LASER SYSTEMS FOR PATIENT MARKING AND POSITIONING

HORUS
LASERSTAR
Founded in 1983, A2J is based in France, in the Eastern Parisian area. Specialized in laser systems for virtual simulation and patient positioning in radiotherapy A2J has been manufacturing and distributing its mobile and fixed lasers initially for virtual simulation in the French market.

OVER THE YEARS A2J HAS BECOME A GLOBAL MARKET PLAYER WITH AN EXTENSIVE NETWORK OF DISTRIBUTORS

HORUS AND LASERSTAR
THE PERFECT COMBINATION FOR PATIENT MARKING AND POSITIONING IN RADIOTHERAPY

The complete redesigned next generation of our laser systems convince with state-of-the-art technology in a modern look and feel. HORUS and LASERSTAR are durable, reliable and trusted high precision tools for the daily use in your advanced workflow for virtual simulation and patient positioning.

HORUS
HORUS moveable laser lines are supporting your radiotherapy treatment planning for a precise and highly accurate marking on the patient skin.

LASERSTAR
Fixed LASERSTAR crosses ensure exact patient alignment for the treatment in radiotherapy.

ISO 13485
HORUS LASER SYSTEMS FOR VIRTUAL SIMULATION AND PATIENT MARKING

Equipped with a linear encoder, HORUS mobile lasers ensure precise marking of the positions defined during your treatment planning. These marks are necessary for exact and reproducible patient positioning during the treatment.

SYSTEM CONFIGURATIONS

HORUS laser systems can be ordered in 3 different configurations depending on your workflow and needs. All configurations are available in red or green or mixed colors emissions.

HORUS 1:
- 1 mobile sagittal laser
- 2 fixed cross beam lasers for horizontal and transversal lines
- 1 additional fixed transverse laser in the ceiling device to prevent shadow effects

HORUS 3:
- 1 mobile sagittal laser
- 2 mobile horizontal lasers
- 3 fixed transverse lasers

HORUS 5:
- 1 mobile sagittal laser
- 2 mobile horizontal lasers
- 2 mobile transverse lasers

WILKE PHANTOM
Laser quality control

LASER CONTROL SYSTEM
HORUS CS

HORUS Control System consists of a handy wireless tablet PC and user friendly software interface. 3 modes are available to comply with your workflow: Moving lasers manually on the touch screen to reach the right reference, entering coordinates on the keypad or sending lasers to the coordinates imported from the treatment planning system.

Table: TECHNICAL DATA HORUS

<table>
<thead>
<tr>
<th>Laser color (wavelength)</th>
<th>red (638 nm), green (520 nm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line width (up to 4 m distance)</td>
<td>&lt; 1 mm</td>
</tr>
<tr>
<td>Line length (at 3 m distance)</td>
<td>&gt; 3 m</td>
</tr>
<tr>
<td>Laser class</td>
<td>2</td>
</tr>
<tr>
<td>Positioning accuracy</td>
<td>± 0.1 mm</td>
</tr>
<tr>
<td>Projection accuracy (up to 4 m distance)</td>
<td>± 0.5 mm</td>
</tr>
<tr>
<td>Travel range</td>
<td>700 mm</td>
</tr>
<tr>
<td>Power supply</td>
<td>100 – 240 V AC</td>
</tr>
<tr>
<td>Dimensions (H x W x D)</td>
<td>1355 x 155 x 145 mm</td>
</tr>
<tr>
<td>Weight Laser rail</td>
<td>20 kg</td>
</tr>
</tbody>
</table>

Tablet PC
- Microsoft Windows 8.3'' touch screen
- 8 megapixel camera
- Docking station

Accessories:
- Floor stand
- Brackets for wall and ceiling devices
- Phantom for Quality Assurance

Please contact us for maintenance and service options.
PATIENT POSITIONING WITH LASERSTAR

With its red or green laser lines and crosses LASERSTAR ensures exact and reproducible positioning to the LINAC isocenter. For patient alignment in all three body planes the system consists of at least three LASERSTAR devices. LASERSTAR can be mounted at the ceiling and wall by using the appropriate brackets. If a wall mount is not possible the laser can be mounted to a floor stand.

TECHNICAL DATA LASERSTAR

<table>
<thead>
<tr>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laser color (wavelength)</td>
<td>red (638 nm), green (520 nm)</td>
</tr>
<tr>
<td>Line width (up to 4 m distance)</td>
<td>&lt; 1 mm</td>
</tr>
<tr>
<td>Line length (at 3 m distance)</td>
<td>&gt; 3 m</td>
</tr>
<tr>
<td>Laser class</td>
<td>2</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>15 - 30 °C</td>
</tr>
<tr>
<td>Power supply</td>
<td>100 – 240 V AC</td>
</tr>
<tr>
<td>Dimensions (H x W x D)</td>
<td>180 x 112 x 81 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>1.4 kg</td>
</tr>
</tbody>
</table>

Accessories:
- Floor stand
- Brackets for wall and ceiling devices

Please contact us for maintenance and service options.

CONFIGURATION EXAMPLES

3 LASER ROOM
One ceiling laser projects the sagittal line and two crosshair lasers project the transversal and horizontal lines.

4 LASER ROOM
One ceiling laser projects the sagittal line and two crosshair lasers project the transverse and horizontal line. One additional crosshair laser above the isocenter to avoid shadow effects.

5 LASER ROOM
One ceiling laser projects the sagittal line and two crosshair lasers project the transversal and horizontal lines. Two lasers project additional horizontal lines below the isocenter.
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