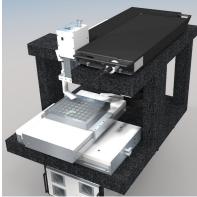


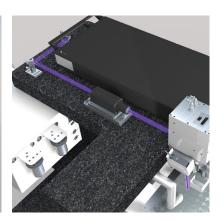
POLYPHOS Depaneling Systems

Laser Depaneling POLYPHOS DP 8000 Series

POLYPHOS DP 8000 Series







Description

The POLYPHOS DP 8000 Series is a machine platform for laser depaneling of rigid and flex PCBs. A hard stone base allows for maximum stability and precision.

Different beam sources are available to adapt the laser cutting process to the substrate material. The system is available as a stand-alone manual loading system or fully automated inline. For inline operation various product specific carrier transport and fixture systems are available. Camera vision is used for machine calibration and offset correction by fiducials.

The system uses a precise XY-stage and a digital controlled galvo scanner for a step&scan process to optimize throughput and accuracy.

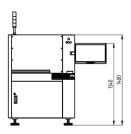
Features

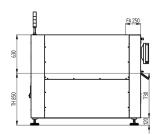
- _ Dust free and stress free depaneling of flexible and rigid PCBs
- _ High positioning accuracy
- _ DIN language controlled (CNC) cutting recipes
- _ Integrated camera vision system
- _ State of the art beam sources and optics for improved cutting result

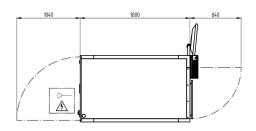
Options

- UV Laser for flex and thin FR4 material
- _ 30 W Green Laser for cutting FPCBA and FR4
- _ 40 W Green Laser for higher throughput
- _ CO₂-Laser for polyimide cutting and for niche applications
- _ Focus shift for thicker PCBs and to match carrier height
- _ Laser power measurement
- _ Laser power calibration
- _ ASYCAM software for easy import of CAD (DXF) data
- _ Exhaust and filter system
- $_$ External Air-water recooler for $\mathrm{CO}_{\scriptscriptstyle 2}$ and UV lasers
- _ MES connection
- _ Inline transport on workpiece carriers
- _ Workpiece carrier return system

Top View:







POLYPHOS DP 8000 Series

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	POLYPHOS DP 8000	POLYPHOS DP 8100	POLYPHOS DP 8200
Machine Configuration			
Transport height	950mm ± 50mm		
Operating side	Front of the machine		
Working Area	305 × 250mm	460 x 305mm	460 x 460mm
Scan field	50 x 50mm up to 80 x 80mm		
	(depending of wavelength)		
Panel Dimensions			
Panel length	20 to 305mm	20 to 460mm	20 to 460mm
Panel width	20 to 250mm	20 to 305mm	20 to 460mm
Panel thickness	Recommended: 0.1 to 1.6mm (2.0mm)		
Panel weight max.	4kg		
PCB weight max.	1.5kg		
Component clearance	+40mm / 0mm for manual loa-		
	ding (other options on request)		
Installation Requirements			
Power supply	3/N/PE AC 400/230V 50Hz		
	3/N/PE AC 208/120V 60 Hz		
Power consumption	UV-Laser 5.6kW avg., 7.2kW peak		
-	GN-Laser 2.7kW avg.		
CDA supply	6bar		
CDA consumption	20NI/min		
Water cooling	10I/min, 15°C, 2.0kW UV-Laser	3l/min, 20°C	3I/min, 20°C
	7.5l/min, 1820°C, 1.7kW 100W	500W 30W GN Laser	500W 30W GN Laser
	CO2-Laser	600W 40W GN Laser	600W 40W GN Laser
	GN-Laser option includes AW		
	recooler		
Ambient Temperature	22°C ±1°C		
Humidity	50% ±20% (non cond.)		
Machine Description			
Length × width × height	1090 × 1800 × 1455mm	1400 × 1800 × 1570mm	1400 × 1900 × 1570mm
Clearance at back side	1040mm	670mm	670mm
Laser type	UV 343nm		
	GN 532nm		
	CO2 9300nm (others on request)		
Laser-class	1		
Positioning accuracy	±15μm @ 5 σ		
Repeatability accuracy	±5μm @ 5 σ		
Cutting accuracy	±25μm with Vision System @ 5 σ		
Fiducial camera	25 x 18mm FoV		
Weight	Approx. 1725kg	2200kg	2200kg
Color	Basic Light, RAL 7015, RAL 4010		
Noise Level	< 75dB(A)		

