

LSS-5 C-gun

Laser Seam Stepper



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

- ▶ Laser Welding with Simple Clamping Technology
- ▶ Power up to 4 kW
- ▶ Repeatable Processing with Multi-layer Sheet Joining
- ▶ Smart Welding Option
- ▶ Interlocking Power Supply Safety System
- ▶ Real Time Welding Quality Control and Data Record of each Welding Seam
- ▶ Wall-plug Efficiency >40%
- ▶ Integrated Chiller with 2 kW model
- ▶ Class 1 Laser Capable System*



IPG Photonics' LSS-5 Laser Seam Stepper combines clamping 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 clamping force up to 3 kN, improved workpiece strength and stiffness, faster process speed and no need for expensive laser safety cabinets. The LSS-5 Seam Stepper can weld a laser wobble seam up to 40 mm in length in half the cycle time of traditional technology and can be used on a wide variety of materials including hot-formed materials. With an online monitoring and interlocking power supply safety system, the Laser Seam Stepper can be qualified as a Class 1* Laser device (without the beam switch). The LSS-5 system features improved laser modules and power supply resulting in wall-plug efficiency >40%. 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).

*Integrator must provide an interlocking guard to create a minimum safety distance of 1 meter.

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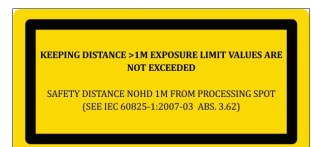
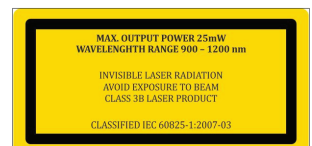
Laser Seam Stepper

Technical Specifications: C-Gun

	2 kW	4 kW
Weight, kg	45	
Adjustable Clamping Force (Z-hub), kN	0.8-3.0	
Opening Width C-gun, mm	130	
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	200	400
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	<4.6	<10.5 (without chiller)
Dimensions Controller, L x W x H	804 x 605 x 1479	806 x 856 x 1517



+1 (508) 373-1100
 sales.us@ipgphotonics.com
www.ipgphotonics.com

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