



Technical description

The optical register hole drilling machine RBM 02 is for drilling in the layers and pressed circuit boards with two drilling units. the distance between the drilling units is free programmable. the minimum and maximum distances must be observed. the minimum distance between the fixed drilling unit on the left and the movable unit on the right is at 200 mm, the maximum distance is at 650 mm. the distance of the drilling spindles is programmable by the software interface and set by the servo controlled positioning system. in a fixed distance of 85 mm. At the site parallel to the left and right drilling unit each one camera installed. the cameras scan the panel surface for the adjustment target. After the adjustment target is in the range of booth cameras, the automatic process mold will start by clamping the panel with pneumatic beam on the adjustment table and start to move the panel into position for drilling. the target evaluation is done by two CCD cameras with special optics, which are able to recognize a wide range of targets which are teachable to the system. If the film or picture marks on the layer are in the before

programmed dissidence and permitted tolerance congruent to each other, the system sends a command to the drilling units to perform the registration drilling holes to the panel. If within the provided time interval (input unit : seconds) the system is not able to accurate reach the desired position of registration , the drilling process will be skipped and the system the report the information about the process with all necessary data on the connected PC screen. After each process the positioning table moves back to its old position and awaits the loading process of the next panel or inner layer.

Each process results, including the number of processors, measured tolerances for each panel, and process times will be reported in the journal that could be safed to hard drive or printed out as a hard copy.

Furthermore the system is able to bring in a twist protection into each panel by drilling a second hole on the left side of the panel so that it's easy to use the panels on a bonding system or in further processes by avoiding to twist the panel or layer into the wrong direction.

Technical data

Useful area:	length	Min 220 mm Max 670 mm
	width	Min 220 mm Max 670 mm
	thickness	0,05 – 6,0 mm
	Hole distance	X-Min 200 mm X-Max 650 mm
Distance axis of the fixed spindle	X-axis	0 mm
	Y-axis	-115 mm (Optional)
distance axis camera: (to cutting middle)	X-axis	X-Min 200 mm X-Max 650 mm
	Y-axis	+85 mm
Tools:	Drilling bit	Ø 1,0 – 6,00 mm
Drilling spindle speed:	stepless	Up to max. 24000 U/min
Adjusting axis drilling spindle:	ballscrew drive with DC-servo motor and incremental transmitter	
	positioning accuracy	+/-0,02 mm
	repeatability accuracy	+/- 0,01 mm
adjusting axis adjustment device:	ballscrew drive with step motor	
	positioning accuracy	+/- 0,005 mm
Controlling system:	PC system Windows 7 based process software in C++	
Connections:	Compressed air 6 bar	
	Electric mains 230 V / 50 Hz	
	Fuse protection 10 A	
	Exhaustion connection Ø 60 mm	
Exhaustion capacity:	3 m³ / min , 200 mbar	
Dimension (Lenght x Width x Height):	1250 x 1250 x 1350 mm	
Weight:	450 kg	



RBM 02 Frontview



RBM 02

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