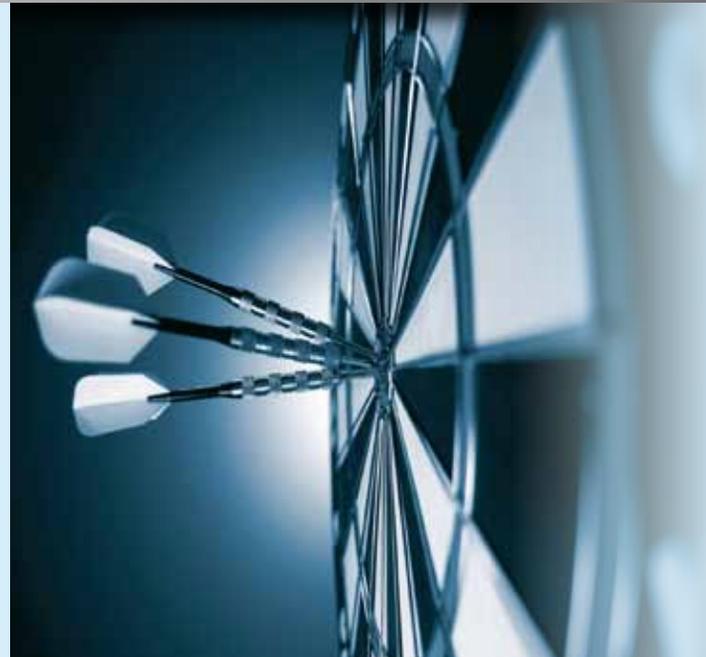




Maximum Precision



The *QUART* dido series



- **Compact Design Concept**
- **Maximum Accuracy**
- **Genuine Features**
- **Fast and Reliable**
- **All in One**
- **Made in Germany**

The QUART dido diagnostic dosimeters are provided for two different ranges of application. Two names identify unit type and corresponding operative range.

QUART *dido2000K**

→ Range of Application

Digital AND Conventional
Radiography
(Pulsed) Fluoroscopy
Dental Intra-oral
Dental OPG
Dental CEPH
Dental 3D (DVT)
Scanning Fan-Beam Systems
Needle Beam x-ray Systems



QUART *dido2100K**

→ Range of Application

same as *QUART dido2000K*
plus Mammography
plus Specimen Radiography
plus Local Dose Monitoring



* Units that carry the "K" in their name feature the kV functionality – units without it, do not.

Why choose a QUART meter?

→ Compact Design Concept

The dido series diagnostic dosimeters are multifunctional Quality Assurance platforms. Strictly following our own Compact Design Concept, they feature optimised size and design plus a compact multi functional state-of-the-art detector.

Downsize-detector design facilitates measurements where only limited space for a proper detector positioning is available. Hence, measurements behind the scatter radiation grid of a radiography unit can be done with the dido without any limitations. And no influence whatsoever is exerted on the automated exposure control (AEC) of x-ray units.

→ Genuine Features

Despite their unpretentious appearance, the dido dosimeters are technically sophisticated and unmatched in performance in their class.

A great deal of unique features such as the verification of inherent tube potential, the display of both exposure and imaging time, or the dose-width product measurement, make them one of the most compact, multi-purpose QA systems available.

→ All in One

QUART dido diagnostic dosimeters cover almost any field of x-ray application. No matter if conventional or digital modality, the meters can be used for measurements in Radiography, (Pulsed) Fluoroscopy, DSA, Dental, 3D (DVT), and Mammography.

Although the kV feature is part of the “standard” configuration of each dido, the dosimeter can also be acquired without it. All other functions will be the same. The cost of a meter without kV feature will be lower – the price/performance ratio, however, remains excellent.





→ **Maximum Accuracy**

We at QUART consider maximum accuracy for our instruments as the company's main mission. After 25 years of developing and manufacturing dosimeters, we feel more than ever committed to provide meters which allow measurements within smallest tolerance and inaccuracy limits.

All our meters carry the German PTB type approval. They are calibrated to traceable national standards. A calibration certificate provided with a dosimeter is valid for two years after which the calibration in most cases has altered imperceptibly, if at all.

→ **Fast and Reliable**

In today's service environment tight schedules demand fast and reliable measurement results. The QUART dido series diagnostic dosimeters provide exactly that. Our meters collect all data simultaneously in only one exposure. Except for a very short setup procedure almost no further user interaction is required.

The dido dosimeters fully analyse each exposure and display all measured parameters after radiation ended. Measurement data can easily be queried via the 3-button panel on top. All data is automatically compensated and corrected before being displayed.

→ **Made in Germany**

We are proud to say that all our instruments are MADE IN GERMANY. A maximum of quality in our production and quality control processes guarantee users of our meters maximised precision and reliability for any application.

A lot of our early dosimeter models are still being used. They easily pass any calibration check and therefore demonstrate their toughness and long term reliability as well.

The QUART *dido* Specifications

→ Basics

Base Size	16.1x7.0x4.4cm (LxWxH)
Base Weight	235g (incl. Battery)
Display	4 digits plus Clear Text
Detector Size	5.0x1.6x0.4cm (LxWxH)
Detector Weight	negligible
Detector Cable	2 m
Power Supply	9V Alkaline Battery
Power Consumption	below 7 mA
Battery Life	approx. 2 years
Auto-Off	after 10 min.

→ Measurement

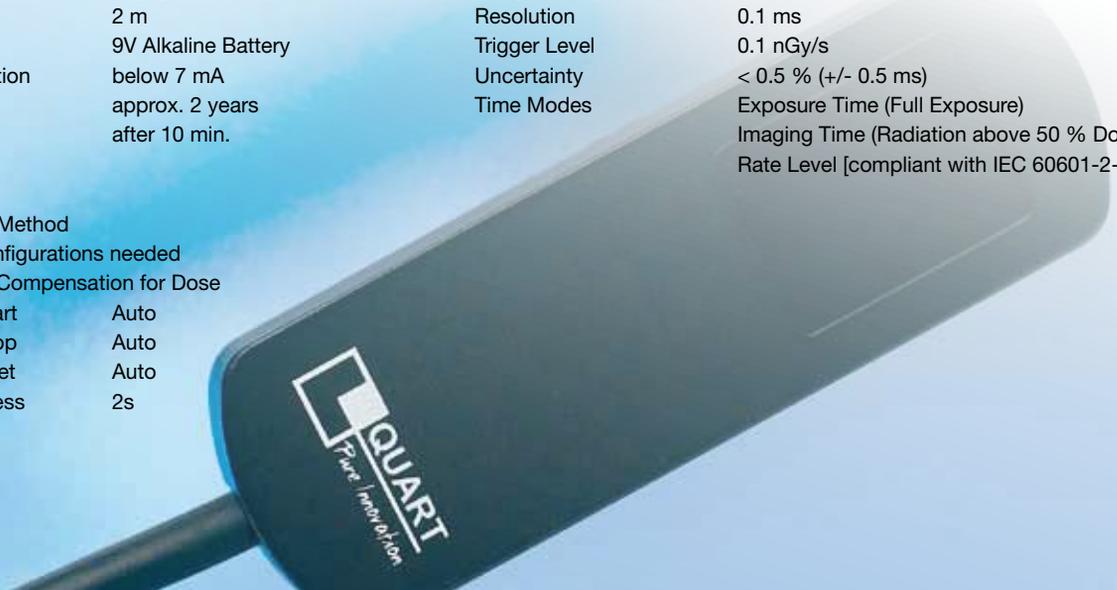
Single Exposure Method	
Only 2 Setup Configurations needed	
Full Range Auto-Compensation for Dose	
Measurement Start	Auto
Measurement Stop	Auto
Intermediate Reset	Auto
Calculation Process	2s

→ Data Communication

USB 1.1 Interface (2.0 compatible)
Data Read-Out available as optional feature

→ Time

Range	0.5 ms – 40 s (or 20 s optional)
Resolution	0.1 ms
Trigger Level	0.1 nGy/s
Uncertainty	< 0.5 % (+/- 0.5 ms)
Time Modes	Exposure Time (Full Exposure) Imaging Time (Radiation above 50 % Dose Rate Level [compliant with IEC 60601-2-54])



→ **Dose**

Exposure Conditions	Attenuated and Open Beam (Configuration required)
Range	5 nGy – 999 Gy
Resolution	0.01 nGy
Min. Exp. Cond.* dido2000K	0.6 mA / 50 kV / 25 mm Al / 90 cm
Min. Exp. Cond.* dido2100K	0.3 mA / 22 kV / no filtration / 80 cm
Uncertainty	< 5 %

→ **Dose Rate**

Range	0.1 µGy/s – 1.0 Gy/s
Resolution	0.1 nGy/s
Trigger Level dido2000K	250 nGy/s
Trigger Level dido2100K	100 nGy/s
Uncertainty	< 5 %
Dose Rate Modes	Real-Time Display Period Dose Rate (half-exposure) Maximum Dose Rate

→ **kV**

Exposure Conditions	2.5 mm Al for open beams (Verification of inherent tube filtration) 0.8 mm Cu Added Filtration (QUART kV filter) or 25 mm Al Added Filtration (Configuration required)
Range dido2000K	50 – 150 kV
Range dido2100K	22 – 35 kV / 50 – 150 kV
Resolution	0.1 kV
Min. Exp. Cond. dido2000K	0.6 mA / 50 kV / 25 mm Al / 90 cm
Min. Exp. Cond. dido2100K	0.6 mA / 50 kV / 25 mm Al / 90 cm 5.0 mA / 22 kV / no filtration / 80 cm (Mammo)
Uncertainty	< 5 %
kV Modes	kVp / effective kV

→ **Pulses**

Range	1 – 65.000
Resolution	Single Pulse
Trigger Level dido2000K	250 nGy/s
Trigger Level dido2100K	100 nGy/s
Uncertainty	+/- 1 Pulse

* Minimum Exposure Conditions

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Your local QUART partner