

Mid – temperature solar collector for heating and cooling for buildings and industrial processes.

General description

- HD16.t a solar thermal collector that produces heat up to 235°C (455°F)
- Actuator drives the reflectors to focus sunlight accurately onto the receiver
- Pressurised water circuit delivers heat
- Designed to withstand environmental forces
- Multiple modules can be inter-connected into a single system



Configuration

- Glazed selective absorber for efficient collection and retention of energy
- 6 glazed reflectors in each module, 16 sun focal image, hail protected in inverted mode
- Heavy duty electric tracking actuator

Mechanical characteristics of a typical 8 module system with end extensions*

Dimensions	Length 52.5m (172.2ft), Width 6m (19.7ft), Height 3.72m (12.2ft), reflector area 214m ² (2,305ft ²)
Weight	6,320kg (13,933lb), (750kg (1,653lb) per module, 320kg (705lb) per extension set)
Tubing	1 1/2" rated up to 40 bar pressure
Actuator	Electric leadscrew actuator
Frame	Extruded aluminium
Absorber	Toughened high clarity glass over selective absorber
Receiver	Extruded aluminium structure, stainless steel water tube
Reflector	Welded aluminium precision structure, bonded glass with backing mesh for hail and falling object protection

* One module constitutes the area between two vertical supports.

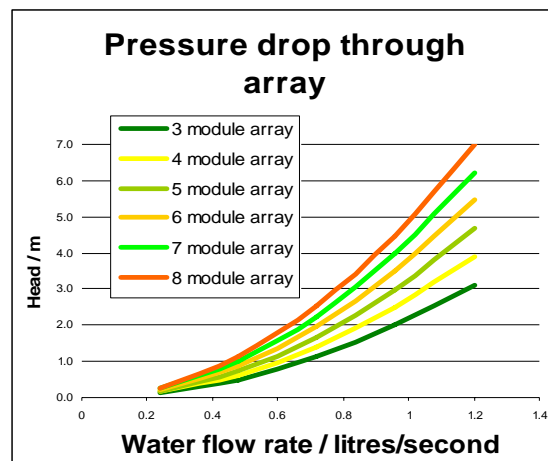
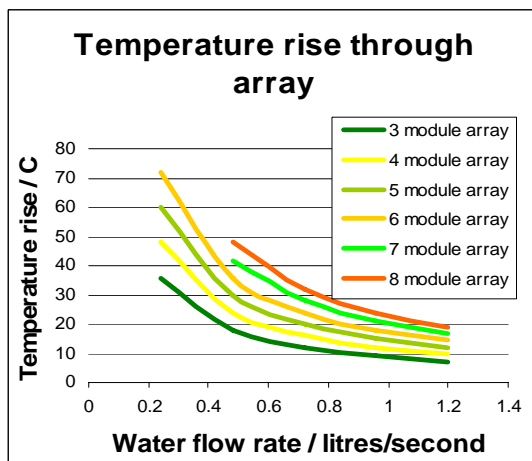
Thermal characteristics of an 8 module system

Maximum heat output	96 kW @ 90°C, 92 kW @ 180°C (325,000 BTU/hr @ 194°F, 300,000 @ 356°F)
Water outlet temperature	182°C (248°F) 3 bar (g)
Oil outlet temperature	235°C (455°F) 6 bar (g)
Steam outlet temperature	180°C (356°F) 9 bar (g)

Environmental stress parameters

Operating temperature range	-30°C to +50°C (-22°F to +122°F)
Operating humidity range	0% to 100%
Front static loading (snow)	400mm (16") maximum
Gust loading	45 m/s (100 mph) maximum in inverted mode
Hailstone impact	50mm (2") @ 30 m/s (73mph) in inverted mode

Characteristics



Applications

Suitable for facility water heating, process heat, absorption chilling and space heating in sunbelt regions.



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