

Laser Cooling Units

LASER COOLING UNIT PS1245CO



FEATURES

- ▶ Water-air cooling
- ▶ Deionizer and particle filter included
- ▶ Provides interlock signal on error
- ▶ Manual temperature setting on front panel
- ▶ Front panel indicators:
 - Coolant/set temperature
 - Low coolant level
 - Overheat
 - No Flow
- ▶ 19" standard case

Cooling unit PS1245CO is designed for flashlamp-pumped lasers and provides effective heat removal and high stability of laser rod temperature. This enables long term operation of your laser at maximum efficiency. Unit is assembled in 19" chase and may be used completing the powering group of laser systems. Also it can be mounted into the 19" rack.

Operation of cooling unit is based on water-to-air heat exchange. Deionised or distilled water of 1–20 $\mu\text{S}/\text{cm}$ conductivity is used in laser loop of cooling unit.

Temperature stability of coolant is maintained by electronic circuit. Stabilization temperature is set by 10-turn potentiometer within 25–45 °C (another range is available according to customers requests).

Indication of coolant and set temperature, coolant level, overheat and pressure absence in laser loop is provided on front panel of cooling unit.

Blocking and protection circuitry in case of overheating, pressure absence or when coolant level is out of low limits sends interrupt signal to interlock connector to which protection circuitry of laser powering might be connected. Coolant pump will be stopped in case of pressure absence or coolant level is out of limits.

Deionisation and filtration of coolant eliminates a build up on the flashlamp, reduces servicing need and allows laser operation at maximum efficiency in day-to-day use.

SPECIFICATIONS

Model	PS1245CO-1.0	PS1245CO-2.0
Recommended cooling capacity ¹⁾	1000 W	2000 W
To laser temperature regulation	± 1 °C (analog proportional control)	
Range of temperature	25–50 °C	
Coolant reservoir capacity	4 liters	
Maximum coolant pump pressure	3.0 bar	
Water pumping capacity	Up to 7 l/min	
Coolant	distilled or deionised water with 1–20 $\mu\text{S}/\text{cm}$ conductivity	
Mains	single phase, 180–250 V, 50/60 Hz	
Power consumption	≤ 230 W	
Size	19" \times 7U front panel, 507 mm \times 442 mm case	
Weight	15 kg	

¹⁾ Power capacity possible to dissipate when temperature difference between water and ambient is 10 °C.