

LSS-5

Automatic Laser Picker



Applications

- ▶ Welding of Car Body Parts
- ▶ Consistently Reproducible Welds with High Grade Steel or Aluminum
- ▶ Reliable Joining of Hot-formed Materials
- ▶ Reliable Welding of High Strength Steel
- ▶ Joining of Thin, Light-weight Materials
- ▶ Increase of Joining Quality and Component Stiffness
- ▶ Low Distortion Joining



Features

- ▶ Part Fixturing thru One-sided Access only from Robot
- ▶ Power up to 4 kW
- ▶ Repeatable Processing with Multi-layer Sheet Joining
- ▶ Smart Welding Option
- ▶ Real Time Welding Quality Control and Data Record of each Welding Seam
- ▶ Wall-plug Efficiency >40%
- ▶ Integrated Chiller with 2 kW model
- ▶ Interlocking Power Supply Safety System



IPG Photonics' LSS-5 Laser Picker combines one-sided fixturing action with a laser welding tool (max. 4 kW) and is typically used as a replacement for resistance spot welding. It provides numerous benefits including adjustable part fixturing force up to 200 N, improved workpiece strength and stiffness and faster process speed. The LSS-5 Laser Robotic Picker can weld a laser wobble seam up to 40 mm in length in half the cycle time of traditional resistance spot welding technology. The LSS-5 Laser Picker can be used on a wide variety of materials and is powerful enough to easily weld even hot-formed materials. The LSS-5 Laser Picker head is mounted on a robot with several degrees of freedom, allowing full flexibility in welding 3D parts. The LSS-5 Picker features improved laser modules and power supply resulting in wall-plug efficiency > 40% and a compact head weighing only 20 kg. The LSS-5 is offered in two configurations: laser power up to 2 kW (controller with integrated chiller) and laser power up to 4 kW (stand-alone chiller).

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Technical Specifications: Laser Picker

	2 kW	4 kW
Weight, kg	20	
Welding Seam Length, mm	max. 40	
Wobble Amplitude (Wobble), mm	±1	
Frequency (Wobble Frequency), Hz	1-25	
Welding Speed, mm/s	max. 50	
Focal Length, mm	250 or 300	
Compressed Air Consumption, l/min	250 (during operation)	

Technical Specifications: Laser/ Controller

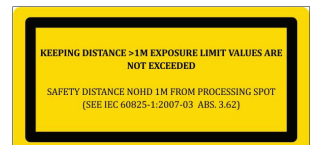
	200	400
Weight, kg		
Wavelength, nm	1070	
Mode of Operation	CW/ Modulated	
Nominal Output Power, kW	max. 2	max. 4
Beam Spot Diameter, µm	125, 250, 375, 500	
Peak Power Consumption, kW	<5	<14 (without chiller)
Dimensions Controller, L x W x H	804 x 605 x 1479	806 x 856 x 1517



2 kW



4 kW



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