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FIELD SERVICE BULLETIN

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ThermoTek Chiller Installation Guide



PRODUCT All Chameleon laser systems

PURPOSE To inform the service organization how to install the ThermoTek Chiller and add the correct mixture of coolant.

DESCRIPTION To ensure optimum laser performance and durability the ThermoTek Chiller must be installed, setup and maintained as specified. The ThermoTek Chiller pumps coolant (a mixture of distilled water and anti-corrosion inhibitor) into the cooling channels within the aluminum base-block of the Chameleon laser. This process is essential to withdraw residual heat away from the cavity to minimize thermal expansion in the base-block and optic mounts. The Chiller also helps to control the temperature of various components within the Verdi pump laser.

ACTION

The ThermoTek Chiller is shipped completely drained of water and must be filled with the correct mixture of coolant before use. The recommended replacement cycle is 90-days in which the coolant must be drained and renewed. Follow the operator's manual included with the chiller for specific instructions.

Installing the ThermoTek Chiller

- 1) Connect the water lines that run between the chiller and the laser head. Take care to note the flow direction. Ensure that the output of the chiller is connected to the input of the laser head and vice versa.
- 2) Fill the chiller reservoir with the coolant mixture consisting of 90% steam-distilled water and 10% Optishield Plus Corrosion Inhibitor.
Important information
Do not use de-ionized water. De-ionized water can contain dissolved solids that may damage the laser head. Do not overfill the chiller reservoir. Ensure that water is not spilled externally around the filler cap. Immediately wipe up any spilled water with absorbent tissues.
- 3) Locate the power cord and connect it to the chiller. If necessary, install a proper mating plug on the mains end. The plug must be installed in a properly grounded outlet with a maximum of 15 Amp service for proper over current and earth fault protection.
- 4) Turn the chiller on and allow the coolant to fill the water lines and laser head.
- 5) Verify the chiller temperature is set to 20°C for 80MHz systems and 25°C for 90MHz systems.

Replacing the coolant in the ThermoTek Chiller

- 1) Disconnect the mains power from the Chiller and drain the coolant from the system (including the laser head).
- 2) If the drained coolant shows signs of contamination, flush the system with distilled water only and repeat this cycle as necessary.
- 3) Follow instructions for **Installing the ThermoTek Chiller** to re-install the ThermoTek Chiller with the correct mixture of coolant.

PARTS

Steam-distilled water. Optishield Plus Corrosion Inhibitor.

PSE Initials

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