

ANTARES 700 X – A1 Auto Unloader X-Ray Reference Drilling Machine for Multilayer Panels



Manual panel load to the machine table – Panel alignment with reference to laser lines – Rear auto unloader with cart for worked panels – Scrap panels are re-presented to operator for unloading – Turbine spindle 300Krpm – Pneumatic Z-Axis.

PURPOSE:

Antares 700 X is designed to drill reference holes (pinning) on multi-layer panels.

- Free programmable targets and holes
- Optimized drilling (best fit)
- On target drilling

HARDWARE:

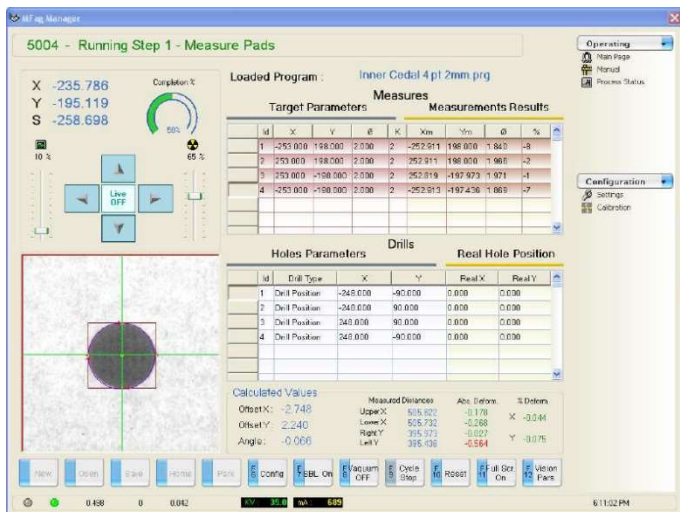
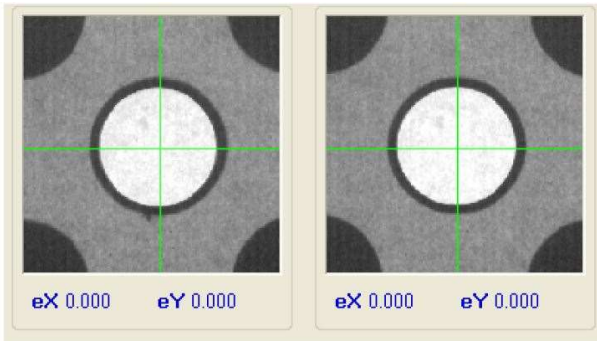
- High performance CNC integrating Axes movement, Vision system and I/O management.
- Position transducers with 1 μ resolution
- Linear motors
- High reliability X-Ray source
- High sensitivity X-Ray camera
- Measuring machine design.

SOFTWARE:

- Friendly user interface
- Part-program based process
- Graph. /Statistical representation of panel enlargement/shrinking
- Output file for measured data
- Measuring machine capabilities

SAFETY:

- No special anti-X-Ray protection required for operators.
- Radiation leakage < 1 μ Sv / hour
- Radioprotection certificate according to Euratom directives



**MACHINE SPECIFICS:**

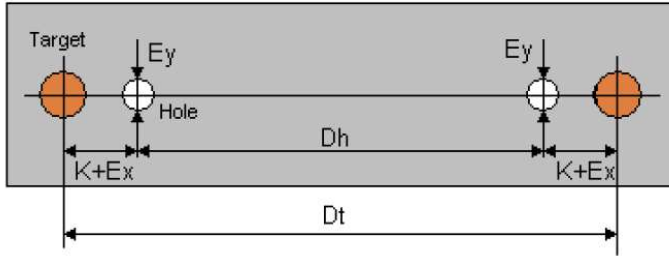
Machine Specific	Value	Notes
Electrical supply voltage	380 V – 50/60 Hz	3 Ph + Ground
Electrical power consumption	3 KVA (Max)	
Air pressure supply	6 ÷ 10 bar	
Air consumption	400 L/min (Avg)	1400 L/min (Peak)
N. of position-controlled axes	X, Y, S (X-R source)	Etel
Max axes speed	60 m/min	
Position accuracy	± 0.003 mm	
Position transducer resolution	± 0.001 mm	Heidenhain
X/Y strokes	800 / 900mm	
Z-axis motion system	Pneumatic	
Z-axis stroke	40mm	
Z drilling feed	0.2 ÷ 2m/min	Adjustable
Spindle speed	30,000 RPM	Fixed
Tool change	Manual	
Tool diameters	1 ÷ 4mm	
Chips evacuation system	Venturi	Standard dust vacuum bag
Panel clamp system	Vacuum – Venturi	Table center
Panel load mode	Manual	
Panel unload mode	Automatic	Rear trolley
Panel reference system	Laser blade	
Unload container capacity	100mm max	Height of stack
X-Ray source	50 KV – 1mA	Focal spot = 50 μ
X-Ray sensor type	CCD + Scintillator	
Sensor field of view	12.5 x 9.6 mm	
Vision system accuracy	± 5 μ	

PANEL SPECIFICATIONS:

Panel specifications	Value	Notes
Max dimensions	700 x 600 mm	
Minimum dimensions	300 x 200 mm	
Max thickness	6mm	Indicative

PROCESS SPECIFICATIONS:

Process Specifications	Value	Notes
Drill-on-target accuracy	± 15 μ Max	Single round target
Optimized drilling accuracy (Ex, Ey)	± 25 μ Max (See definition)	Single round targets @ Dt = 600 mm and Dh=Dt - 5 mm
Cycle time	15 s	2 targets + 3 holes
Panel load time	5 s	Estimated – Operator depending
Productivity	2.5 panels/minute	



Definition of optimised drilling accuracy :
 Dt = Measured distance between targets
 Dh = Distance between holes
 2K = Eventual difference between theor. distances
 Ex = Errors along X axis (scale error)
 Ey = Errors along Y axis

Dimensions:

