

Heat Transition U-tube Collector MPi58-1700-15-HTU , MPi58-2000-18-HTU

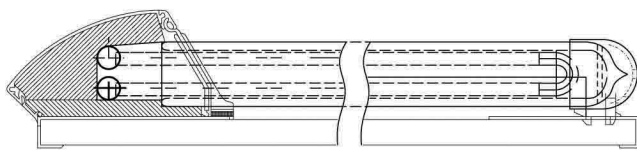
The heat transition U-tube collectors are always connected with existing heating supply device in any situation, whether on a flat roof, in a backyard garden, or on a building facade. Its highly selective vacuum coating converts solar energy and transfers heat to the metal U-tube by an aluminum fin. The anti-freeze mixture inside the U-tube is heated, and conducts the heat energy to the water storage tank.

Features of MPi58-1700-15-HTU, MPi58-2000-18-HTU

- Suitable for frigid zones because there is no water in the tube
- Designed for pressurized system
- High solar-thermo conversion and low heat loss
- High output due to vacuum insulation
- High output due to advanced solar selective coatings:
 - metal-Aluminum nitride cermet (M-AIN) materials
- Borosilicate glass : high chemical and thermal shock resistance
- Simple maintenance-tubes can be replaced without having to empty solar loops
- High output even at lower outside temperature
- Very simple assembly process - low assembly costs
- Could be installed using parallel or series connection



Typical section diagram



Bearing hailstone ability	hail stone diameter $\Phi 25\text{mm}$
Pressure durability	1MPa
Housing	304-2B grade stainless steel or aluminum alloy
Sealing ring	macromolecular silicon rubber
Heat insulation	polyurethane and glass wool
Heat insulation thickness	20mm (average)
Feet holder	nylon 66
Freezing resistance	-35 °C
Wind resistance	30mps

*) copper, silicon rubber sealing plug

**) Data based on daily solar radiation $17\text{MJ}/\text{m}^2$ ($4.7\text{Kwh}/\text{m}^2$) and the water temperature up $35\text{ }^\circ\text{C}$

Specifications

Model*	MPi58-1700-15-HTU	MPi58-2100-18-HTU
Collector type	evacuated tube collector	
Tube type	heat transition U-tube	
Installation type	roof-mounted, in-roof	
Tube structure	all glass coaxial double-layer tubes (U-tube copper in evacuated tubes)	
Solar tube diameter	$\Phi 58$	
Outer tube thickness	$1.8 \pm 0.15\text{mm}$	$2.1 \pm 0.15\text{mm}$
Inner tube thickness	$1.8 \pm 0.15\text{mm}$	$2.1 \pm 0.15\text{mm}$
Tube length	1.72m	2.02m
No. of tubes	15	18
Gross surface area	2.52m ²	2.60m ²
Open surface area	1.66m ²	1.70m ²
Absorber surface area	0.43m ²	0.46m ²
Width	1128mm	1344mm
Height	1935mm	2235mm
Empty weight	64 kg	65 kg
Collector capacity	2.58L	2.92L
Absorber coating	Graded AIN/SS-AIN/Cu or other highly-selective vacuum coating	
Absorptance (α)	0.94 ~ 0.96	
Emittance (ε)	0.04 ~ 0.06	
Collector glazing	evacuated tubes (borosilicate glass)	
Heat transfer medium	water-glycol	
U-tube	copper	
Max. operating pressure	6 bar	
Idle temperature	250 °C	
Absorption coefficient	> 92%	