



**Wentworth
Laboratories**

www.wentworthlabs.com



PROBE CARD EQUIPMENT COMPASS

COMPASS BUILD MAINTENANCE & TEST

The Compass Test Station is purpose built for the build, maintenance and test of blade or epoxy cantilever probe cards.

COMPASS FEATURES

- ✓ Fast turnaround of probe card repair.
- ✓ Control probe card resources.
- ✓ Align, planarize, and replace probes.
- ✓ Simulate probe card use by using exercising function.
- ✓ Resistivity measurement capability.
- ✓ Assemble & Replace blade needles.
- ✓ Wide range of product enhancing accessories.
- ✓ Robust mechanical design.

Leader In ProbeAbility

IN HOUSE PROBE CARD SUPPORT

PROBE CARD MAINTENANCE MADE EASY

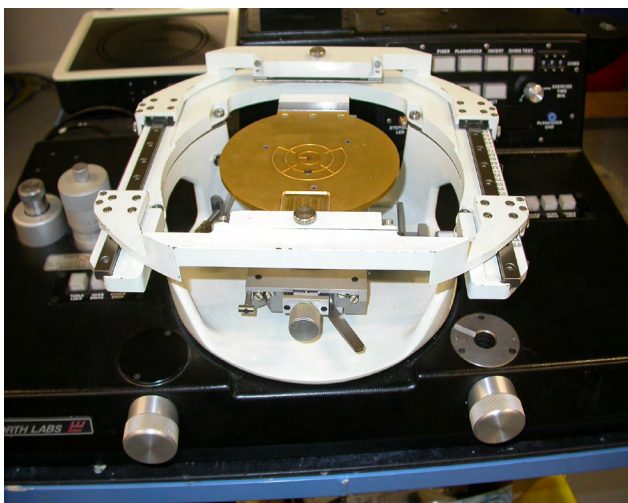
The Compass is a high precision tool for the build, repair and test of blade-style probe cards.

Productivity-boosting Compass technology enables operators to assemble blades to the card, align the probes to the pads, planarize, "exercise" the card to duplicate production test, clean the probe tips and accurately check the resistance of each probe.

Card assembly on the Compass is accomplished after aligning the card in the holder. Probe card depth is set with a barrel micrometer and a probe is located onto the device pad using gripper arm XYZ controls. Device contact is registered on

Compass by an eyepiece LED and/or an optional audible tone. The rapid pneumatic chuck drop and power lock feature on the freely rotating basket enable fast and accurate assembly of all remaining probes.

Compass gripper arm assembly is easily removed on completion of probe assembly for ease of planarization. The Compass chuck allows rapid adjustments to planarity and permits the operator to obtain instant re-readings of card planarity.

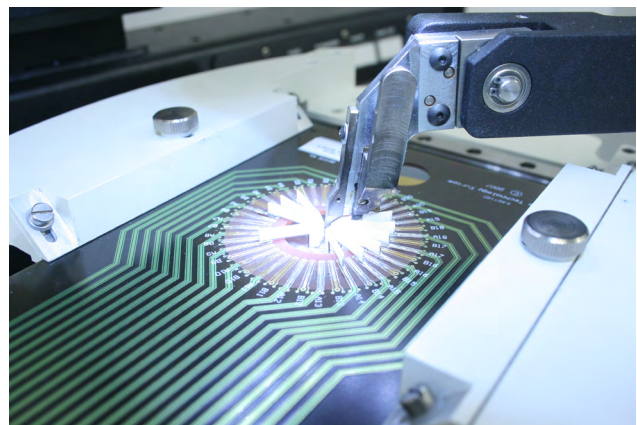


Compass Chuck & Probe Card Rails



COMPASS TECHNOLOGY ENABLES OPERATORS TO ASSEMBLE BLADES TO THE PROBE CARD, ALIGN THE PROBES, PLANARIZE, "EXERCISE", CLEAN THE PROBE TIPS AND CHECK RESISTANCE.

- ✓ Barrel micrometer for setting depth of probe tips.
- ✓ Adjustable overdrive to accurately check probe alignment and scrub mark position.
- ✓ 6 inch chuck with 2 inch XY stage movement and 20° theta rotation
- ✓ LED Light box invert option for planarizing or resistance checking



Compass Gripper Arm for Blade Needles

| COMPASS SPECIFICATIONS | | | |
|---|--|------------|---|
| Chuck Assembly | 6" diameter, gold plated, vacuum wafer chuck. Chromed hardened steel planarizer chuck with ceramic rear for tip cleaning. 2" XY travel, 0.5" travel and 20°theta. | Light Box | Standard light box comes with 144 lights with LED display of chuck Z motion in 0.0001" increments, actuated by first probe contact. Contact resistance go/no go test with 0.01 to 9.99 Ω capacity accurate to $\pm 3\%$ and $\pm 0.03\ \Omega$. 288 position dual light box is available. Dual light box available allowing 288 probes to be planarized using LED read out. |
| Probe Card Holder | Probe card holder is situated on a 360° infinite rotational carousel. This is locked in place during the build/alignment process by air-actuated friction brakes. Various probe card holders are available for the Compass. See list of probe card holders below. | Services | 110 VAC 60 Hz or 220 VAC 50/60 Hz system, 200 VA. Vacuum 0.5 cfm @20" Hg (min) Filtered compressed air 40-90 psi. |
| P/N 5-000-1178 Open top PCH (requires set of 2 clamps) P/N 5-000-1169 Clamps for 4.5" card P/N 5-000-1171 Clamps for 6" card P/N 5-000-1210 10" universal PCH for 4.5" to 10" wide cards. P/N 5-000-1233 12" universal PCH for 4.5" to 12" wide cards. P/N 5-000-1248 16" universal PCH. (Does not rotate) | | Dimensions | Weight 130 lb (59 kg) Length 28" (711 mm) Width 18" (457 mm) Height 25" (635 mm) |

UNITED KINGDOM / EUROPE

Wentworth Laboratories Ltd

1 Gosforth Close
Sandy, Bedfordshire
SG19 1RB
England

Tel: +44 1767 68 1221

Fax: +44 1767 69 1951

Email: CustomerServicesUK@wentworthlabs.com

UNITED STATES

Wentworth Laboratories Ltd

1087 Federal Road, Unit 4,
Brookfield, Connecticut
06804

Tel: 203 775 0448

Fax: 203 740 7636

Email: CustomerServiceDeptCT@wentworthlabs.com

BELGIUM / NETHERLANDS

CN Rood

Z.1 Reasearchpark 40
1731 Zellik, Belgium

Tel: +32 (0) 2 467 03 50

Email: sbuelens@cnrood.com

FRANCE, ITALY, MOROCCO & MALTA

STI

4 Rue des Beaumonts
94120 Fontenay-sous-bois
Paris
France

Tel: +33 (0)1 43 94 00 99

Email: info@stifrance.com

POLAND

Testpol Sp. z.o.o

ul.Klecinska 125, 54-413
Wroclaw, Poland

Tel: +48 71 783 63 60

Email: testpol@testpol.com.pl

ISRAEL

DANEL Technologies Ltd

58, Amal Street
Kirat Ari Petach Tikva, Israel

Tel: +972 (0) 3 927 1888 1666

Email: sales@danel.co.il

INDIA

Electronic Enterprises PVT Ltd

No 12 1st Floor 3rd Main Road
Shivnagar, West of Chord Road
Bangalore 560010, India

Tel: +91 080 338 0451

Email: eehyd@hotmail.com

CHINA

Qatek Inc.

Unit 2112, 21F Yong Sheng Towers,
2025 West Zhong Shan Road
Shanghai, P.R.C (P.C. 200235)

Tel: +86-21-6481-3366

Email: sales@qatek.com.cn

TAIWAN

Qatek Co. Ltd

4/F, 308, Sec. 1 Nei Hu Road, Nei Hu,
Taipei 11493, Taiwan, R.O.C.

Tel: 886 2 2797 3357

Fax: 886 2 2797 3957

Email: sales@qatek.com.tw

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