SP4S Premium

1.1.16

TECHNICAL SPECIFICATIONS

SP4S PREMIUM CEILING TUBESTAND

for auto-positioning configuration

STEPHANIX
MEDICAL IMAGING SOLUTIONS

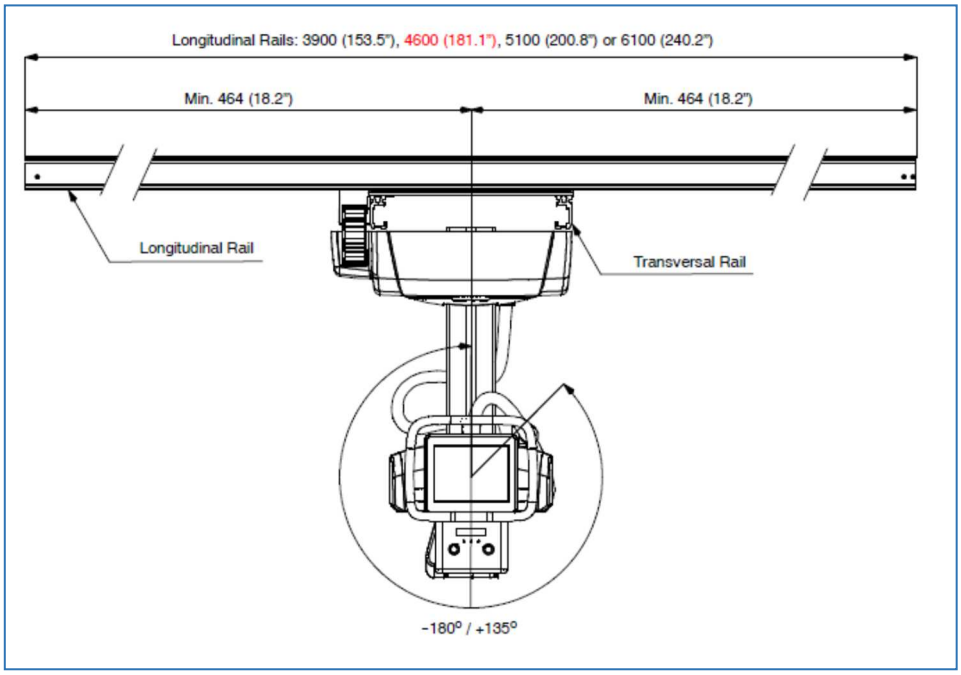
1.1.17

SP4S PREMIUM CEILING TUBESTAND

It consists in three main parts:

- The system of rails, composed with two longitudinal rails (fixed on ceiling) on which slides one bridge composed of two lateral rails
- The carriage (on the bridge) with telescopic tube holder
- The x-ray tube assembly with control console

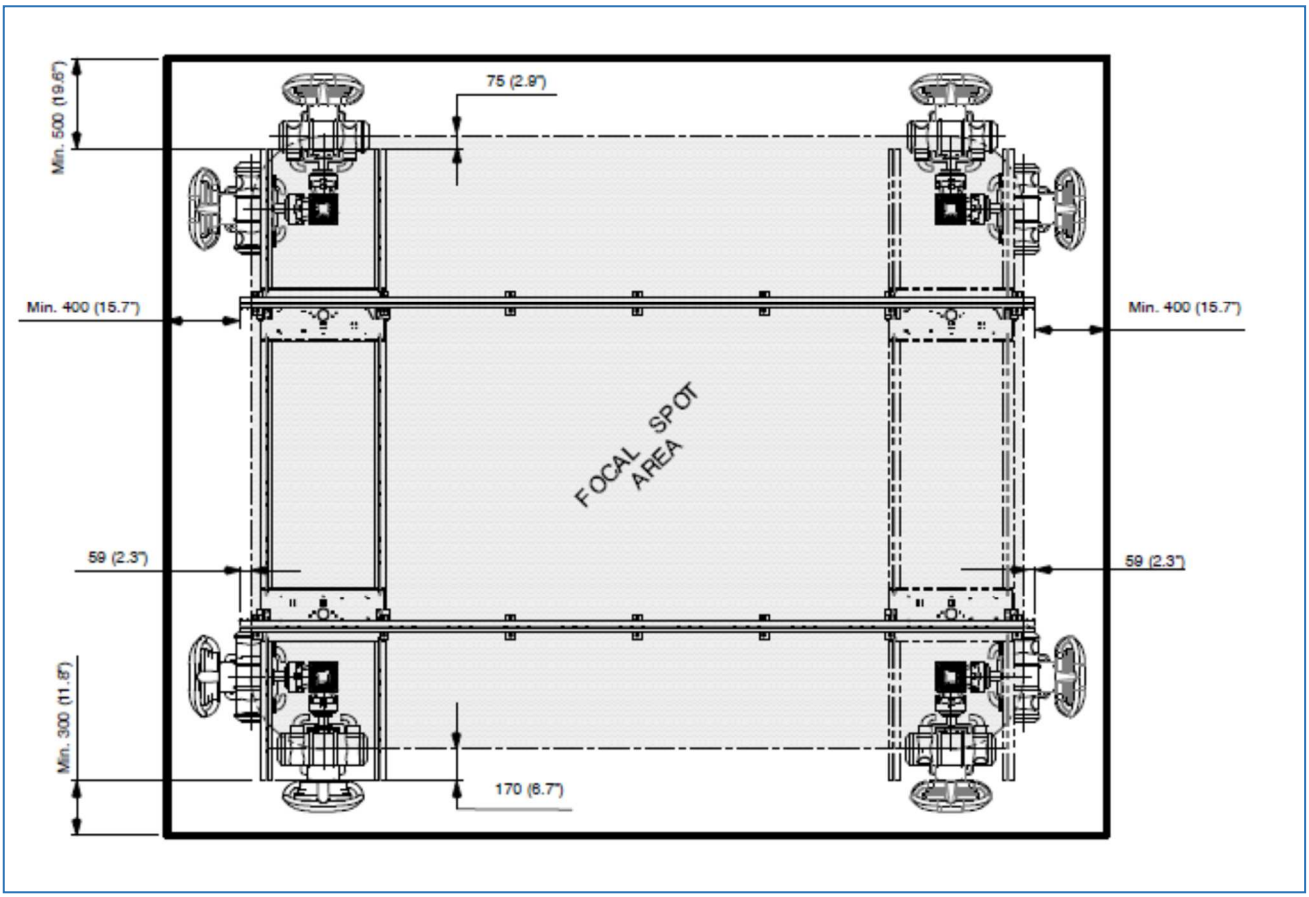
X System of rails



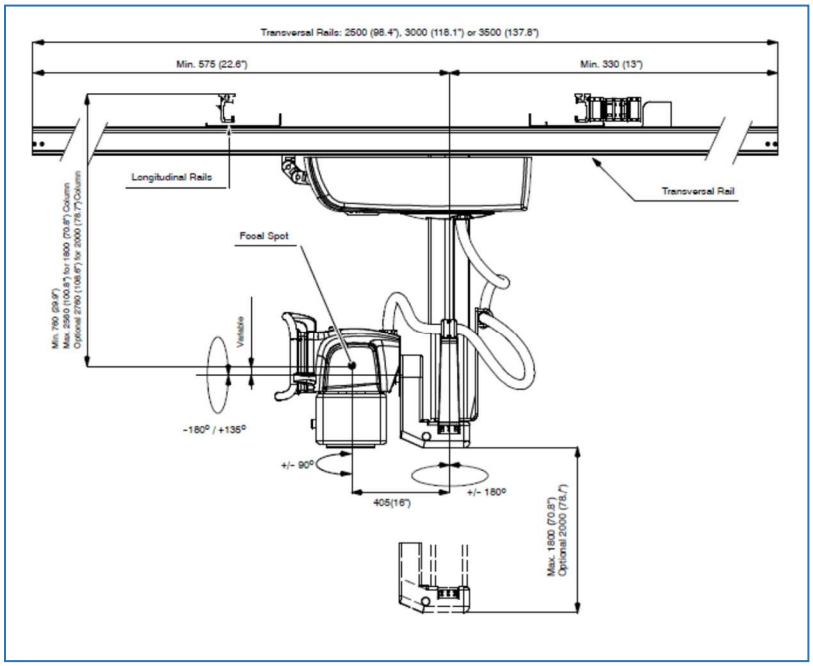
Longitudinal rails with standard length of 460 cm, motorised carriage movement of 350 cm
Typically, 18 cm/s maximum speed.
To comply with the room layout, optional dimensions are available:
With optional 390 cm length, longitudinal movement of 297 cm
With optional 510 cm length, longitudinal movement of 417 cm
With optional 610 cm length, longitudinal movement of 517 cm
Smaller ones are also available
Distance between longitudinal rails 180 cm

Lateral rails with standard length of 300 cm, motorised carriage movement of 210 cm
Typically, 18 cm/s maximum speed.
To comply with the room layout, optional dimensions are available:
With optional 250 cm length, lateral movement of 160 cm
With optional 350 cm length, lateral movement of 260 cm
Smaller ones are also available

Coverage under X-rays (regarding selected rails lengths)



X Carriage with telescopic tube holder



The telescopic column is designed with four independent parts guided by high precision alignment mechanism with a double safety system that secures the vertical movement.

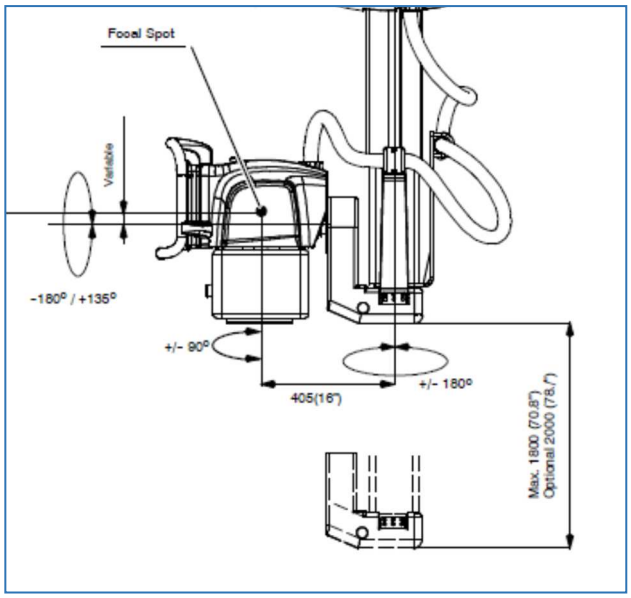
180cm motorised vertical movement, servo assisted and counterbalanced, 15cm /s maximum speed 1.1.20

Optionally, vertical movement of 200 cm

Minimum focal spot / ceiling distance: 76 cm

Maximum focal spot / ceiling distance: 256 cm (option, 276 cm)

X-ray tube assembly with control console



The ***rotation angle*** around the horizontal axis of the telescope (Alpha axis) is – 180° / + 135° avec with mechanical stop every 45°.
The rotation angle around the vertical axis of the telescope (Beta axis) is +/- 180° with mechanical stop every 45°.
Electromechanical brakes

The distance between the focal spot and the axis of telescope is about 40.5 cm

The **collimator** is fitted with four pairs of mobile lead shutters and two pairs of pre-shutters. Its minimum inherent filtration is 2mm Al eq; it is equipped with white LED light beam (minimum 160 lux @ 1m @ 14"x14") and laser indicator, it can be rotated manually by +/-90° 1.1.34

In option, additional variable filtration (1mm Al + 0.1mm Cu or 1mm Al + 0.2mm Cu or 2mm Al) can be selected regarding each protocol (paediatrics …) 1.1.35

1.1.33 It is motorised with manual and automatic modes.

In automatic mode, shutters are opened regarding image receptor format, anatomical region and selected graphy field; manually, it is possible to adjust more precisely the collimation to the needed area to xray.

The automatic collimation and filters can be key elements for dose reduction.

Several types and brands of X-ray tubes are available

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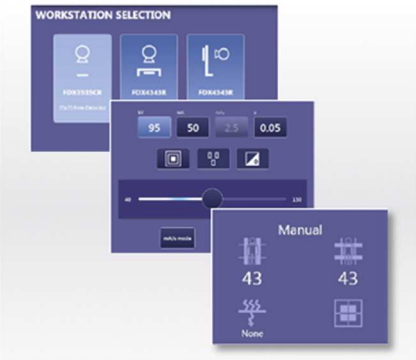
The ***control console*** is composed with one capacitive handle and one Touch screen.

The soft keys are colour coded and can release the brakes to control linear and rotating movements.

The capacitive handle unlocks all linear movements.



X High frequency generator

The generator is made of an electronic cabinet including HV tank. It is microprocessor controlled and uses the Inverter technology with IGBT circuits (Insulated Gate Bipolar Transistor).

Available powers are 32kW, 40kW, 50kW, 65kW or 80kW

X AEC (option)

Installed in the image receptor tray, the ionization chamber is an x-ray sensor designed for automatic exposure control regarding selected kV in One point mode. It will optimize image quality with patient dose reduction.

It is composed with three rectangular fields and the central one is slightly lower positioned.

X X-ray Tube

Several types and brands of X-ray tubes are available.

- Presetting of x-ray tube features in generator:

Loading ratings, cooling ratings, starting voltages, starting times, maximum current limitation

- Safety and protection disposals for x-ray tube:

The electronic calculation of load by generator software indicates limits to the tube with message and forbids x-ray

Housing temperature control and display of available Heat Units in %

Overheated IGBTs detection

Housing oil pressure control in series with x-ray tube heat safety

X Dose Area Product measuring system

It consists in a transparent ionization chamber and its integrated detector electronics, installed at the level of the collimator. A dedicated zone closed to the console displays Dose Area Product

X DR digital system with flat panel detector

With its acquisition console and Flat panel detector that can be portable wifi, or wired integrated into the Bucky, it replaces the analog system to optimise patient workflow and user comfort. Captured image is readable within few seconds.

X Options

Other longitudinal rail length; other transversal rail length; other vertical movement
20m HV cables & cover, other lengths on request
Additional filters
DAP measuring system
X-ray tubes *Other options on request*

X Equipment environment

Dimensions (L x x x h)

With standard rails lengths : 460 x 300 x 107 cm minimum
With maximum rails lengths: 610 x 350 x 107 cm minimum

Weights

Main assembly (carriage + telescopic tube holder) and control console 217 kg
Lateral rails (length 350 cm): 53 kg ; Longitudinal rails (length 610 cm): 91.3 kg
X-ray tube assembly (x-ray tube, collimator, hose & cables) without control console around 80kg (depending of selected x-ray tube)

Operating environmental conditions

Temperature from 10°C to 40°C (the temperature has to change progressively)
Relative humidity from 30% to 75% (not condensing)
Atmospheric pressure from 700 to 1060 HPa
These environmental conditions do not include other items such as digital detector. Refer to the other items documents

Power supply

115 - 230 V ca +/- 10%, single phase, 50 - 60 Hz