



YLS-8000-BR Trifocal Fiber Laser Brazing

from the World Leader in Fiber Lasers



Applications



Features



Advantages



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The Power to Transform®

YLS-6000-BR Fiber Lasers



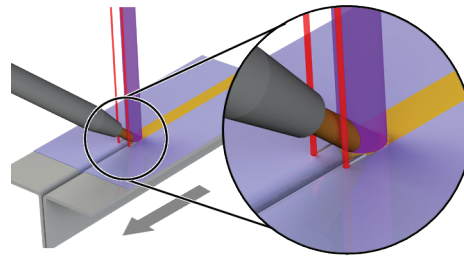
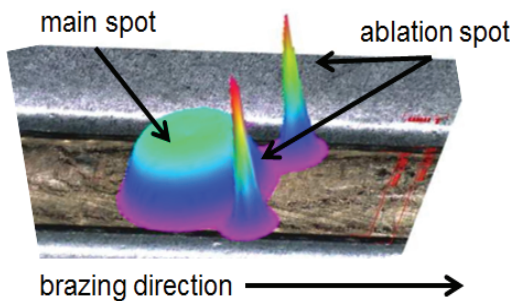
Advantages

- Clean and Join Parts in One Step
- Reduce Manual Cleaning Labor, Automated Process
- Improve Reproducibility
- Maximize Joint Strength
- Increase Brazing Speed
- Improve Joint Appearance: Straight Seam Edges, Smooth Surface, No Spatter
- Control of Brazing Temperature
- Minimize Heat Effects on the Assembly
- Minimize Process Running Costs



Features

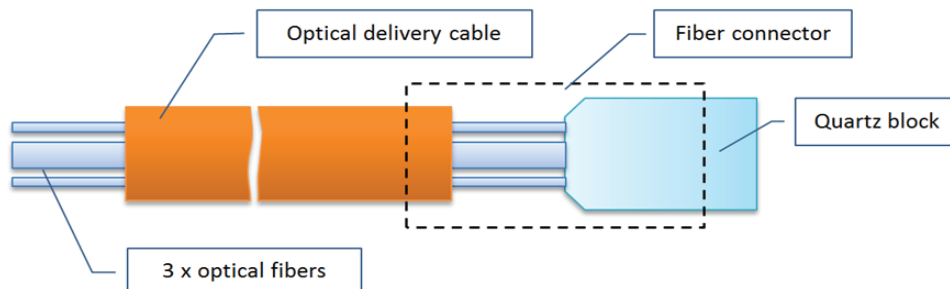
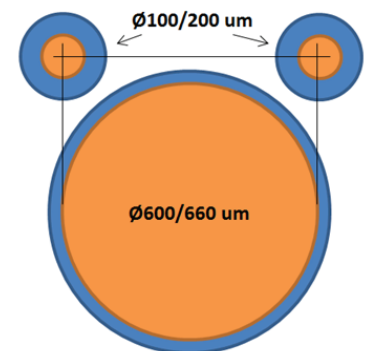
- 5, 6 and 8 kW Total Power
- Compact Footprint
- High Efficiency ECO-modules
- Integrated Water-water Chiller with Automatic Refilling
- Replaceable Three-core Process Fiber
- Compatible with All Types of Processing Heads
- Independent Power Control via Fieldbus Interface
- Advanced IPG Power Supply with Integrated Safety
- Laser Emission ON Watchdog



To obtain high-quality brazed joints, the base metals must be clean and free of oxides. Contamination can cause poor wetting of brazed parts impeding flow of the filler material, compromising the strength and visual appearance of the joint.

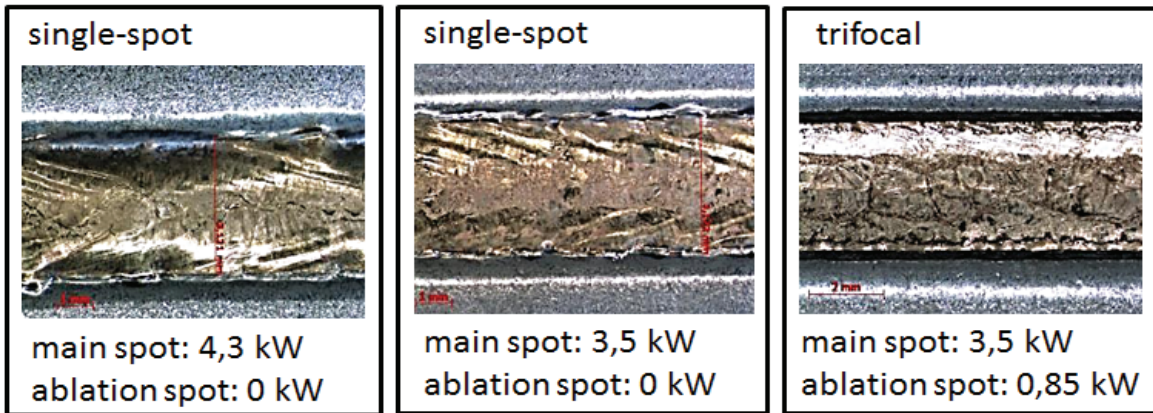
In trifocal laser brazing the main laser spot is accompanied by two smaller ablation spots that are offset laterally and precede the main spot in the brazing direction. The localized heating of ablation spots allows cleaning of the base metal parts improving filler material flow, resulting in reproducible brazed joint with increased strength and better appearance.

Trifocal laser brazing can replace traditional non-laser brazing methods while increasing process speed, minimizing heat effects on the assembly and reducing dependence on manual part cleaning.



Applications

Brazing of Electrogalvanized Materials



Brazing of Hot Dip Zinc Coated Steel: Brazing Speed 4.5 m/min

Optical Characteristics

Operation Mode	CW/Modulated
Main Beam Nominal Output Power*, kW	4, 5 and 7
Stripping Beams Number**	2
Stripping Beam Nominal Output Power, W	500
Beam Parameter Product Main Beam (86%), mm × mrad	22
Stripping Beams (86%), mm × mrad	3.0

* Higher power is available upon request.

** Fibers with different diameters and core geometry are available upon request.

General Characteristics

Cooling Method	Integrated Water to Water Chiller
Dimensions, W × D × H, mm	856 × 806 × 1517
Weight (without water in chiller), kg	700
Wall-plug Efficiency, %	>40
Wall-plug Efficiency (without chiller), %	>45



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