THE BODY SCAN FULL BODY CONTAMINATION MONITOR

Reliable measurement.
From head to toe.



BERTHOLD

HIGH ACCURACY. FAST WORK FLOW.

RELIABLE MEASUREMENT - FROM HEAD TO TOE.



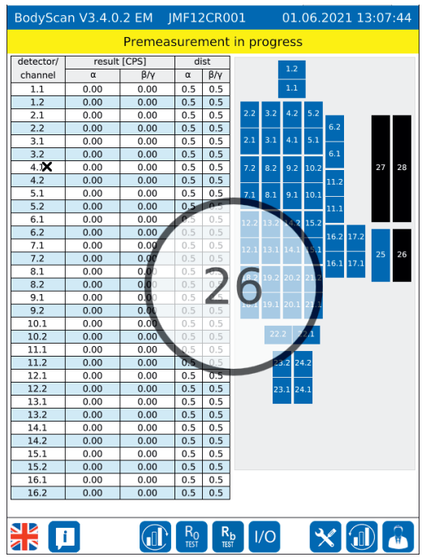
Designed for a seamless workflow

The Body Scan full body contamination measurement system is a stationary system for monitoring contamination of personnel with high accuracy and high throughput. The whole system consists of 24 detectors in its standard version. For easy use the system is equipped with a touch display and a speaker guides you clearly and understandably through the measurement. Both an entrance and an exit door are available as an option.

The Body Scan is designed for use in nuclear power plants and decommissioning.

Body Scan benefits at a glance:

- Very large active detector surface up to 20.640 cm^2 (standard version with 24 detectors).
- Easy maintenance: sophisticated detector plug-in system and service door for quick maintenance access.
- One detector type for the entire system: In case of service, only one detector type is needed for stockpiling.
- Easier installation in hard-to-reach areas: The Body Scan can be dismantled before installation and installed in hard-to-reach positions. This makes it possible to overcome obstacles such as narrow doors or stairs.



Body Scan device software, overview of all detectors



Body Scan closed cabinet version with doors and small items detector

TAILORED TO YOUR NEEDS.

INDIVIDUAL CUSTOMIZATION FOR YOUR NEEDS.

It's your decision:
Configuration levels to suit your needs!

If you want to get the most out of your Body Scan, we can offer you the following optional features:

- Choose between gas flow proportional counters or gas free scintillation detectors. Retrofitting of scintillation detectors to gas flow detectors is optionally possible.
- Choose between open and closed cabinet.
- Additional small items compartment enables the simultaneous measurement of tools, documents, etc.
- Advanced sensors for footwell monitoring.
- Additional gamma detector for incorporation monitoring.
- MaRCoS module and MaRCoS client software for the visualization and further processing of the measurement data.
- A station for personal dosimeters can be integrated directly into the Body Scan.



Body Scan head detector



View of the inside, detector arrangement

Body Scan detectors:
Choose the one that is best for you!

Our detectors come with easy positioning by an user-friendly plug-in system. Moreover, the detector foils are easy to replace by the user, even by untrained personnel. For reliable and fast measurements, our detectors provide high efficiencies for alpha and beta radiation. To help you decide which type of detector is right for you, see the below comparison:

PDK 860:

- Gas flow proportional counter
- Low flow rate 2-4 L/h
- Excellent long-term stability
- Not likely to be influenced by high ambient dose rates

SZ 860:

- Plastic scintillation counter with ZnS(Ag)
- No counting gas required

TECHNICAL SPECIFICATION

Mechanical Data

Dimensions (H x W x D)	2400 mm x 1000 mm x 1300 mm
Weight	Open design, including 2 sliding doors: approx. 500 kg With doors + gamma detectors + lead shielding: approx. 600 kg
Material	Stainless Steel

Ambient conditions

Temperature range	0 - 40 °C
Humidity	operation (per IEC61098): ≤ 85 % non-condensing at max. 35 °C

Detectors

Type	SZ 860 scintillation or PDK 860 gas flow proportional counter
Entry window	480 mm x 180 mm
Active surface	approx. 850 cm²
Weight	approx. 2.3 kg

Ordering Information

RMS Body Scan V1.24 - Closed cabinet with 24 SCINT detectors (SZ 860)	70711-10
RMS Body Scan V1.24 - Closed cabinet with 24 gas detectors (PDK 860)	70711-20
RMS Body Scan V1.18 - Closed cabinet with 18 SCINT detectors (SZ 860)	70711-30
RMS Body Scan V1.18 - Closed cabinet with 18 gas detectors (PDK 860)	70711-40
1 x Fully automatic sliding entrance/exit door	71915
Toolbox for small items. Alpha/Beta and Gamma measurement, incl. 2 detectors (1 x SZ 860 SCINT detector and 1 x SZG 345 gamma detector)	71916
Toolbox for small items. Alpha/Beta and Gamma measurement, incl. 2 detectors (1 x PDK 860 gas detector and 1 x SZG 345 gamma detector)	72404
Toolbox for small items. Alpha/Beta measurement, incl. 1 x SZ 860 SCINT detector	72406
Toolbox for small items. Alpha/Beta measurement, incl. 1 x PDK 860 gas detector	72407
Footwell monitoring	71929
Incorporation detector SZG 1500 consisting of: 2 gamma detectors SZG 1500 and 10 mm lead shielding	73214
MaRCoS-module RMS Body Scan	72402
MaRCoS Client Software	72403

SZ 860 plastic scintillation detector

Typ. efficiencies:	
^{241}Am	17 %
^{90}Sr	48 %
^{36}Cl	22 %
Background	α < 0.1 cps, β < 15 cps
Spillover	< 50% (α in β/γ channel, ^{241}Am)
Dimensions	500 mm x 200 mm x 75 mm

PDK 860 gas flow proportional counter

Typ. efficiencies:	
^{241}Am	19 %
^{90}Sr	51 %
^{36}Cl	38 %
Background	α < 0.1 cps, β < 12 cps
Spillover	< 1 % (β/γ in α channel, ^{137}Cs)
Dimensions	500 mm x 200 mm x 45 mm

TRANSFORMING SCIENCE INTO SOLUTIONS

Experience and expertise are of great importance to be able to ensure safety-relevant measurements properly and reliably. With more than 70 years of experience in planning and design, installation and commissioning, calibration, documentation and service of radiation protection measurement systems, we continue to support our customers in their task to continuously optimize their work processes and to ensure the safety of the environment and personnel.

Berthold Technologies GmbH & Co. KG
Calmbacher Straße 22
75323 Bad Wildbad
GERMANY
phone: +49 7081 177 0
email: nuclear@berthold.com
www.berthold.com/rp

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