

# X-CHECK 310MF



## PRE/POST DRILLING INSPECTION BENCH

### Description

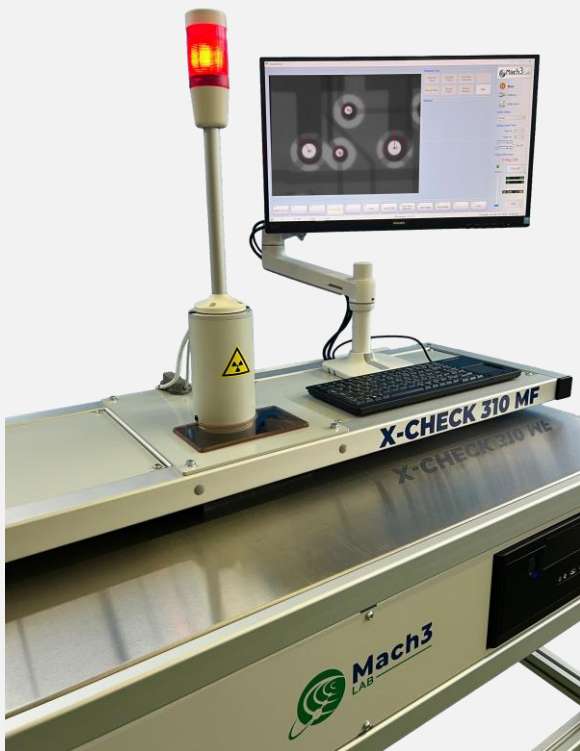
X-Check 310 MF is designed to ease a fast and efficient check of the centring error of holes respect to targets on multilayer panels, thus allowing to calculate the minimum annular ring. Inspecting four preliminary holes at the corners of the panels is also possible to determine the X-Y correction to apply to the drilling machine.

The X-check inspection bench allows introduction of pinned panels in order to carry out the first step of measurements without de-pinning reducing this way the risk of different pinning positions. The X-Check 310 MF provides also tracks and distances measures automatic and semi-automatic tools permitting to have an overall view of the panel.



### An eye to the operator safety

- With a certified elevate shielding efficiency the X-Check 310 MF doesn't require an exposure meter for the operator, and it is safe to use.
- A key switch selector prohibits unauthorized personnel from operating with the machine.
- An automatic time-out will cut off the X-Ray emission after a couple of minutes to prevent accidental exposures.
- An integrated totem red lamp will always signal when the X-Rays are ON



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Full management of the X-Ray and camera systems with control of KV and exposure time to work with the minimum X-Ray energy. Easy and fast setting by recalling a predefined parameter set including KV, Exposure Time, Frame integ, etc.

Wide area for the image display

Measured data exportable to Excel (CSV)

Wide number of automatic and semi-automatic measuring tools

The screenshot displays the Mach3 LAB software interface. On the left, a large X-ray image shows four circular features labeled 1, 2, 3, and 4, each with a red measurement circle and a vertical line. Below the image is a green progress bar. The top right contains 'Measuring Tools' with buttons for 'Automatic Rings', 'Automatic Tracks', 'Automatic Distances', 'Manual Rings', 'Manual Tracks', 'Manual Distance', and 'Clear'. Below this is a 'Measures' table:

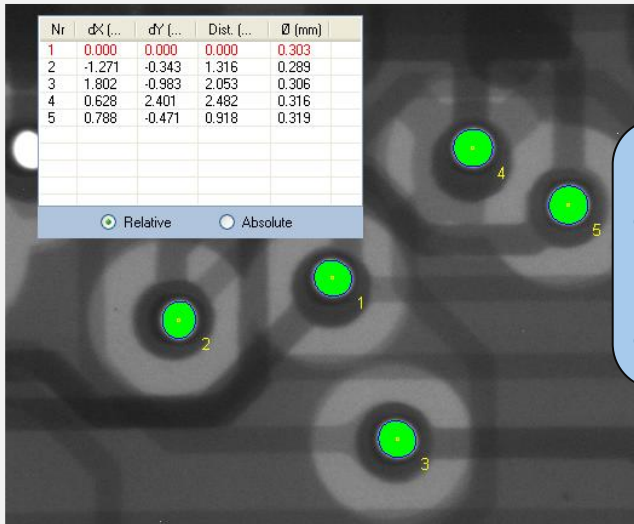
N.	Ø Int.	Ø Ext.	dX	dY	Dist.	No...	Min...
1	0.596	1.047	-0.014	0.023	0.027	0.226	0.199
2	0.326	0.671	-0.034	0.055	0.065	0.172	0.108
3	0.338	0.703	-0.047	0.046	0.066	0.183	0.116
4	0.591	1.070	0.001	0.031	0.031	0.239	0.208

Below the table are six empty boxes for measurements. The right sidebar includes 'Main', 'Settings', 'Calibration', 'Current Setting' (Special\_1), 'Camera Control Panel' (Time Int: 3, Frame Int: 16, Pin UP), and 'X-Ray Control Panel' (X-Ray OFF, 43.5 KV, X-Ray ON, KV: 0.0, mA: 0, Opt. Zoom: x 1.00, Live). The bottom toolbar has buttons for F1 Digital Zoom X2, F2, F3, F4 Compensations, F5, F6 Grids, F7 Export Data, F8, F9 Load Image, F10 Save Image, F11, and F12 Print. The status bar shows '0', '0.977', '0.001', 'SW Version: 2.0.0.1', and 'Wednesday, December 19, 2012 11:02 AM'.

Digital Zoom x2 at high resolution for accuracy in measurements x1 for a large F.O.V. and easy individuation of the area to be inspected

Save/Load images for remote operations (Workstation in the LAN)

Pin-Up function to inspect panes with pins. The panel is inspected by flipping it with pins up, but the acquired images will be shown as in the normal panel orientation

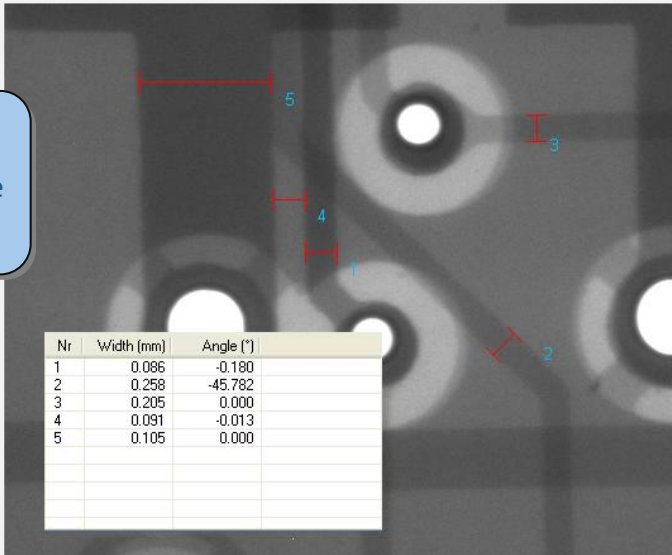



**Measurements of distances**

- Click on the object and drag a "Region Of Interest" (ROI) to measure automatically diameters and distances between objects in the F.O.V.
- Results displayed in absolute or relative mode

**Width measurements**


Click and drag a "cut" to automatically measure the width of traces and insulation areas





### Measure report

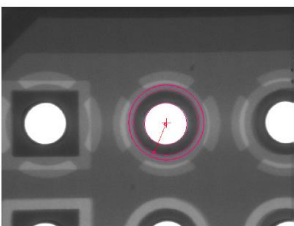
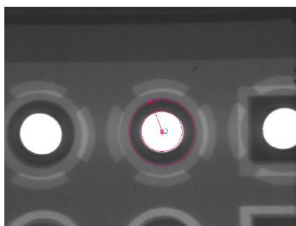
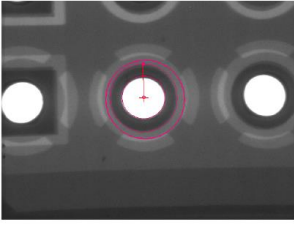
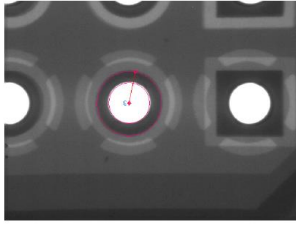
2012/12/14 09:58:59



**Note:** Test Compensations

**Part Number** Ma-1234      **Batch** BT-415

**Customer** Mach3 Lab

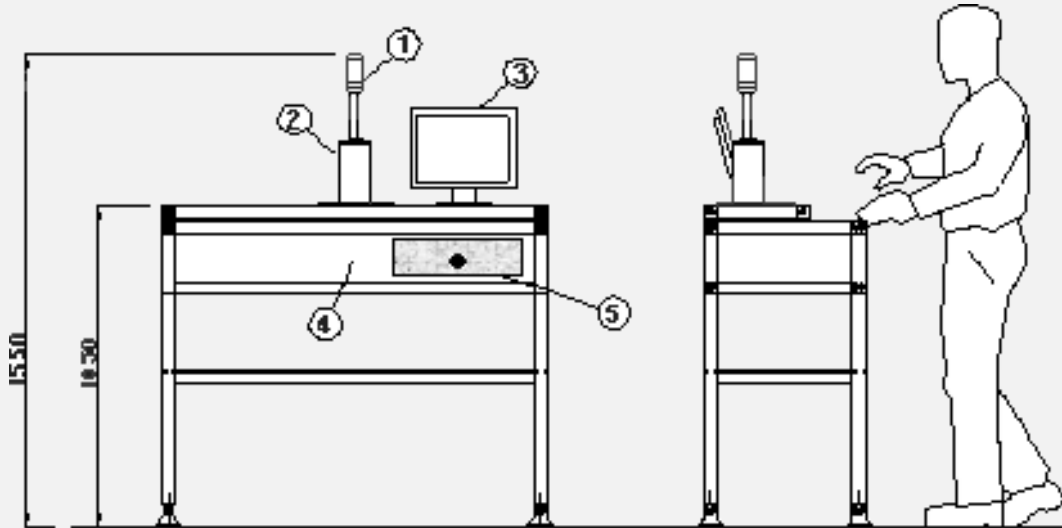





**Measure results**      Xc = 0.004    Yc = -0.009    Alfa [Deg] = 0.002

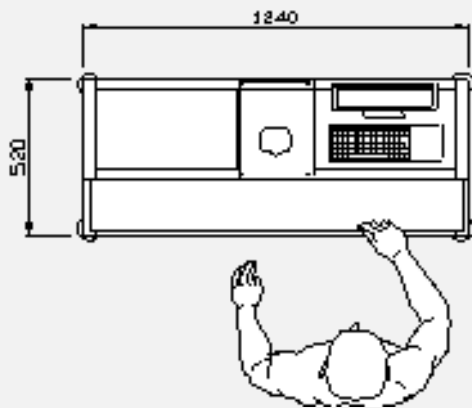
Nr	Ø Int.	Ø Ext.	dX	dY	Dist.	Nom. Ring	Min. Ring
1	0.929	1.437	-0.016	-0.040	0.044	0.254	0.142
2	0.902	1.455	-0.012	0.033	0.035	0.277	0.210
3	0.900	1.420	0.002	0.008	0.008	0.260	0.252
4	0.948	1.494	0.000	0.018	0.018	0.273	0.255

**Print-out of Report**

- Customized logos
- I.d. texts typed in by the operator
- Single or quad image with measuring symbols
- Measured data table
- Print-out on paper or \*.pdf file



- 1 X-Ray ON lamp
- 2 X-Ray Camera
- 3 LED screen 22"
- 4 X-Ray source housing
- 5 P.C.



#### **Power supply**

Voltage: 220 V – 50/60 Hz

Consump.: 600 W

#### **X-Ray**

Max anodic voltage: 50 KV

Max anodic current: 1 mA

Focal spot: 50  $\mu$ m

Cooling: Forced air

X-R Tube overtemp. check (alarm)

X-R lamp integrity check (alarm)

Automatic mA control

Automatic tube warm-up

#### **Inspecting details**

Inspection: Full panel area

Panel input openings: 24 mm / 1" high

#### **Option**

Data matrix printer

## **TECHNICAL CHARACTERISTICS AND OVERALL DIMENSIONS**

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