



# DMC 2000 XB

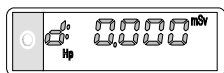
## Personal electronic dosimeter

• X,  $\gamma$  : 20 keV to 6 MeV •  $\beta$ : 60 keV to 3,5 MeV • Hp(10) and Hp(0.07)

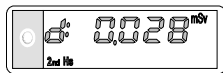
- dedicated to simultaneous measurements of X,  $\gamma$  and  $\beta$  radiations
- small, light, ergonomic, compact, and rugged
- compliant with international standards and local rules
- hands free reading system with data centralization

The use of  $\beta$  particle emitters for radiation therapies (treatments of eye tumours, coronary arteries, or inflammatory joint diseases) has significantly increased during recent years, and this has made the use of dedicated  $\beta$  dosimeters essential.

The DMC 2000 XB was designed, to allow simultaneously deep dose equivalent Hp(10) and shallow dose equivalent Hp(0,07) measurements for X,  $\gamma$  and  $\beta$  emissions. Furthermore it can be used as an operational dosimetry system for all medical risk assessment including radiological exposures, and in addition has applications in radioactive source production facilities, nuclear power plants and other nuclear facilities.

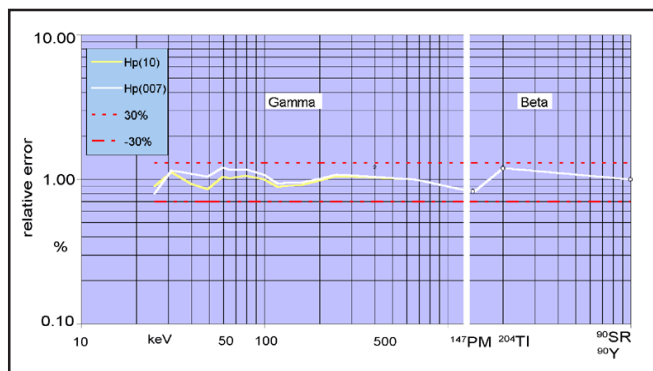


Hp(10) - deep dose



Hp(0.07) - shallow dose

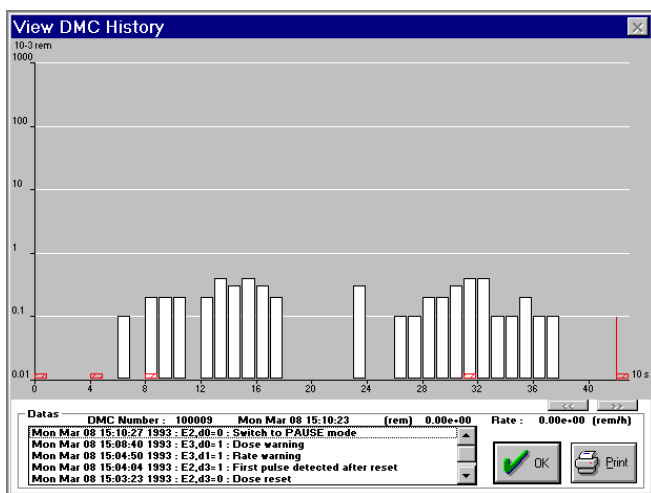
With the display directly visible to the wearer, many functions are available using alphanumeric characters.



DMC 2000 XB energy response



Technician using hands-free the capability of the DMC 2000 XB with the LDM 2000 reader



The history enables detailed event reconstruction for efficient analysis of incident situation circumstances.

\*(literature available on request)

## Physical characteristics

- complies with IEC 61526
- display units: mSv or mrem
- measurement range:
  - dose: 1  $\mu$ Sv to 10 Sv (0.1 mrem to 1000 rem)
  - dose rate: 0.1  $\mu$ Sv/h to 10 Sv/h (0.01 mrem/h to 1000 rem/h)
  - display: 0.01 mSv/h to 10 Sv/h (1 mrem/h to 1000 rem/h)
- linearity:
  - < +/- 10 % up to 1 Sv/h (100 rem/h)
  - < +/- 25 % up to 10 Sv/h (1000 rem/h) for X,  $\gamma$  > 60 keV and  $\beta$
  - < +/- 25 % up to 3 Sv/h (300 rem/h) for X < 60 keV
- energy response:
  - X,  $\gamma$  rays: 20 keV to 6 MeV
  - $\beta$   $E_{\text{mean}} > 60$  keV ( $E_{\text{max}}$  : 0.22MeV to 2.3 MeV)
- accuracy:
  - < +/- 5 % ( $^{137}\text{Cs}$ , 0.2 mSv/h)

## Mechanical characteristics

- dimensions: 84 x 48 x 17.5mm (3.3" x 1.9" x 0.7")
- weight with battery: < 70 g (2.2 oz)
- attached by replacable clip

## Electrical characteristics

- Li MnO<sub>2</sub>, CR2450 battery, battery life > 1 year (8 hrs/d) or 6 months continuous use

## Environmental characteristics

- temperature: -10°C to +50°C (14°F to 122°F)
- humidity: < 90 % at 42°C (108°F)
- storage: -30°C to +71°C (-22°F to 160°F)
- shock, vibration and drop resistant
- EMC: complies with and exceeds  $\text{CE}$  standards

## Customization

- setup can be achieved by user with DOSIMASS software

## Related Products\*

MGP Instruments offers a range of products which can be used with the DMC 2000 XB to create integrated dosimetry systems including:

- LDM 210, LDM 220 proximity reader
- LDM 2000 pass-by reader
- DOSIVIEW dosimetry centralization and access control software
- DOSIMASS dosimeter configuration software
- DOSIMED operational dosimetry software

128144A

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As standards, specifications and design change from time to time, please ask for confirmation of the information given in this publication.

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