

ANTARES 700 X

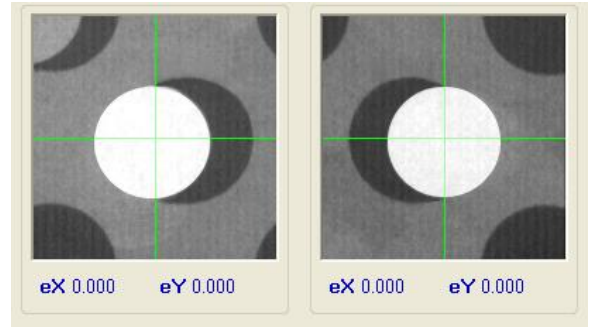
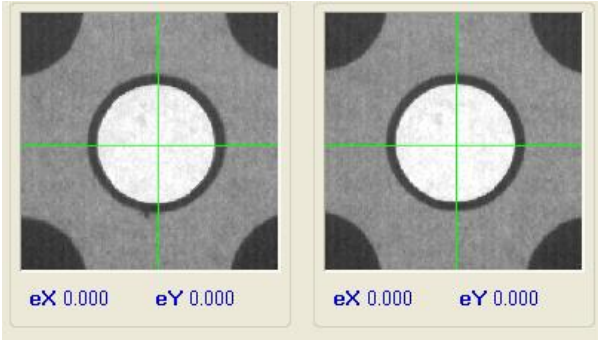


**X-RAY REFERENCE DRILLING MACHINE
FOR MULTILAYER PANELS**

PURPOSES:

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

- Free programmable targets and holes
- Optimised drilling (best fit) – One and two axes optimization
- On target drilling

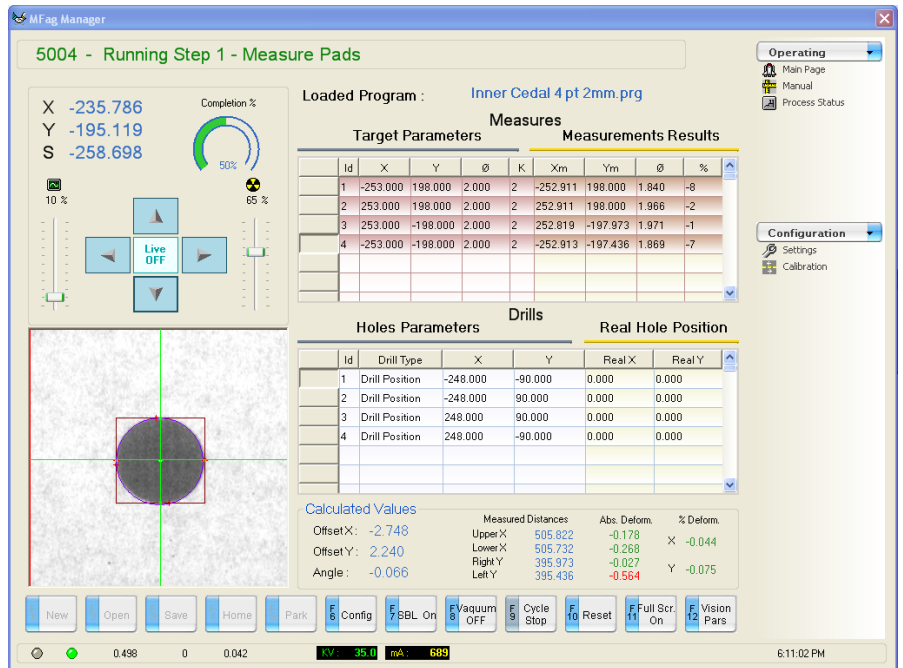


HARDWARE:

- 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

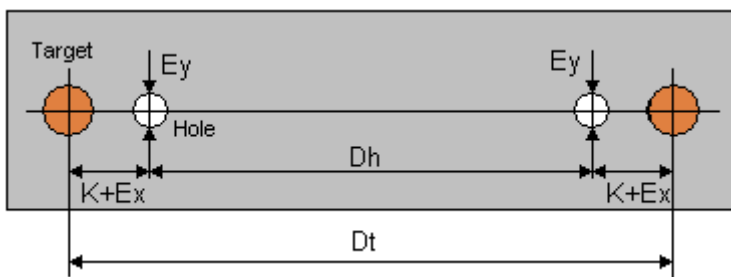
SAFETY:

- 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 | 380 V – 50/60 Hz | 3 Ph + Ground |
| 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 | 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 / 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 | |
| Chips evacuation system | Venturi | Standard dust vacuum bag |
| Panel clamp system | Vacuum - Venturi | Table centre (Blind area 150x250 mm) |
| Panel load mode | Manual | |
| Panel unload mode | Manual | Automatic with option Rear unloader |
| Panel reference system | n. 2 Cross laser lines | |
| X-Ray source | 50 KV – 1mA | Focal spot = 50 µm |
| X-Ray sensor type | CCD + Scintillator | |
| Sensor field of view | 12,5 x 9,6 mm | |
| Vision system accuracy | ± 4 µ | |

| Panel specifications | Value | Notes |
|----------------------|--------------|----------------|
| Max dimensions | 700 x 600 mm | |
| Min. dimensions | 300 x 200 mm | |
| Max. thickness | 6 mm | Indicative |
| Target diameter | 0.5 – 3 mm | Circular shape |

| Process specifications | Value | Notes |
|--------------------------------------|----------------------------|---|
| Measuring accuracy (3σ) | ±10 µm | inside a vision area of 640 x 480 mm |
| Drill-on-target accuracy (3σ) | ±16 µm | Single round target |
| Optimised drilling accuracy (Ex, Ey) | ±20 µm (3σ 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 |

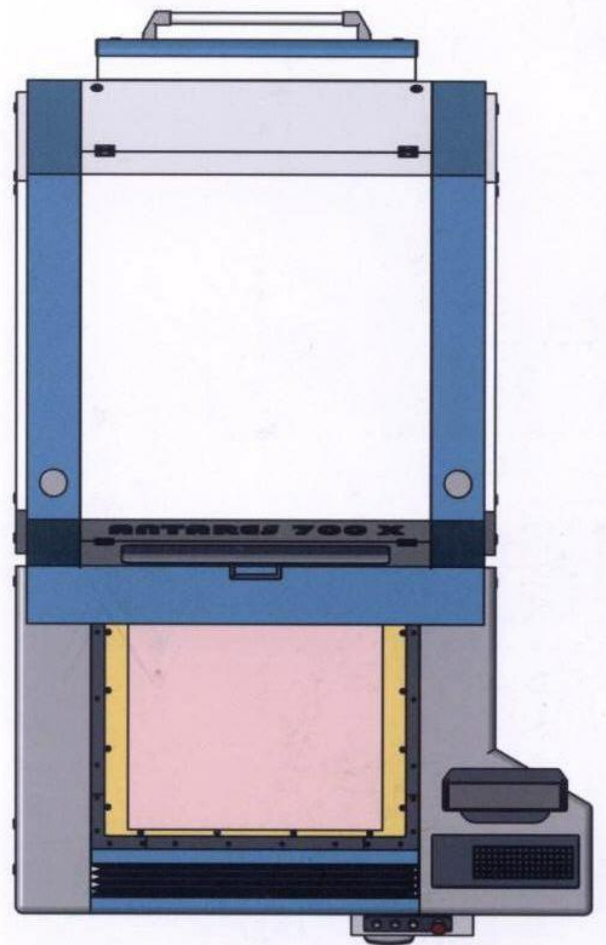
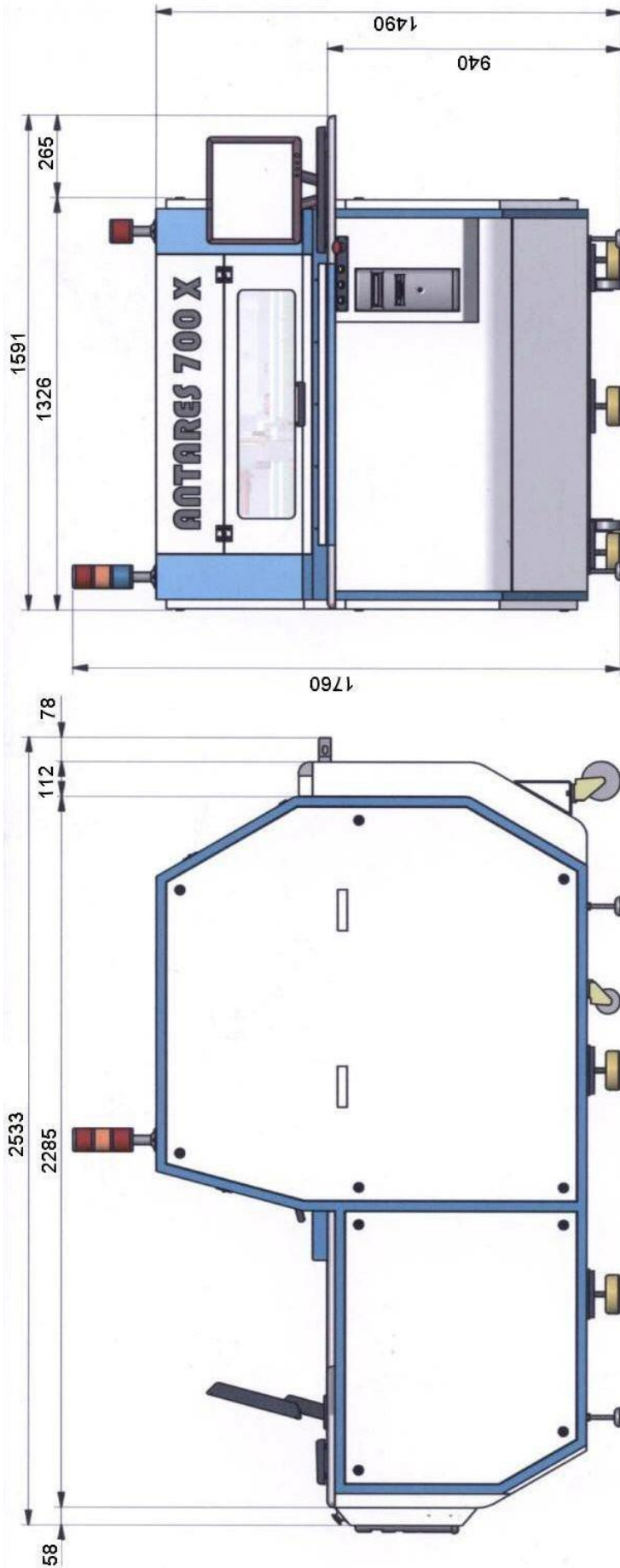


Definition of optimised drilling accuracy :

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: | Rear auto-unloader with cart |
|----------------|-------------------------------------|

Overall dimensions for version with rear unloader



Overall dimensions for version without rear unloader

