

Evacuated Heat Pipe Collector MPi70-1700-10-EH , MPi70-1900-20-EH

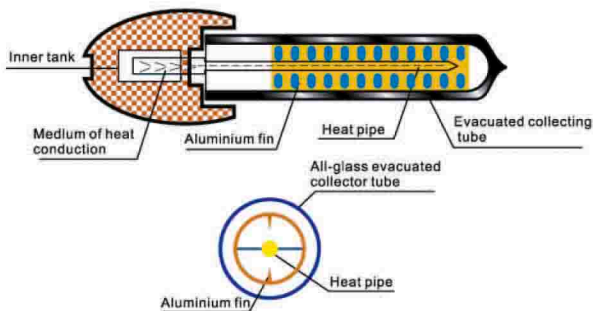
The evacuated heat pipe collectors are always connected with existing heating supply device in any situation, whether on a flat roof, in a backyard garden, or on a building facade. The heat pipe collector structure with its highly selective absorber coating on its metal fin, and with a high-quality insulation make it one of the highest-performance collectors of its type.

Features of MPi70-1700-10-EH , MPi70-1900-20-EH

- 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



Typical section diagram



| | |
|---------------------------|--|
| Housing | 304-2B grade stainless steel or aluminum alloy |
| Frame | stainless steel |
| 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 |

*) MPi70-1700-10-EH: Water in/outlet- left and right sides of manifold
 MPi70-1900-20-EH: Water in/outlet- backside of manifold

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

Specifications

| | | |
|---------------------------|--|----------------------------|
| Model* | MPi70-1700-10-EH | MPi70-1900-20-EH |
| Collector type | evacuated tube collector | |
| Tube type | evacuated heat pipe | |
| Installation type | roof-mounted, in-roof | |
| Tube structure | all glass coaxial double-layer tubes (copper pipes in evacuated tubes) | |
| Solar tube diameter | Φ 70 | Φ 70 |
| No. of tubes | 10 | 20 |
| Outer tube thickness | 2.0 ± 0.15mm | |
| Inner tube thickness | 2.0 ± 0.15mm | |
| Tubes length | 1700mm | 1900mm |
| Absorber surface area | 0.94m ² | 1.88m ² |
| Water supply** | 85L | 170L |
| Width | 1140mm | MPi70-1700-10-EH 2140mm |
| Height | | 1790mm |
| Collector capacity | 1.9L | 3.8L |
| Width | 1060mm | MPi70-1900-20-EH 2060mm |
| Height | | 1830mm |
| Collector capacity | 2.0L | 4.0L |
| Absorber coating | Graded AlN/SS-AlN/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 | |
| Heat pipe | copper | |
| Max. operating pressure | 6 bar | |
| Idle temperature | 250 °C | |
| Absorption coefficient | > 92% | |
| Bearing hailstone ability | hail stone diameter Φ25mm | |