

GALAXY 700XB



X-RAY REFERENCE DRILLING MACHINE
AND DE-FLASHING STATION
WITH AUTOMATED LOAD/UNLOAD SYSTEM



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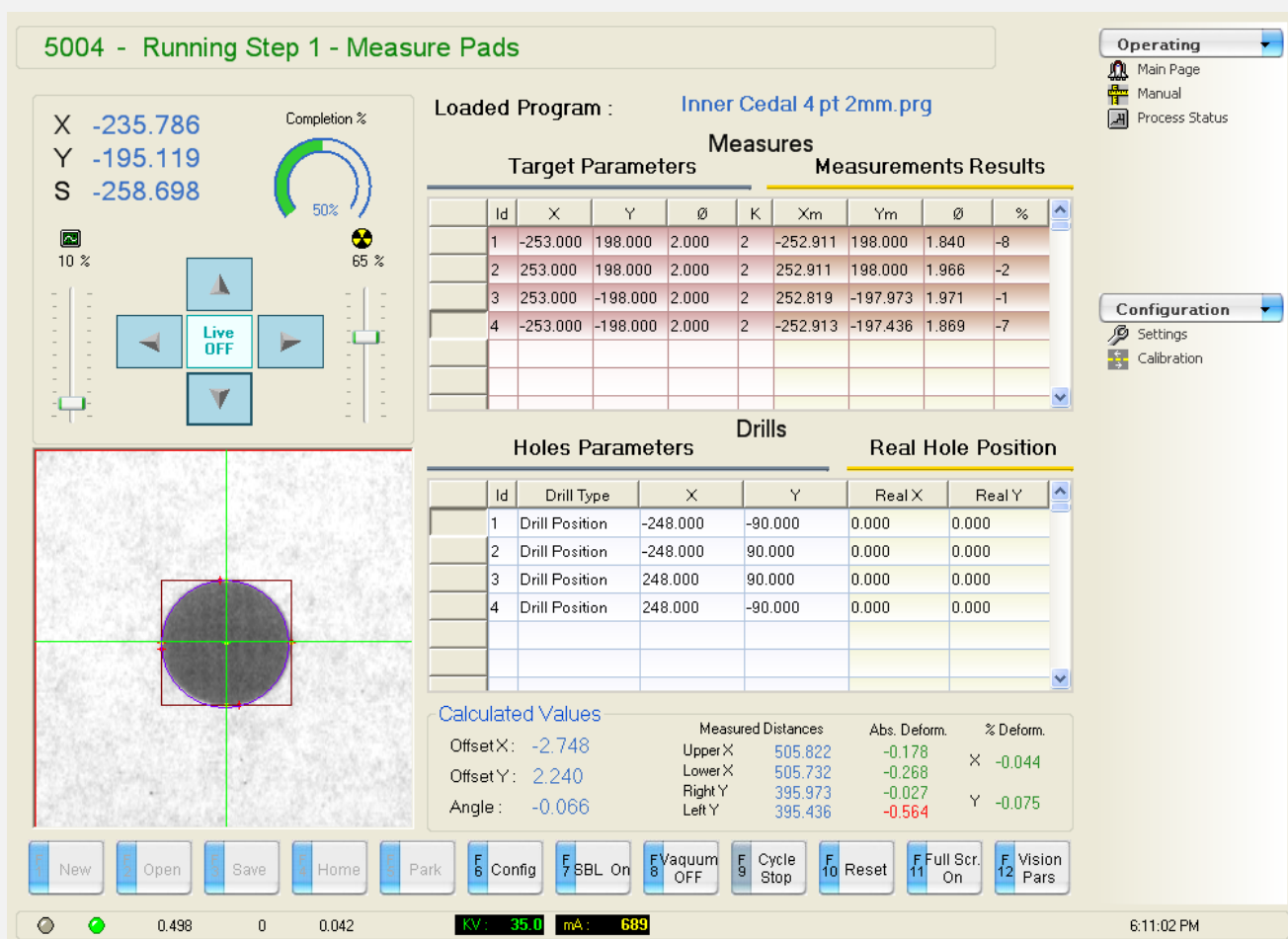
“Galaxy 700 XB is designed to drill optimized reference holes on multi-layer panels, to remove the flash and bevel all sides, to round corners and to perform the spot-face on slots. The automatic loader/unloader allows the machine to operate in full autonomy after the batch of panels is initialized

HARDWARE

- Latest generation CNC
- Position transducers with **1 μ resolution**
- Linear motors
- High reliability X-Ray system
- High sensitivity X-Ray camera
- Compact solution (see overall dimensions)

SOFTWARE

- User friendly interface
- All data of measured panels stored into a *.mdb file (network access)
- Measuring functions available

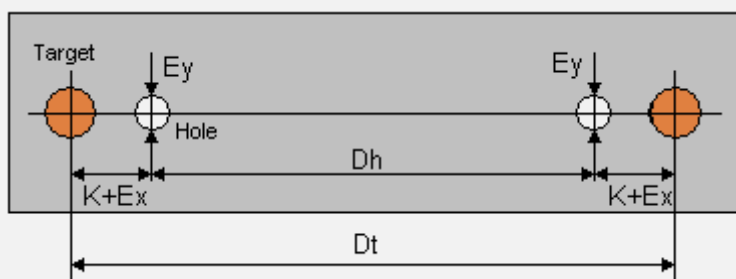


TARGET

- Fully programmable target recognition
- Blob analysis and pattern matching technologies
- Easy management of layers

HOLES

- Optimised drilling (best fit)
- On-target drilling
- Scaled drilling



Definition of optimised drilling accuracy:

Dt = Measured distance between targets

Dh = Distance between holes

$$2K = Dt - Dh$$

Ex = Errors along X axis (scale error)

Ey = Errors along Y axis

TWO SPINDLE VERSIONS

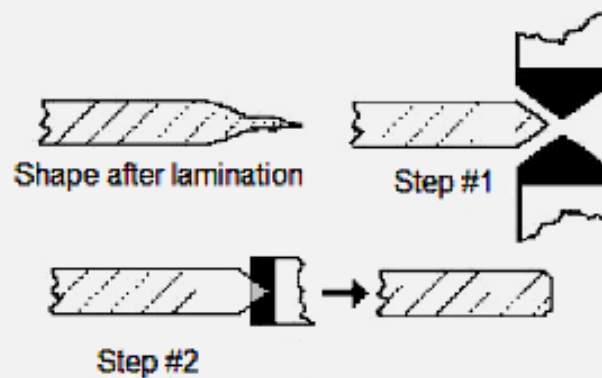
PNEUMATIC

- 30.000 rpm fixed speed
- Adjustable descending speed
- Single tool
- 16 μ m run-out
- Easy and fast tool change

ELECTRIC

- Max 60.000 rpm
- Position and speed controlled Z axis
- ATC (automatic tool change)
- 4 station tool magazine
- TLD (tool length device)
- Within 2 μ m run-out

DE-FLASHING STATION



DE-FLASHING

- Programmable dimensions
- Programmable corner radius
- Beveled edges

SLOTS

- “Multiline” slots flattening (Spotface)
- Gentle removal of the excess resin from panel surface

De-Flashing Specifications

Max panel size	700 x 700 mm (27.5" x 27.5")	After beveling
Min panel size	305 x 305 mm (12" x 12")	After beveling
Panel thickness	0.5 – 4.8 mm (0.02" – 0.19")	
Max flash width	25 mm	Over the cutting limits
Max flash thickness	≤ panel thickness	
Finished panel tolerance	± 0.5 mm (0.02")	
Corner radius	5 – 10 mm (0.2" – 0.4")	
Max stack on output trolley	200 mm (7.9")	
Process time	60 sec.	Cut+Bev.+Corner round.+Spotface+Laydown
Electrical Power	10 KVA (max)	
Air consumption	100 NL/min	Average
Machine footprint	4800 x 1800 mm	189" x 71"
Footprint + operator area	4800 x 3300 mm	189" x 130"
Maintenance area	6300 x 4300 mm	248" x 170"

X-RAY PROCESS SPECIFICATIONS

Process Specifications	Measuring Accuracy	±15 µm	Within a vision area of 640x480 mm (25"x 19")
	Drill-on-target accuracy	±15 µm	Round target
	Optimised drilling accuracy	±18 µm (See description)	Round targets @ Dt = 600 mm and Dh=Dt - 5 mm
	Cycle time	20 s	4 targets + 3 holes
	Productivity	3 panels / minute	4 targets + 3 holes

Machine Specifications	Electrical supply	3 Ph + Ground – 50/60 Hz	Voltage on request
	Electrical power consumption	2 KVA (Max)	
	Air pressure supply	6 ÷ 10 Bar	
	Air consumption	400 L/min (Avg)	1400 L/min (Peak)
	N. of position controlled axes	3	4 with electro-spindle
	Max axes speed	60 m/min	
	Position accuracy	± 3 µm	
	Position transducer resolution	± 1 µm	Heidenhain
	X / Y strokes	800 / 900 mm	
	Vision Area	700 x 580 mm	Blind area 150 x 250 mm at the centre
	Z-axis motion system	Pneumatic	
	Z axis stroke	40 mm	
	Z drilling feed	0,2 ÷ 2 m/min	Adjustable
	Spindle type	Turbine	
	Spindle speed	30.000 rpm	Fixed
	Tool change	Manual	
	Tool diameters	1 ÷ 5 mm	
	Z-axis motion system	Position Controlled	
	Z axis stroke	50 mm	
	Z drilling feed	0,2 ÷ 2 m/min	Adjustable
	Spindle type	Turbine	
	Spindle speed	Up to 60.000 rpm	Programmable for each tools
	Tool change	Automatic	4 tools
	Tool diameters	1 ÷ 5 mm	
	Chips evacuation system	Centralized	(on board as option)
	Panel clamp system	Vacuum - Venturi	Table centre (Blind area 150x250 mm)
	Panel load mode	Automatic	From left cart
	Panel unload mode	Automatic	To right cart
	Rejection of bad panels	Automatic	To right cart with an offset
	Panel reference system	n. 2 Cross laser lines	For manual load mode
	X-Ray source	50 KV – 1mA	Focal spot = 50 µm
	Radiation leakage	< 1 µSv / hour	Euratom certificate
	X-Ray sensor type	CCD + Scintillator	
	Sensor field of view	20 x 15 mm	
	Vision system accuracy	± 4 µm	

Panel Specs Automated Load/Unload	Max. dimensions	580(X) x 660(Y) mm	20" x 26"
	Min. dimensions	320(X) x 320(Y) mm	12" x 18"
	Max. Weight	3,0 Kg	6.6 Lb per panel
	Thickness	0,3 to 4 mm	Indicative
	Min. Thickness	Down to 0,1 mm	With special vacuum table

Panel Specifications Manual Mode	Max. dimensions	700(X) x 700(Y) mm	27.5" x 27.5"
	Min. dimensions	300(X) x 200(Y) mm	12" x 8"
	Thickness	0,3 to 10 mm	0.012" to 0.40" (Indicative)
	Min. thickness	Down to 0,100 mm	0.004" (With special vacuum seal)