

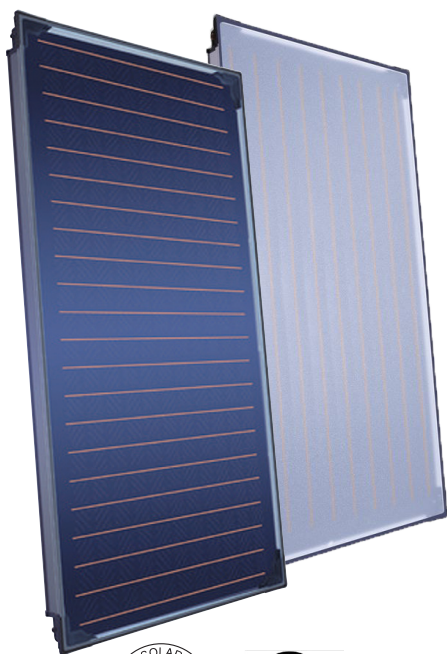
# Solar Thermal Flat Plate Collectors | FKT-1, FKC-1

## Solar Thermal Water Heating Solutions

Models: FKT-1, FKC-1  
Now is the time to start  
utilizing renewable resources



**BOSCH**  
Invented for life



Bosch collectors use the energy from the sun to heat water for domestic, space and pool heating applications and are combined with a storage tank and auxiliary back-up to provide comfort and reliability. The collectors are available in portrait (vertical) and landscape (horizontal) formats.

### Features

- ▶ Excellent value & optimal performance using high selective absorber coating
- ▶ Fiberglass frame & solar safety glass for robust & durable construction
- ▶ Fastest hydraulic collector connection on the market
- ▶ Universal mounting systems

### Common Applications

- ▶ Domestic hot water
- ▶ Space heating
- ▶ Pool heating

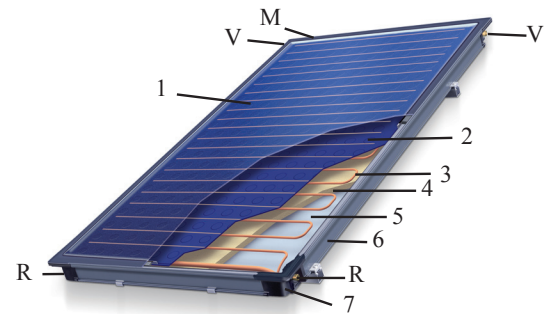


# Solar Thermal Flat Plate Collectors

## Solar Thermal Water Heating Solutions

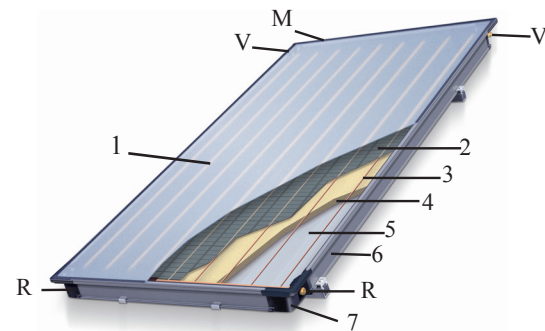
Technical Specifications	FKT-1s Portrait	FKT-1w Landscape	FKC-1s Portrait	FKC-1w Landscape
Part Number	8718530424	8718530425	7747025774	7747025775
Gross Collector Area (m <sup>2</sup> )	25.95 Ft <sup>2</sup> (2.41)	25.95 Ft <sup>2</sup> (2.41)	25.95 Ft <sup>2</sup> (2.41)	25.95 Ft <sup>2</sup> (2.41)
Net Aperture Area (m <sup>2</sup> )	24.3 Ft <sup>2</sup> (2.25)	24.3 Ft <sup>2</sup> (2.25)	24.3 Ft <sup>2</sup> (2.25)	24.3 Ft <sup>2</sup> (2.25)
Dry Weight (kg)	97 lbs. (44)	99 lbs. (45)	90 lbs. (41)	92 lbs. (42)
Fluid Content (L)	0.37 gal (1.43)	0.46 gal (1.76)	0.23 gal (.86)	0.33 gal (1.25)
Max. Operating Pressure (°C)	248°F (120)	248°F (120)	248°F (120)	248°F (120)
Stagnation Temperature (°C)	370°F (188)	370°F (188)	370°F (188)	370°F (188)
Solar Glass Thickness (mm)	1/8" (3.2)	1/8" (3.2)	1/8" (3.2)	1/8" (3.2)
Solar Glass Transmissivity	91.5%	91.5%	91.5%	91.5%
Coating	Highly Selective PVD	Highly Selective PVD	Highly Selective Black Chrome	Highly Selective Black Chrome
Absorptivity	95% ± 2%	95% ± 2%	96% ± 2%	96% ± 2%
Emissivity	5% ± 2%	5% ± 2%	12% ± 2%	12% ± 2%
Absorber Material	Copper with Ultrasonic Welding			
Absorber Type	Double Meander	Double Meander	Harp	Harp
Collector Type / Construction	Plug & Socket Connector / Open Vented			
Thermal Insulation (mm)	2 1/6" Mineral Wool, High Temperature Resistant & Outgassing Free			
Max. Operating Pressure (bar)	145 psi (10)	145 psi (10)	87 psi (6)	87 psi (6)
Nominal Flow Rate (L/hr)	0.22 gpm (50)	0.22 gpm (50)	0.22 gpm (50)	0.22 gpm (50)
Efficiency $\eta_0$ (%)	85.1	85.1	85.1	85.1
Effective Heat Transfer Coefficient				
$k_1 W/(m^2 \geq K^1)$	4.0360	4.0360	3.6810	3.6810
$k_2 W/(m^2 \geq K^2)$	0.0108	0.0108	0.0173	0.0173
Collector Yield (Min. Yield Verification <sup>1</sup> )	> 525	> 525	> 525	> 525
Max. # Col / Row Opposite Side Connection	10	10	10	10
Max. # Col / Row Same Side Connection	5	5	Not Permitted	Not Permitted
Y-intercept	0.746	0.746	0.723	0.723

### FKT-1



- (1) Solar Safety Glass
- (2) Absorber Plate
- (3) Double Meander Piping
- (4) Mineral Wool Insulation
- (5) Galvanized Steel Rear Panel
- (6) Fiberglass Frame
- (7) Extruded Plastic End Cap
- (V) Supply
- (R) Return
- (M) Collector Sensor Well

### FKC-1



- (1) Solar Safety Glass
- (2) Absorber Plate
- (3) Harp Piping
- (4) Mineral Wool Insulation
- (5) Galvanized Steel Rear Panel
- (6) Fiberglass Frame
- (7) Extruded Plastic End Cap
- (V) Supply
- (R) Return
- (M) Collector Sensor Well

Performance Rating SRCC (OG100 Certified)	Category (Ti-Ta) Ti= inlet fluid temp. Ta= ambient air temp	BTU Per Ft <sup>2</sup> Per Day			Thousands of BTU Per Panel Per Day		
		Clear Day 2,000 BTU/ Ft <sup>2</sup> .Day	Mildly Cloudy 1,500 BTU/ Ft <sup>2</sup> .Day	Cloudy Day 1,000 BTU/ Ft <sup>2</sup> .Day	Clear Day 2,000 BTU/ Ft <sup>2</sup> .Day	Mildly Cloudy 1,500 BTU/ Ft <sup>2</sup> .Day	Cloudy Day 1,000 BTU/ Ft <sup>2</sup> .Day
FKT-1s / FKT-1w	A (-9°)	1,486	1,119	757	36.1	27.2	18.4
	B (9°)	1,358	992	630	33.0	24.1	15.3
	C (36°)	1,156	798	444	28.1	19.4	10.8
	D (90°)	757	432	128	18.4	10.5	3.1
	E (144°)	391	128	0.0	9.5	3.1	0.0
FKC-1s / FKC-1w	A (-9°)	1,481	1,111	782	36	27	19
	B (9°)	1,317	988	617	32	24	15
	C (36°)	1,111	741	412	27	18	10
	D (90°)	700	412	82	17	10	2
	E (144°)	370	82	0.0	9	2	0.0

#### Bosch Thermotechnology Corp.

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