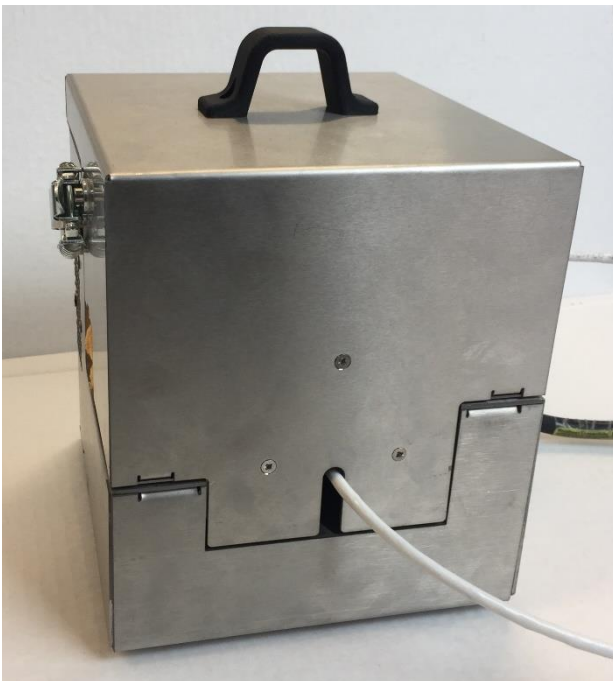
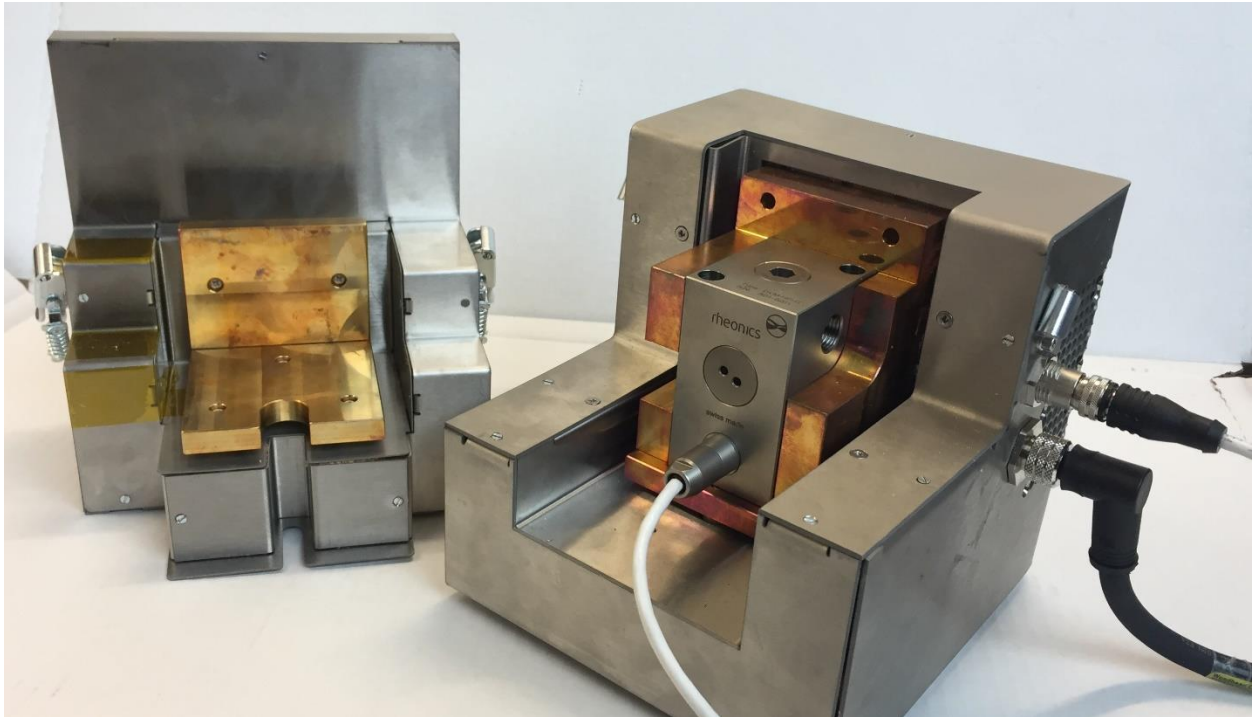


DTCM

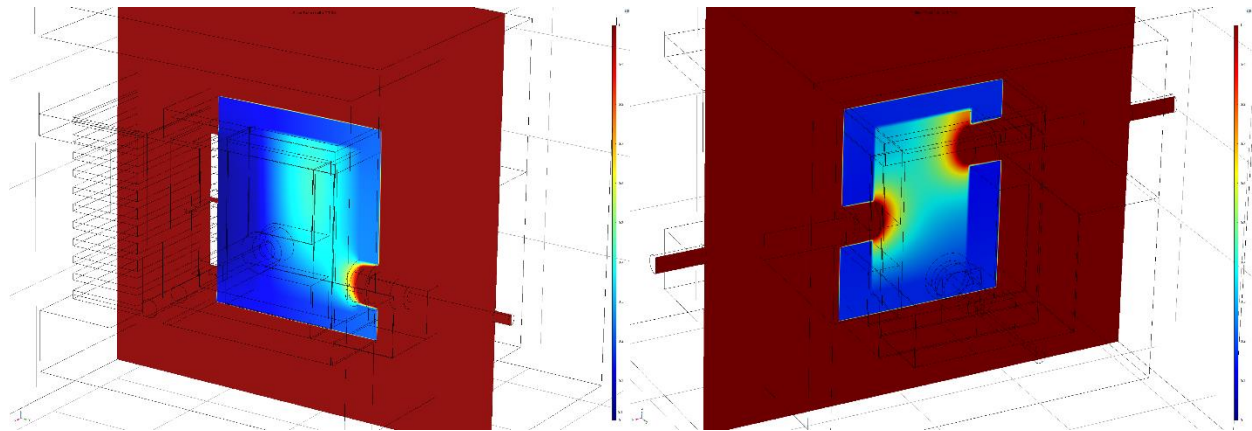
DVM Thermal Control Module



- DVM thermal chamber
- 10 °C to 180 °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	10 °C to 180 °C 50 °F to 350 °F	
Temperature stability	0.005 °C	
Temperature accuracy	0.05 °C	Same as DVM (Class AA Pt1000)
Operating temperature	max. 65 °C ambient max. 150 °F ambient	
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.