

Iris Power RIV 800

Robotic Inspection Vehicle with Camera System



LOW PROFILE ROBOTIC SYSTEM FOR STATOR CORE TESTING AND INSPECTION

The magnetically supported Robotic Inspection Vehicle (RIV 800) has been developed to provide an automated scanning method for the EL CID stator core interlaminar insulation test equipment. The vehicle allows scanning of the stator bore of a generator or large motor, in order to test the integrity of the stator lamination insulation out more efficiently. The equipment can also be adapted to carry other lightweight attachments for stator inspection including the mini-camera or wedge tightness probe. A single control unit is used to provide power and control to the vehicle and camera module.

FEATURES AND BENEFITS OF THE RIV

- Reduce overall cost of maintenance by providing faster testing with only one operator.
- Reduce human fatigue, stress and accessibility concerns.
- Fits into the 35 mm air gap for rotor-in-place testing.
- Operates with EL CID, Stator Wedge Analyzer and incorporates a Camera system.
- Magnetically self-supporting with automatic guidance on stator core.
- Guidance system detects the edges of the stator teeth to follow a straight line.
- Measures distance using an encoder wheel.
- Curvature adjustment accommodates the tractor in stator cores of various sizes.
- AUTO mode allows the RIV to stop at a pre-set distance
- Variable speed adjustment

ROBOTIC INSPECTION VEHICLE SPECIFICATIONS

Overall Length	350 mm with Chattock Holders Adjustable from 180 to 300 mm
Overall Height	30 mm
Maximum Payload	2 kg in vertical climb mode
Slot Pitch	65 mm to 210 mm
Guidance	Automatic, Using Magnetic Sensors
Distance Measurement	0 to 9.99m
Controls	Speed, Direction, Auto Stop Distance
Outputs	X Axis Pulses for EL CID distance recording
Power Requirement	85 - 264 V, 50/60 Hz
Operating Temperature	0° to +50°C (+32° to +122°F)



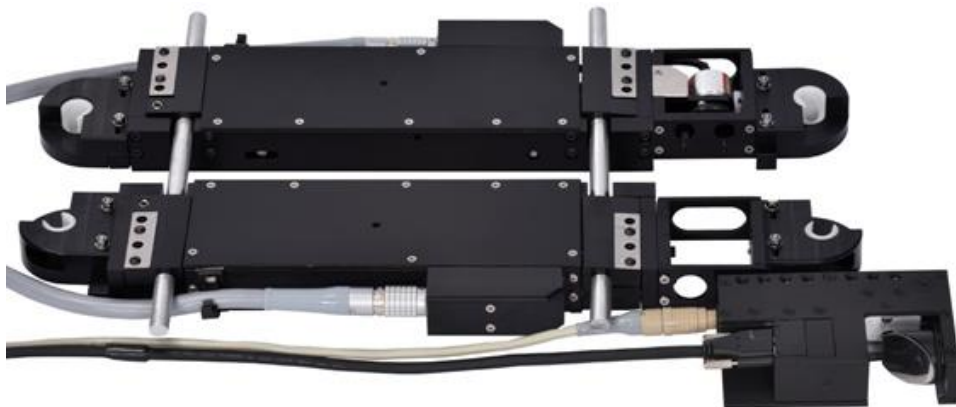
Robotic
Inspection
Vehicle –
No Camera

IRIS POWER RIV CAMERA SYSTEM

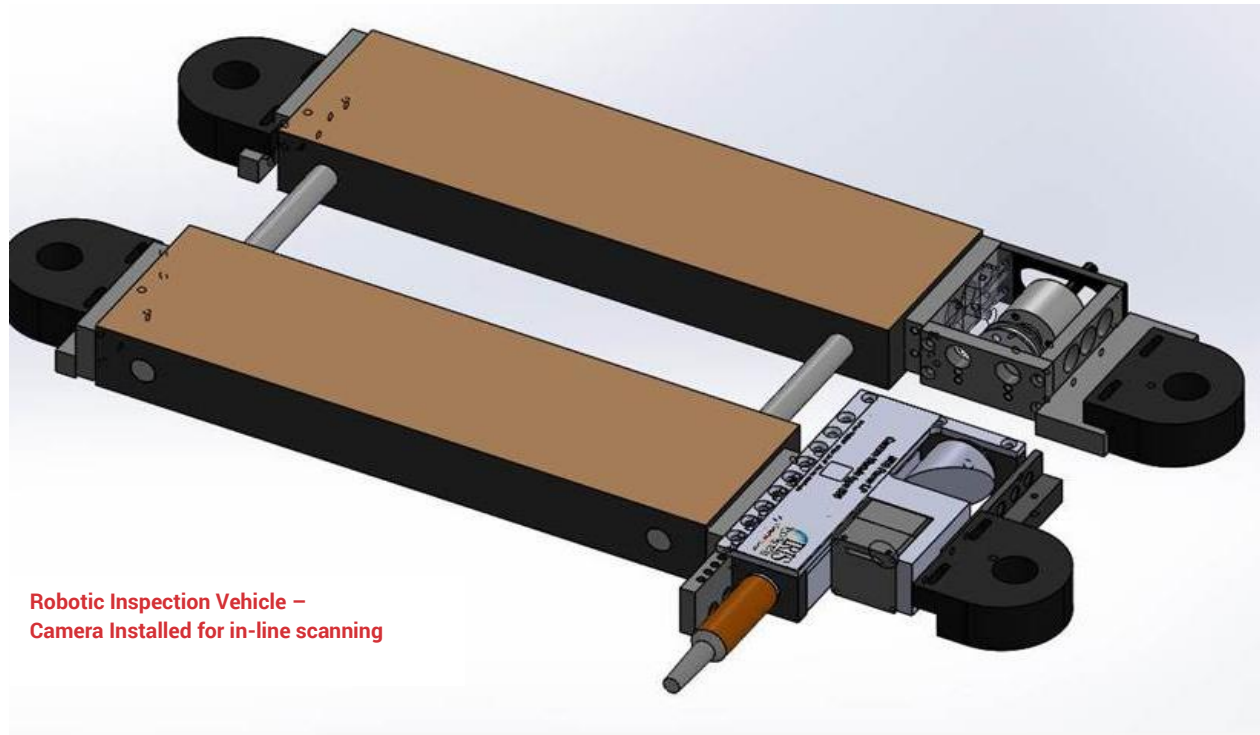
The Iris Power RIV Camera System provides a flexible system for Rotor-in-Place inspections of large generators. It is fitted to the Iris Power Robotic Inspection Vehicle which can be moved along the stator slots. The camera system includes an integral light. The camera field of view is directed at a 45° mirror, which can be remotely rotated through 360° to allow scanning of the stator or rotor as well as looking forward along the air-gap. The camera can also be focused remotely. The system allows a visual inspection of the generator stator and rotor, including checking the air vents for debris, without removing the rotor. The video output is displayed on a 145 mm color TFT LCD integral monitor in the control unit.

CAMERA SYSTEM SPECIFICATIONS

Focusing	Remotely Operated Via Control Unit
Operating Temperature	0° to +50°C (+32° to +122°F)
Illumination	Dual LED
Resolution	1280 x 1024 pixels



**Robotic Inspection
Vehicle -
Camera Installed for
lateral scanning**



FEATURES AND BENEFITS OF THE CAMERA SYSTEM

- Visually inspect stator and rotor for defects and damage with rotor in place with a low-profile vehicle of 30mm
- Focus on the stator core surface, stator air vents, or rotor surface
- Scans image while conducting wedge tightness or EL CID test
- Assists positioning for Rotor-in-Place wedge tightness testing
- Check for debris in the air-gap
- Image can be adjusted for 360-degree angle and focus
- Built-in dual light source

GET IN TOUCH

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