

MID POWER LASER CL 500



Laser system CL 500 in mobile housing

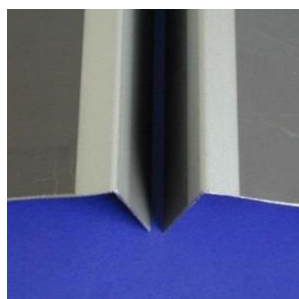
Basic system

- 500 W laser power (CW)
- Precise and gentle surface cleaning
- Diode pumped solid-state laser
- Real-time controlling
- Large working distance
- Optional air or water cooling
- Suitable for robust industrial application

LASER SYSTEMS FOR INDUSTRIAL USE

IPG | cleanLASER CL 500 is a mid-power laser system suitable for a wide range of industrial applications. The diode pumped laser module enables a nearly maintenance-free application of the system. Due to an optical fiber guiding the laser light into the laser optics, the system is well suited for automated applications. Optionally, the system can be delivered with typical fieldbus interfaces for automation integration. Typical applications are large-scale adhesive bonding pre-treatment, paint removal or weld seam pre-treatment at high rates of feed.

Due to an integrated cooling system and a compact design – despite 500 watt of laser power – the system is mobile. Only a three-phase electrical connection and, if necessary, separate house cooling water are required to operate the laser. Further media such as protective gas are not necessary.



APPLICATION EXAMPLES

- Weld seam pre-treatment for aluminum alloys
- Pre-treatment for adhesive bonding
- Fast cleaning of oily surfaces
- Complete or selective paint removal
- Mold cleaning

TECHNICAL DATA



Laser system in optional cabinet

OPTIONS

- Circular or square optical fiber
- Visualization system for up to 6 systems
- Pilot laser mirrored into the optical path of the laser
- Teleservice-module CLQ-Control
- Fieldbus, e.g. profinet, profibus, interbus
- Cooling system water-air
- Tailored suction and filter technology
- Separate recooling systems (water/air)
- Plasma sensor for process control

Laser type	Diode pumped solid-state laser
Control system	Control system with safety circuits
Wavelength	1064 nm ± 4 nm (~ Infrarot)
Laser Class	4
Specified power of laser source (CW mode)	500 W ± 5 %
Puls frequency	18 – 40 kHz
Max. pulse energy	25 mJ
Min. pulse duration	65 ns
Max. energy consumption	3,9 kW
Standard fiber length	~ 10 m
Expected MTBF time of laser diodes	> 50.000 Stunden
Size (l x b x h)	795 x 1.250 x 1.270 mm ³
Weight	~ 350 kg
Power supply (only laser)	400 V (50 / 60 Hz), 16 Ph, N, PE (CEE Plug)
Min./max. ambient temperature	10 / 40 °C (36 °C for air-cooled version)
Humidity	< 95 %, non condensing
Cooling system	Water – water / optional air – water
Necessary external cooling water quality	< 19 °C, pressure difference 1,5-4 bar, particles < 100 µm, non corrosive, pH-neutral
Technical availability according to DIN	> 98 %

01.2025 Subject to technical changes.

PLEASE CONTACT US - WE ARE HAPPY TO ADVISE

