Solar Collectors

Firebird offer twocollector types to ensure that customers can choose the right collector to suit their installation requirements and budget.

TZ58-1800 Heat Pipe Solar Collector

The TZ58-1800 Heat Pipe Solar Collectors offer an optimum performance to price ratio.
The tubes are highly efficient due to a round shaped absorber design so that they capture the solar energy throughout the day.

Other features:
High build quality - aluminium manifold design, nickel plated condenser head, boro silicate glass.
Manifold can be installed initially and the tubes add edlater during commis sioning (avoiding the lifting of heavy items onto the roof).
Reinforced mounting kit manufactured to Firebird's specification.

Sales Codes:	SOL820VTS - 20 Tube Set
	SOL830VTS - 30 Tube Set

CVSKC-10 Vacuum Tube Collector

The CVSKC-10 Vacuum Tube Collector is a U-pipe direct flow evacuated tube, often referred to as a 'Sydney' tube. They are amongst the most efficient solar collector designs due to the CPC reflector aluminium plate placed behind the tubes. It reflects solar radiation back onto the absorber. The CVSKC-10 collector offers optimum performance in terms of the installation footprint. Ten tubes have an incredible aperture area of 1.6m and with a height of only 1.64m, will fit on most restricted roof spaces.

Other features:
Delivered assembled to cut down installation time.
Co-axial glass tubes with excellent vacuum ~5 Pascals.
Transfer manifold insulated with mineral wool insulation.
Light weight construction for ease of handling.

Sales Code:	SOL150VTC

Solar Specifications

Technical Specification		TZ58-1800 Heat Pipe		CVSKC-10 Vacuum Tube
		20 tube set	30 tube set	
Outer dimensions:	Height [mm]	2020	2020	1645
	Width [mm]	1825	2655	1115
	Depth [mm]	155	155	107
Tube dimensions	Diameter [mm]	58	58	37
	Length [mm]	1800	1800	1550
Weight	[kg]	78	115	31
Gross collector area	[m2]	3.507	5.005	1.83
Aperture area	[m2]	1.867	2.791	1.59
Max operating pressure	[bar]	6	6	10
Stagnation temperature	[˚C]	200	200	286
Angle of inclination permitted		15˚ to 75˚	15˚ to 75˚	15˚ to 75˚
Performance data *				
Zero-loss collector efficiency	η0	73.4%	73.4%	60.5%
Collector heat loss coefficient, a1	[W/m2 K]	1.529	1.529	0.850
Collector performance ratio, a2	[W/m2 K2]	0.0166	0.0166	0.010
Absorption		> 94 %	> 94 %	> 96%
Emission		< 7%	< 7%	< 6%
Annual energy yield	[kWh/m2]	> 525	> 525	> 529

*All based on aperture area.