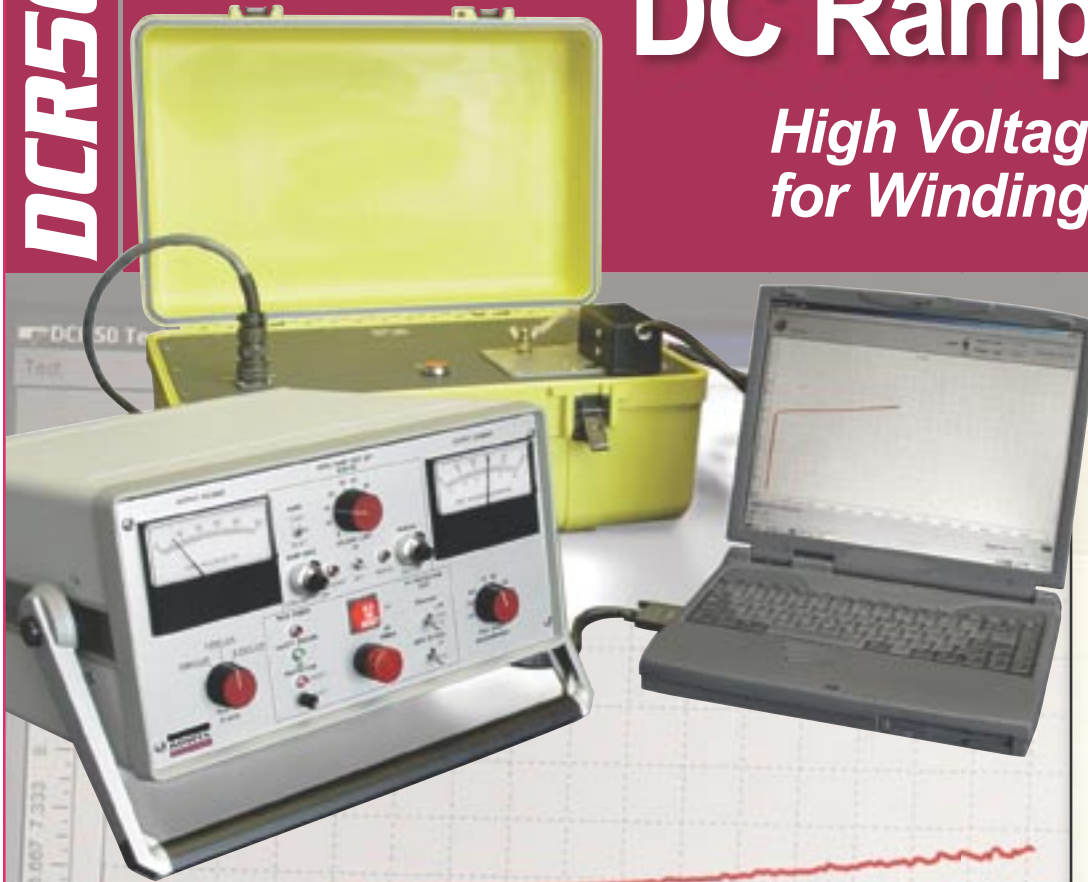


DCR50

DC Ramp Test Set

*High Voltage DC Test
for Winding Insulation*



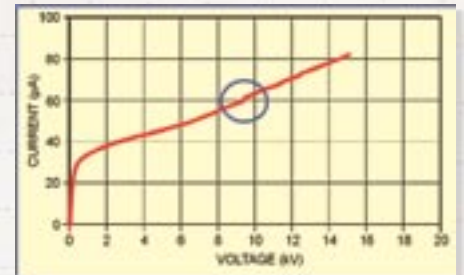
- Simple, low risk, off-line test
- Identify onset of fault mechanisms
- Diagnose damage and deterioration
- Quick, accurate and repeatable results
- Computer records for analysis
- Tests to IEEE® Std 95-2002™

The DCR50 provides a simple off-line test of the condition of the stator winding groundwall insulation of large AC electric machines. It can identify problems in the insulation system before an unexpected in-service failure occurs, unlike the pass/fail of a DC or AC hipot test.

An automatically ramped or manually stepped direct voltage (up to 50 kV) is applied to the stator winding and the resulting current is measured and plotted against voltage. A single phase test usually takes less than an hour to perform and can be conducted by one person. The DCR50 allows tests to be performed in accordance with IEEE Std 95-2002.

The DC Ramp Test method has been proven in use for many years by the US Bureau of Reclamation and others, on a wide variety of machines with asphalt-, polyester- and epoxy-mica insulations.

With accurate and repeatable test results, the DCR50 can identify stator windings that are approaching failure without accelerating the deterioration process.



Examination of the current versus voltage curve allows assessment of insulation condition, as well as diagnosis of damage, defects, and deterioration mechanisms.

ADWEL

www.adwel.com

DC Ramp Test Set

Features

- Ground Presence Detection and Protection
- Automatic Ramp or Manual Mode Selection
- Ramp Rate Control (0-2.5 kV/min)
- Manual Voltage Control (0-50 kV)
- Automatic Trip Protection (high/low tracking, output limit, fault detection)
- Built-in Winding Discharge Circuit
- Voltage Metering (0-50 kV)
- Current Metering (0-250 μ A, range switchable, charge and discharge)
- Analogue Outputs for Voltage and Current
- Connection to PC to
 - Remote emergency stop test
 - Display results as test progresses
 - Store multiple curves and test parameters for later analysis
 - Display curves side-by-side for test comparison

Specifications

Power Input	85-260 V AC, 2 A, 50/60 Hz
Output Voltage and Metering	0-50 kV DC, negative polarity
Output Current	1.0 mA max
Current Metering	0-1/2.5/5/10/25/50/100/250 μ A
Pen Plotter Outputs	0-10 V DC fsd
PC	PCMCIA A/D interface (supplied) Windows 2000 or XP
Environmental Conditions	Operating: 0 °C to +40 °C Storage: -25 °C to +60 °C Humidity: 5-95 % RH, non-condensing Operating Altitude: 0-3000 m
Dimensions & Weights	Control Unit: 200 x 370 x 480 mm, 10kg HV Module: 145 x 370 x 470 mm, 13kg
Standards	Tests to IEEE® Std 95-2002™ CE Compliance: EN61010-1 for safety EN61326 for EMC Bureau of Reclamation Report REC-ERC-78-7, “A Programmable DC High-Voltage Ramped Test System for Electrical Insulation.”

Developed under a Cooperative Research And Development Agreement (CRADA) with the US Department of the Interior, Bureau of Reclamation, in accordance with the Federal Technology Transfer Act of 1986.

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Windows 2000 and XP are the registered Trademark of Microsoft Inc
These specifications are subject to change without notice. E&OE

DCR50 Set Contents

Contained in 2 cases:

- Control Unit
- HV Module
- Control, HV and Grounding Cables
- PCMCIA PC Interface
- Laptop PC
- Software
- Instruction Manual

Customer to supply:

- Ground networks
- Safety protective fencing etc.

The application of a linear, slowly ramping voltage enables separate assessment of capacitance charging, dielectric polarization, and insulation leakage current components. Test curves can be captured on a PC to facilitate comparison with similar machines or earlier results to identify changes in the insulation system's condition. Automatic circuits that detect sudden changes in current or voltage, and operator intervention, normally allow test cessation before damage occurs. An internal discharge circuit eliminates the need to access the test connections while the winding is charged, enhancing operator safety.

This system generates high voltages. Adequate safety precautions should be taken to avoid injury to personnel and damage to property.



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