



OSCILLATING WIRE SCANNER PROBE MODEL OWS-30

TRIUMF-Licensed, Beam Profiler



The **D-Pace OWS-30 Oscillating Wire Scanner Probe** performs two orthogonal intensity scans of a beam in one scanning operation. An replaceable 0.5mm diameter tungsten wire with two legs is pivoted about an axis within the case of the instrument. A high-sensitivity ammeter is used to measure the intercepted beam current.

The wire crosses the beam in an arc of approximately $\pm 13^\circ$. Each wire leg passes through the center of the beam at 45° relative to the flange. The oscillation speed is controlled by adjusting the motor voltage. Position feedback is output as an analog signal.

D-Pace can provide a custom vacuum box.¹

The Wire Scanner Probe can be purchased separately, or D-Pace can provide a turnkey system, complete with the probe, controller, current meter, PC, software, cables, and optional instrument rack. The software displays 2D intensity distributions in real time as scans are performed, allowing the operator to tune and center beams. A single oscillation results in two passes of both legs of the scanning wire through the beam.

- Measure low-energy charged-particle beam profiles (< 1 MeV)
- Simultaneous orthogonal scanning as a diagnostic tool for centering a beam
- Scan $\varnothing 30$ mm beam²
- Controllable scan speed
- Interchangeable $\varnothing 0.5$ mm tungsten wires
- Optional turnkey system and custom vacuum box
- TRIUMF-licensed technology³

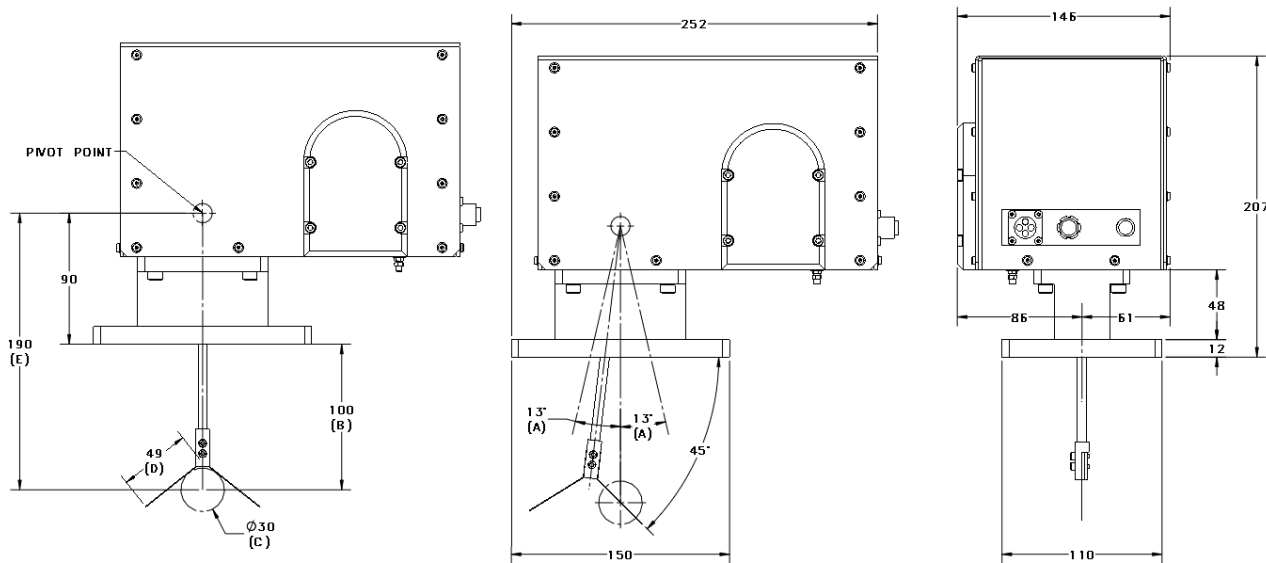
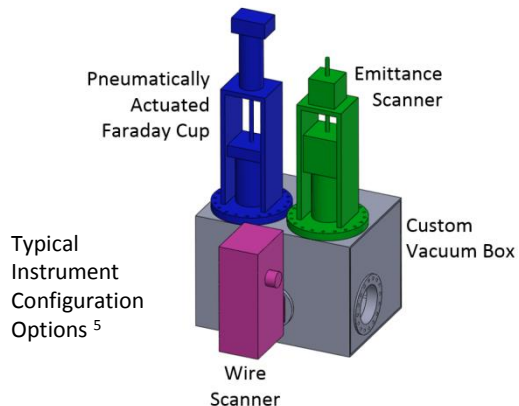
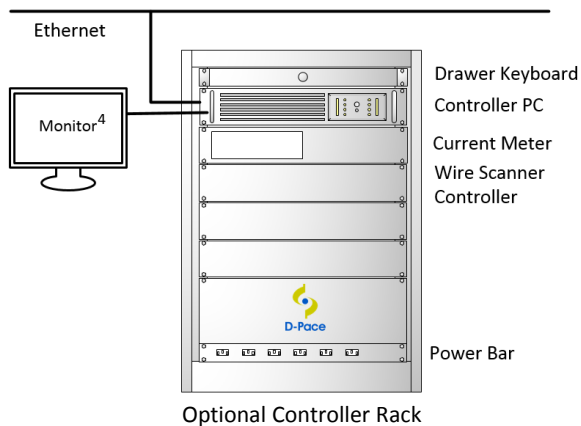
SPECIFICATIONS: OWS-30

Max Beam Diameter ²	30 mm
Min Oscillation Period	10 seconds/cycle
Max Oscillation Period	> 60 seconds/cycle
Maximum Beam Intensity	$1\text{W}/\text{mm}^2$
Wire	$\varnothing 0.5$ mm Tungsten
Bias voltage	None
Flange	Custom, O-ring
Mass	4 kg
Arm Scan Angle (A)	$\pm 13^\circ$
Flange to Beam Center (B)	100mm
Leg Wire Length (D)	49mm
Pivot Length (E)	190mm
Output	BNC Coax

The wire scanner can be factory configured for smaller beams by adjusting the scan angle. This allows the device to operate in smaller vacuum boxes.

SPECIFICATION - TURNKEY SYSTEM OPTION 4

Turnkey System	Includes probe, computer, software, power supplies, instrumentation and cables
Instrument Rack Option	Optional 19" rack, keyboard and power distribution
Platform	Industrial PC / Windows™ OS
Control Options	Stand alone or Remote Ethernet control
Current Meter	2nA to 20mA (full scale) 10-100pA (typical noise floor)
Power	115 or 220 VAC (configured) 550 W, single phase
Data Plots & Visualization	2D orthogonal intensity distribution displayed in real time
File Export	CSV
Dimensions (W x D x H)	16U instrument rack 545 x 660 x 765 mm
Mass (approx.)	60 kg excluding probe



1. D-Pace can provide a custom vacuum box. Contact D-Pace with custom requirements for a quotation.
2. Wires tangent to beam diameter at maximum angle.
3. Technology licensed from TRIUMF for world-wide distribution.
4. Turnkey system with instrument rack option. Monitor not supplied.
5. Wire Scanner can be combined with D-Pace's Phase Space Emittance Scanner and Faraday Cup Probes.
6. D-Pace reserves the right to update specifications as part of its ongoing product improvement program.