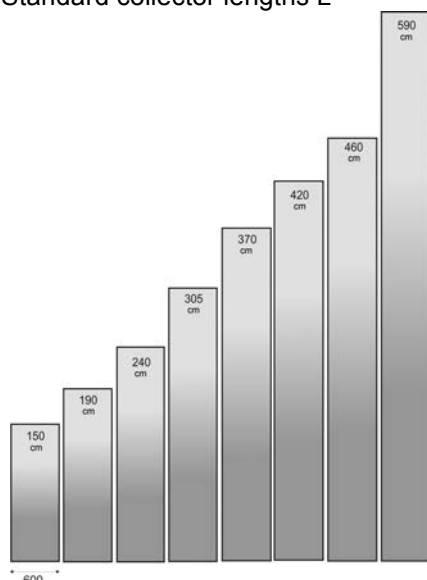




Standard collector lengths L



Collector

Type	Flate plate collector
Solar heating system design	Drain-back system, mandatory
Mounting	Roof or facade integrated
Collector module width	60 cm
Standard lengths L	150 190 240 305 370 420 460 590 cm
Aperture area	0.76 0.98 1.25 1.60 1.95 2.22 2.44 3.14 m ²
Gross area	0.90 1.14 1.44 1.83 2.22 2.52 2.76 3.54 m ²
Weight (without heat carrier) ¹	approx. 7.7 kg/m ²
Tilt angle min. ... max.	25° ... 90°
Conversion factor η_0	0.77
Heat transfer coefficients K_1 / K_2	3.0 W/(m ² K) / 0.035 W/(m K) ²
Stagnation temperature ²	155 °C
Max. wind and snow load	according to EN 12975

Framing, 65 mm

Material, framing	Aluminium, anodized
Height, side profiles	65 mm
Width, side profiles	30 mm

Absorber

Material	PPS, polyphenylene sulfide
Coating	black paint coating, non-selective
Absorptance / emittance	0.94 / 0.76
Intrinsic design / outer wall thickness	Twin-wall sheet / 0.5 mm
Standard width / height	554 mm / 6 mm
Standard absorber lengths	= standard collector length L - 7 cm
Connections inlet (inner / outer)	Ø 20 mm / Ø 24 mm
Connections outlet (inner / outer)	Ø 20 mm / Ø 24 mm
Parallel tube segments	56
Heat carrier	pure water without additives
Heat carrier volume	≈ 3.5 l/(m ² gross area)
Recommended volume flow	2.0 - 2.5 l/(min module) = 120 - 150 l/(h module)
Heat carrier flow direction	vertical
Max. gauge / operating pressure	approx. 0.5 bar
Pressure drop (per module)	negligible under operation with correct heat carrier flow

Cover Sheet

Material	Polycarbonate; Sun Type, clear, with anti-UV treatment
Intrinsic design	Twin-wall sheet, rectangular structure, 10 x 10 mm
Sheet height	10 mm
Standard width	585 mm
Weight	1.7 kg/m ²
Transmittance (light) ³	0.85
U-value	3.1 W/(m ² K)

Thermal insulation

Material	Rock mineral wool, insulation boards for flat solar collectors
Thickness	25 mm
Width	590 mm
U-value	0.035 W/(mK)
Density	50 kg/m ³



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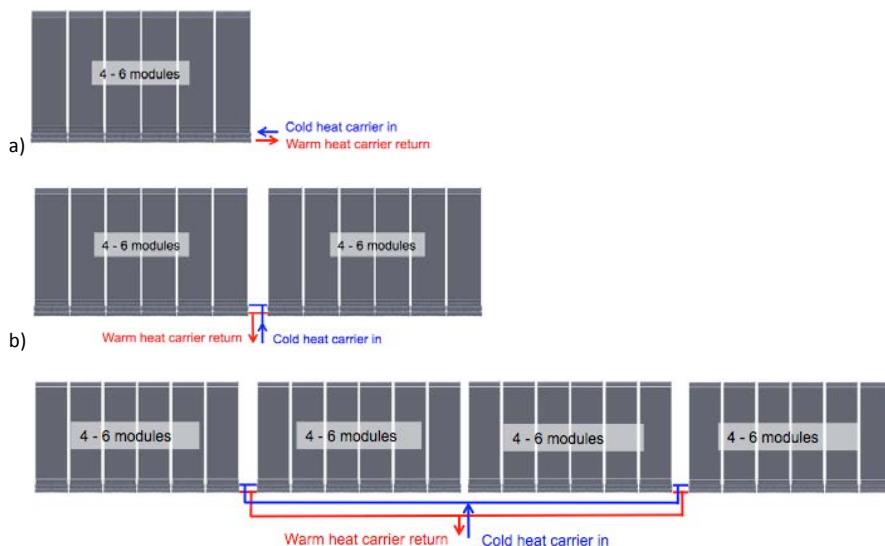
¹ Collector module weight depends on collector module length (approx. 8.0 kg/m² for shortest and approx. 7.5 kg/m² for longest modules).

² Measured by manufacturer (I=1000 W/m², T_a=30°C).

³ Measured with a lux-meter as per NF P38-511.

Connection examples

- Depending on the module length, up to six modules of the AventaSolar collector V65 can be coupled in parallel through the forward and return manifold pipes of the absorber module.
- For collector fields larger than six modules the field is symmetrically split into sections, where up to six modules are interconnected.⁴



Connection components

EPDM connectors with metal sleeves for joining forward and return pipes of the manifold of two neighboring absorber modules;

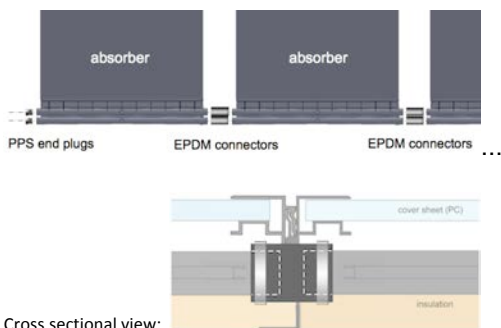
PPS end plugs for closing forward and return manifolds pipes of outermost absorber modules.

Sealing gaskets:

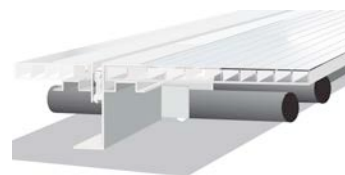
PPS end plugs : 2 x O-rings

Recommended solar circuit pipes and connectors

PEX Combi pipe-in-pipe (\varnothing 16, ... 25 mm) with PPSU connectors

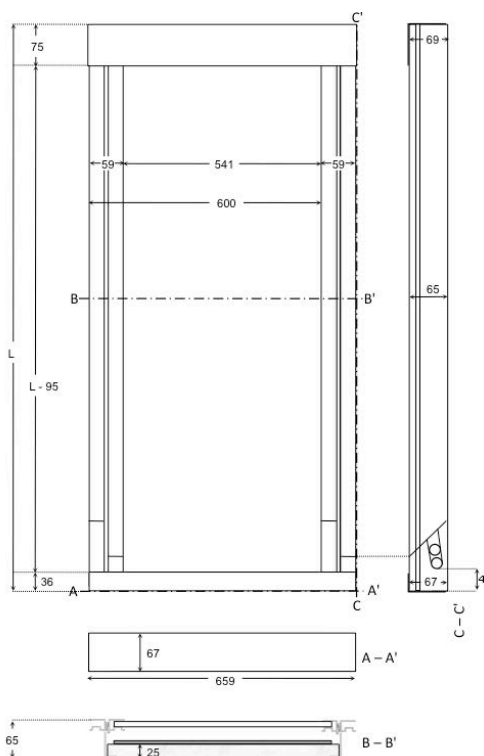
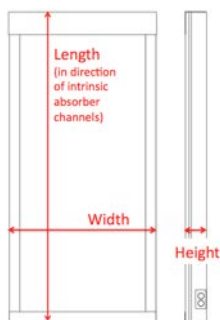


View top front:



Collector dimensions

Definition of dimensions



⁴ Note that the hydraulic connection is dependent on the length of the collectors and the present description is a general guideline for average-sized collector lengths and fields. Aventa can advise with finding the best solution in each particular case.