R650QDASM

AUTOMATIC SQUARE-FIELD COLLIMATOR SYSTEM WITH TWO PAIRS OF RECTANGULAR SHUTTERS DESIGNED TO OPERATE WITH A FIXED OR MOBILE "C"- ARM IN CONNECTION WITH IMAGE DETECTOR UNIT (DYNAMIC FLAT PANEL).

The square-field is defined by two pairs of lead-lined shutters located near the exit window of the x-ray beam from the collimator and, a cone (near the focus) that limits the x-ray beam to the larger field size.

The two pairs of shutters move perpendicularly within the x-ray field; shutters movements are motorised and controlled by stepper motors.

The two pairs of lead rectangular shutters, both located near the entrance window of the x-ray beam in the collimator, move independently of each other in translation and rotation motion (+/- 360°). Stepper motors control the movements of shutters.

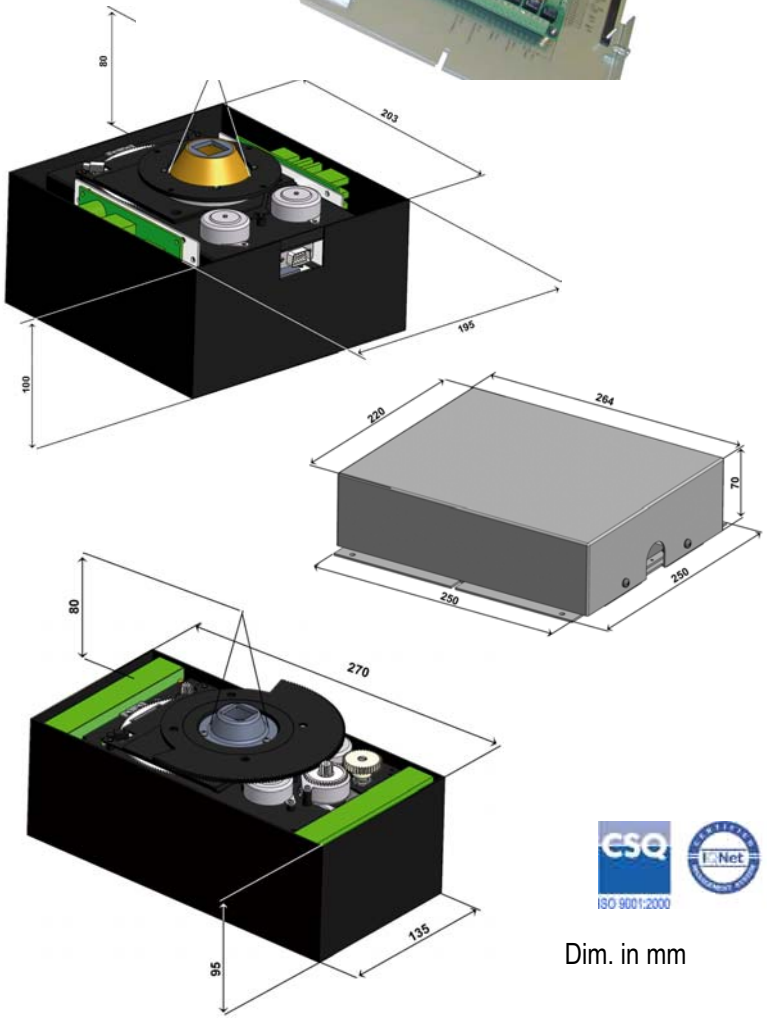
The two pairs of lead rectangular shutters may be substituted either by two filtering shutters, made of copper (1 mm thickness) or by single copper shutter - 1 mm thick, having a cardiac contour.

Three variable values of filtration on aluminium disk (1 mm thickness), near the entrance window, may be added to collimator inherent filtration. Filters positioning is stepper motor controlled.

The collimator rotates on its axis +/- 90°, its movement is motorised and controlled by potentiometer.

The collimator features 2 microprocessor circuits assembled into the collimator to control the eight step-motors positioning that allow all movements (described above) to be set. The motor movements are controlled via external signals received with CanBus protocol. The circuits return a CanBus protocol signal to indicate correct motor positioning.

External interface board reads the analogical signals and transmits them to the collimator boards with CanBus protocol. During rotation the distance between the two rectangular shutters remains steady, with a tolerance of ± 10 mm at 100 cm FFD (SID). The system is designed and constructed for installation with **rotating or fixed anode x-ray tubes (EN 60601-1-3 par. 29.202.3);** motorised controls provided for the adjustment of the x-ray field dimension to that of anatomical area of interest.



Dim. in mm

TECHNICAL FEATURES:

- 125 kVp - 4 mA radiation shielding.
- No inherent filtration
- Field dimension at FFD 100cm (39.4") with the collimator mounted at 80 mm (3.14") from the focus is 30 cm (12"): minimum 0x0 - maximum 35x35 cm.

OPTIONAL ITEMS:

RO 246 – Shutter cardio copper, 1 mm thickness
RO 265 - Substitution of rectangular lead shutters for copper shutters, 1mm thickness.
RO 268 – Interface board for Can Bus transmission of analogic signals
RO 267 - A pair of rectangular lead shutters, 3 mm thickness
RO 277 - Additional variable filtration, automatic positioning:
0,1mm copper in addition to the 1mm Al. Support.
0,2 mm copper in addition to the 1mm Al support.
1mm aluminium in addition to the 1 mm Al support.
RO 291 - Rotation on collimator's axis +/- 90°, potentiometer controlled positioning.
RO 325 – Substitution of square field with a round field, diam. 14" at FFD (SID) 1m with the collimator mounted at 80mm from the x-ray focus.

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