

MHP-2550A200A

[General Specification]

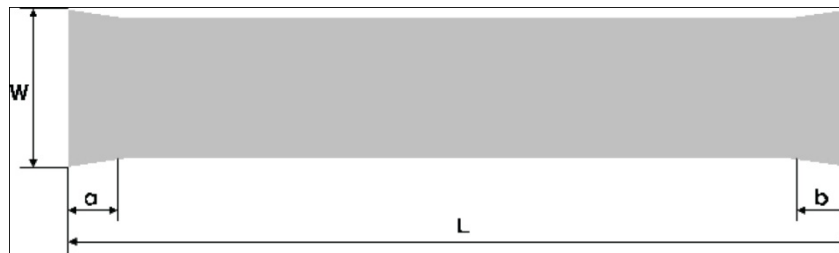
| Item | | Description |
|-------------------------------|------------|----------------------|
| Part Number | | MHP-2550A200A |
| Material of Container | | Aluminium 1050 |
| Wick Structure | | Groove |
| Working Fluid | | Acetone |
| Dimension | Thickness | 2.5 mm |
| | Width | 50.0 mm |
| | Length | 200.0 mm |
| Weight | | 26.0 g (Average) |
| Q _{max} | Horizontal | 75.0 W (at 50°C) |
| | Vertical | 270.0 W (at 50°C) |
| Typical Thermal Resistance | | <0.2°C / W (Average) |
| Operating Inclination, ϕ | | 0 ~ 90° |
| Leak Temperature Criterion | | -40~100°C |

[Scope]

This specification details the requirements and applications for 2.5 mm x 50.0mm x 200.0mm.

[Dimensions]

The dimensional attributes of this shall conform to the following figure.



| Thickness (t) | Width (W) | Length (L) | Ineffective Length (a) | Ineffective Length (b) |
|---------------|-----------|------------|------------------------|------------------------|
| 2.5 mm | 50.0 mm | 200.0 mm | 2.5 mm | 2.5 mm |

[Material]

| | |
|-------------------|----------------|
| Container | Aluminium 1050 |
| Working Fluid | Acetone |
| Surface Treatment | None |

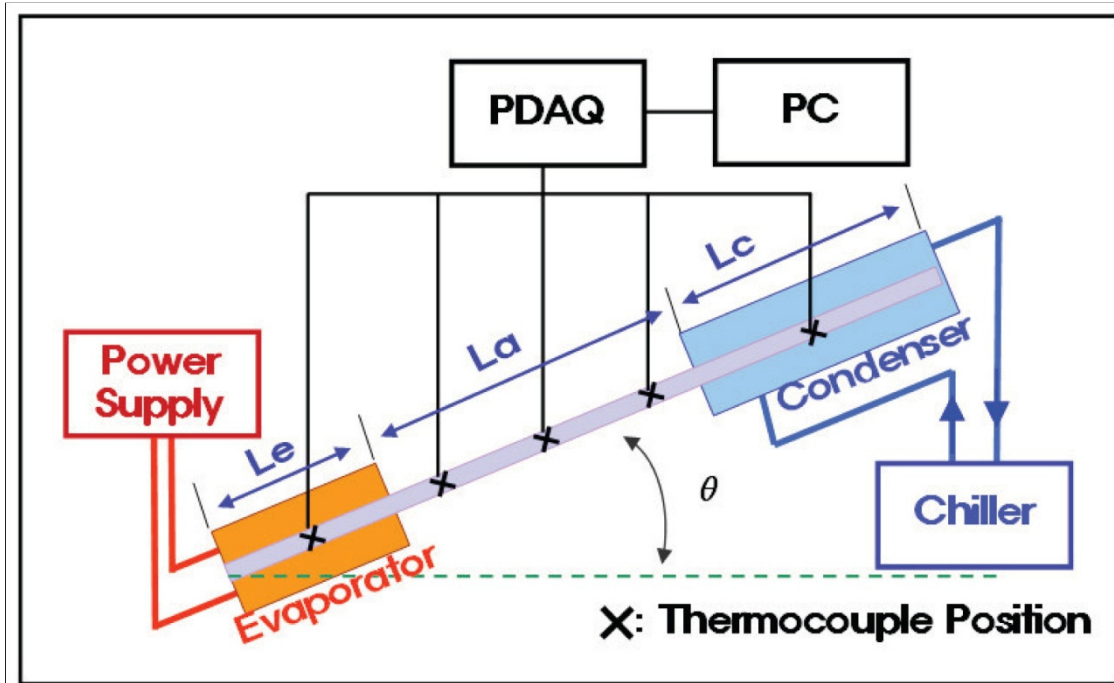
AMEC Thermasol

1-2 Steam Mill Lane, Great Yarmouth, Norfolk, NR31 0HP

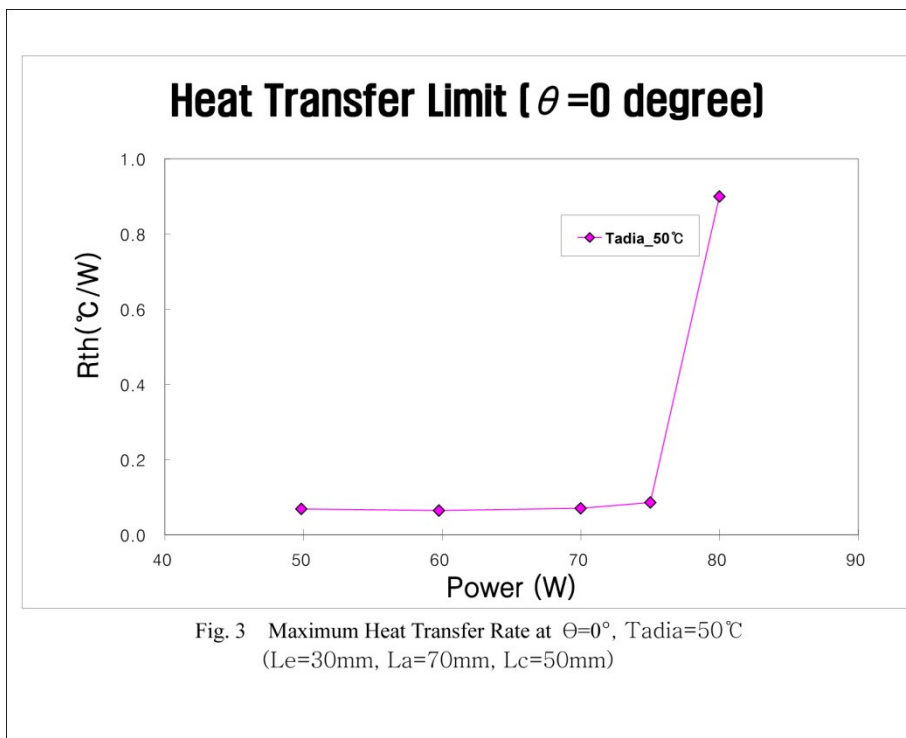
Telephone: +44(0) 1493 668622 Fax: +44(0) 1493 668623

Email: sales@amecthermasol.co.uk Website: www.amecthermasol.co.uk

Test Data - MHP-2550A150A



Qmax Test Apparatus



AMEC Thermasol

1-2 Steam Mill Lane, Great Yarmouth, Norfolk, NR31 0HP

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Heat Transfer Limit ($\theta = 90$ degree)

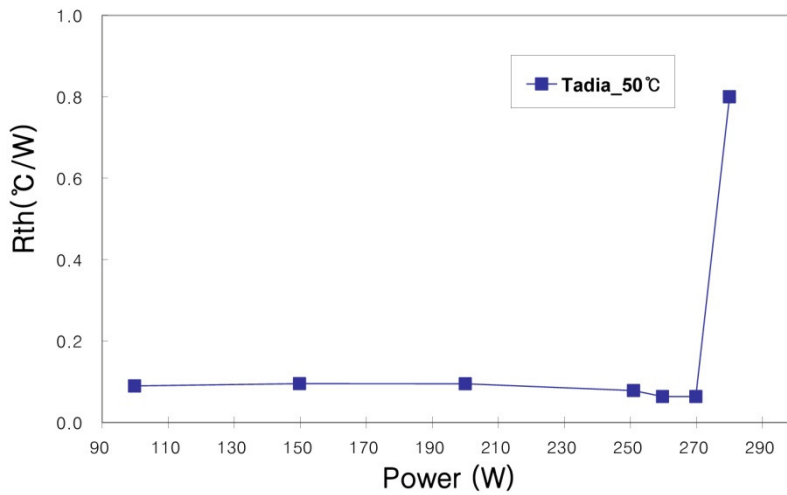


Fig. 4 Maximum Heat Transfer Rate at $\theta=90^\circ$, Tadia=50 $^\circ\text{C}$
 (Le=30mm, La=70mm, Lc=50mm)

Qmax v.s. Tilt

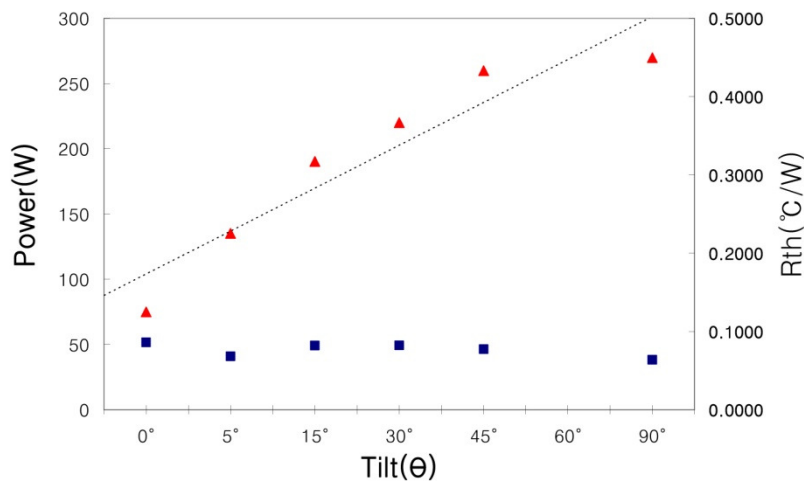


Fig. 5 Maximum Heat Transfer Rate vs. Inclination at Tadia=50 $^\circ\text{C}$
 (Le=30mm, La=70mm, Lc=50mm)

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[High Temperature Leak Test]

Every manufactured S sealed with a mechanical pinch system. The mechanical pinch of container results in a cold weld seal. The average leak temperature is about 170°C.

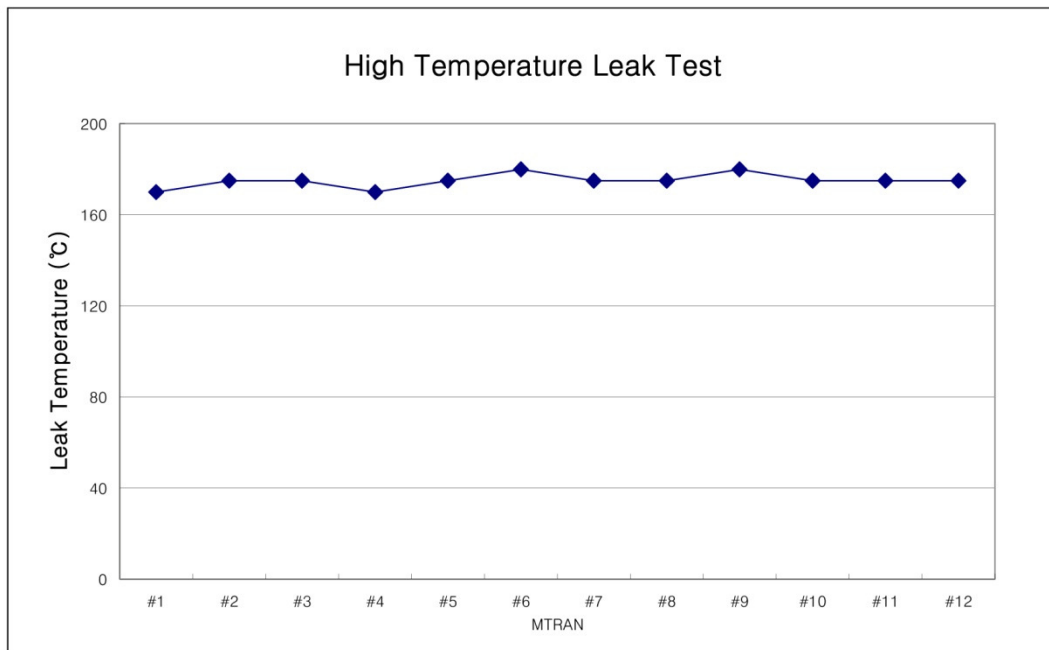


Fig. 6 Leak Test at High Temperature

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[Thermal Response Test]

Every manufactured must pass the thermal response test to ensure its operation and Vacuum and leakage check. The experimental test bench is schematically shown in Fig.6. Water bath temperature, T_w is set at 50°C and the temperature of other end, T_t is measured immediately after it is placed vertically into the water bath. The criterion for acceptance is 5°C ($T_w - T_t$).

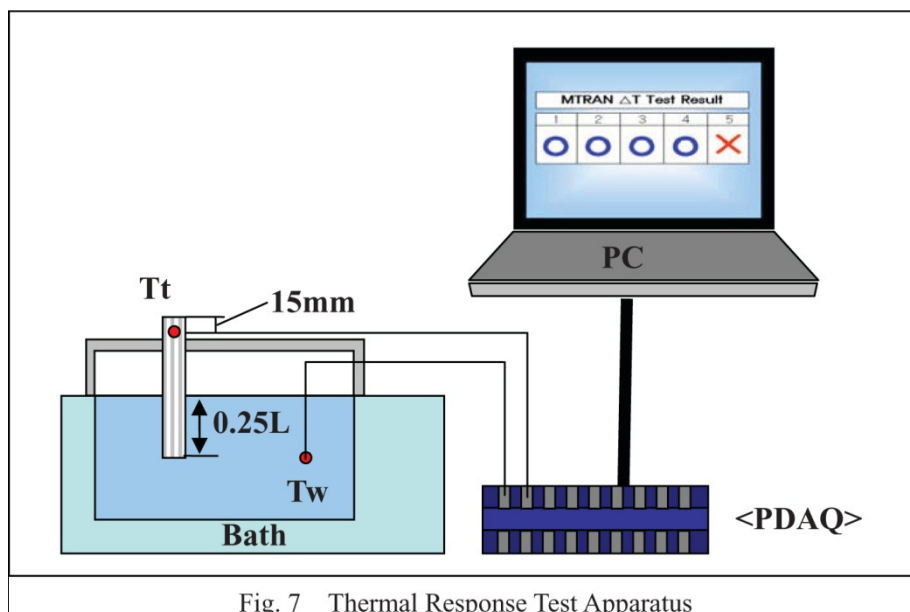


Fig. 7 Thermal Response Test Apparatus

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