



Centralite[®] Patient Alignment Lasers

Precisely align patient position during radiation therapy.





Accurate patient positioning is a critical component in effective radiation therapy. Recognizing the need for lasers that work predictably and reliably each time, Diacor® introduced the Centralite® family of patient alignment lasers in the late 1980s. We continually research and refine our systems to offer tools that meet unique needs in radiation oncology. Which explains why Centralite lasers are used in thousands of hospitals and clinics throughout the world.

Diacor offers red and green fixed lasers as well as moving laser systems in a variety of configurations. We also offer custom lasers for both OEM and direct customers. No matter which system you choose, you can count on consistent and reliable performance today—and tomorrow.



Centralite Fixed Lasers

Reliability, stability and outstanding line quality are the hallmarks of Centralite fixed lasers. Diacor fixed lasers feature a width of less than 1mm at isocenter and a line depth of field of 1.5m – 4m. This ensures you can precisely mark patients for therapy and reproduce positions throughout a treatment schedule. Fingertip controls provide independent adjustments for the angle of rotation of the cross-lines. All fixed lasers include a custom-designed mounting plate. We also offer optional angle brackets and pedestal mounts to ensure you can install and use our lasers in the manner that best suits your facility.

Benefits

- Unique three-filter design reduces transient power issues and extends diode life
- Precise line quality with width of less than 1mm at isocenter and line depth of field of 1.5m – 4m ensures accurate position reproducibility
- Diagonally cut ends provide easy access to mounting bolts during installation
- Stable aluminum housing provides rigid frame for internal laser and optics

Centralite Red Diode Fixed Lasers

Red diode lasers have long been the standard in radiation therapy. Diacor offers three configurations for our Centralite red diode lasers that address common treatment requirements and make ordering from Diacor fast and easy.

Red Diode Laser Models

- Model DLL-2: Red diode cross laser
- Model DLL-4: Red diode sagittal laser

Motorized System Available

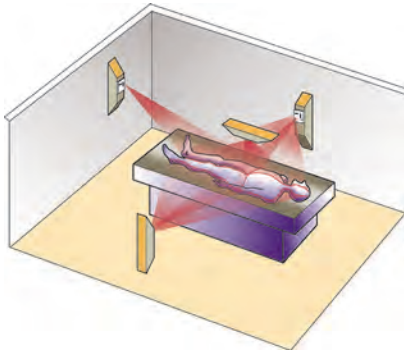
Our optional motorized system for red diode lasers uses a handheld infrared transmitter that enables you to make minute adjustments to the laser beam while inspecting the image at isocenter. It's an ideal solution for hard-to-reach locations, such as an overhead laser.

AC/DC Converter Included

All fixed lasers include an AC/DC converter that allows you to power the system anywhere in the world where 115/220VAC and 50/60HZ power is available.



Centralite Red Diode Fixed Laser Configurations

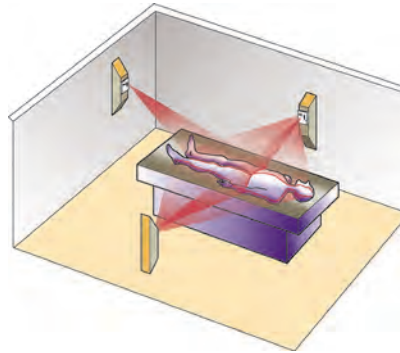


Centralite LS-1 Laser System

Depending on the configuration of the room, the two lateral and overhead cross lasers may be mounted either vertically or horizontally. The sagittal laser mounts vertically on the back wall, allowing the beam to project downward at a 20-degree angle.

System Components

- 3 red diode cross lasers (model DLL-2)
- 1 red diode sagittal laser (model DLL-4)
- Mounting plates

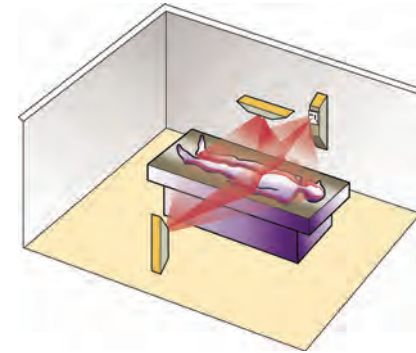


Centralite LS-2 Laser System

The two lateral cross lasers may be mounted vertically or horizontally. The sagittal laser is mounted vertically on the back wall, allowing the beam to project downward at a 20-degree angle.

System Components

- 2 red diode cross lasers (model DLL-2)
- 1 red diode sagittal laser (model DLL-4)
- Mounting plates



Centralite LS-3 Laser System

In this configuration, two cross lasers may be mounted vertically or horizontally on opposing walls. The third laser is mounted on the ceiling, allowing the two beams to project downward through the isocenter.

System Components

- 3 red diode cross lasers (model DLL-2)
- Mounting plates

Centralite Green Diode Fixed Laser Bundles

We also offer three unique configurations for our Centralite green diode lasers. Green diode lasers deliver the same accuracy as red diode lasers while projecting an image that is easier to see across a wider variety of skin tones.

Green Diode Lasers

- Model DLG-1: Green diode cross laser
- Model DLG-1S: Green diode sagittal laser

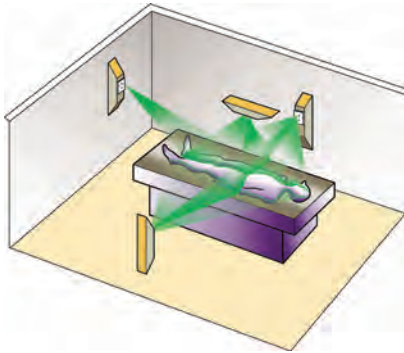
Why Choose a Green Laser?

There are four clear reasons to consider Diacor green diode lasers:

1. Appear brighter to the human eye than red lasers
2. Minimize line diffusion on skin
3. Project clearer image across a wider variety of skin tones
4. Deliver same accuracy as red diode lasers



Centralite Green Diode Fixed Laser Configurations

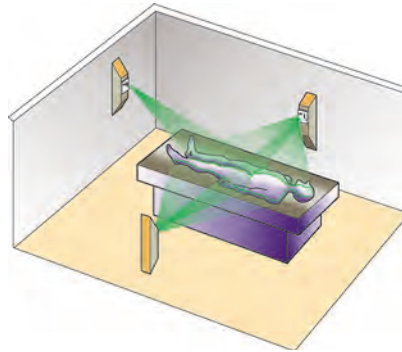


Centralite LS-4 Laser System

To match the configuration of your room, the green diode overhead and lateral cross lasers may be mounted either vertically or horizontally. The cylindrical lens of the sagittal laser projects the beam at a 20-degree angle that runs the length of the table.

System Components

- 3 green diode cross lasers (Model DLG-1)
- 1 green diode sagittal laser (Model DLG-1S)
- Mounting plates

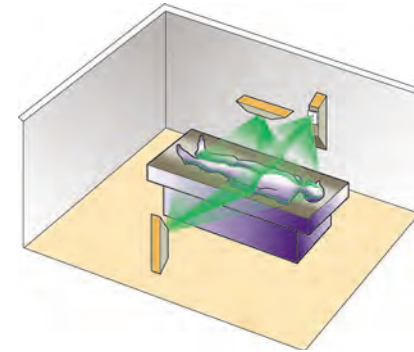


Centralite LS-5 Laser System

The two lateral cross lasers may be mounted vertically or horizontally. The sagittal laser is mounted vertically on the back wall, allowing the beam to project downward at a 20-degree angle.

System Components

- 2 green diode cross lasers (Model DLG-1)
- 1 green diode sagittal laser (Model DLG-1S)
- Mounting plates



Centralite LS-6 Laser System

In this configuration, two cross lasers may be mounted vertically or horizontally on opposing walls. The third laser is mounted on the ceiling, allowing the two beams to project downward through the isocenter.

System Components

- 3 green diode cross lasers (Model DLG-1)
- Mounting plates

Centralite CT Moving Laser System

The Centralite CT moving laser system lets you use treatment-planning data to directly identify tumor locations and mark patients for treatment. Designed expressly for radiation therapy departments that use CT scanners for virtual simulation, it's today's most accurate and reliable patient alignment system. The Centralite CT moving laser system positions laser diode-generated lines at X, Z and Y coordinates. Used in conjunction with a digitized CT scan of the affected area, it can help you precisely identify tumor location, yielding more effective treatment. Each system includes a combination of moving laser actuators and fixed lasers (depending on configuration), a system controller that manages up to five actuator positions, and a graphical handheld interface terminal.

Benefits

- Provides complete system control through graphical handheld terminal—including remote coordinate transfer from TPS system—allowing therapist to maintain focus on the patient
- Delivers accurate, error-free marking of patients due to precise, self-calibrated laser line positioning
- Provides seamless interface to all major commercial virtual simulation and treatment planning systems, allowing you to choose the system that works best for your facility



Centralite CT System Components



Moving Laser Actuator

The moving laser actuator moves the laser line to the position commanded by the system controller. A laser diode is moved from one end of the actuator to the other using a precision, stepper-motor-controlled positioning system.

Benefits

- Count on extremely accurate positioning of the laser line at isocenter thanks to factory calibration
- Easily adjust alignment of vertical and horizontal positions using buttons at the bottom of the actuator
- Mount actuators on a wall, ceiling and/or pedestal to match the unique layout of your facility



Operator Handheld Terminal

The graphical handheld terminal—located in the CT simulation room and featuring a 24-key pad and easy-to-follow menus—delivers complete control over the moving laser system and empowers the therapist to work more efficiently and effectively.

Benefits

- Displays patient ID information, laser positions and status, and control menus
- Makes critical information available to the therapist in the CT simulation room
- Allows rapid movement between coordinates, streamlining the patient-marking process
- Allows the therapist to focus on the patient instead of the system

System Controller

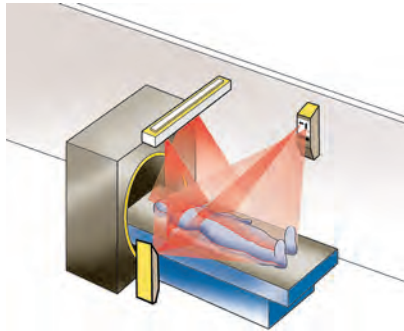
The heart of the moving laser system is a microprocessor-based, multi-axis position controller. Designed to control the position of 1 to 5 actuators, the operator uses the handheld terminal to communicate with the system controller. When configured with an optional single-board computer, moving laser coordinates may be imported from the treatment planning system. This ensures more efficient data entry while eliminating potential operator error.



Benefits

- Interfaces to all major commercial treatment planning systems
- Eliminates need to place an additional computer or monitor in the CT control room
- Controls power to all moving actuators

Centralite CT Moving Laser Configurations

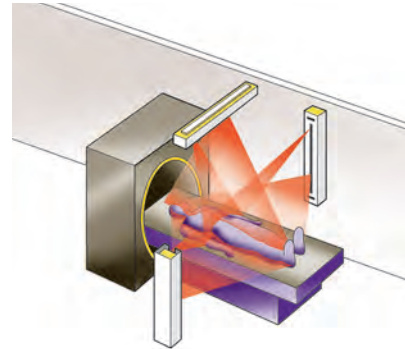


Centralite CT Single-Moving Laser System

The Centralite CT single-moving laser system (Model CML-1, CML-1PC) provides one moving plane (X) and two fixed planes (Y and Z).

System Components

- 1 overhead moving laser actuator
- Left and right lateral fixed lasers
- System controller
- Operator handheld terminal
- Optional PC interface for TPS connectivity

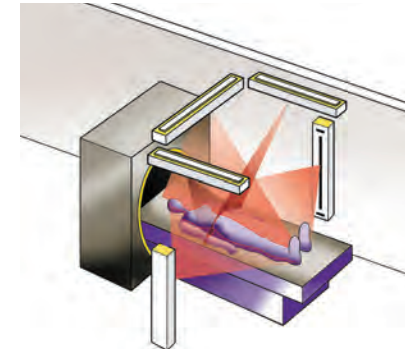


Centralite CT Three-Moving Laser System

The Centralite CT three-moving laser system (Model CML-3, CML-3PC) provides two moving planes (X & Z) and one fixed plane (Y).

System Components

- 1 overhead moving laser actuator
- Left and right lateral moving laser actuators
- System controller
- Operator handheld terminal
- Optional PC interface for TPS connectivity



Centralite CT Five-Moving Laser System

The Centralite CT five-moving laser system (Model CML-5, CML-5PC) provides three moving planes (X, Y and Z) for the ultimate precision in tumor marking.

System Components

- 3 overhead moving laser actuators
- Left and right lateral moving laser actuators
- System controller
- Operator handheld terminal
- Optional PC interface for TPS connectivity

Patient Alignment Laser Systems Comparative Chart



Fixed Laser Specifications

	Red Diode Laser	Green Diode Laser
Depth	3.9" (9.9 cm)	3.9" (9.9 cm)
Width	3" (7.6 cm) housing; 5.5" (13.9 cm) mounting plate	3" (7.6 cm) housing; 5.5" (13.9 cm) mounting plate
Height	11.5" (29.2 cm) housing; 13" (33 cm) mounting plate	16" (40.6 cm) housing; 17.5" (44.4 cm) mounting plate
Power	115/220 VAC 50/60 Hz. AC/DC converter	115/230 VAC 50/60HZ AC/DC converter
Laser Beam Output	Less than 1 mW per beam (Class II laser)	Less than 1 mW (Class II laser)
Line Width	0.9-1.2 mm at isocenter when mounted 3 m from isocenter	0.9-1.1 mm at isocenter when mounted 3 m from isocenter
Fan Beam Angle	Greater than 50 degrees	Greater than 50 degrees
Wavelength	650 nm	532 nm
Adjustment Sensitivity	Less than 0.1 mm (manual or motor driven)	Less than 0.2 mm
Drift	No measurable drift	No measurable drift
Certification/Marking	Complies with CDRH regulations for Class II lasers / Carries CE marking	Complies with CDRH regulations for Class II lasers / Carries CE marking



Moving Laser Specifications

	Moving Laser	System Controller	Handheld Terminal
Length	41" (104 cm)	17.1" (43.5 cm)	9" (23 cm)
Width	4.5" (11.6 cm)	7.1" (18.2 cm)	5.1" (13 cm)
Height	4.1" (10.4 cm)	3.9" (10.0 cm)	1.4" (3.5 cm)
Weight	22 lbs (10 kg)	7 lbs (3.2 kg)	1.3 lbs (0.6 kg)
Power	Supplied by system controller	100-240 VAC, 50-60 Hz	Supplied by system controller
Line Positioning Accuracy	+/- 0.3 mm	NA	NA
Encoder Resolution	0.004 mm	NA	NA
Adjustment Sensitivity	Less than 0.1 mm	NA	NA
Laser Beam Output	< 1 mw (CDRH Class II)	NA	NA
Wavelength	650 nm	NA	NA
Line Width	< 1.0 mm	NA	NA
Fan Beam Angle	50°	NA	NA
Length of Travel	500 mm	NA	NA
Certification/Marking	Complies with CDRH regulations for Class II lasers / Carries CE marking	NA	NA



A History of Innovation

Diacor manufactures proven solutions for critical care. For more than twenty years we've offered innovative products that are used in radiation therapy departments throughout the world. In addition to our Centralite fixed and moving patient alignment lasers, we offer patient positioning systems that enable you to accurately establish and reproduce patient positions in radiation therapy. We also offer our block cutting and casting system that enables you to quickly cut and cast a precision mold and mount the casting to a blocking tray. All products are manufactured under a registered ISO 9001:2000 quality management system.



ISO 9001
ISO 13485
FM 75208
FM 502197

Learn more about our comprehensive family of patient alignment lasers by calling (800) 342-2679 or (801) 467-0050.



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