

CLADDING HEAD YC52

When cladding, the wear resistance or corrosion properties of a component or a range of components can be improved. For this procedure Precitec offers the YC52 cladding head. It can be used with solid-state lasers. Areas of application are, for example, repair welds on tools, turbine blades or moulds, the tempering of surfaces and the generation of structures in tool, automobile and aircraft construction.

EFFICIENT

- capable for highest laser power
- high-quality welding by means of high-grade optics
- adaption of track widths with motorized focal position adjustment
- lenses are protected against contamination by a protective glass
- long protective window durability because of the coaxial protective gas supply

FLEXIBLE

- modular design
- individual, customer-specific configuration
- simple integration into existing systems
- different nozzle concepts (off-axial nozzle, 4-beam nozzle, coaxial annual jet nozzle)
- different focal lengths for collimation and focusing

USER FRIENDLY & SAFE

- process highly reproducible because of the precise adjustment of the laser and powder beam
- optics can be replaced easily
- protective glass cartridge with monitoring
- operating status can be monitored by PC



SOUDAGE WELDING SCHWEISSEN
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 LASSEN SOLDADURA Soudage

MEASURE

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CONTROL

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PROCESS

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MONITOR

TECHNICAL SPECIFICATION OF YC52 CLADDING HEAD

standoff distance	12 to 14 mm (24 mm at focal length focusing of 250 mm)
min. powder focus diameter	0.7 mm (anular jet nozzle), 2.0 mm (4-beam nozzle)
track widths	depending on laser power and defocusing of laser beam up to 6 mm possible
free aperture	48 mm
weigth	approx. 5.5 kg

- 1 fiber socket
- 2 aperture, water cooled
- 3 collimation lens, water cooled
- 4 motorized focal position adjustment
- 5 camera module
- 6 beam splitter module
- 7 focusing lens, water cooled
- 8 protective glass cartridge
- 9 coaxial annual jet nozzle



So that the cladding head can also be used in an automated production mode, different sensors have been integrated both for monitoring the optics and also for monitoring the process:

MONITORING THE OPTICS

The level of contamination and the temperature of the protective window can be determined with protective window monitoring. The presence of the protective window can also be checked.

PROCESS MANAGEMENT

The integrated process monitoring sensor makes it possible to keep to the height and width of the cladding track precisely even when building up several layers or with volatile geometries.

QUALITY CONTROL

Online process monitoring using the LWM laser welding monitor.

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