



Cutting Head HP SSL

Processing head for flat bed systems with fiber-coupled lasers



The HP SSL cutting head is ideal for use in flat bed systems and pipe-cutting machines with fiber-coupled lasers. Modelled on the design of the successful and reliable HP series, this head has integrated distance sensor with extremely durable stability and a monitored protective glass cartridge. Preadjustable cartridges enable ultra-fast replacement when cutting different workpiece thicknesses.

>> EFFICIENT

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

>> FLEXIBLE

- cutting of different material thicknesses
- 2D cutting
- focal lengths tailored to your application
- all media connections located in upper part

>> USER FRIENDLY & SAFE

- simple and safe cartridge replacement system with TCP retention
- motorised focal position adjustment
- fast change of protective glass and attendance check of protective glass cartridge
- temperature monitoring of the sensor insert
- focal length detection by coding
- magnetic breakaway coupling

Featured and fitments

System types / lasers

>> The HP SSL cutting head is used in flat bed and pipe-cutting machines with fiber-coupled lasers.

Integrated sensors

>> The integrated non-contact distance sensors guarantee consistently high cutting quality and speed. Sensors integrated in the head record errors like collisions, cable breaks and the exceeding of measuring area tolerances - they then send either an EMERGENCY STOP signal or a signal with the relevant errors to the machine.

Focal position adjustment can be motorised. This means that various sheet metal thicknesses can be cut without the need for any manual adjustment.

The collimation unit can be supplied as a 90° version - and Z adjustment for collimation is also available.

Cartridge replacement system

>> Thanks to the cartridge replacement system, the focusing optics can be replaced easily and quickly to suit various cutting requirements. A non-contact cartridge detection system is also integrated into the cutting head.

Protective glass cartridge

>> To protect its high grade optical components, this cutting head is fitted with a protective glass which is located in a cartridge - this enables simple control and fast replacement. Additionally the protective glass cartridge is controlled on attendance.

Cooling system

>> The collimation module is also designed to operate with a water cooling system. All water-guiding parts are made of corrosion-resistant stainless steel.

Additionally an air cooling of the sensor insert is possible. All media connections are located in the upper part of the cutting head.

Examples of Application



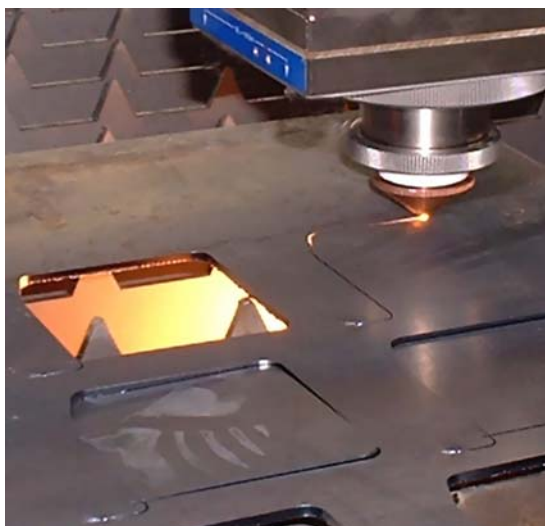
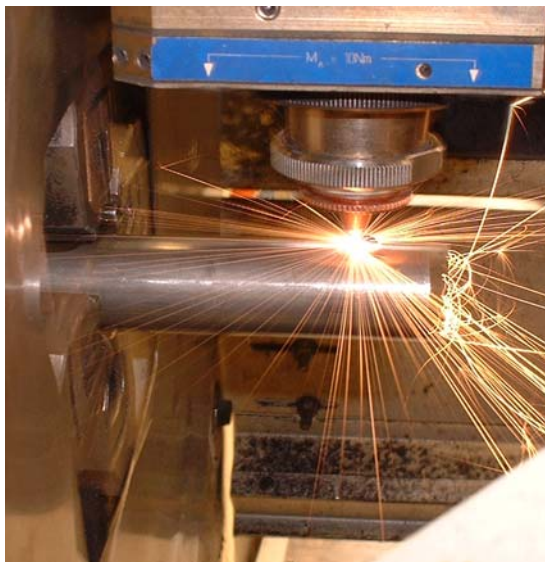
Cutting of pipes and profiles

>> The HP SSL cutting head is all-purpose. It is an indispensable tool for the fiber-coupled cutting of pipes, edges and profiles of all kinds in modern sheet metal processing.

Thanks to the cartridge replacement system, replacing focal lengths is fast and easy - and this enables the HP SSL to cut different material thicknesses efficiently.

Motorised focal position adjustment enables the cutting of different sheet thicknesses within the same cycle - so manual intervention is no longer necessary.

The mechanical interface is identical for all HP1.5" cutting heads and this enables simple changeovers between CO₂ lasers and fiber-coupled solid-state lasers.



Cutting on flat bed systems

>> The HP SSL cutting head is mainly used for cutting contours from level sheet metal panels on flat bed systems.

The HP SSL head, being designed for high cutting speeds is mechanically rugged and provides a stable signal for the distance sensors - thus enabling high cutting speeds to be achieved.



- 1 fiber socket
- 2 media connections for air cooling
- 3 media connections for water cooling
- 4 sensor connection
- 5 hand wheel for vertical adjustment (focal position)
- 6 viewing window for vertical adjustment
- 7 exchangeable cartridge (focusing lens)
- 8 protective glass cartridge
- 9 sensor insert with ceramic part and nozzle

Technical specifications of HP SSL cutting head

max. laser power	6 kW (with wave lengths of 900 to 1080 nm)
electronics	Lasermatic®
focal lengths collimation	75 mm, 100 mm
focal lengths focusing	125 mm, 200 mm, 250 mm (250 mm with extension adapter)
lens diameter	30 mm
max. free aperture	26 mm
mass	4.5 kg (collimation F100 mm, focusing F125 mm)
vertical adjustment range	-10 to +5 mm
dimensions (W x T x H)	103 x 89 x 349 mm (incl. collimation 75 mm, fiber connection QBH)

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.**

04/Bg/12.02.2010



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