

Welding Head YW52

High-power welding head in modular design



Precitec's range of processing heads has been extended with the addition of the compact YW52 Welding Head. Due to the systems modular design customers can tailor the package to meet the specific needs of their application. The basic version is very competitively priced. The head can be extended by pre-process, in-process and post-process monitoring moduls. The full process monitoring features make the complete system ideal for fully automated production processes.

>> EFFICIENT

- capable for highest laser power
- high-quality welding by means of high-grade optics and adaptable protective shield gas supply
- long protective window lifetime by application-specific CrossJet concepts

>> FLEXIBLE

- modular design
- individual, customer-specific configuration
- simple integration into existing systems
- different focal lengths for collimation and focusing

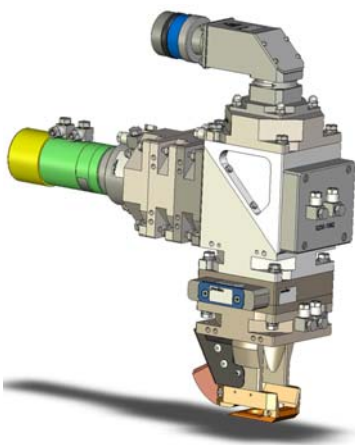
>> USER FRIENDLY & SAFE

- simple teaching thanks to monitoring camera
- easy optics exchange
- monitored protective window cartridge
- operating status can be monitored by PC

System types / Lasers:

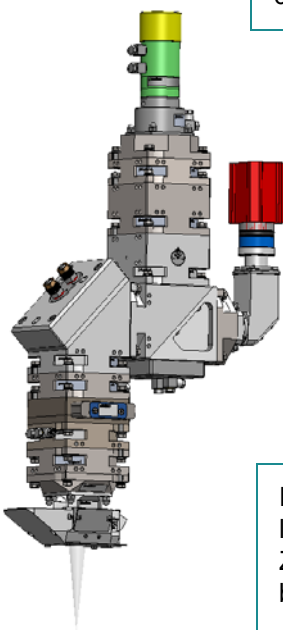
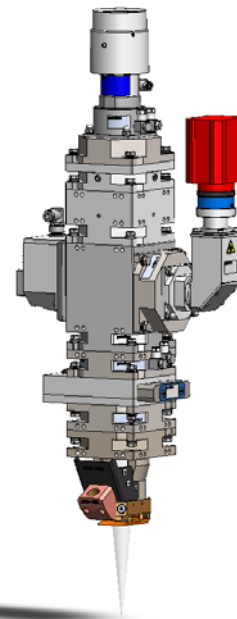
- robot
- gantry systems
- customised machinery
- for all diode and solid-state lasers like Nd:YAG, disc and fibre lasers

Modular concept - application-specific configuration



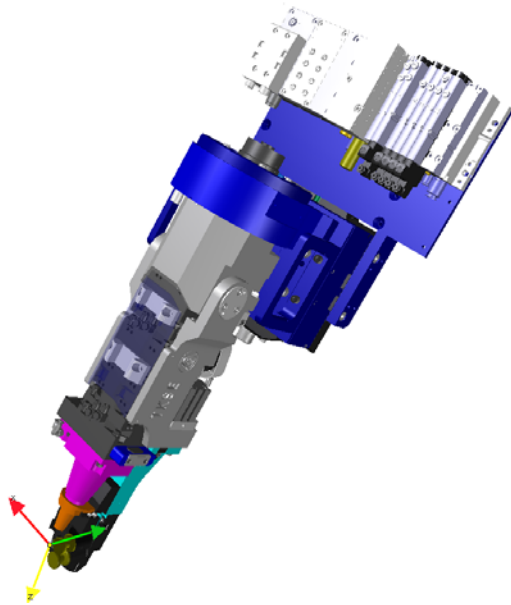
The basic version of the YW52 Welding Head is compact and competitively priced. The picture on the left shows the head in angled design with LLK-B compatible fibre socket, collimation, focusing, camera module, protective window cartridge and CrossJet.

This version shows the YW52 Welding Head with „automotive“ fibre socket, Z-module for displacement of focal position, beam splitter with camera module, LWM process monitoring, protective window cartridge with monitoring and CrossJet.



Furthermore multiple-angled versions are available. The picture on the left shows the YW52 Welding Head with LLK-B compatible fibre socket, Z-module for displacement of focal position, camera flange, beam bender with focusing, protective window cartridge and CrossJet.

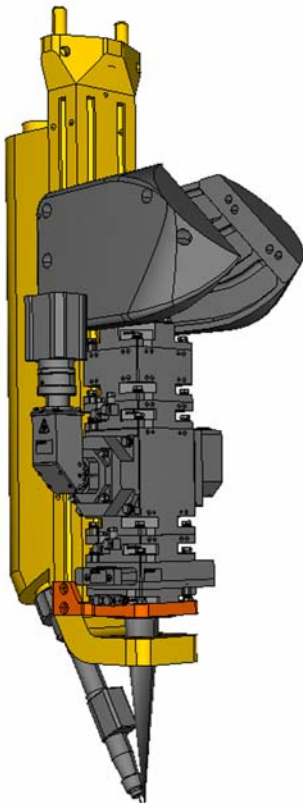
Application example - YW52 integrated in pressure roll system



Laser roll clamping LSK05 by ThyssenKrupp Drauz Nothelfer

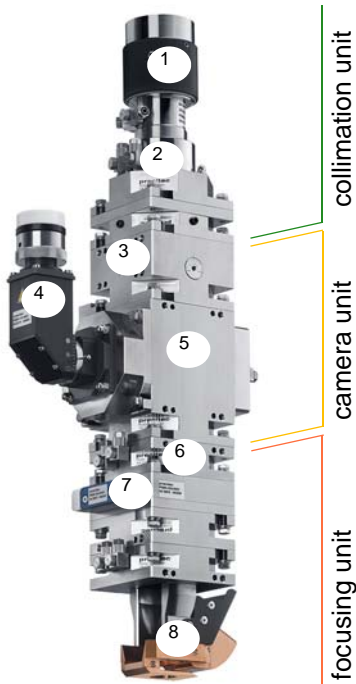
- matching with various joining geometries thanks to modular design and various tooling sets
- excellent component accessibility thanks to slim design
- minimized component flange width thanks to patented clamping system
- patented zinc evaporation system

Application example - YW52 as hybrid welding head



Hybrid Welding Head by Fronius

- tolerant to large gaps
- low heat input
- compact design
- excellent component accessibility
- efficient CrossJet
- closed air supply



- 1 - fibre socket
- 2 - aperture, water cooled
- 3 - collimation lens, water cooled
- 4 - camera module
- 5 - beam splitter module
- 6 - focusing lens, water cooled
- 7 - protective window cartridge
- 8 - CrossJet with air guide plate and air connection

• **Quality control**

- can be combined with pre-process monitoring (seam tracking LPF), in-process monitoring (Laser Welding Monitor LWM), and post-process monitoring (seam geometry monitoring SGM)
- monitored protective window cartridge independent of laser power, control of presence, temperature and the degree of contamination of the window

• **Cooling system**

- no separate cooling system necessary; the laser cooling unit can be used

Technical specifications of YW52 Welding Head

max. laser power	20 kW
focal lengths collimation	100 mm, 125 mm, 150 mm, 200 mm
focal lengths focusing	150 to 1000 mm
mass	3 to 6 kg, depending on construction
dimensions (standard module)	74 x 74 mm (edges dimension)

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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