

DORADOnova

MOVING LASER SYSTEM FOR PATIENT ALIGNMENT IN RT





PERFECT INTEGRATION

The characteristic features of LAP laser systems are sophisticated technology, quality and design for more than 30 years. This level of excellence has made us the global market leader for patient alignment in radiotherapy.

Precise patient marking, accurate planning and exact positioning are key factors for a successful treatment. Patient marking takes place during CT simulation (virtual simulation) and is required for reproducible treatment positioning on the LINAC.

Our DORADOnova laser system together with the LAP laser control supports this crucial and important marking process and conforms to your department's workflow. You select the mounting version, the laser color and the control system. Offering various configurations and mounting options the DORADOnova laser system is perfectly suited to meet any and all room requirements.

LAP – WE KNOW PATIENT ALIGNMENT

- Since 1984
- Global market leader
- In-house hardware and software development
- Scientific collaborations
- Worldwide service network
- Certified in accordance to ISO 9001 and ISO 13485
- Made in Germany



- ULTRA-FINE PRECISE LINES
- DISTORTION-FREE WINDOWS
- FAILSAFE SYSTEM
- COMPREHENSIVE TRAVEL RANGE

REMOTE CONTROL
Laser adjustment while the housing is closed, no additional tool required

- Alignment (shift, tilt, rotation)
- Focusing



DORADOnova LASER SYSTEM UNIQUE TECHNOLOGY

3
PROJECTION COLORS
AVAILABLE:
RED, GREEN, BLUE

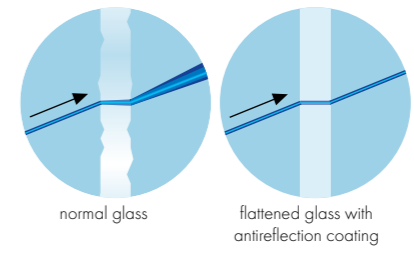


PRECISE

LAP ULTRALINE is the result of advanced mechanical components and unique optoelectronics used to generate and align laser lines for medical applications. The ultra-fine and very long lines meet the high quality requirements for linearity and brightness distribution.

DISTORTION-FREE

LAP laser systems are fitted with unbreakable, specially flattened glass windows. This minimizes scattering and guarantees ultra-fine lines at all transition angles.

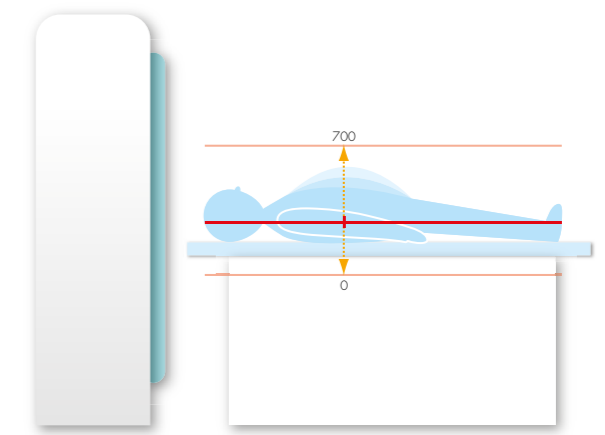


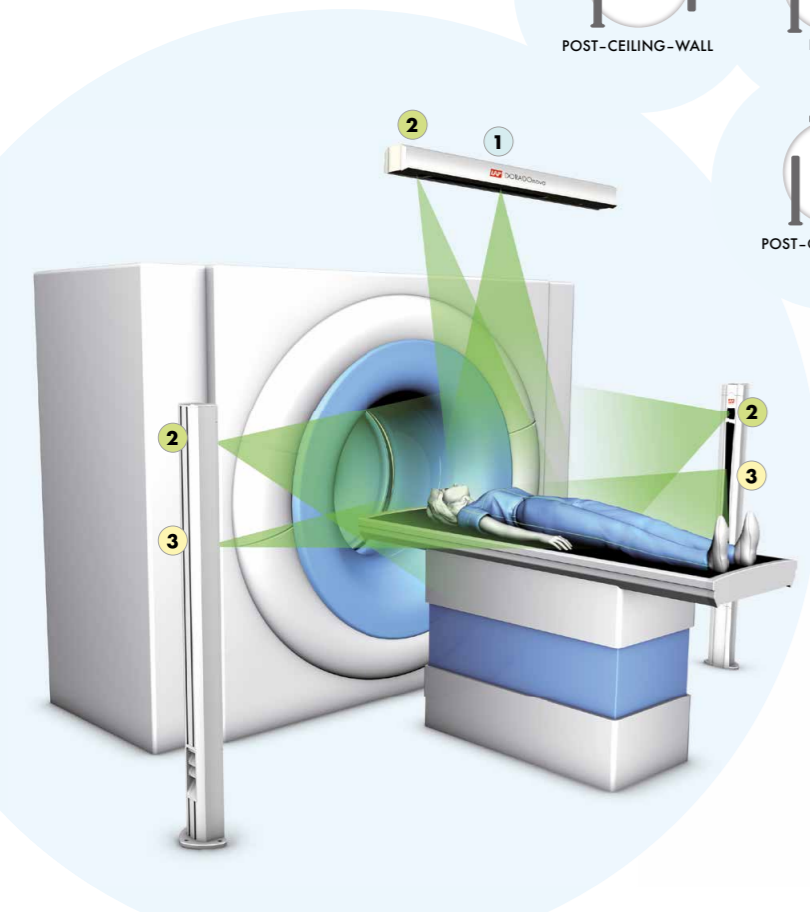
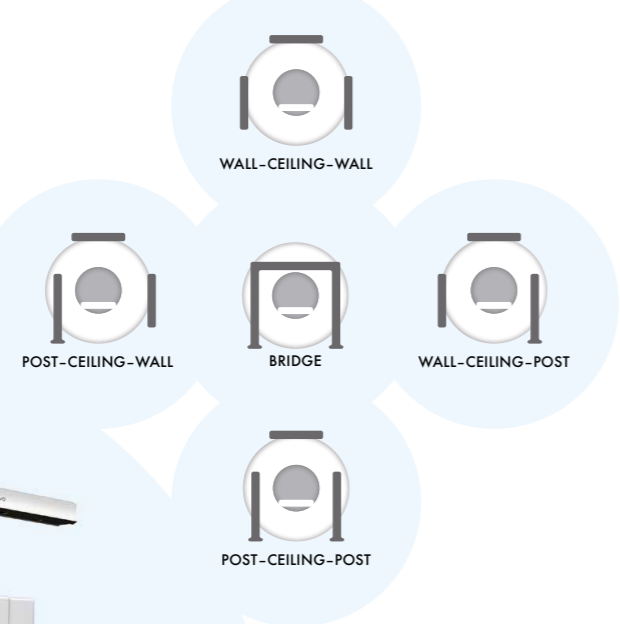
FAILSAFE

LAP moveable laser modules will not switch on until they are definitely placed at their prescribed positions. A linear encoder continuously verifies the position of the stepper motor to compare the laser modules actual position to its nominal position.

COMPREHENSIVE

The laser module travel range of 700 mm makes LAP DORADOnova systems unique. In order to achieve consistent precision of the laser line over the entire travel range the mechanical components are manufactured at near-zero tolerance and are perfectly aligned.

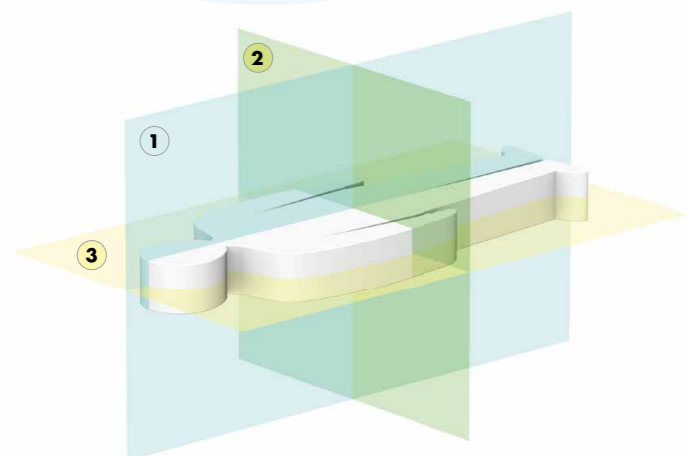




MOUNTING VERSIONS

Each DORADOnova laser system consists of three rails with fixed and movable laser modules for projecting red, green or blue lines.

You are free to select from five mounting versions to perfectly match your existing room situation.



PROJECTED BODY PLANES

The DORADOnova laser system projects the desired coordinates to mark the patient in all three planes.

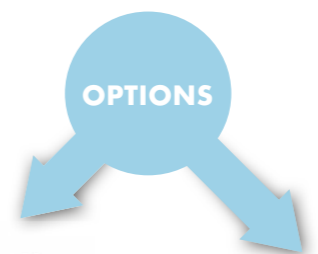
- 1 SAGITTAL PLANE
One movable laser line from the ceiling rail
- 2 TRANSVERSE PLANE
One fixed laser line from the ceiling rail and one fixed laser line from each wall/post rail
Shifting is possible by moving the patient table
- 3 HORIZONTAL PLANE
Two movable laser lines, each from the wall/post rails

LAP LASER CONTROL

DORADOnova laser systems are operated by special LAP laser control systems, consisting of hard- and software. With CARINAsim and CARINAnav LAP provides you two different control systems to move the lasers and interact with your RT planning system. Once connected to your RT planning or virtual simulation system the data can be imported via LAP file format or DICOM.

FEATURES

- Touchscreen operation
- Individual workflow support
- Easy navigation, intuitive laser control
- Status and position feedback
- Data import via LAP file format or DICOM
- Data security, protection and privacy



CARINAsim
Operated by an All-In-One Touch PC CARINAsim acts as the laser control and an interface between the RT planning software and laser system. A 3D patient view displays the laser projection on the skin surface.



CARINAnav
CARINAnav's tablet PC is an independent wireless laser control system offering maximum freedom in a compact design. Patient data are imported via Bluetooth or Wi-Fi interface.

TECHNICAL DATA		
Laser color	red (635 nm), green (532 nm), blue (450 nm)	
Laser class	2	
Line width up to 4 m distance	0.5 mm (blue), < 1 mm (red, green)	
Line length at 3 m distance	3 m	
Positioning accuracy	± 0.1 mm	
Projection accuracy	± 0.5 mm at a projection distance of 4 m	
Travel range	700 mm	
Travel speed	up to 200 mm/s	
Power supply	100 ... 240 VAC	
SYSTEM	DIMENSIONS (W x H x D)	WEIGHT
Ceiling / Wall	1553 x 143 x 109.5 mm (61.1" x 5.6" x 4.3")	23.3 kg
Post	1707.5 x 225 x 164 mm (67.2" x 8.9" x 6.5")	20 kg
Bridge	Width (customized) 2594 - 5000 mm (102.1" - 196.9") Height (customized) 2300 - 2800 mm (90.6" - 110.2")	approx. 100 kg



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