

# Flat plate collector K420MS-Cu

## Technical data

Type of construction	Flatplate collector for on-roof, flat-roof and facade mounting
Absorber type	KBB absorber with Cu-sheet and Cu-tubes, Absorber with 1serpentine $\varnothing 9\text{mm}$ and 2 manifolds $\varnothing 22\text{mm}$
Measurement (L / W / H)	1870 / 1150 / 95 mm
Gross area	2.175 m <sup>2</sup>
Aperture area/Absorber area (net)	1.969 m <sup>2</sup> / 1.969 m <sup>2</sup>
Total Weight dry	35.2 kg
Liquid content	1.73 l
Efficiency $\eta_0$	77.5 %, related to the aperture area
Heat loss coefficient a1	3.73 W / (m <sup>2</sup> K)
Heat loss coefficient a2	0.0152 W / (m <sup>2</sup> K <sup>2</sup> )
Heat loss coefficient a40	4.338 W / (m <sup>2</sup> x K <sup>2</sup> )
Max. stagnation temperature	217 °C
Absorber coating	Highly selective on copper
Absorptance / Emittance	95 % / 5%
Covering	Low iron, structured, solar safety glass (ESG)
Transmission of covering	91.5 %
Impact resistance of covering	Cover passed the optional impact resistance tests following EN12975-2.
Nominal flow	120 l/h (low flow conditions: 50 l/h)
Nominal pressure loss	280 mbar (low flow conditions: 90 mbar, water/propylen-glykol 20°C)
Hydraulic connection	Parallel connection with collectors side-by-side
Max. operation pressure	10 bar
Heat insulation	Mineral wool 50 mm
Collector case	Aluminium frame, powder coated
Angle of inclination	15 – 90°
Permissible wind and snow load	3 kN/m <sup>2</sup> suction, 5 kN/m <sup>2</sup> pressure
Recommended heat transfer fluid	Antifreeze mix based on propylene-glycol
Report no. of Performance Test,	88-07/D,
Reliability Test acc. to EN12975	89-07/Q
Solar Keymark no. / expiry date	011-7S1683 F / 2014-06-30
Guarantee	10 years for functionality and weathering resistance

