

Glass Evacuated Tube Collector MPI58-1800-14-AG

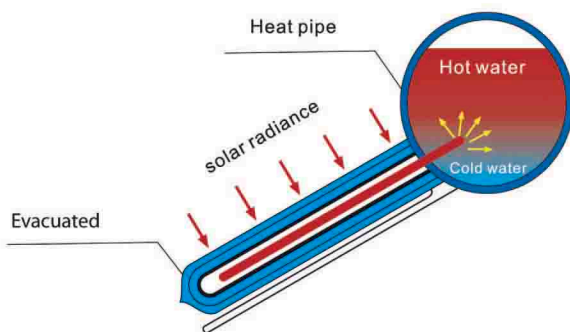
The glass evacuated tube collector MPI58-1800-14-AG moves household water through the system without pumps. Its design is based on a phenomenon known as natural convection, to circulate water through the collectors and to the tank. These systems are very reliable and relatively inexpensive.

Features MPI58-1800-14-AG

- Electricity outage and electric pump breakdown are not an issue
- High output due to vacuum glass insulation
- Reliable, simple structure, easy installation
- Daily average efficiency > 50%
- Borosilicate glass : high chemical and thermal shock resistance
- Withstands water pressure < 0.1MPa
- Very simple assembly process - low assembly costs
- Could be installed using parallel or series connection
- Auxiliary electric booster is optional - 1500W or 3000W
- Hot water can be used directly or as a pre-heat



Typical section diagram of MPI58-1800-14-AG



Working Principal

Specifications MPI58-1800-14-AG

Model	MPI58-1800-14-AG
Collector type	evacuated tube collector
Installation type	roof mounted or ground stand
Tube structure	all glass coaxial double-layer tubes
Outer tube diameter	$\Phi 58 \pm 0.7\text{mm}$
Inner tube diameter	$\Phi 47 \pm 0.7\text{mm}$
Outer tube thickness	$1.5 \pm 0.15\text{mm}$
Inner tube thickness	$1.5 \pm 0.15\text{mm}$
Tube length	$1800 \pm 4\text{mm}$
Unit tube weight	$1.35 \pm 0.12\text{kg}$
No. of tubes	14
Absorber surface area	1.82m^2
Absorptance (α)	$0.94 \sim 0.96$
Emissance (ϵ)	$0.04 \sim 0.06$
Collector glazing	evacuated tubes (borosilicate glass)
Max. operating pressure	$\leq 5 \times 10^{-3} \text{ Pa}$
Transmittance of outer tube	0.91
Idle temperature	$270 \sim 300 \text{ }^\circ\text{C}$
Heat-loss coefficient	$\leq 10 \text{ W/m}^2 \text{ }^\circ\text{C}$
Bearing hailstone ability	hail stone diameter $\Phi 25\text{mm}$
Pressure endurance	1MPa
Outer shell of tank	Aluminium with electrophoresis treatment or
Inner tank	0.6mm thick SUS304 Stainless Steel
Inner tank thickness	0.6mm
Stand	Galvanized steel or aluminum plate
Insulation	60 ~ 70 mm polyurethane integral foaming
Sealing rubber	110 methyl silicone rubber with Vinyl
Tailstock	ABS
Daily average efficiency	>50%
Collector angle	$33^\circ \sim 55^\circ$ for flat roof 45° for tilted roof
Optional electric booster	1500W or 3000W