

Cutting Head HP1.5" M

High power cutting head with cartridge changing system and adjustable lens position over CNC



The HP1.5" M Cutting Head is used with CO₂ lasers in flat bed systems and pipe-cutting machines. Like the other models in the HP series, it is also equipped with the proven cartridge changing system, which enables the fast and easy replacement of the preadjustable cartridges and the cutting of variable workpiece thicknesses and types of material. In addition to the non-contact distance sensors and the motorised lens position adjustment, several sensors have been integrated for cutting process automation, e.g. piercing and lens break sensor.

>> EFFICIENT

- high cutting speeds with integrated distance sensors
- short conversion times with fast changing of focal lengths
- faster gas changes
- optimised gas flow

>> FLEXIBLE

- cutting of different material thicknesses
- cutting of non-metal materials like plastic or wood
- focal lengths tailored to your application

>> USER FRIENDLY & SAFE

- simple and safe cartridge replacement system with TCP retention
- motorised focal position adjustment
- temperature monitoring of the sensor insert

System types / Lasers:

- flat bed systems
- pipe cutting systems
- CO₂ lasers



Laser cutting of coated, honey-comb-shaped aluminium sheets with 10" focal length

- **Integrated sensors**

The Cutting Head HP1.5" M is equipped with an integral non-contact distance sensor system, which guarantees consistently high cutting quality and speed. Integrated sensors record errors like collisions, cable breaks (or when measuring area tolerances are exceeded) and send a relevant error signal or an EMERGENCY STOP signal to the laser equipment system.

Focal position adjustment is motorised - so various sheet metal thicknesses can be cut, without the need for any manual adjustment.

- **Cooling System**

The housing of the cutting head is water-cooled. All water-guiding parts are made of highly corrosion-resistant stainless steel. Air cooling of the lens (by means of cutting gas and auxiliary gas) and air cooling of the sensor insert is possible.



- 1 - media connection for air and water cooling circuits
- 2 - sensor connection
- 3 - exchangeable cartridge for focal lengths 5", 7.5", 10"
- 4 - sensor insert with ceramic part and nozzle



CAN version

The HP1.5" M Cutting Head can be equipped with additional electronics. This version, HP1.5" M CAN has:

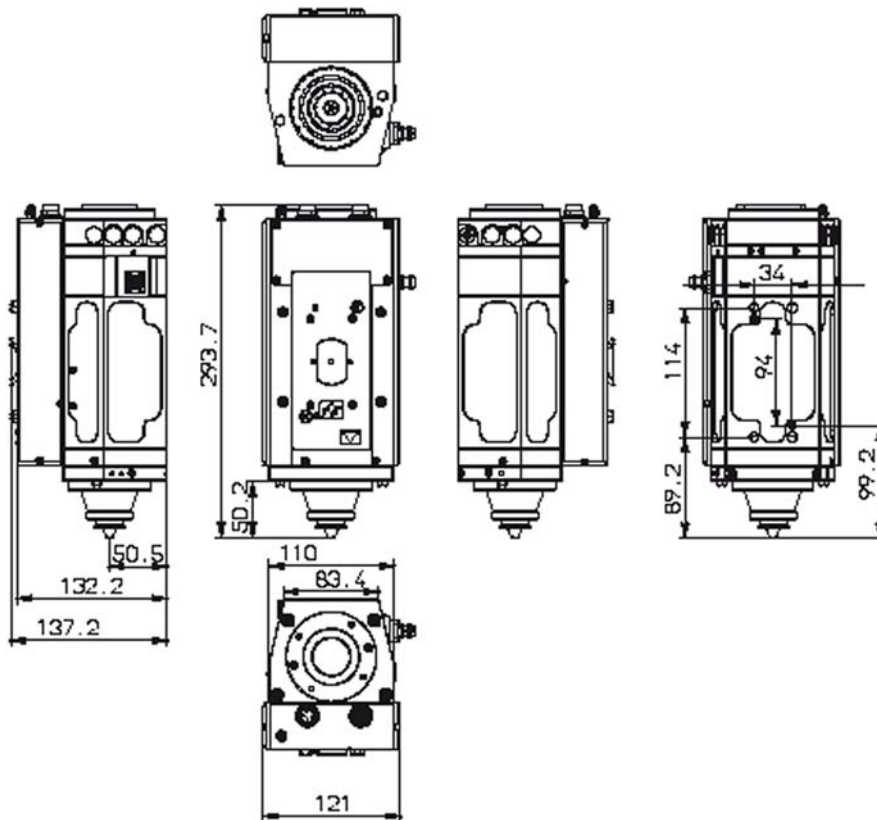
- electronic cartridge detection, which detects the cartridge and the focal length being used,
- temperature monitoring of the cutting head housing, the cartridge and the sensor insert,
- a cutting gas pressure sensor,
- detection of the extension adapter for 10" focal lengths.

The electronic connection of the sensor system takes place via I/Os (with I/O box CAN converter), CAN OPEN or PROFIBUS DP (with additional interface).

Technical specification of HP1.5" M Cutting Head

max. laser power	6 kW
electronics	Lasermatic®
focal lengths	5" and 7.5" (10" optional)
lens diameter	1.5"
max. free aperture	33 mm
axial length	approx. 294 mm
mass	4.9 kg
cutting gas pressure	max. 25 bar
vertical adjustment range	-14 to +6 mm
movement speed of the lens	30 mm/s

Dimensions of HP1.5" M Cutting Head



The given data was generated for a typical application and may be different given other circumstances. Furthermore misprints, changes and/or innovations may lead to differences in the listed measurements, technical data and features. Therefore **all information is non-binding and technical data, measurements as well as features are not guaranteed by information in this product information.**

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