DENSITY SERIES

TECHNICAL SPECIFICATIONS

MODEL	Density PB	Density NFB	Density S	Density S-NFB
ТҮРЕ	Pencil beam	Narrow Fan Beam	Pencil beam	Narrow Fan Beam
TECHNOLOGY	Single detector	Multiple detectors	Single detector	Multiple detectors
STANDARD PROTOCOLS	Spine, Femur, Forearm, Whole body	Spine, Femur, Forearm, Whole Body	Spine, Femur, Forearm	Spine, Femur, Forearm
SCAN TIME * (Normal mode)	Spine: 119s Femur: 119s Forearm: 95s Whole body (2 meters): 9 min.	Spine: 48s Femur: 48s Forearm: 34s Whole body (2 meters): 4 min.	Spine: 119s Femur: 119s Forearm: 95s	Spine: 48s Femur: 48s Forearm: 34s
DOSE PATIENT * (Normal mode)	Spine: 12.37uGy Femur: 12.37uGy Forearm: 0.82uGy Whole body: 4.71uGy	Spine: 15.12uGy Femur: 15.12uGy Forearm: 1.00uGy Whole body: 5.75uGy	Spine: 12.37uGy Femur: 12.37uGy Forearm: 0.82uGy -	Spine: 15.12uGy Femur: 15.12uGy Forearm: 1.00uGy -
DIMENSIONS	2650*1125*1125mm	2650*1125*1125mm	1950*1125*1125mm	1950*1125*1125mm
SCAN AREA	2000*620mm	2000*620mm	1300*620mm	1300*620mm
WEIGHT	196kg	196kg	175kg	175kg

^{*}Time and effective exposure depend on patient's morphology

Principle of operation:

Separation: samarium filtered (K-edge)

Energies: 40keV, 75keV Filtration: 30,5mm Al eq **External shielding:**

Not required: x-ray safety requirements may be different in

Environmental Dose Rate: <0.5µSv/h for typical usage @1m from x-ray source

Performance:

Precision: <1% Accuracy: <1%

Reporting results: BMD, BMC, area, Z-score, T-score,

Z-Score %, T-Score %

Reference curves: NANHES, local databases **Calibration:** multi-points BMD and area

Continuous Electronics Autocalibration: adaptive peak

threshold setting **Linearity range:** 0,2g/cm² ÷ 2g/cm² Patient weight limit: 160kg

X-ray generator:

Type: x-ray monobloc, HF, fixed anode, microprocessor controlled stability

Tube current: 0.125 - 1.75mA

Constant potential source at 86keV

Cooling: oil convection

Collimator: single hole /multiple holes, 2mm diam.

Beam size: 2mm

Type: ultra high efficiency Nal(TI) scintillator integral line PMT

Detector HV: negative, -200 to -1200V, stabilized

Environmental requirements:

Temperature: 15 to 27°C

Humidity: 15% to 80% (non condensing) Minimum room dimensions: 3x3m Power requirements: 230VAC, 500W

Software:

Protocols: spine, Femur (right/left), Forearm (right/left), Total Body/Body composition (PB and NFB models), Pediatric (optional)

Dicom 3.0 compliant (optional)

Built-in automatic QC procedures and system diagnostics

Bone edge detection: automatic

Selectable quality (High resolution, Normal, Fast) Pre-set exam parameters automatically adjusted according to patient's morphology

PC and OS minimum requirements:

Operating system: windows 64 - bit (7/8/8.1/10)

Memory: 4GB Hard disk: 500GB

Display: LCD or LED, 22", resolution 1920*1080" Printer: inkjet or laser color

Connection: Ethernet or 802.1n Wi-Fi (optional)

Accessories:

Washable and anallergic mattress Washable and anallergic pillow **Covering clothes**

A bone densitometer for all:

Easy to access for disabled and elderly with mobility problem. Table height is just 60cm.





EUROTEC MEDICAL SYSTEMS s.r.l.

is one of the most important companies in Italy designing and manufacturing X-ray devices.

Eurotec Medical Systems units are designed, developed and manufactured in ITALY, aiming to the most innovative technological and mechanical solutions.

EUROTEC MEDICAL SYSTEMS is ISO 13485 certified.





EUROTEC MEDICAL SYSTEMS srl

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DISTRIBUTOR

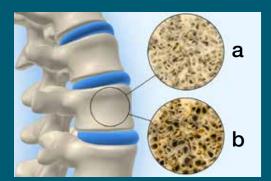


DENSITY

A different DEXA bone densitometer







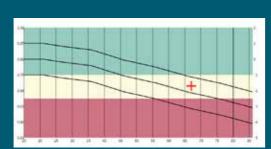
a: Normal bones - b:Osteoporosis

WHO (World Health Organization) defined osteoporosis based on bone mineral density (BMD).

A standardized score, called T-score, comparing BMD to average values for young healthy people, is used to define the categories.

OSTEOPOROSIS

Osteoporosis is a medical condition in which the bones become brittle and fragile from loss of tissue, typically as a result of hormonal changes, or deficiency of calcium or vitamin D. Osteoporosis is one of the major diseases affecting the elderly and more precisely is the seventh most common complaint. The incidence among people over age 50 is about 50% mostly among women.





WHO Definition of Osteoporosis based on BMD

Classification	BMD	T-score
Normal	Within 1 Standard Deviation of the mean level of young-adult reference population	T-score at -1.0 and above
Osteopenia Between 1.0 and 2.5 Standard Deviations below the mean value of young-adult reference population		T-score between -1.0 and -2.5
Osteoporosis	2.5 Standard Deviations or more below the mean value for young-adult reference population	T-score at or below -2.5
Severe Osteoporosis	2.5 Standard Deviations or more below the mean value for young-adult reference population	T-score at or below -2.5 with one or more osteoporotic fractures

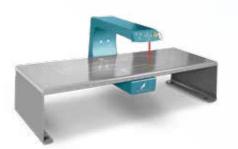
DEXA bone densitometry is a painless radiological test for the diagnosis of osteoporosis and is undoubtedly the most reliable and accurate technique.

DENSITY SERIES

ESSENTIAL DESIGN

Density series are the first bone densitometers to employ the patented suspended arm architecture. Their one-piece solid aluminum frame makes Density 's design both pleasant and practical. This innovative feature allows to have open space under the table, making it easy to access any part of the device for cleanings and maintenance, improving the sanitation of the room where the unit is installed: no dirty or dust hiding under the machine!





Density PB: Pencil Beam - Whole body



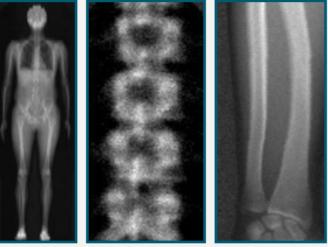
Density S: Pencil Beam - Compact



NFB: Fan Beam - Whole body



Density S-NFB: Fan Beam - Compact



ON THE SIDE OF THE PATIENT: THE LOWEST DOSE!

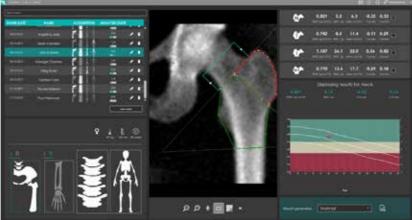
Thanks to their layout to an adaptive system of energy discrimination and of the currents selection of the tube of the x-ray generator Density series densitometers reduce

patient dose to the minimum, adapting to patient's morphology and maintaining an high quality level of the images.

dVISION

The smart Density software

dVision is a totally new software, developed in the windows presentation foundation environment and specifically designed to be easy-to-use and to a have a very gentle learning curve. It has been conceived from the user's point of view and it includes a set of automatic tools that make scans easy and quick to carry out.



FEATURES

AUTOMATIC SEGMENTATION: for each area, the software can identify the regions of interest. The user has just to review and confirm.

SINGLE WINDOW: all operations are performed in a single window, there is no need to open and close multiple windows to access specific functions.

AUTOMATIC DAILY QUALITY CONTROL: no external Phantom. The Quality Control Phantom is mounted directly under the table and the unit automatically performs QC tests and measurements.

MULTI-LANGUAGE: devised for windows 10, the software can be fully provided with a specific requested language.

BODY MASS COMPOSITION (optional): this module, available only on wholebody models (PB and NFB), provides an accurate analysis of the body mass composition (fat mass, lean mass, fat %, lean %, BMI)

REMOTE ASSISTANCE: in case of any problems, it is possible to organize a remote assistance session.



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