

## HIGH POWER SCINTILLATOR

BPV-100

A pneumatically-actuated live beam profile viewer with 2 kW beam power capability.

- · Live monitoring of beam shape and intensity.
- · Pneumatic insertion of scintillation head.
- · Viewport shutter for metallic vapours protection.
- Water-cooled, 2 kW beam power capability.
- Radiation-resistant camera, with remote control unit (can be placed in a low radiation location).
- · Capable of viewing beams over 100 mm square.

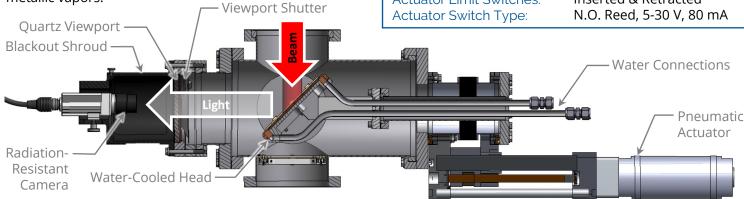


Scintillation head mounted on the pneumatic actuator.

The D-Pace **High Power Scintillator** allows for real-time monitoring of ion beams, providing immediate information during beam tuning and scanning. The insertable, water-cooled head has an alumina coating, which scintillates in an ion beam. The orientation of the head allows a radiation-resistant camera to view the light produced by scintillation, outputting a live video signal which can be observed by the operator.

When not in use, the scintillation head can be retracted, and a protection shutter used to shield the viewport from metallic vapors.

SPECIFICATION1: BPV-100	
Max. Beam Power:	2 kW
Max. Power Density:	0.6 W/mm²
Max. Beam Size:	124 mm × 104 mm
Vacuum Compatibility:	HV (10 <sup>-8</sup> Torr) <sup>2</sup>
Flange Sizes:	8" CF (DN160 CF)
Dimensions:	1484 mm × 459 mm 355 mm (beam direction)
Weight:	73 kg
CAMERA SYSTEM	
Camera:	Monochrome
Radiation Tolerance:	> 3 × 10⁵ rad.
Video Outputs:	Coaxial & USB 2.0 B
COOLING WATER	
Min. Water Flow Rate:	1.5 L/min
Max. Inlet Pressure:	345 kPa (50 psi)
Max. Inlet Temperature:	20 °C
Connections:	1/2" O.D. tube fitting
PNEUMATIC ACTUATOR & '	VIEWPORT SHUTTER
Supply Pressure:	150-700 kPa (22-100 psi)
Actuator Connections: Shutter Connections:	Ø6 mm push tube fittings Ø4 mm push tube fittings
Actuator Limit Switches: Actuator Switch Type:	Inserted & Retracted N.O. Reed, 5-30 V, 80 mA



Cross-section of the scintillator installed on a beamline illustrating the functional components and operating principle.

- 1. D-Pace, Inc. reserves the right to update specifications without notice as part of the continuous improvement program for its products.
- 2. Design uses internal O-rings.

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