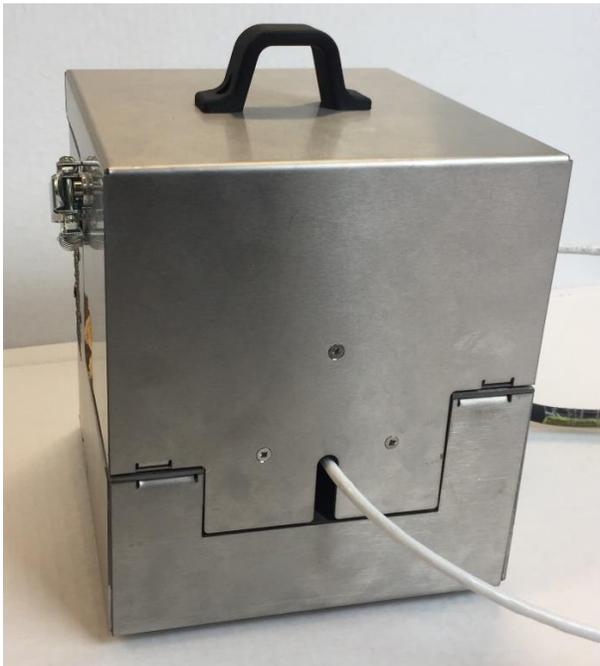
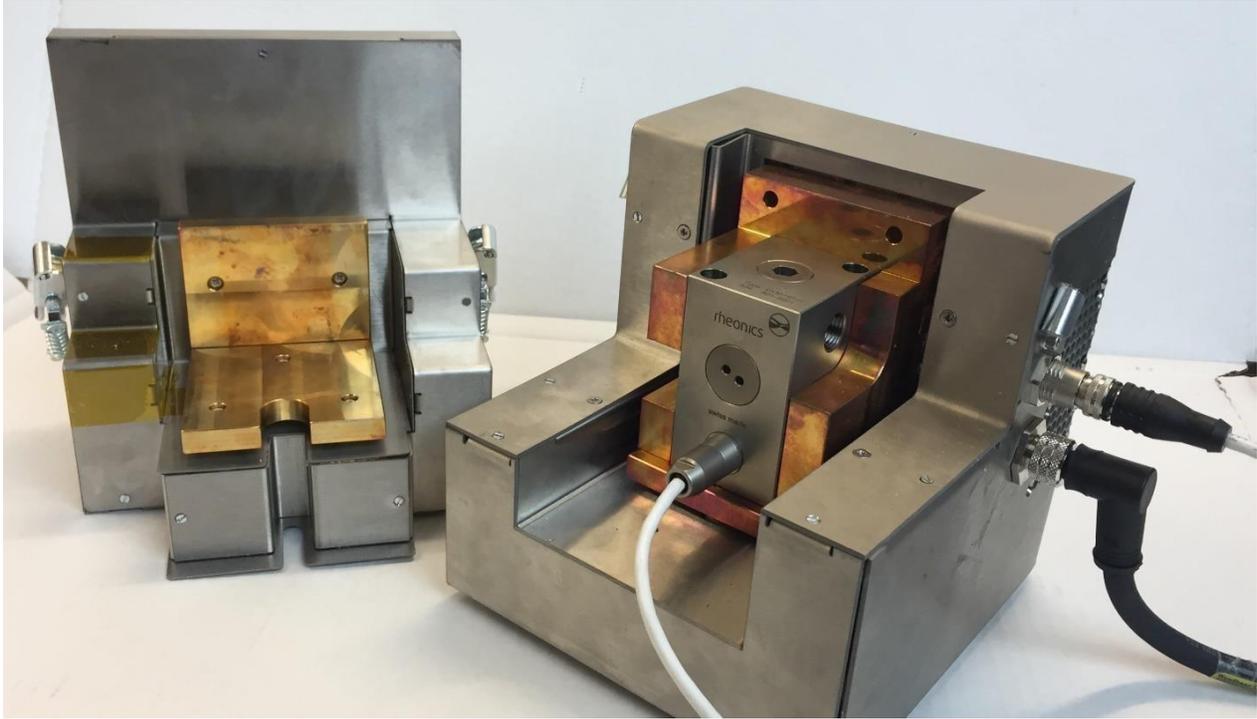


DTCM

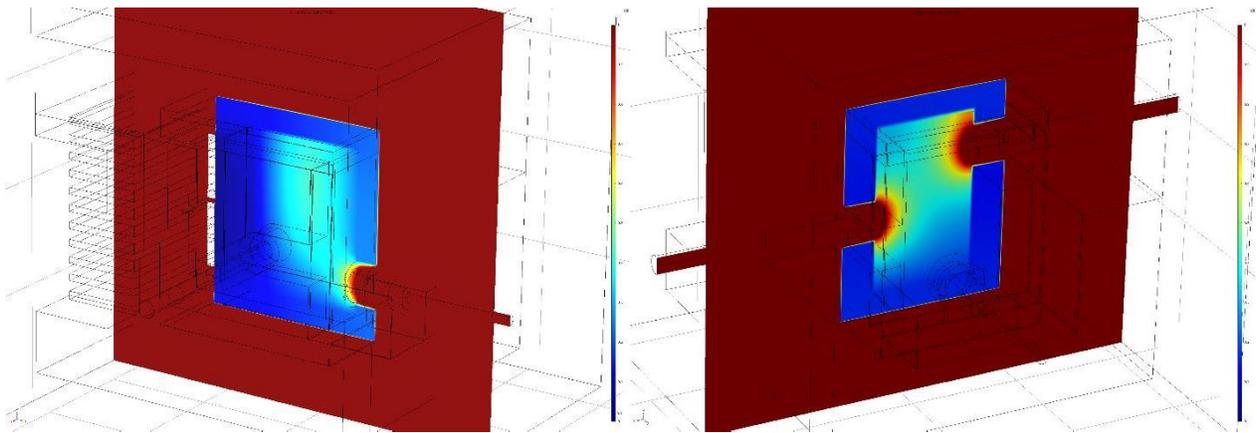
DVM Thermal Control Module



- DVM thermal chamber
- 5 °C to 120 °C
- 0.005 °C temperature stability
- 0.05 °C temperature accuracy
- Integrated temperature controller
- PC built-in for standalone operation
- Ethernet, Wi-fi, RS485 ports for direct integration
- 7.5kg (16.5 lb) with DVM

DTCM is custom designed to ensure uniform temperature distribution across DVM even when installed in a flow loop. Heating and cooling is achieved through solid-state thermal devices with an advanced model-based controller. DTCM was designed after extensive simulation and testing to ensure high level of thermal stability, accuracy and repeatability.

DTCM eliminates the need for bulky and expensive thermal test chambers (climate chambers) for temperature control. It reduces the foot print to the same size as a typical small coffee machine (Nespresso) while achieving 10x better stability and uniformity compared to a typical 100L commercial thermal chamber. It enables HPHT fluid analysis with DVM in field and mobile units without compromising data integrity.



Thermal uniformity across the DVM during operation.

DTCM Specification

| Parameter | Value | Notes |
|-------------------------------|--|--|
| Dimensions | 177 x 163 x 187 (mm) 7 x 6.4 x 7.4 (inch) | Smaller than a typical desktop coffee machine |
| Power Input | 110 / 220 V AC | Mains supply |
| Power consumption | max. 150W | |
| Total Weight | 7,500 g (16.5 lb) | Including DVM |
| Temperature range | 5 °C to 120 °C 40 °F to 250 °F | |
| Temperature stability | 0.005 °C | |
| Temperature accuracy | 0.05 °C | Same as DVM (Class AA Pt1000) |
| Ambient temperature | max. 65 °C max. 150 °F | |
| Controller | SMEBOX | Standalone Controller and PC |
| Communication (SMEBOX) | Wi-Fi, USB, RS-485 (Modbus) 4-20 mA | Direct control of DTCM and DVM from RCP running on PC |
| Communication (DVM) | Ethernet, RS-485 (Modbus), USB 4-20 mA | Same as a standard DVM electronics. Accessible through the desktop SMEBOX. |