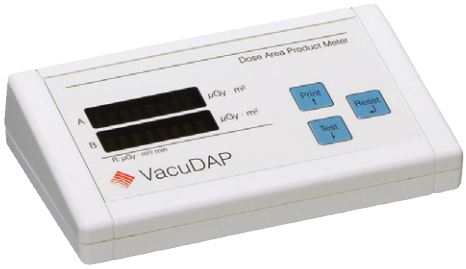
Radcal

VacuDAP

Dose-/Dose Area Product Measuring System

VacuDAP duo

VacuDAP Bluetooth duo



Two-field measuring systems "duo" for simultaneous measurement of DAP, DAP rate, air kerma, air kerma rate and irradiation time.

VacuDAP duo and VacuDAP Bluetooth® duo with display unit

- VacuDAP *duo* and VacuDAP *Bluetooth® duo* measuring chambers
- Display unit Dose/DAP
  upper display line: accumulated dose
  lower display line: dose rate during irradiation, accumulated DAP after irradiation
- The display unit Dose/DAP is available as a *Bluetooth* version as well.
- The measuring chamber VacuDAP *Bluetooth® duo*, shown in the picture above, is presented with the universal adjustable mounting rails attached.

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The Measuring System

The modular VacuDAP dose-/dose area product measuring system offers various ionization chambers and configurations for almost all medical diagnostic X-ray equipment in radiography, fluoroscopy, dental applications or whole body scanners.

All complete systems have a serial interface RS 232 on the display unit for connecting a printer or transmitting data to a workstation or RIS.

The VacuDAP Systems are used for simultaneous DAP (dose area product) and DAP rate measurements according to IEC 60580.

The VacuDAP duo systems additionally determine reference air kerma and reference air kerma rate in accordance to the standards IEC 60 601-2-54, IEC 60 601-2-43 and 21 CFR 1020.32.

Measuring chambers

All measuring chambers provide a serial interface RS 485 to transfer measuring data and to receive control commands by means of an ASCII protocol.

Optionally the system is available with *Bluetooth®* wireless technology.

The measuring chambers can be completed with several display units to many different stand alone systems to match all X-ray systems and official requirements.

Chamber resolution of 0.01 µGy·m² for DAP enables them for use in pediatrics.

All rectangular chambers are available with an active area of 123 mm x 123 mm or 147 mm x 147 mm. They are adaptable to all common X-ray collimators by means of different rails.

The system VacuDAP *duo* consists of:

- measuring chamber: VacuDAP *duo* P/N 458 00 15
- display unit: VacuDAP *duo* P/N 943 00 03
- connection cable MediSnap: P/N 943 00 40
- power supply US: P/N 950 00 59

TECHNICAL DETAILS: All specifications subject to change.

GENERAL:	
Quality equivalent filtration (70 kV)	0.2 mm Al
Light Transparency (rectangular chambers)	> 70%
Radiation quality	(40 ... 150) kV
Atmospheric pressure	(80 ... 106) kPa
Temperature	(+10 ... +40) °C
Air humidity	(10 ... 80)% rel. humid. (max. 20 g/m³)

DIMENSIONS:	
Rectangular transparent measuring chambers:	
Active area	123 mm x 123 mm, 147 mm x 147 mm

CIRCULAR MEASURING CHAMBERS:	
Active area / outer dimension (diam.)	44 mm/60 mm, 72 mm/100 mm (non transparent), 68 mm/90 mm (transparent)

ELECTRONICS FOR CIRCULAR CHAMBERS:	80 mm x 50 mm x 17 mm
DISPLAY UNIT:	160 mm x 94 mm x 37 mm

DAP:	
Digital resolution	0.01 µGy·m²
Measuring range	0.1 ... 99 999 999 µGy·m²

DAP RATE:	
Digital resolution	0.6 µGy·m²/min
Mesuring range	6 ... 1 800 000 µGy·m²/min
Useable active area	1 ... 200 cm²

DOSE*:	
Digital resolution	0.003 mGy
Measuring range	(0.03 ... 99 999 999) mGy

DOSE RATE*:	
Digital resolution	0.18 mGy/min
Measuring range	(1.8 ... 17 000) mGy/min
Useable active area	(2 ... 200) cm²
Minimal field width	1.4 cm

** Distance focus-chamber: 28 cm; Distance focus-reference point: 100 cm*

Manufactured by VacuTec Meßtechnik GmbH, Germany • Distributed in North America by Radcal Corporation