OTS80PB and OTS60PB
Portable oil test sets

- **Light-weight, rugged, portable instruments for measuring insulating oil breakdown voltage**
- **Lock in precision - oil vessel with lockable adjustment**
- **Bright 3.5 inch colour display visable out doors**
- **Suitable for mineral, ester and silicon oils**
- **Trip detection circuit with direct measure ment of voltage and current**
- **Ultra fast (<10 µs) HV switch off time**

DESCRIPTION

Megger's automatic portable oil test sets perform accurate breakdown voltage tests on mineral, ester and silicon insulating liquids. Moulded test vessels give repeatable results in the field and laboratory with lock in precision electrode gap setting adjustment wheels. The transparent, shielded lid is a key feature enabling users to see what is happening within the test chamber.

Megger portable 60 kV and 80 kV oil test sets are the lightest on the market ranging from 16 kg to 23.5 kg depending on model and configuration. They come complete with optional carry bag and transport case. The carry bag has pouches for electrode accessory pack, leads, quick user guide, paper roll etc.

The units are mains powered with optional lead acid or NiMH batteries. In addition, an internal 12 V DC charger and vehicle adaptor cable is standard with either battery option.

Test standards are preloaded in the instrument and new versions can be uploaded via USB flash drive. Both portable instruments support the creation of user defined custom tests. Test results are identified either by a serial number or asset ID and are time and date stamped.

An optional internal printer provides a hard copy of results. Ink based printout ensures durability at all temperatures. USB interfaces (x3) support PC connection, USB flash drive, external USB printer and barcode scanner.

User safety is paramount and Megger have designed independent and dual redundant high voltage cut-off circuitry to ensure safety. During a test the operator can terminate by pressing any button on the keyboard which will remove high voltage immediately and abort the test. The transparent lid provides ample visibility within the chamber yet is protected and electrically shielded by a screen with multiple links to instrument ground.

FEATURES AND BENEFITS

- Test voltages up to 60 kV or 80 kV
- Lock in precision oil vessel - lockable gap setting
- Flat electrode gap gauges that will not damage electrodes
- Automatic oil temperature measurement
- QVGA colour display with backlight
- Easy clean chamber with oil drain
- Safe operation with dual redundant micro-switch HV cut off, zero volt touch bar and screened lid
- Transparent lid results in highly visable test chamber and vessel
- Intuitive user interface supports fully automatic operation with preloaded international test standards plus user configurable test sequences

OPTIONAL ITEMS

- Factory fitted lead-acid (OTS80PB only) or NiMH battery with 12 V charger and vehicle lead
- Internal printer
- Motorised lid impeller
- Voltage check unit (VCM100D)
- Carry bag
- Transport case

APPLICATION

Monitoring and maintenance of oil quality is essential in ensuring the reliable operation of oil filled electrical equipment. Codes of practice have been established in many countries that include several different types of test on insulating oils.

One of the fundamental tests of oil quality is the breakdown voltage test, which is a measure of the oil's ability to withstand electric stress. A low breakdown voltage can indicate the presence of contaminants such as water or conducting particles.

Care should be taken to ensure the process of sampling oil and subsequent testing does not in any way contaminate it with foreign objects. Cleaning vessels between oil tests should be a rinse with the next sample, never clean with fibrous materials. To ensure an accurate reading set gap carefully and lock adjusting wheels.

SPECIFICATIONS

Test voltage

OTS 60PB	-30 to +30 kVrms
OTS 80PB	-40 to +40 kVrms
Voltage resolution	0.1 kV, ±1%, ±2 digits
Programmed test sequences	ASTM D 1816-04 ASTM D 877A-02 ASTM D 877B-02 IEC 60156-95
Vessels 400 ml (standard) 150 ml (option)	Nylon 12 chamber provides precision electrode alignment and adjustment wheels lock electrodes in position, option of 150 ml vessel for low volume oil samples
Temperature sensor resolution	1 °C
Power supply	Line voltage 85 to 265 VAC Line frequency 50/60 Hz
Batteries (option)	Lead acid 2 x 12 V 4 Ah, or NiMH 24 V 2 Ah
Interfaces	USB 2.0 compatible 2 x USB type-A (memory stick) 1 x USB type-B (printer or PC)
Internal Printer (option)	Matrix impact printer Paper 57.5 mm wide
External printer	Any printer with USB interface and PCL3 driver
Protection	Safety interlock on cover
Display	320 x 240 QVGA colour display with backlight

Dimensions

OTS 60PB	520 mm x 340 mm x 250 mm
OTS 80PB	520 mm x 380 mm x 250 mm

Weight

OTS 60PB	16 kg (printer, no battery), 16.8 kg (printer, NiMH battery)
OTS 80PB	20 kg (printer, no battery), 20.8 kg (printer, NiMH battery), 23.2 kg (printer, lead acid batteries)
Test vessels	1.1 kg (400 ml and 150 ml)

Environmental

Operating temperature	0 °C to +50 °C
Storage temperature	-30 °C to +65 °C
Humidity	80% RH at 40 °C operation 95% RH at 40 °C storage

Safety
Designed in accordance with IEC61010

EMC
Light industrial IEC 61326-1 Class B, CISPR 22, CISPR 16-1 and CISPR 16-2

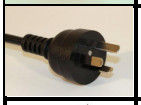
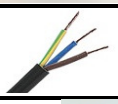
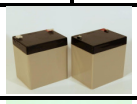
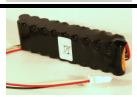
VCM100D

400 ml vessel assembly (electrodes fitted)

ORDERING CONFIGURATION

Example of an ordering configuration:-

OTS80PB-EU2-EP-4C = This order is for an OTS80PB with EU power lead, NiMH battery, IEC electrode set, internal printer, lid stirrer and carry bag.

Model:	OTS		PB-		-		-		Weights
Select Model	80 kV	80							19.4 kg
	60 kV	60							15.3 kg
Select Power Cord		EU Lead	EU						
		UK Lead	UK						
		US Lead	US						
		Australian Lead	AU						
		No Plug Lead	BL						
Select Battery Option			Sealed Lead Acid	1 OTS80PB ONLY					3.3 kg
			NiMH	2					0.8 kg
	NONE		No Battery	X					0 kg
Select Electrode Set				ASTM Set	A				
				IEC Set	E				
				Full Set	U				
Select Printer Option					Internal Printer	P			0.54 kg
					No Printer	X			0.08 kg
Select Stirrer Option						Stirrer Lid Assembly Fitted	4		0.3 kg
						Stirrer Lid Assembly Not Fitted	X		
Select Carry Case Option							Carry Case	C	1.3 kg
							No Carry Case	X	

ORDERING INFORMATION

Product	Order Code
Included Accessories	
Vessel 400 ml assembly	
12 V vehicle charger lead (supplied only on instruments configured with a battery)	
Magnetic bead stirrers (2 off)	
Magnetic bead retriever	
Feeler gauge set 1, 2, 2.5, 2.54 mm	
User manual	
Configured accessories (to order additional or spares)	
IEC60156 Electrode Set - 12.7 mm spherical (2), 36 mm mushroom (2)	1001-477
ASTM D877/1816 electrode set - 25.4 mm cylindrical (2 std, and 2 none std), 36 mm mushroom (2)	1001-478

Product	Order Code
Full electrode set ASTM and IEC electrodes	1001-479
Vessel lid mounted impeller (ASTM D1816) for use with 400 ml vessel	1001-102
Carry bag (padded) OTS80PB	1001-476
Carry bag (padded) OTS60PB	1001-480
Optional accessories	
Transport case (with wheels)	1001-475
Vessel 400 ml assembly (no electrodes supplied)	1001-473
Vessel 150 ml assembly (no electrodes supplied)	1001-474
VCMD Digital calibration meter	1001-105
Printer paper, 1 roll (MOV applies) (4 rolls supplied if printer configured)	25995-001

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CERTIFICATION ISO
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