PROTON CAMERA

DIAKONT

- Mid-range radiation tolerance
- High-resolution color HD video
- 10:1 Optical zoom
- Integral high-powered LED lights
- Integral pan/tilt, for easy deployment via umbilical cable

High performance & ruggedness in a compact package

The Diakont Proton camera system is the next evolution in refueling support camera systems. Simply deploy, and instantly have high-resolution video to support your operation.

Inspection & monitoring applications

- Monitor reactor assembly/disassembly
- Monitor tool deployment and operation
- Fuel serial number verification (high-speed "core mapping")
- Inspection of reactor internals and steam dryer OD
- Monitor cask loading activities

Use it anywhere and everywhere

Diakont's Proton camera system is a compact unit with remote pan/tilt, zoom, and LED lighting that make it an extremely-useful tool for use in the refueling cavity, reactor vessel, and spent fuel pool. The Proton is fabricated from rugged, easily-decontaminated stainless steel, and the straight forward refurbishment process makes for a minimal cost of ownership. The load-carrying cable allows the operator to deploy the camera without a requirement for poles or robotics.

Proton camera

Proton camera system

Proton Console System

Diakont's Proton console system incorporates the best-in-class Proton rad tolerant HD camera along with a rack-mounted camera control unit, a monitor, a digital video recorder (DVR), and a microphone, all integrated into a rugged enclosure. By combining the Proton camera with all of the equipment required to successfully complete visual inspections, the Proton console offers a turnkey solution that is ready to use "out of the box."

Proton camera technical specifications

Sensor	1920x1080 Pixel CMOS
Image Resolution	800 H-TVL
Image	HD color
Signal/Noise Ratio	≥50 dB
Sensitivity	1 Lux
Format	1080i / 720p
Light Output	Four 10W LED lights (40W total output)
Zoom	10:1 Optical; 4x digital
Field of View (horizontal)	5° - 50°
Minimum Focal Distance (wide)	Front window
Focus	Auto / manual
Tilt Range	+/- 140°
Pan Range	+/- 180°
Envelope	3.9" x 11.4"
Weight (in air)	11 lb.
Housing	Stainless steel
Environmental	IP 68, 131' submersible
Cumulative Dose	2×10^5 Rads*
Maximum Dose Rate	5×10^3 Rads/hr
Operating Temperature	50°F to 113°F

* Lifetime can be extended to 2×10^6 Rads with replacement of camera module