

Schüco Premium V

Flat Plate Solar Collector



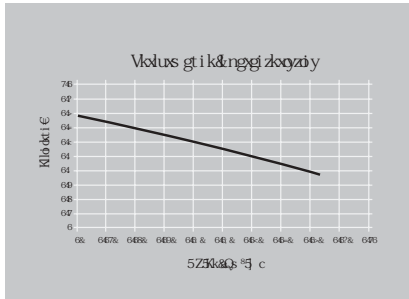
The Schüco Premium V high-performance solar collector converts solar energy into heat and is excellent for providing domestic hot water as well as for heating swimming pools. The high selectivity absorber coating and optimum thermal insulation maximize efficiency. The absorbed solar heat is transferred to a storage tank by freeze-protected, non-toxic solar fluid through a serpentine copper pipe. This aesthetically pleasing collector was developed with performance, longevity, and simple installation in mind.

Features

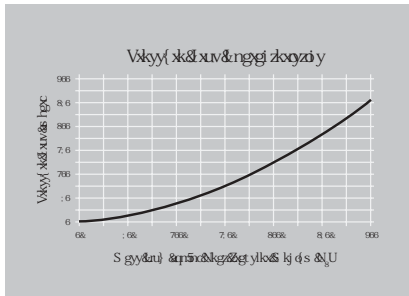
- High efficiency with high selectivity absorber coating.
- Low energy loss due to excellent thermal insulation.
- Robust silver anodized aluminum frame for maximum durability.
- Corrosion-resistant materials for high reliability and long service life.
- High transparency, low-iron glazing.
- Superior flow control over conventional header/riser designs.
- Suitable for pitched roof, flat roof, synergy roof®, awning, and façade installation.
- Tempered glass inset a full half-inch into the frame.
- Quick and simple installation with SolarEZ mounting hardware, collector connectors, and installation accessories.
- Serpentine piping, 1 connection on each long side for portrait orientation of collector.
- Certifications: SRCC OG-100, CE, DIN EN 12975-2, DIN CERTCO, EC guideline 97/23/EC.

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Technical Data



Performance Characteristics



Pressure Drop Characteristics

Size: 84.7 x 49.3 x 3.6 in.
(2152 x 1252 x 93 mm)
Collector surface area (A_g):
29 sqft. (2.69 m²)
Weight (empty): 121 lbs. (55 kg)
Efficiency: $\eta_o = 78.4\%$
Heat loss coefficient: $k_1 = 4.28 \text{ W/m}^2\text{K}$; $k_2 = 0.014 \text{ W/m}^2\text{K}^2$
Incident angle modifier: $k_{(50)} = 0.96$
Thermal output: 2.0 kW_{th}

Absorber long-wave emissivity:
 $\epsilon = 5.0\%$
Absorber short-wave absorptivity:
 $\alpha = 95\%$
Absorber surface area:
27.1 sqft. (2.52 m²)
Aperture surface area:
27.0 sqft. (2.51 m²)
Absorber material: Copper
Absorber coating: High selectivity

Heat transfer fluid volume:
0.53 gal. (2.0 ltr.)
Minimum volume flow (up to max. 4 collectors in series):
0.66 gal./min (2.5 ltr./min)
Pressure drop (0.66 gal./min solar fluid): 1.1 psi (75.0 mbar)

Connection:
12.0 mm Cu pipe, serpentine
Connector type:
Compression fitting
Operating pressure:
46.4 psi (3.2 bar)
Permissible excess operating pressure: 145 psi (10 bar)
Test pressure: 290 psi (20 bar)
Stagnation temperature:
381 °F (194 °C)
Maximum operating temperature:
248 °F (120 °C)

Solar glazing:
Low-iron, high transparency
Transmittance: >91.0%
Thickness: 0.16 in. (4mm)

Frame material: Aluminum
Gaskets: EPDM
Thermal insulation:
0.79 in. (20 mm) mineral wool

Schüco article
Premium V 231 156
Schüco installation system
SolarEZ

Specifications subject to change without notice.

Schüco USA L.P.
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