

Heat Transition Pipe

MPI47-1500-HT , MPI58-1800-HT , MPI70-1700-HT

The heat transition pipe structure is between all-glass evacuated tube and metal-glass evacuated tube, where its full surface cylindrical absorber with its highly selective vacuum coating is a very high-performance product. Therefore, the collector's module mean heat transfer to the solar loop is extremely efficient.

Features

- 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



Specifications

Model* (A/B)	MPI47-1500-HT	MPI58-1800-HT	MPI70-1700-HT
Name	heat transition pipe		
Tube structure	all glass coaxial double-layer tubes		
Solar tube diameter	Φ 47	Φ 58	Φ 70
Outer tube thickness	1.6 ± 0.15mm		
Inner tube thickness	1.6 ± 0.15mm		
Tubes length	1.5m	1.8m	1.7m
Hot water output**	5.3L	7.15L	6.9L
Empty weight	2.7kg		
Absorber surface area	1.82m ²		
Material of tube coating	Al/N/Al or other highly selective coating		
Absorptance (α)	0.94 ~ 0.96		
Emittance (ε)	0.04 ~ 0.06		
Tube material	evacuated tubes (borosilicate glass)		
Max. operating pressure	≤ 5×10 ⁻³ Pa		
Transmittance of outer tube	0.91		
Idle temperature	270 ~ 300 °C		
Heat-loss coefficient	≤ 10 W/m ² °C		
Bearing hailstone ability	hail stone diameter Φ25mm		
Pressure endurance	1MPa		
Freezing resistance	-35 °C		
Wind resistance	30mps		

*) A- copper, silicon gel sealing plug B- cork sealing plug

**) Data based on daily solar radiation 17MJ/m² (4.7Kwh/m²) and the water temperature up 35 °C

Typical section diagram

