Mach3 Lab s.r.l.

ANTARES 700 X

X-RAY REFERENCE DRILLING MACHINE

FOR MULTILAYER PANELS

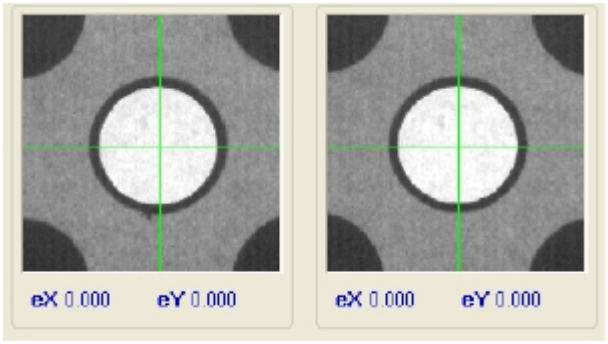
Supported and Distributed by:

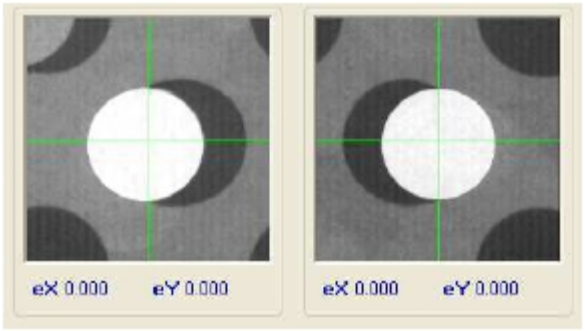
KuperTek

PURPOSES:

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

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



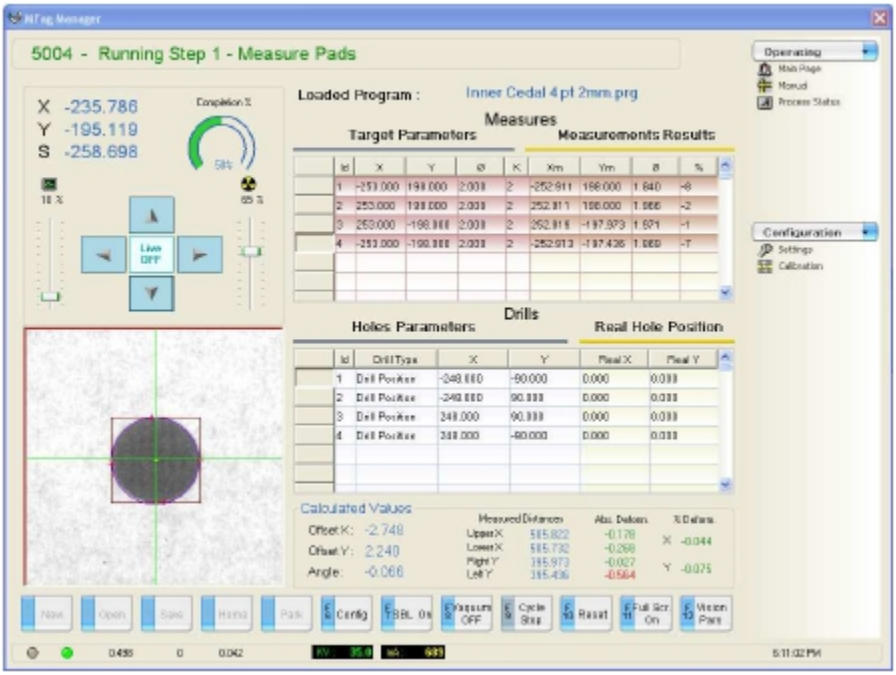


HARDWARE:

- High performance CNC integrating Axes movement, Vision system and I/O management
- Position transducers with 1µ 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



PROCESS:

- Manual Panel load (laser pointers)
- Vacuum clamp
- Measurements and drilling in 12 sec.
- Hole to pad check (config.)
- Automatic panel unload in the rear trolley

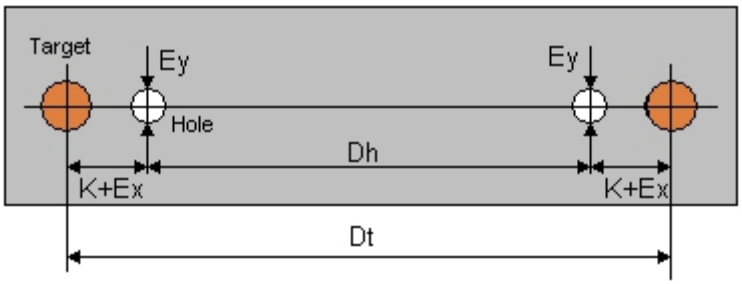
SAFETY:

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

Machine Specifications	Value	Notes
Electrical supply voltage (Input)	380 V – 50/60 Hz (Tranformable)	3 Ph + Ground
Electrical power consumption	3 KVA (Max)	
Air pressure supply	6 | 10 Bar / 87- 145 PSI	
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 2400 in/min	
Position accuracy	± 0.003 mm ± 0.118 mil	
Position transducer resolution	± 0.001 mm ± 0.039 mil	Heidenhain
X / Y strokes	800 / 900 mm 31.5 / 35.4 Inches	
Z-axis motion system	Pneumatic	
Z axis stroke	41 mm 1.50 Inches	
Z drilling feed	0,2 - 2 m/min 7.87- 78 in/min	Adjustable
Spindle speed	30.000 rpm	Fixed
Tool change	Manual	
Tool diameters	1 – 4 mm .039 - .157 Inches	
Chips evacuation system	Venturi	Standard dust vacuum bag
Panel clamp system	Vacuum - Venturi	Table centre
Panel load mode	Manual	
Panel unload mode	Automatic	Rear trolley
Panel reference system	Laser blade	
Unload container capacity	100 mm max 3.9 Inches max	Height of stack
X-Ray source	50 KV – 1mA	Focal spot = 50 ∝
X-Ray sensor type	CCD + Scintillator	
Sensor field of view	12,5 x 9,6 mm .492 x .377 Inch	
Vision system accuracy	± 5 ∝	

Panel specifications	Value	Notes
Max dimensions	700 x 600mm 27.5 x 23.5 Inches	
Min. dimensions	300 x 20 mm 11.8 x 0.78 Inches	
Max. thickness	6 mm 1/4 Inch	Indicative

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

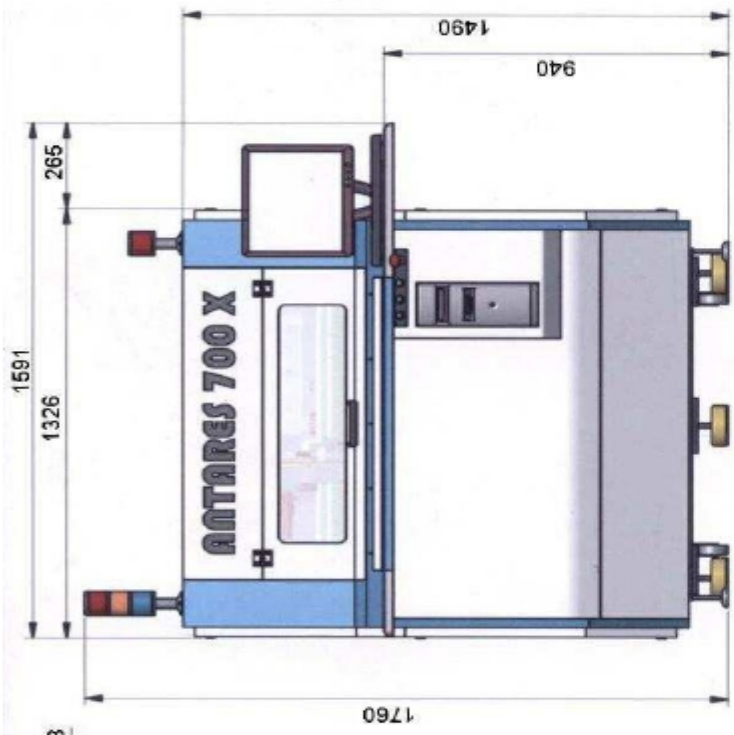


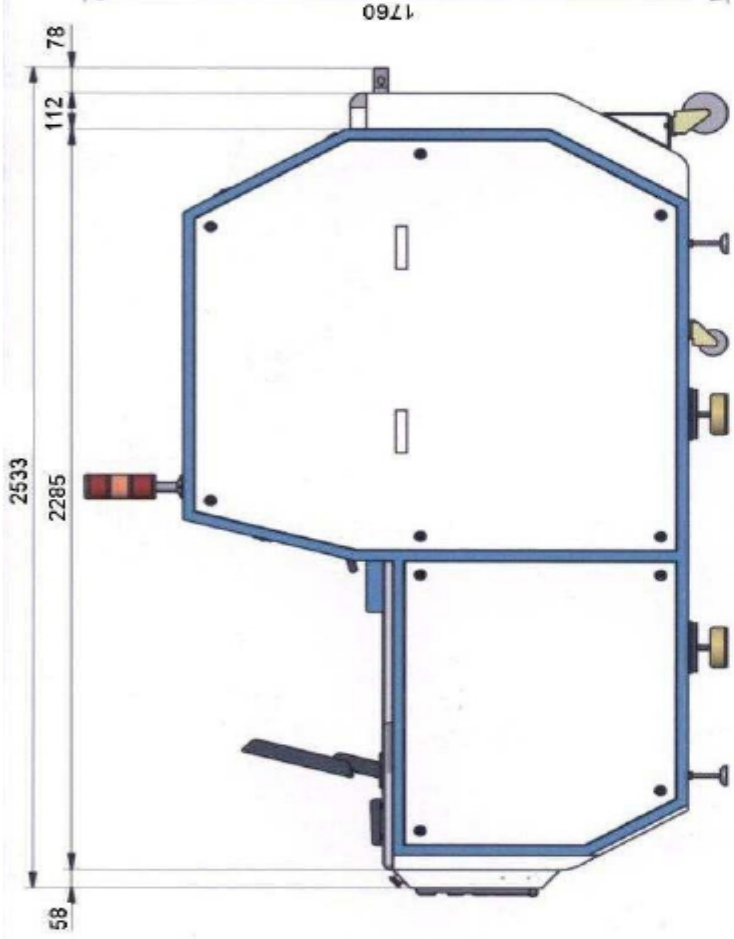
Definition of optimised drilling accuracy :
Dt = Measured distance between targets
Dh =Distance between holes
2K = Eventual difference between theor. distances
Ex = Errors along X axis (scale error)
Ey = Errors along Y axis

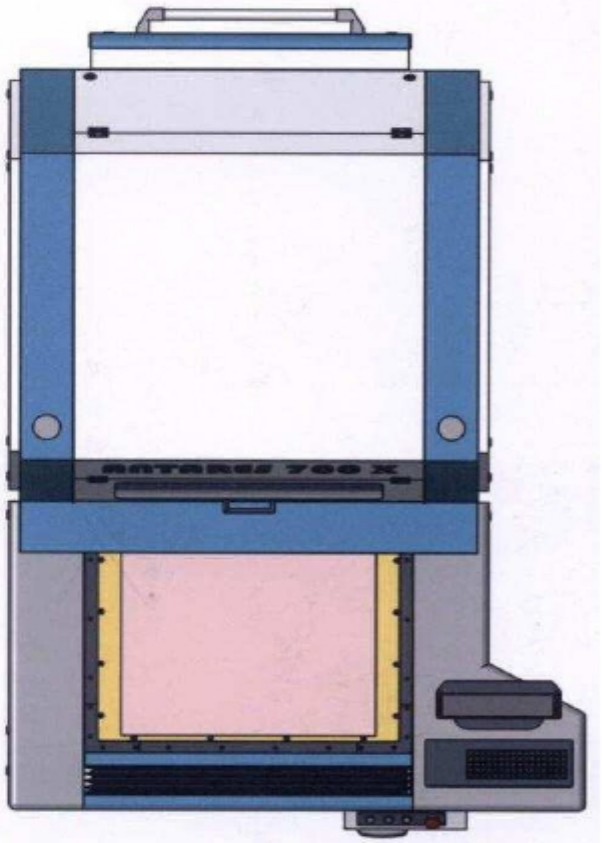
Option: Automatic loading / unloading system

Machine Overall Dimensions:

Inches : Height 59 X Depth 100 X Width 63







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