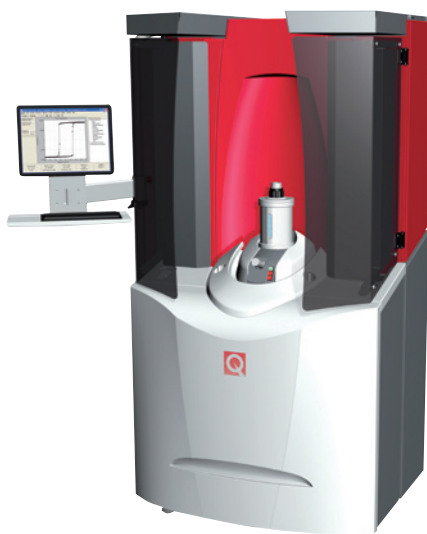
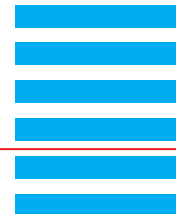


# MPMS family of SQUID based magnetometers

## Magnetic Property Measurement System



MPMS-SQUID-VSM System



MPMS-XL System with Evercool Dewar

Reference Chart *			
Description	MPMS SQUID VSM	MPMS XL5	MPMS XL7
Field range	±7 Tesla	±5 Tesla	±7 Tesla
Intrinsic field uniformity (4 cm: ±2 cm from center of pickup coil)	0.01% over 4 cm		
Electronic field setting resolution	0.3 Gauss to 7 Tesla	1 Gauss to 5 Tesla 0.1 Gauss to 0.5 Tesla	1 Gauss to 7 Tesla 0.2 Gauss to 0.6 Tesla
Residual field ( <i>oscillate mode, typical</i> )	<5 Gauss	<5 Gauss	<5 Gauss
Sample space size	9 mm		
Sensitivity (minimum resolvable change in magnetic moment, 10 <sup>-4</sup> emu range, standard error)	≤10 <sup>-8</sup> emu to <2,500 G ≤8x10 <sup>-8</sup> emu to 7 Tesla with less than 10 s average	≤10 <sup>-8</sup> emu to 2,500 G ≤2x10 <sup>-7</sup> emu to 5 Tesla with RSO measurement	≤10 <sup>-8</sup> emu to 2,500 G ≤6x10 <sup>-7</sup> emu to 7 Tesla with RSO measurement
Maximum DC moment	±5.0 emu	±5.0 emu to ±300 emu with EDR option	
Temperature range at the sample space	1.8 K to 400 K to 1,000 K with optional oven	1.9 K to 400 K to 700 K with optional oven	
Maximum rate of temperature change	300 K to 10 K at 30 K/min 10 K to 2 K at 10 K/min	300 K to 10 K at 10 K/min 10 K to 2 K at 2 K/min	
Temperature accuracy	±1%; typical much better		
Temperature stability at the sample space	±0.5%; typical much better		
Helium dewar capacity	approx. 65 Liter	approx. 52 Liter	
Helium usage** Standard insulated dewar	~4.5 Liter/day	~6 Liter/day	
* Technical specifications are subject to change without notice. ** Based on average usage-including temperature & field sweeps.			



# MPMS family of SQUID based magnetometers

## Magnetic Property Measurement System

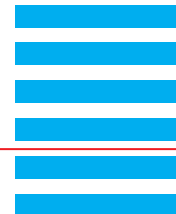
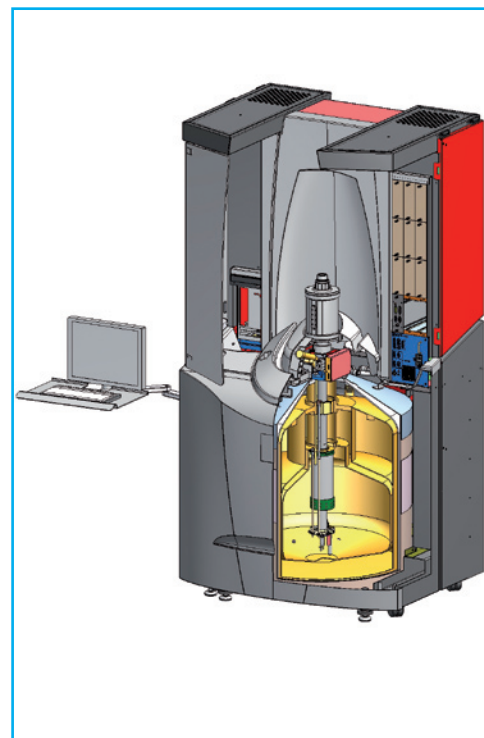


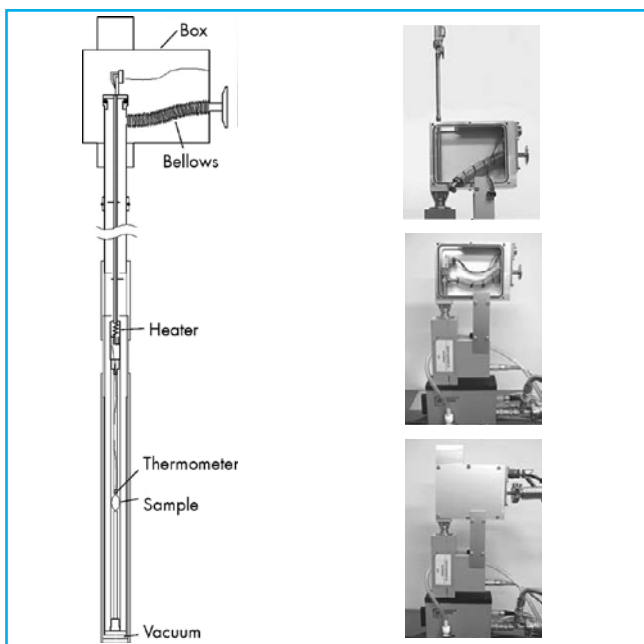
Chart of Options		
	MPMS SQUID VSM	MPMS XL
	Option	Option
SQUID ac susceptibility	M150	M120/M123
Ultra low field	M155	M127
Oven	M103	M102
Magnet reset	Standard	M104
Extended dynamic range	-	M105
Transverse moment detection	-	M101A
Vertical and horizontal rotator	-	M101D
Environmental magnetic shield	Standard	M107
External device control	-	M106
Fiber optic sample holder	-	C010 (IR or UV)
Manual insertion utility probe	-	C111
Nitrogen jacketed dewar	Standard	-
EverCool dewar	C060	C050

Standard options are included in the base system. Please contact LOT-Oriel for further details.



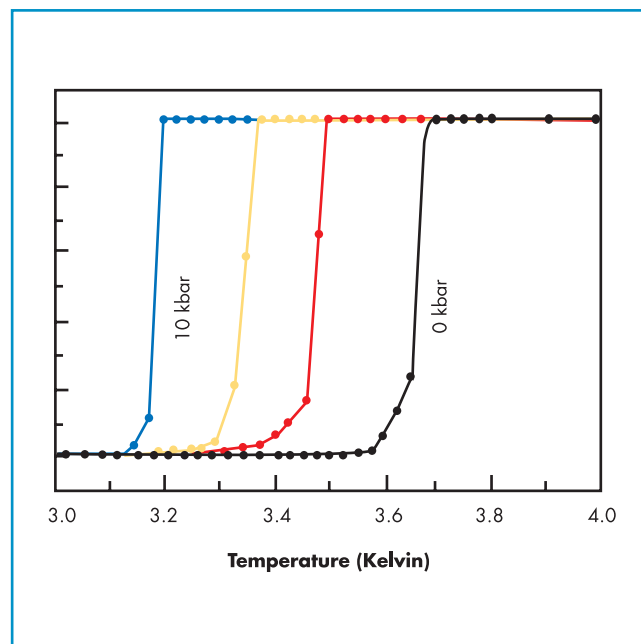
### Options compatible with MPMS XL from other manufacturers

#### Helium-3 system for measurements to less than 0.5 K



<sup>3</sup>He insert

#### Pressure cell for magnetic characterization under pressures of up to 10 kbar



Tin manometer superconducting transition shift measured on a MPMS XL-5

