

# Iris Power DCR 50™

## DC Ramp Test Set

### RAMPED HIGH VOLTAGE DC TEST FOR WINDING INSULATION

- Simple off-line test
- Lower risk of failing stator insulation than standard Hipot test
- Identify onset of fault mechanisms
- Diagnose damage and deterioration
- Quick, accurate and repeatable results
- Computer records voltage and currents for analysis
- Compliant with IEEE Standard 95-2002™



The Iris Power DCR 50™ is a simple off-line DC tester to identify problems in the stator groundwall insulation system of large AC electric machines before an unexpected in-service failure occurs. Unlike the pass or fail of a DC or AC hi-pot test, the DC ramp test gives diagnostic information and often can be stopped before a failure occurs.

Unlike a stepped voltage test, the ramped voltage test enables the user to separate the polarization and capacitive current components from the leakage current so that small insulation defects can be easily found. A single-phase test usually takes less than an hour to perform and can be done by one person. The DCR 50 tests according to IEEE Standard 95-2002.

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

Test curves are captured on a PC to allow easy comparison to similar machines or past results.

# IRIS POWER DCR 50™

## FEATURES

- Automatically ramps voltage from 0 to 50kV (60kV optional)
- Allows manual user-selected voltage control in the range from 0 to 50kV
- Ground presence detection and protection
- Built-in winding discharge circuit
- Analog outputs for voltage and current for connection to chart plotter or external data collection systems
- Connection to PC to: display results as test progresses, store multiple curves and test parameters for later analysis and display curves side-by-side for test comparison
- Examination of the current versus voltage curve allows test stoppage before failure of insulation and diagnosis of damage, defects, and deterioration mechanisms.

## KIT CONTENTS

- Control Unit
- HV Module
- Control, HV and Grounding Cables
- PCMCIA Interface Card and Cable
- Operating Manual

## SPECIFICATIONS

<b>Power Input</b>	85-264 V AC, 2A, 50/60 Hz
<b>Output Voltage and Metering</b>	0 to 50 kV DC, negative polarity
<b>Ramp Rate</b>	0 to 2.5 kV/min (continuously adjustable)
<b>Output Current</b>	1.0 mA max
<b>Current Metering</b>	0-1/2.5/5/10/25/50/100/250 µA
<b>Pen Plotter Outputs</b>	0-10 V DC fsd
<b>PC</b>	PCMCIA A/D interface; Windows XP
<b>Operating Temperature</b>	0° to +40°C (+32° to +104°F); Storage: -25° to +60°C (-13° to +140°F)
<b>Operating Altitude</b>	0-3000 m
<b>Dimensions &amp; Weight (2 cases)</b>	Control Unit: 20 x 37 x 48 cm (8" x 15" x 19"), 10 kg (22 lb)  Above in case: 34 x 52 x 75 cm (15" x 20" x 30"), 32 kg (70 lb)
<b>Standards</b>	Compliant with IEEE Standard 95-2002 CE Compliance EN61326 for EMC Bureau of Reclamation Report REC-ERC-78-7

## ORDER

Part Nr.	Description
DC505	DC Ramp Test Set – Model DCR50 includes: control unit, HV module, control, HV and grounding cables, PCMCIA interface card and cable, software license for current version release, manual and CE marked
DC510	DC Ramp Test Set – Model DCR50 includes: control unit, HV module, control, HV and grounding cables, PCMCIA interface card and cable, notebook with pre-installed software and license, manual and CE marked

*Iris Power DCR 50 is a trademark of Qualitrol-Iris Power.*

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

QUALITROL-IRIS POWER HAS BEEN THE WORLD LEADER IN MOTOR AND GENERATOR WINDING DIAGNOSTICS SINCE 1990, PROVIDING A FULL LINE OF ON-LINE AND OFF-LINE TOOLS, AS WELL AS COMMISSIONING AND CONSULTING SERVICES.



A **QUALITROL** Company

[www.irispower.com](http://www.irispower.com)

[www.qualitrolcorp.com](http://www.qualitrolcorp.com)

**Iris Power LP**  
3110 American Drive  
Mississauga, ON, Canada L4V 1T2  
Phone: 1-905-677-4824  
Fax: 1-905-677-8498  
[sales.iris@qualitrolcorp.com](mailto:sales.iris@qualitrolcorp.com)

**Qualitrol Company LLC**  
1385 Fairport Road  
Fairport, NY, USA 14450  
Phone (585) 586-1515  
Fax (585) 377-0220



**QUALITROL**  
Defining Reliability

Ver 2 • 8/10