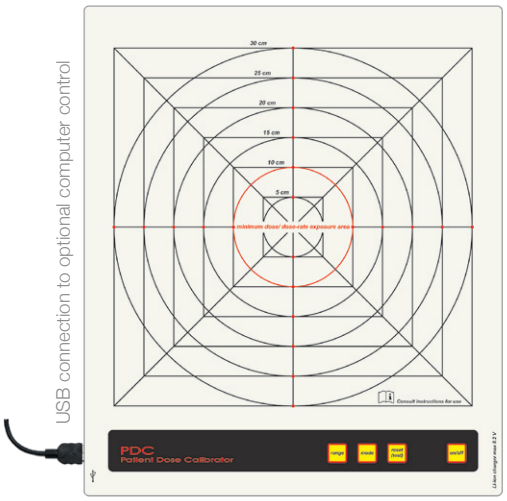
# Radcal

# Patient Dose Calibrator PDC

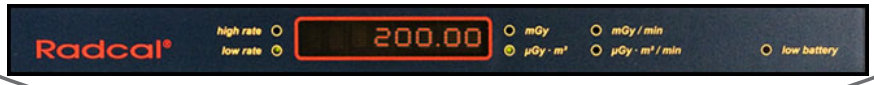
**Quick and Easy Calibration** - *of Installed DAP (KAP) and Patient Dose Systems*

## What's it all about ?

Foam Elevation Support Stand




## Patient Dose Control



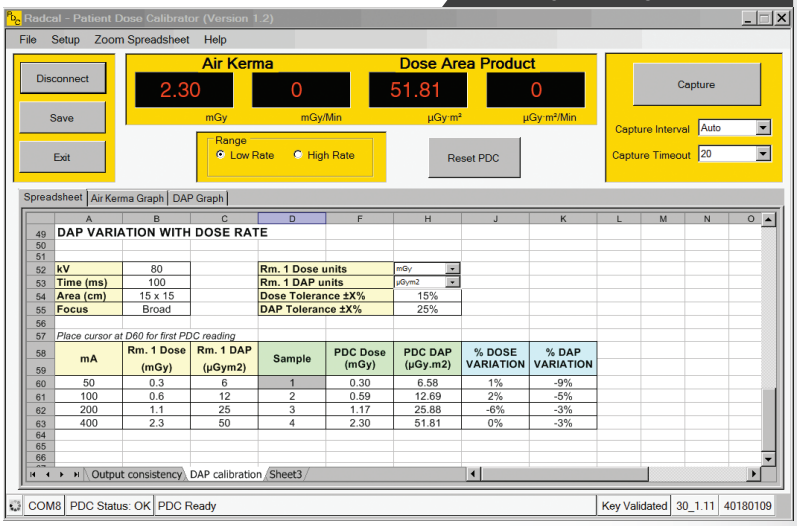

TRACEABLE MEASUREMENTS - The PDC is a reference class instrument for "field calibration" of patient dose measurement and control systems thus ensuring the validity of inter-institution patient dose comparisons.

FLEXIBLE AND CONVENIENT - Use the PDC with a phantom to simulate patient imaging conditions including scattered radiation or mount the PDC on its support stand to measure air Kerma.

SIMPLE TO USE - The PDC displays DAP (KAP) and dose rate during an exposure then automatically switches to display accumulated DAP (KAP) and dose on exposure completion.

DEPENDABLE - A tough ABS plastic housing protects the ion chambers and electronics that incorporate several patented features to ensure long term stability.

DAP CALIBRATION TEMPLATE




*THE GOLD STANDARD IN RADIATION MEASUREMENT*

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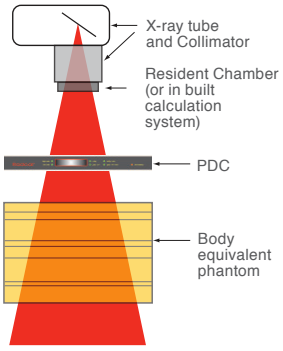
# PDC KEY FEATURES AND BENEFITS:

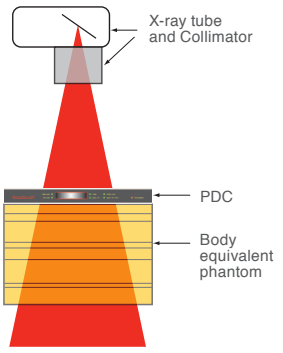
| KEY FEATURES | BENEFITS |
|---|---|
| **Complete DAP meter assessment:** | Measures DAP, DAP-rate over a full range of field sizes and beam qualities |
| **Symmetrical Response:** | Can be used with under-couch tubes without the need for inversion |
| **Patient Dose System assessment:**<br>**1. Dose/DAP Air Kerma Calibration:**<br>**2. Entrance (skin) Dose / DAP Calibration and QA:**<br>**3. Image Receptor Dose/ DAP Calibration and QA:** | Measure Dose and Dose-rate<br>Measure DAP and dose linearity with dose and field size<br>Surface dose calibration with phantom and establish reference DAP and dose levels<br>Verify Image Receptor dose measurements and AEC linearity testing |
| **Optional Remote Control Software:** | Automatic data capture with customizable templates |
| **Optical and radiographic alignment markers:** | Setting reference field sizes made simple |

## APPLICATIONS



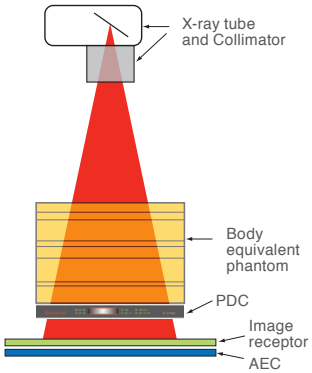

### DOSE / DAP AIR KERMA CALIBRATION

- DAP and dose linearity with dose and field size.
- Sensitivity testing.
- DAP and dose calibration at the patient plane or at a reference distance.




### ENTRANCE (SKIN) DOSE / DAP CALIBRATION AND QA

- Entrance surface dose calibration for different examinations using a phantom.
- Establishing examination related reference DAP and dose levels.




### IMAGE RECEPTOR DOSE / DAP CALIBRATION AND QA

- Image receptor dose measurement.
- AEC linearity testing.

## SPECIFICATIONS / TECHNICAL DATA:

| | |
|---|---|
| **Display Range**<br>Dose area product<br>Air kerma | <br>(0.01... 99 999 999)µGy·m²<br>(0.001... 99 999 999)mGy |
| **Accuracy**<br>DAP and Air kerma | Inclusive of all uncertainties (temperature, pressure, rate, area and beam quality) ± 10%<br>Under reference conditions (10 mGy/min, 15 X 15 cm field, 80 kVp, 2.5 mm Al filtration) ± 7.5% |
| **Digital Resolution**<br>Dose area product<br>Dose area product rate<br>Air kerma<br>Air kerma rate | <br>0.01 µGy·m²<br>1µGy·m²/min<br>0.001mGy<br>0.1 mGy/min |
| **Rated range of use**<br>Tube voltage<br>Dose area product:<br>(low rate range)<br>(high rate range)<br>Air kerma rate | <br>(40 ... 150) kV<br><br>(1 ... 1·10⁴) µGy·m²/min<br>(2·10³ ... 9 ·10⁵) µGy·m²/min<br>(0.2 ... 9 ·10³) mGy/min (at the position of the chamber) |
| **Automatic Temperature and Pressure Correction**<br>Pressure<br>Temperature<br>Air humidity | <br>(80.0 ... 106.0) kPa<br>(+10 ... +40) °C<br>(10 ... 80) % rel. humidity (max. 20 g/m³) |
| **Ionization chamber**<br>Response versus radiation quality (50kV ... 150 kV, norm. to 100kV; acc. IEC 60580)<br>Quality equivalent filtration (70kV)<br>Active area<br>Dose area product<br>Air kerma | <br>± 3 %<br><br>0.6 mm Al<br><br>max. (300 x 300) mm²<br>min. (100 x100) mm² |
| **Power supply**<br>Internal rechargeable battery pack operation time (state of charge: 100%) | <br>Li-ION, 2 cells<br>> 8 h |
| **Serial Interface**<br>**Protection class (acc. IEC 60529)**<br>**Weight**<br>**Dimension** | USB<br>IP 41<br>2.32 kg<br>350 mm x 410 mm x 35 mm<br>(L x W x H) |

All specifications subject to change.

**PORTABLE CONVENIENT CARY CASE**

Foam Elevation Support Stand fits inside the interior of the Carry Case lid.