BRT-20

Product data | **Remote Controlled Table**

BMI

BRT-20 Remote controlled table has been designed as basic equipment, compact and extremely simplified.

MAIN APPLICATION

- Gastroenterology
- Myelography
- Interventional radiography
- Skeleton
- Paediatrics
- Urology and gynaecology
- Emergency and traumatology
- Digital angiography

MAIN FEATURES

- Advanced design and structure
- 9” to 16” I.I.
- Absence of architectonic barriers for a total access to the table
- Total access to the patient from any side
- Flat or concave tabletop
- Retractable grid
- Visualization of tilting and incidence angles on the tabletop
- SFD with digital-controlled servo motors

MAIN OPTIONS

- Collimator with iris
- II elevation device
- Tabletop longitudinal movement

PERFORMANCES

MICROPROCESSOR CONTROL

All the functions of the BRT-20 systems are microprocessor controlled in order to ensure the greatest operation safety, superior reliability and real time-check of the equipment, including the self-diagnosis function.

EXAMINATION TABLE

The table size of 210x74 cm makes the equipment particularly compact.

The tabletop-floor distance measures 82 cm, the tilting angle is 90°/18°.

TABLETOP

The tabletop is available either in stratified wooden material or carbon fibre and can be mounted with flat or concave side up. The tabletop can be turned over at any time, but this operation requires the intervention of the servicing personnel.
With both solutions the profile ensures a reduced tabletop-film distance; furthermore, the edges, made of anodized aluminium, are provided with special accessory-holder guides placed under the tabletop thus avoiding any possible accumulation of liquids.
The tabletop movements are extremely wide: 34 cm transversally, 95 cm longitudinally as an option for the fixed base.

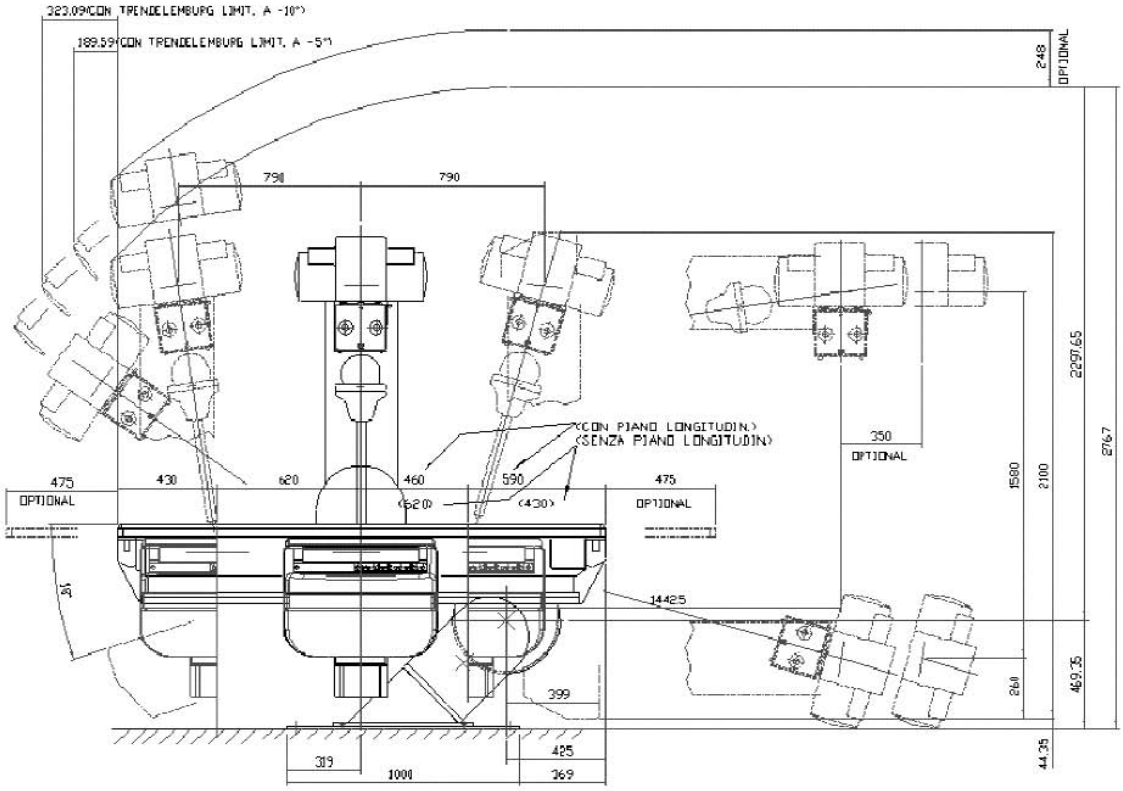


fig.1 - The ample displacements of the stand and of the tabletop ensure complete examinations of the patient (dimensions in mm)

PERFORMANCES

X-RAY TUBE STAND

The extended displacements of the stand make BRT-20 very versatile.

Longitudinal displacement:

- 124 cm, without longitudinal tabletop movement.
- 108 cm with longitudinal tabletop movement.

Focus-film distance:

- Variable focus-film distance of 115, 135 and 150 cm for excellent cardiac and lung examination quality.

Oblique incidences:

- ± 40° along a longitudinal displacement of 45 cm, ensures the execution of complete examinations of the spine with different incidences; besides, the possibility of selecting the layer height allows the operator to maintain the object to be examined always centered on the image.

X-ray tube assembly rotation:

- ± 180° ensures the execution of exposures on other accessories, such as wall Bucky and stretchers.

Minimum distance between X-ray beam and table edge:

- 43 cm, makes it easy to execute effective uro-gynaecological examinations.
  Due to its special structure, the table placed in vertical position ensures a great diagnostic efficiency.
- Easy **examination on charged legs**, thanks to the reduced focus-to-floor distance.

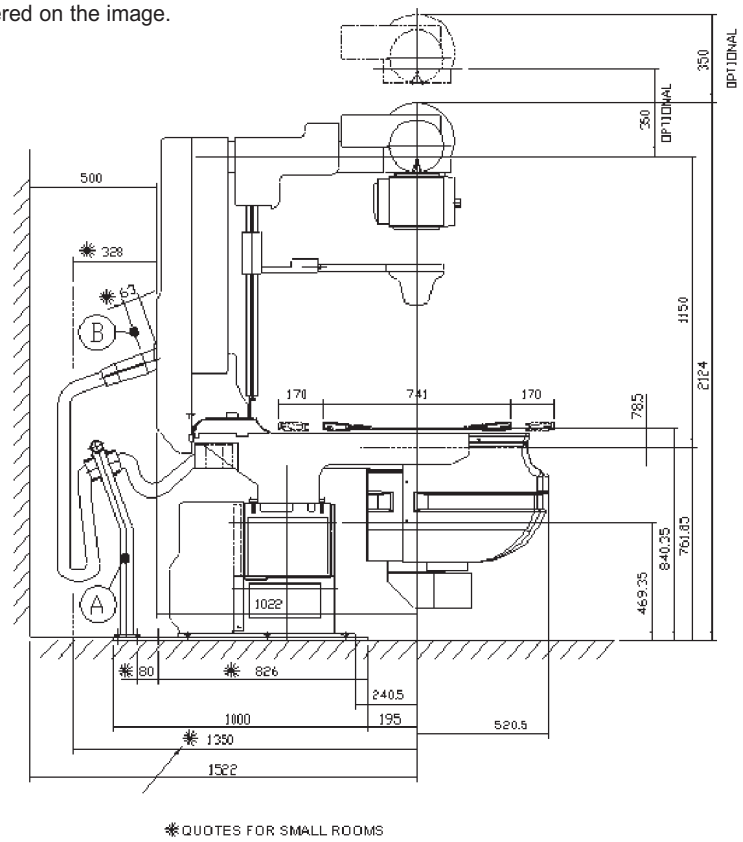


fig.2 - The compactness of the table shows up in the side view (dimensions in mm)

PERFORMANCES

EXAMINATION ON STRETCHED PATIENTS

proves to be very easy since, thanks to the wide longitudinal displacement and large focal distance, the operator can rely on a large focus-floor distance and wider room for positioning the patient.

COLLIMATOR

The collimator, provided with luminous centering device, allows three adjustment modes:

- manual;
- remote-controlled from the control panel;
- automatic, according to the cassette division, I.I. field, focus-film distance.

The collimator can be the rectangular field type or rectangular and iris type, which proves to be very useful for the digital system applications.

COMPRESSOR

The remote-controlled compressor allows an effective though not traumatic palpation and can be easily removed when it is not necessary.

A special attention has been given to the mechanical and electrical safeties, including safety against wrong manoeuvres.

SPOT FILM DEVICE

The SFD is completely automatic and, thanks to its great versatility, can be used with cassettes of any sizes from 18x24 cm to 35x43 cm with possibility of vertical subdivision into 2-3-4. The versatility of the SFD is even enhanced by the possibility of removing the retractable grid.

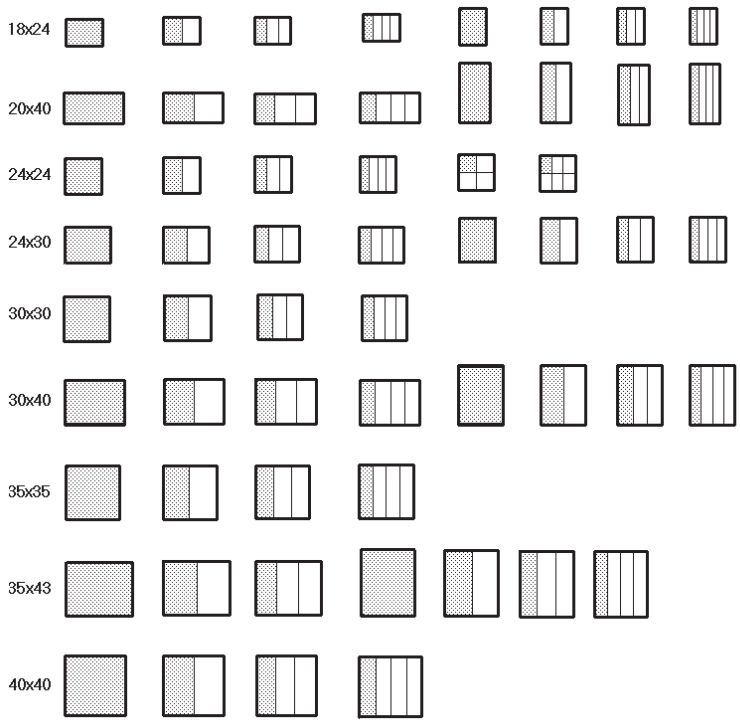


fig.3 - *Some examples of the comprehensive program featuring the SFD*

PERFORMANCES

HOMOTHETIC TOMOGRAPHY

Normally tomography involves the movement of important masses which is contradictory compared to accurate movements:
with BRT-20, tomography takes a special advantage from the effort devoted to reduce the dynamic masses, besides the digital control ensures a high accuracy and precision of reproducibility.

Main performances:

- possibility of execution from +90° up to -18°, with scan in both directions;
- tomographic area covering the whole displacement of the SFD;
- angles: 8°, 20°, 40°;
- two speeds for each angle;
- possibility to change over from tomography to radiography on the same cassette;
- selection of the layer height from 0 to 330 mm.

IMAGE INTENSIFIER AND TV CHAIN

BRT-20 can be equipped with a 9” to 16” **Image Intensifier** with high performance TV Chains.
The remote-controlled table can be prepared to receive a digital radiology systems.
A great advantage is given by **elevation of the Image Intensifier**, allowing to position the I.I. input surface at the same level of the X-ray beam.

This feature ensures the optimization of the exposure geometry in fluoroscopy and digital fluorography.

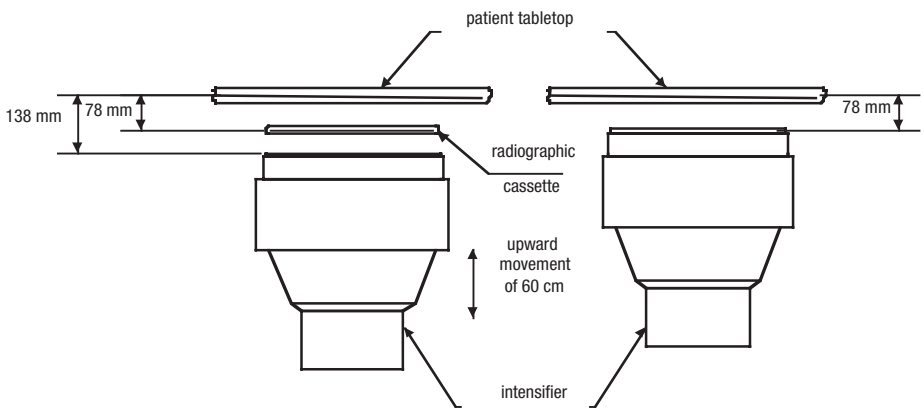
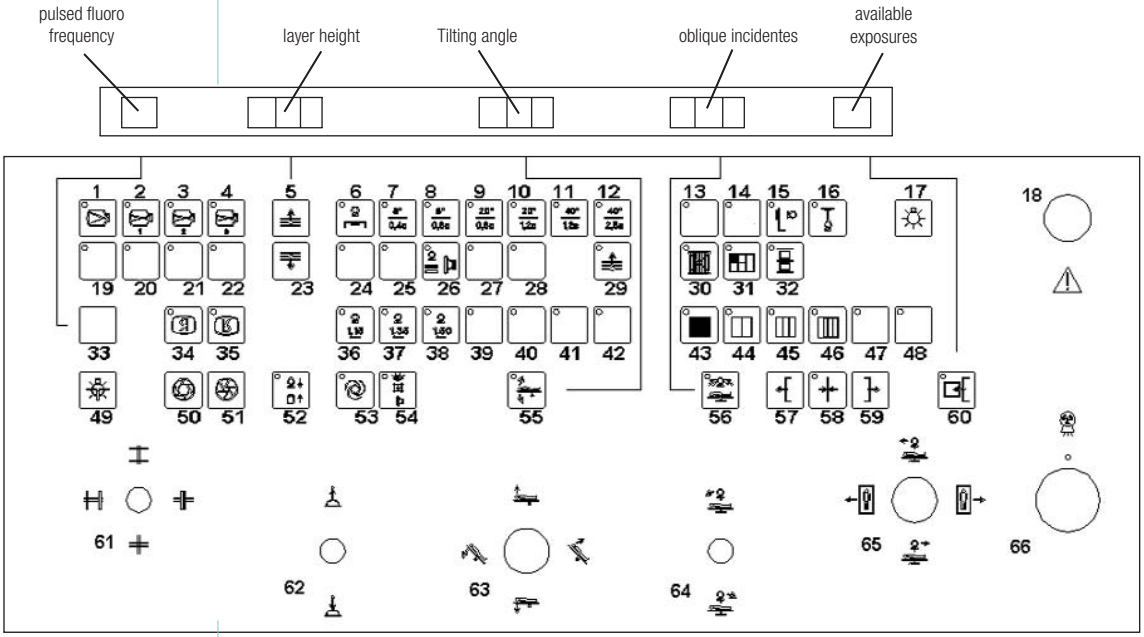


fig.3 - *Some examples of the comprehensive program featuring the SFD*

PERFORMANCES

CONTROL PANEL

The control panel is characterised by five joysticks and one series of light touch-keys, while large displays constantly show the entire status of the equipment to the operator.

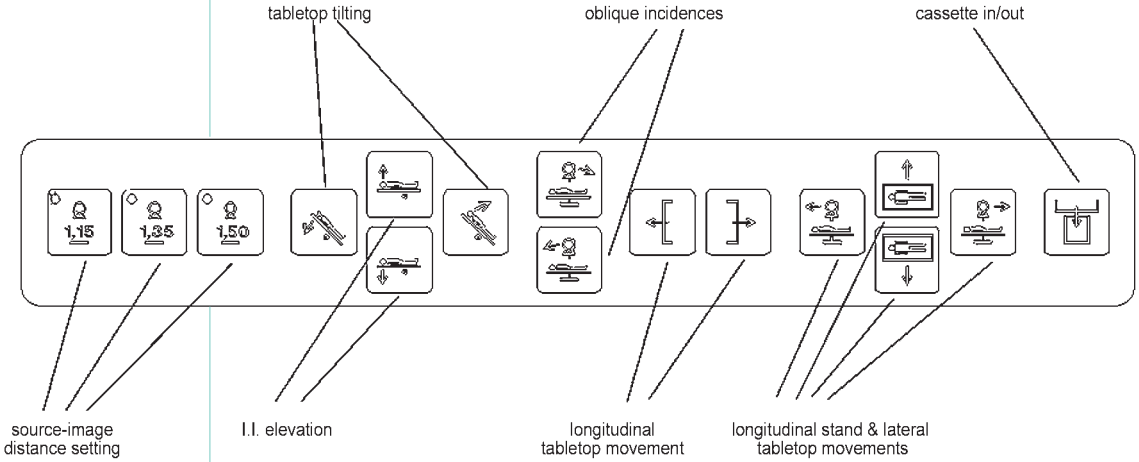


1-2-3-4 Image intensifier field selection
5-23 Tomographic layer height setting
6-7-8-9-10-11-12 Tomography
13-14 Not used
15-16 Accessory selection
17 Room light on
18 On/off button
19-20-21 Not used
22 Not used
24-25-26-27-28 Angio programming
29 Automatic layer height increment setting
30 Retractable grid
31 Mixed programming
32 Rapid spot filming
33 Not used
34-35 Image reversal
36-37-38 Source-image distance setting
39-40-41-42 Not used
43-44-45-46-47-48 SFD program selection
49-53-54 Motor-driven diaphragm controls
50-51 Manual iris diaphragm adjustment (opt.)
52 Image intensifier elevation device
55 Stop in horizontal position
56 Vertical stand position
57-58-59 Longitudinal tabletop movement (opt.)
60 Cassette in/out
61 Manual rectangular diaphragm adjustment
62 Compression device
63 Tabletop tilting - elevating
64 Oblique incidences setting
65 Longitudinal stand-lateral tabletop movements
66 Radiographic exposure

PERFORMANCES

CONTROL PANEL

The controls enabling the movements are also duplicated on the remote-controlled table



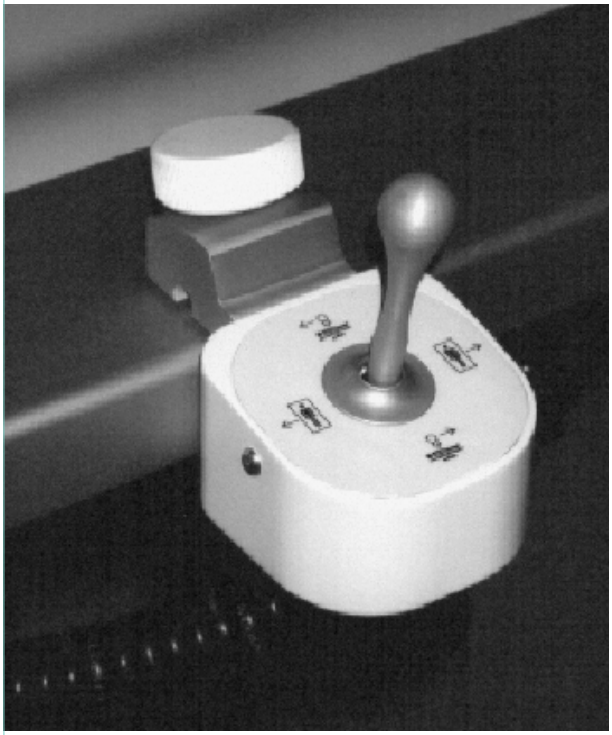
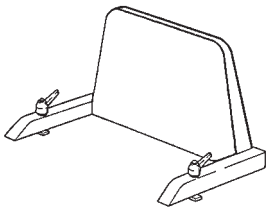


fig.5 - *Optional on board console with joystick*

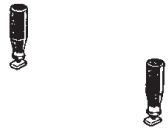
ACCESSORIES

BRT-20 versatility is further enhanced by the availability of a complete series of accessories.

STANDARD ACCESSORIES

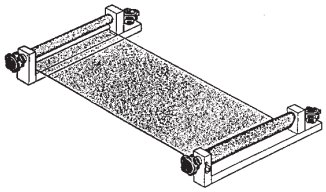


Adjustable height footrest

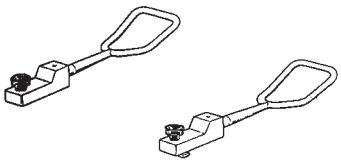


Hand grips

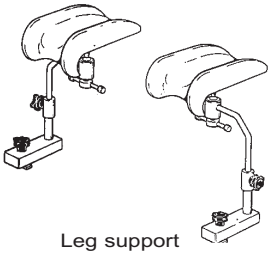
OPTIONAL ACCESSORIES



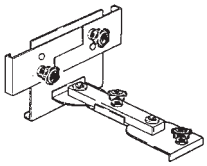
Shoulder rest



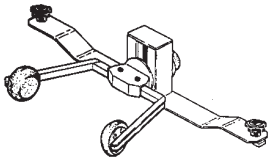
Ankle support



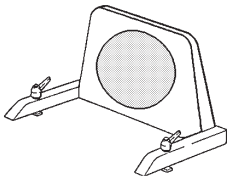
Leg support



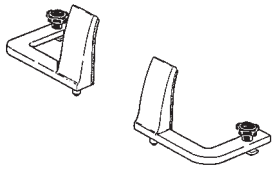
Lateral projections cassette folder



Head contention device



Motorized rotating footrest



Shoulder rest

OTHER OPTIONAL ACCESSORIES:

- Support for glass of barium
- Photocell for low ceiling
- On board console with joystick

TECHNICAL FEATURES

EXAMINATION TABLE	Tilting angles	90 / 18°
	Tilting speeds	variable up to 6°/s
	Simultaneous movements	• tilting
		• longitudinal stand travel
		• tabletop travel
		• stand incidences
TABLE TOP	Dimensions	210 x 74 cm
	Absorption	• wood stratified < 1 mm Al eq
		• carbon fibre < 0.5 mm Al eq
	Maximum patient weight	150 kg
	Height from floor	82 cm
	Lateral displacement travel	34 cm
	Lateral displacement speed	variable up to 5 cm/s
	Longitudinal displacement travel	± 47.5 cm opt.
	Longitudinal displacement speed	5 cm/s
STAND	Focus-film distance	115 - 135 - 150 cm
	Longitudinal incidences	± 40°
	Tube rotation	±180°
	Longitudinal displacement with SFD	124 cm (108 cm with tabletop longitudinal movement)
	Longitudinal displacement speed	variable up to 15 cm/s
	Minimum distance from table edge	43 cm

TECHNICAL FEATURES

SPOT FILM DEVICE	Minimum cassette format	18 x 24 cm
	Maximum cassette format	35 x 43 cm
	Vertical divisions	1 - 2 - 3 - 4 on all formats
	Crossed divisions	no
	Tabletop-film distance	78 mm
	Maximum applicable image intensifier	40 cm
	Tabletop-intensifier distance	138 mm, option 78 -138 mm
	Rapid spot filming	4 images in 2 s
	Fluoroscopy-radiography transition time	without II movement: 0.85 s
	Retractable grid	110 lines/inch, ratio 12:1, focalization 120 cm
TOMOGRAPHY DEVICE	Movement	linear with execution in the two directions
	Topographic area	extended all over SFD displacement
	Angles / times	• 8° / 0.4 - 0.6 s
		• 20° / 0.6 - 1.2 s
		• 40° / 1.2 - 2.5 s
	Layer height selection	0 - 330 mm
COLLIMATOR	Type of command	• manual
		• remote-controlled
		• automatic
	Rectangular field	standard
	Iris field	optional
	Luminous centering device	standard
COMPRESSOR	Compression force	from 50 to 200 N
	Travel	55 cm

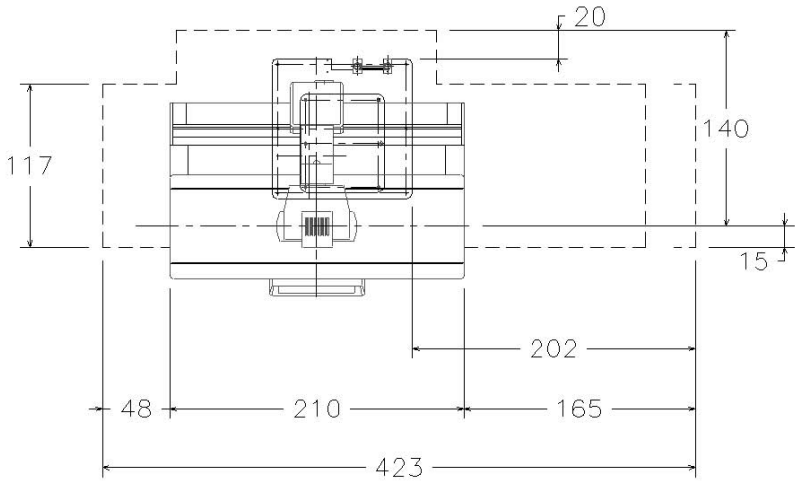


fig.6 - *Encumbrances of remote controlled (dimensions in cm)*

RADIOFLUOROGRAPHIC ROOM:

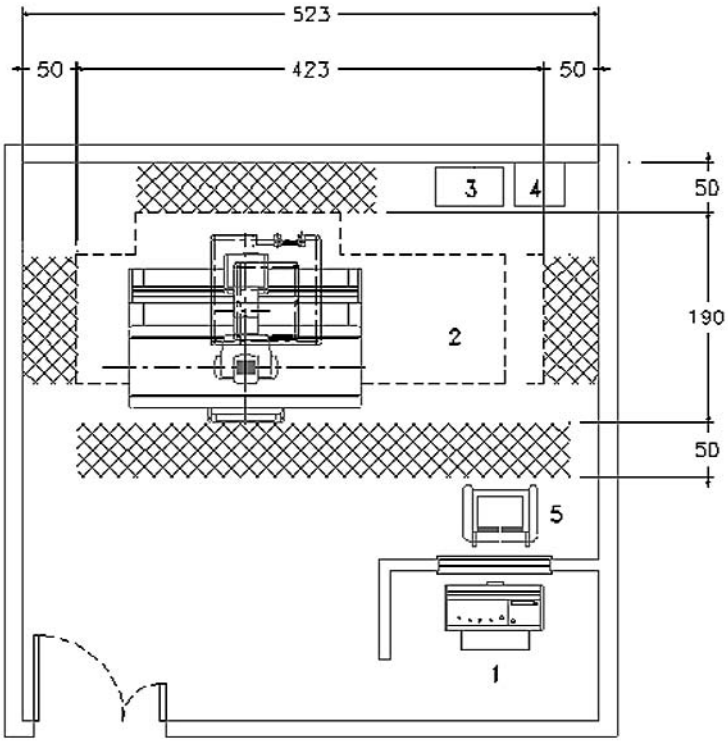
TYPICAL LAYOUT

	denomination	weight kg	support base m²
1	Control console	80	0,180
2	Examination table (*)	650	1,000
3	Service cabinet	140	0,210
4	Power cabinet	110	0,185
5	Monitor	70	//

Minimum ceiling height for 90° tilting: 230 cm

(*) composition and weights (in kg)

Equipment	650
Accessories	80
Floor base	114
Patient (CEI EN60601-1)	150
Total	994



dimensions in cm

Safety area (EN 292 conformance)

ESSE 3 Via Garibaldi 30
14022 Castelnuovo D.B. (AT)
tel +39 011 99 27 706
fax +39 011 99 27 506
e-mail esse3@tuttopmi.it
web : www.4ci.com

ISO 9001
ISO 13485