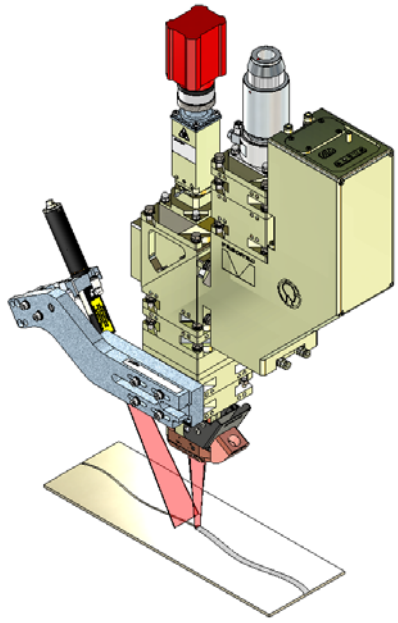
The WobbleTracker

Welds seams that are exactly positioned and only as wide as necessary!



Welding variable joint positions is a challenge which not every welding head can master. The tools of choice here are intelligent welding heads. They measure the position of the joint in order to place the weld seam at the correct position. Every welding task also requires a spot size that is adapted to the application - and the effective width of the laser beam can be flexibly optimised from one seam to another, ensuring a stable process. The weld seam width is thus only as wide as necessary, enabling the highest possible welding speeds.

>> EFFICIENT

- minimal pre-process times for measuring positions
- highly dynamic beam positioning
- process-optimised welding speed
- spot size can be adjusted to match joint gap and geometry
- significantly improved ability to bridge gaps of up to 0.4 mm

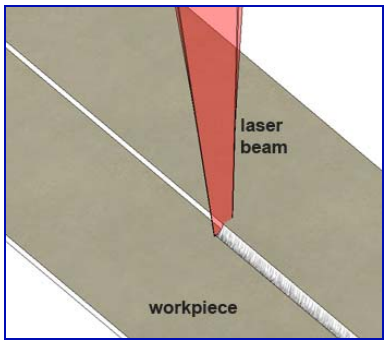
>> FLEXIBLE

- programmable beam width and energy input per unit length from one seam to another
- process can be optimised without having to change focal lengths
- individual, customer-specific configuration
- suitable for all welding geometries

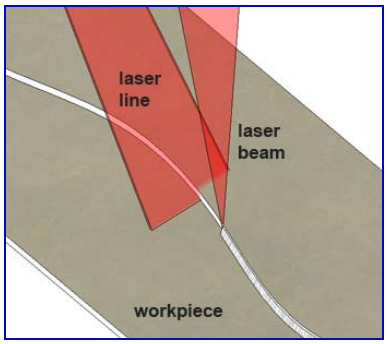
>> USER FRIENDLY & SAFE

- control via simple interfaces
- no additional control
- easy teaching with built-in camera
- operating status can be monitored

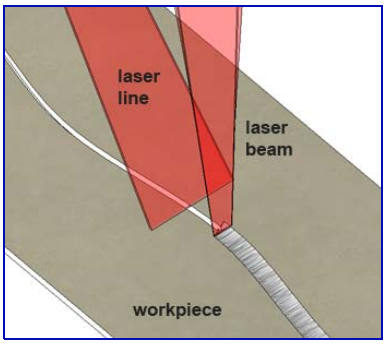
Wobble

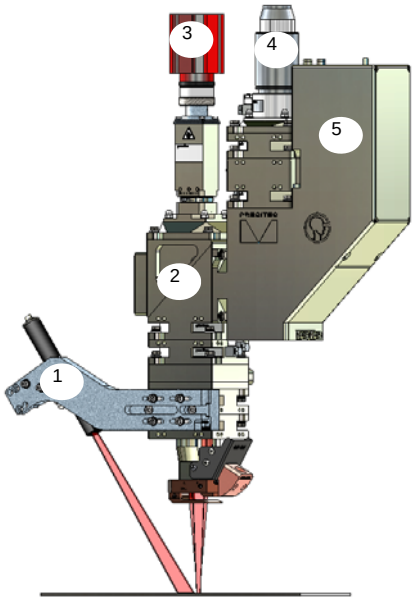


Track



WobbleTrack





1 line generator
2 YW52 Welding Head
3 coaxial camera
4 fibre socket
5 scanner unit

How the WobbleTracker works

>> All the functions of the WobbleTracker are fully integrated into the new YW52 welding head, without the need for additional external sensors, cameras or external linear positioning drives.

The WobbleTracker uses the welding optics to coaxially measure the joint only a few millimetres in front of the TCP. The position acquired is immediately transferred to the controllable deflection mirror (also fully integrated) and a pre-selected Wobble amplitude and frequency is then overlaid. The minimum pre-process times (less than one tenth of a second) and the optimal distribution of the energy input per unit length over the weld seam width guarantee short cycle times in a fully optimised process.

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