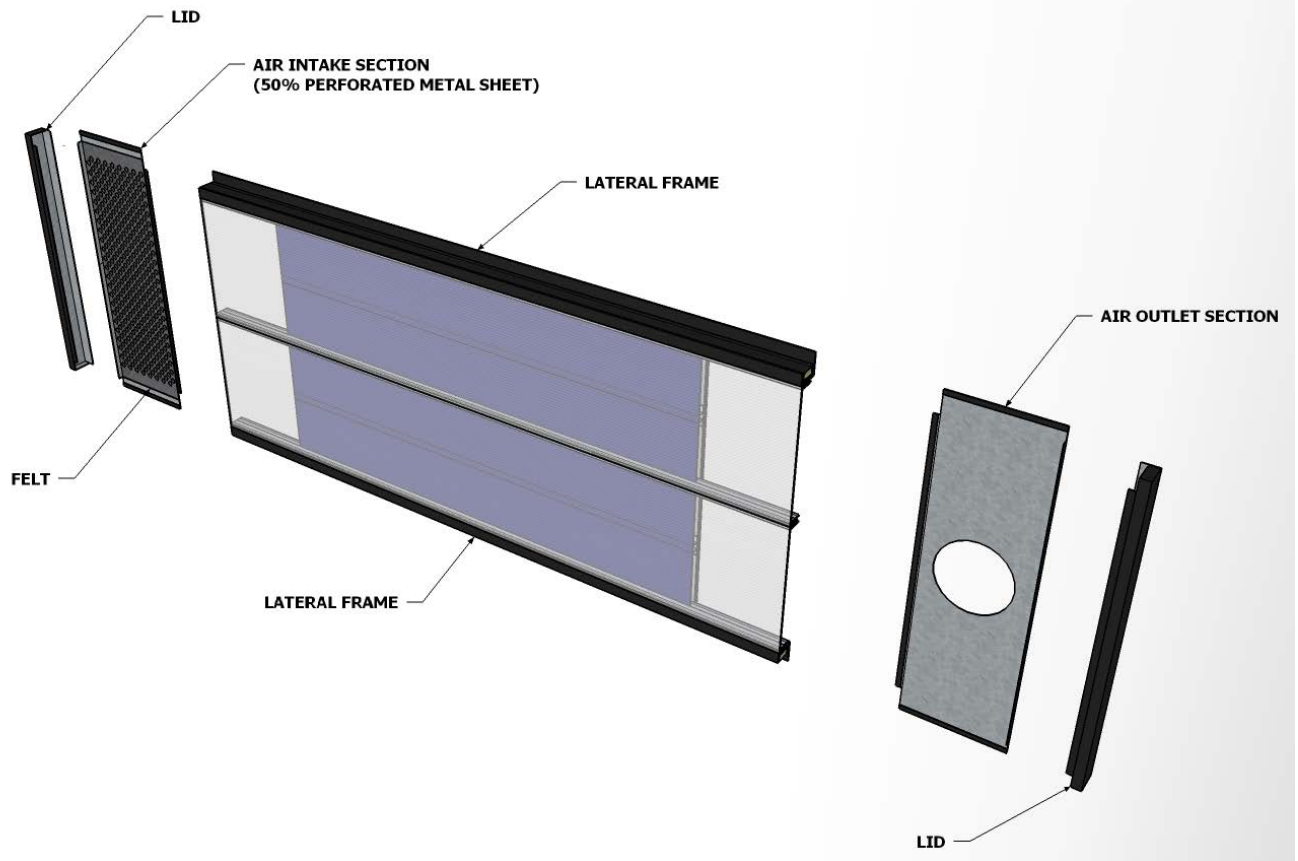
Fresco configurations with 1, 2 or 3 air flow strips in parallel.

Generally speaking, the Fresco collector is installed upstream from a make-up air unit (MAU). The total air flow of the MAU determines the necessary number of collector rows.

Based on available roof space versus air flow, the Fresco collector can be delivered in three different versions. There can 1, 2 or 3 collector air flow passages (or strips), factory-mounted side by side.

Collector strips	1	2	3
Overall width W (mm)	700	1300	1900
Overall width W (in)	27.5	51.5	73.5
Weight (kg / linear m)	10.1	19.8	29.5
Weight (lbs / linear ft)	6.9	13.5	20.2
Max. air flow (m ³ /h)	1700	3400	5100
Max. air flow (cfm)	1000	2000	3000

Collector details



Collector's main sections: air intake, collector strip, air outlet

The Fresco collector's patent-pending design includes extruded parts of aluminum and polycarbonate. This design allows the collector to be delivered at any required length. Typically, maximum length is limited due to transportation limitations (truck) to 45 ft. or 14m.

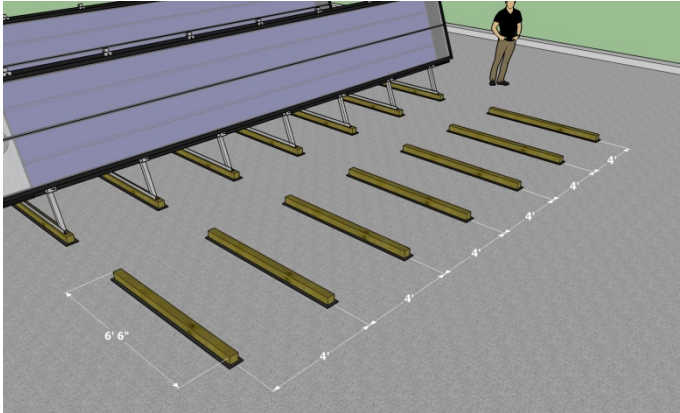
It is delivered already factory pre-mounted, so that no collector parts must be mounted on site. The only installation required is to position the collector on the support legs provided by Trigo Energies.

On rare occasions where two collector sections must be mounted in series, a simple connector kit is provided.

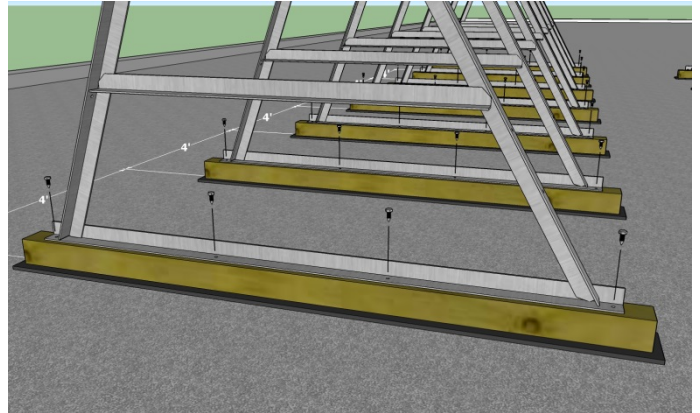
Installation of the legs

Please refer to the mechanical drawings and roof layouts for positioning the collector rows in relation to the ventilation unit (MAU).

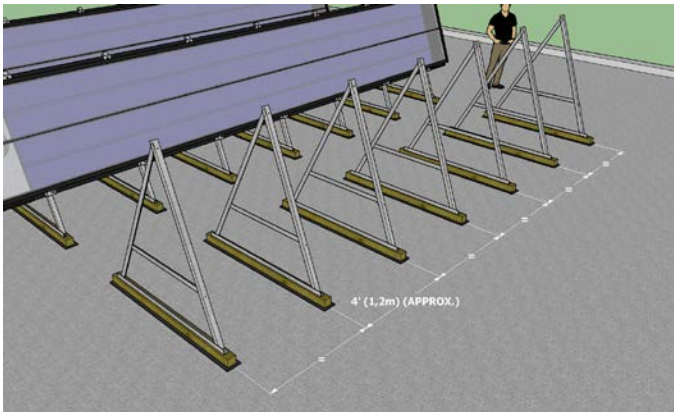
The roof must be clean of debris or other obstacles before laying out the collector support legs



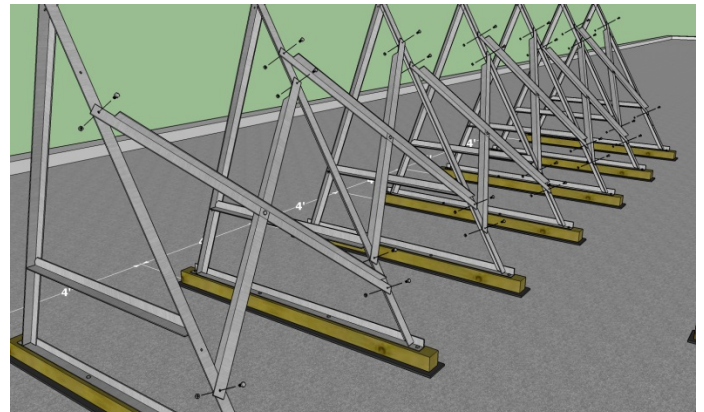
**Position of wood beams on rubber pads on roof
(not delivered by Trigo) at typical distance of 4 ft or
1.2 m.**



**Legs are fixed vertically on wood beams with
galvanized screws
(not supplied by Trigo)**



Legs assembly on roof in straight level line

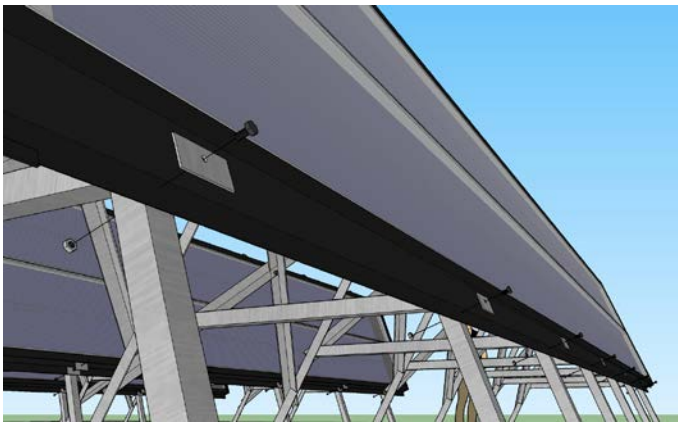
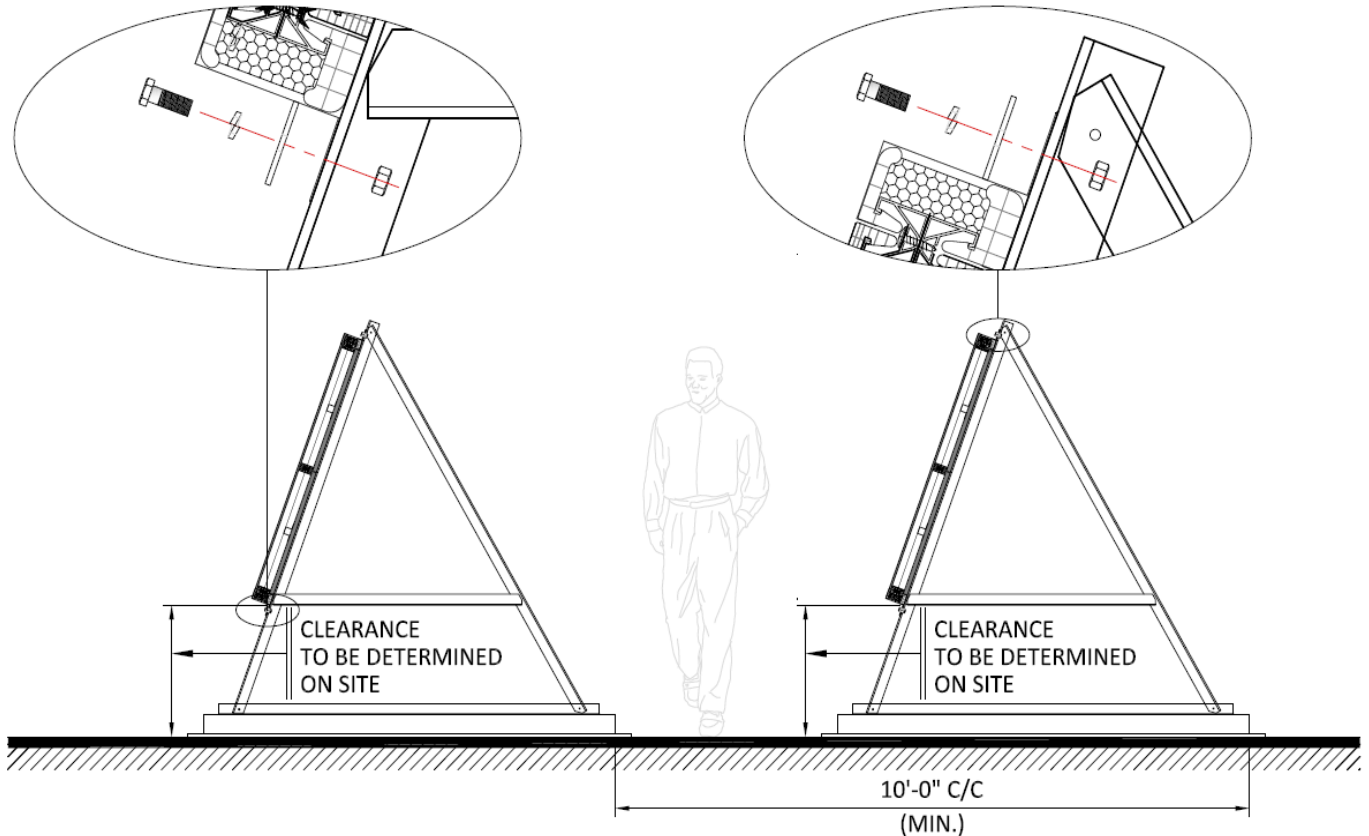


**Legs linked together with aluminum cross-bars
provided by Trigo**

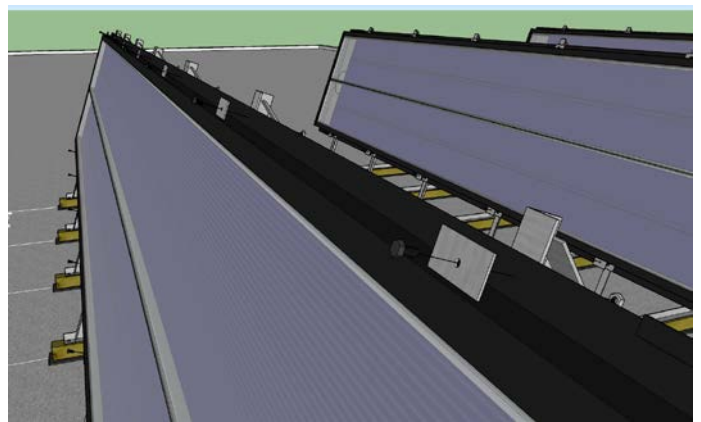
The legs must be linked together by means of the X cross-bars as supplied by Trigo Energies, so as to make a solid frame for each collector row.

Mounting of collectors on legs

The collector comes pre-built with steel edges that allow smooth alignment and easy mounting of the horizontal collector the vertically-mounted legs. It is preferable to have the collector at level with the ground.

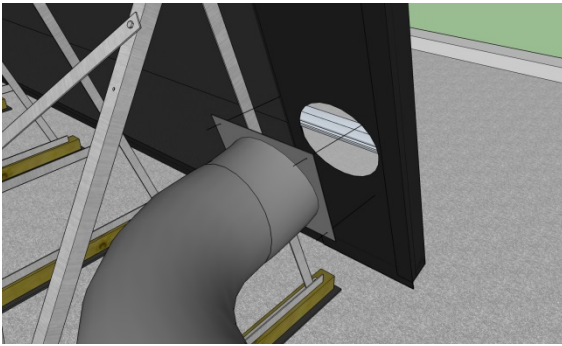


First, fix bottom edge of collector on standing legs with supplied nuts and bolts



Second, fix upper edge of collector on standing legs with supplied nuts and bolts

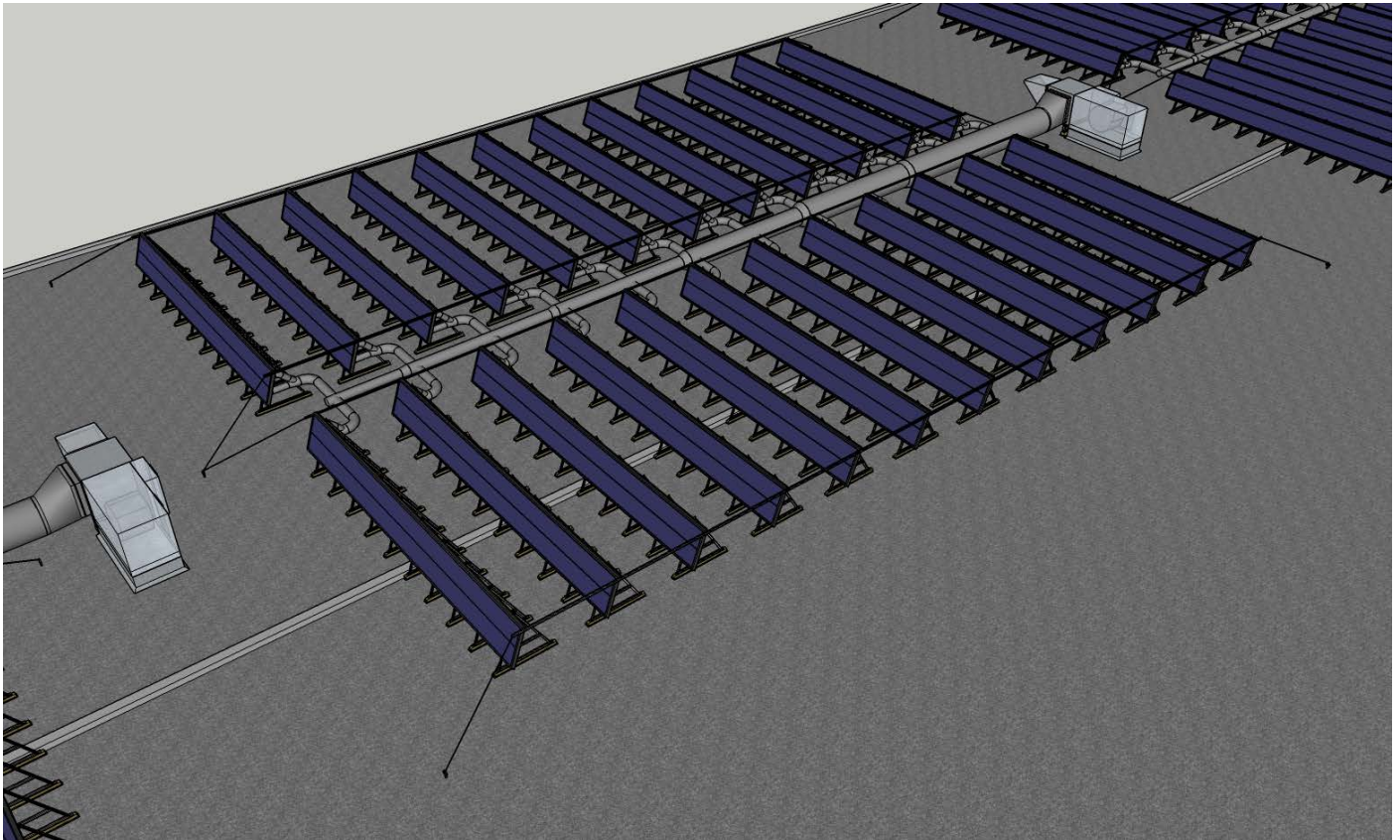
Connection to MAU



Once the collectors are mounted, the supply ducts are to be connected to the collector's outlet (see on left).

Typically, Trigo recommends that there be a balancing key for each collector section leading to the main duct.

A bypass damper is also recommended at the inlet of the HVAC unit for summer operation when there is no call for heat.



Typical arrangement of Fresco collectors connected to a make-up air unit

Depending on the project, there are in some cases junction bars between rows at specific location - please refer to shop drawings provided by Trigo.

Guy wires may also be recommended by the structural engineer. These are to be connected to surrounding anchor points (parapets, anchor bars, etc.). Structural engineers' recommendations in this regard must be carefully followed.