

MT-Power: Thermal Applications 100°C To 180°C

Unrivalled performance in any climate condition, without concentration

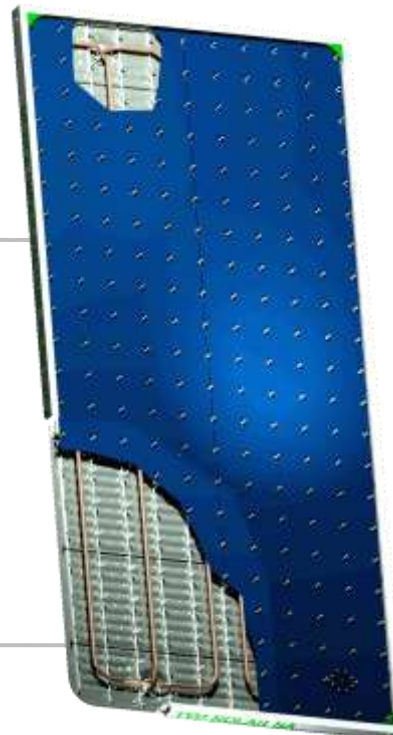
MT-Power is Thermal Vacuum Power Charged™: revolutionary, high-end, high-vacuum flat solar thermal panel designed as an ideal thermal energy source for large-scale applications between 80°C and 180°C such as: air conditioning, desalination, and process heat.

Key FEATURES

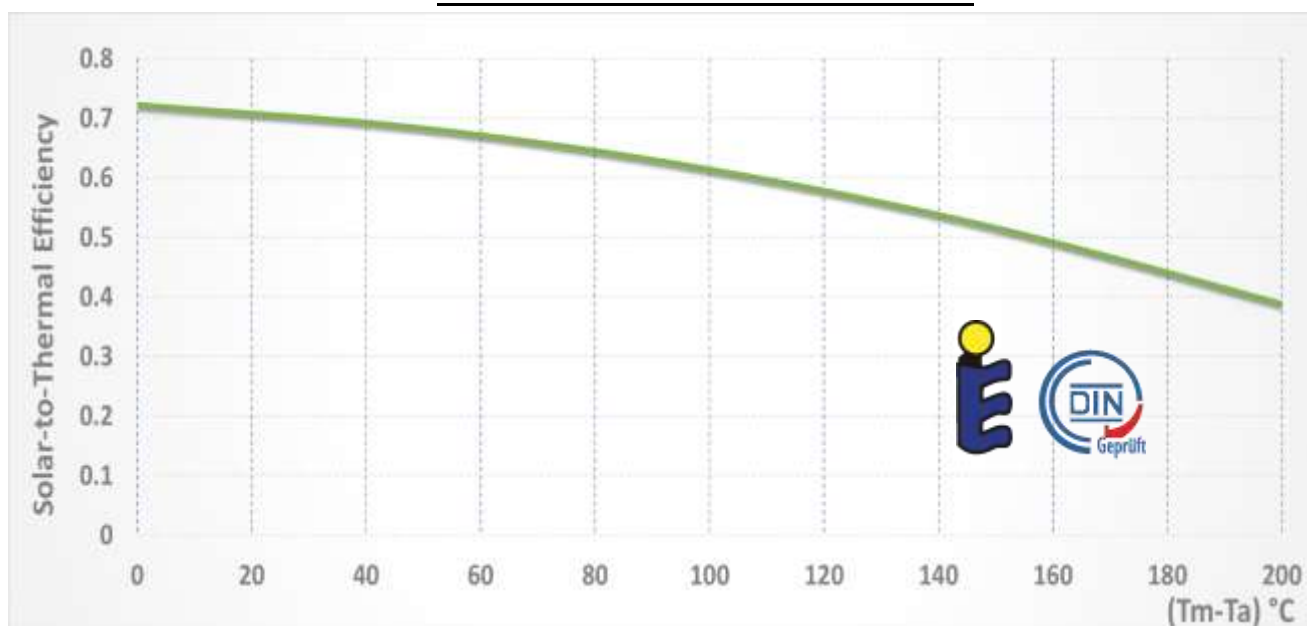
- ✓ Designed to operate above 100°C in large-scale deployments
- ✓ Flat for more active surface, high-vacuum for best performance
- ✓ Embedded return HTF flow to maximise deployment scalability
- ✓ Corrosion-proof all-metal casing for any environment
- ✓ Made with materials qualified for long-lasting high-vacuum operation
- ✓ Spot-Check™ to visually verify vacuum insulation
- ✓ 100% recyclable

Key ADVANTAGES

- ✓ **Lowest cost per Watt**_(thermal)
- ✓ **Highest peak performance:** 500 W_{th}/m² at 180°C (T_{amb} = 30°C)
- ✓ **Highest yearly average output:** due to maximum diffuse light capture
- ✓ **Long durability:** no degradation of performance over long-lasting product lifetime
- ✓ **Zero panel maintenance:** no need for precision cleaning and no serviceable mechanical parts
- ✓ **Superior design for solar fields:** minimizes footprint and balance of system, as well as easing installation



MT-Power Performance Curve



MT-Power is the only solar thermal panel with Solar Keymark certification to 200°C

TVP Solar MT-Power Specifications (v4 SK)

| <i>Physical Characteristics</i> | |
|--|--|
| Dimensions | see diagram for details |
| Unit Gross Area | 1.96 m ² 21 sq. ft. |
| Aperture Area | 1.84 m ² 20 sq. ft. |
| Weight | 53 kg 117 lb |
| Fluid Volume | 1.4 L 47 fl. oz. |
| Heat Absorber-Pipe | Al sheet + Cu pipe |
| Absorber Coating | Alanod Mirotherm |
| Back-plate | AISI 441 stainless steel |
| Glass Coating | Single-sided anti-reflective (interior face) |
| Connecting Ports | SMS PN16 |
| <i>Operating Conditions</i> | |
| Stagnation Temperature | 302 °C 576 °F |
| Max. Operating Pressure | 16 bar 232 psi |
| Pressure Drop H ₂ O @ 260 l/h ; 50°C | 1.4 kPa 138 mm H ₂ O |

MT-Power v4 Solar Keymark-Certified Thermal Performance

| Application | Machinery | T _m (°C) | Peak Power |
|----------------------------|----------------------------------|---------------------|------------|
| Air Conditioning / Cooling | Double-Effect Absorption Chiller | 175 | 1.1 kW |
| | Single-Effect Absorption Chiller | 90 | 1.3 kW |
| Desalination | MED/TVC | 150 | 1.2 kW |
| | MED, and MSF | 80 | 1.4 kW |
| Industrial Process Heat | HTF Heater | 160 | 1.1 kW |
| | Steam Boiler Feedwater | 130 | 1.2 kW |
| | Dryers / Ovens | 110 | 1.3 kW |
| | Tank Temperature Control | 90 | 1.3 kW |
| | District Heating | 80 | 1.4 kW |

Built On Thermal Vacuum Power Charged™ Technology

Thermal Vacuum Power Charged™ family of technologies are designed to make, maintain, and inspect the high-vacuum in TVP flat panels, key to the industry-best sun-to-thermal efficiency. Make: innovations in manufacturing process & equipment, as well as materials such as the patented inorganic, flexible glass/metal seal to resist mechanical stresses and contain the vacuum. Maintain: novel use of materials qualified for long-lasting high-vacuum products, and a patented self-regenerating getter pump assembly to preserve high-vacuum insulation and high performance over panel lifetime. Inspect: patented visual verification tool inside TVP panels showing high-vacuum state for easy deployment troubleshooting.

Thermal Vacuum Power Charged™ panels harness the full power of solar thermal technology – providing unrivalled performance for any thermal application in any climate condition, without concentration.

