

SP3000 – Technical Specifications

Mechanics

Working area	2.210 x 3.210 mm (87 x 126 in)
Loading area	2.500 x ∞ mm (98 x ∞ in)
Max. height of work piece	50 mm (1.96 in)
Working head	Software controlled z-axis
Working table	Slat cutting table, aluminum cutting grid table, or honeycomb cutting table
Max. processing speed	1 m/s (39 ips)
Acceleration	10 m/s ² (393 ips ²)
Motors	Brushless DC servo motors
Position sensor	Incremental encoder
Optical elements	Telescope, lens and all mirrors air-flushed
Lens	2.5" (standard); 5.0" (optional)
Addressable accuracy	1 μm (0.00004 in)
Accuracy to size of parts	Results depend on material and process, exact figures for specific applications can be determined during sampling
Maximum material load	200 kg (440 lbs), even load distribution across the entire working area
InPack Technology™	Protects working head and all moving parts from dust; harsh environment protection kit included
Exhaust	Table exhaust for entire working area
Gas-Kit	Control of compressed air and process gas with max. 6 bar (87 psi) supply pressure, built in filter-unit
Software	JobControl® Expert
Interface	USB for connection with Control PC
Operating console	Keypad, safety-switch, system turnkey; workspace for mouse, keyboard, monitor, drawer for tools; PC and Monitor not included

Laser

Laser system	Sealed-off CO ₂ laser
Laser power	60, 100, 200 and 400 watts
Cooling	Water cooled
Wavelength	10,6 μm

Options

JobControl® Vision	Camera compensation system for print & cut applications
Travelling exhaust	Exhaust mounted to working head
Digital table exhaust	Four digitally controlled table exhaust sections
Tandem Operation	Continuous machine operation on alternating table sides
Tabletop	Acrylic cutting grid tabletop for slat or grid table
Standard Chiller	Complementary cooling unit for all power levels
Advanced Chiller	Available for 200 W and 400 W laser power, with tempering function, reduced noise and reduced energy consumption
Sonar Technology™	Ultrasonic based autofocus system
TroCAM Basic / Advanced	CAD / CAM software for perfect cutting results; nesting-function, lead-in/lead-out, kerf correction
Workflow integration	UniDrive software package for automatic job generation via hot folder and job ticket interface, remote interface for execution control
After Sales Services	Customized service packages available

Dimensions (W x D x H) & Weight

Machine	3.076 x 3.914 x 1.230 mm (121 x 154 x 49 in) 1.600 kg (3.530 lbs)
Chiller	720 x 835 x 930 mm (117 x 33 x 37 in) (400 watts standard chiller) 130 kg (287 lbs) (400 watts standard chiller)
Operating console	800 x 600 x 1.126 mm (32 x 24 x 45 in); 40 kg (88 lbs)
Travelling exhaust	2.082 x 714 x 2.852 mm (82 x 29 x 113 in); 100 kg (220 lbs)

Safety

Laser class	Fully enclosed beam path CDRH laser safety class 4 laser; can be operated like laser class 2 in standard operation mode
Laser safety	Fully enclosed beam path as well as active laser deflector shield at working head
Mechanical safety	Light barriers and safety bumpers for beam path and gantry
Interlock	Dual channel interlock safety system
Ambient conditions	Temperature +15° to +25° C or 59° to 77° F Humidity 40% to max. 70%, not condensing Dust free environment (2nd degree according to IEC 60947-1)
Certificates	CE compliant

Electrical & Exhaust

Exhaust working point	Min. 2.500 m ³ /h at 800 Pa (Min. 1.200 cfm at 8.900 in H ₂ O) - Table exhaust Min. 100 m ³ /h at 4.450 Pa (Min. 60 cfm at 17.865 in H ₂ O) - Travelling exhaust Minimum requirement for acrylic cutting; depending on application
Voltage & power consumption (Machine without chiller)	3x400V (3xL+N+PE) 50/60Hz, max. 1,6 kW (60 watts) 3x400V (3xL+N+PE) 50/60Hz, max. 3,1 kW (100 watts) 3x400V (3xL+N+PE) 50/60Hz, max. 4,5 kW (200 watts) 3x400V (3xL+N+PE) 50/60Hz, max. 8,4 kW (400 watts)