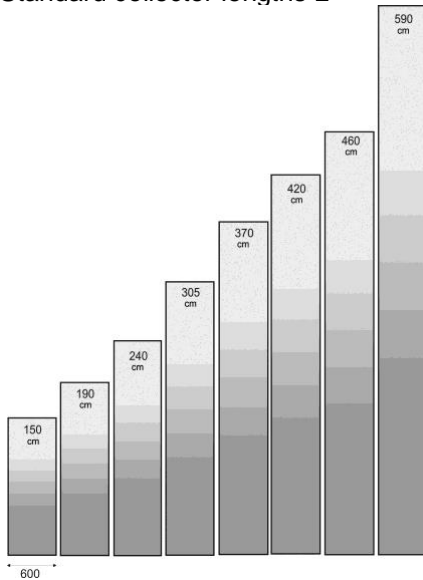




Standard collector lengths L



### Collector

Type	Flat 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 <sup>2</sup>
Gross area	0.90 1.14 1.44 1.83 2.22 2.52 2.76 3.54 m <sup>2</sup>
Weight (without heat carrier) <sup>1</sup>	approx. 7.7 kg/m <sup>2</sup>
Tilt angle min. ... max.	25° ... 90°
Conversion factor <sup>2</sup> $\eta_0$	0.77
Heat transfer coefficients <sup>2</sup> $K_1 / K_2$	3.0 W/(m <sup>2</sup> K) / 0.035 W/(m K) <sup>2</sup>
Stagnation temperature <sup>2</sup>	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 <sup>2</sup> 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 <sup>2</sup>
Transmittance (light) <sup>3</sup>	0.85
U-value	3.1 W/(m <sup>2</sup> K)

### Thermal insulation

Material	Rock mineral wool, insulation boards for flat solar collectors
Type	KNAUF TSP Solar Board D5
Thickness	25 mm
Width	590 mm
U-value	0.035 W/(mK)
Density	50 kg/m <sup>3</sup>



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<sup>1</sup> Collector module weight depends on collector module length (approx. 8.0 kg/m<sup>2</sup> for shortest and approx. 7.5 kg/m<sup>2</sup> for longest modules).

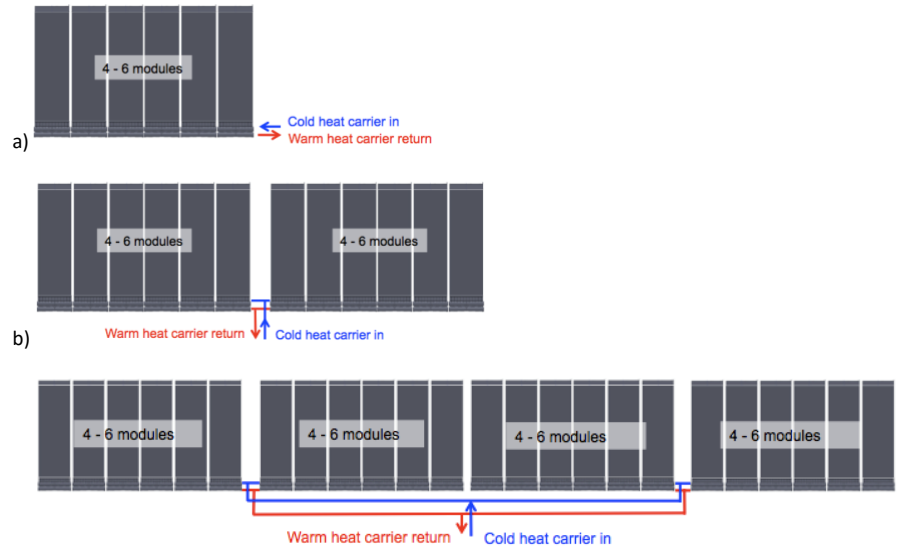
<sup>2</sup> Measured by manufacturer (I=1000 W/m<sup>2</sup>, T<sub>a</sub>=30°C).

<sup>3</sup> Measured with a lux-meter as per NF P38-511.

Subject to change without prior notice.

### 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.<sup>4</sup>



### Connection components

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

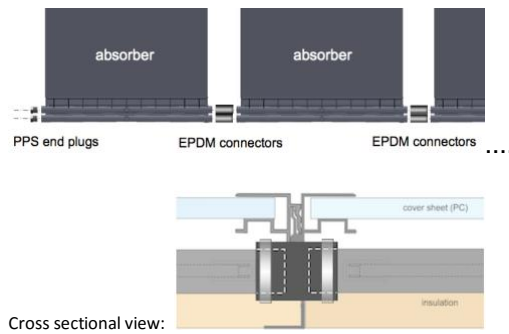
**PPS end plugs** for closing forward and return manifolds pipes of outermost absorber modules.

#### Sealing gaskets:

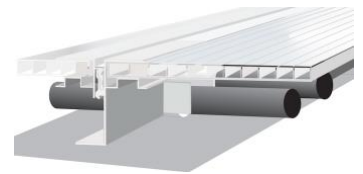
PPS end plugs : 2 x O-rings

#### Recommended solar circuit pipes and connectors

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

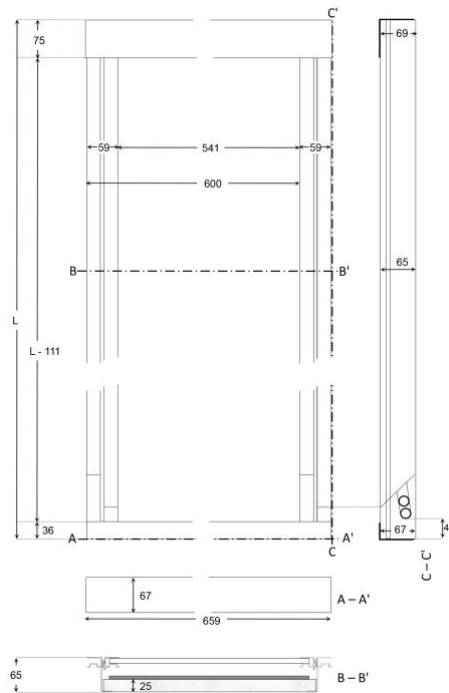
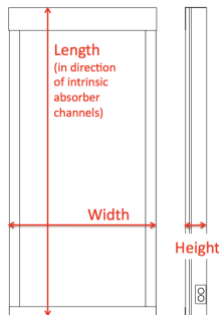


View top front:



### Collector dimensions (all in mm)

#### Definition of dimensions



<sup>4</sup> Note: 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.

*Subject to change without prior notice.*