

# Horizon 4090

## Wafer Size Capacity

Automatic Wafer Sizing for 100mm , 125mm ,  
150mm , 200mm(4",5",6",8")

## Wafer Handling

I cassette of 25 or 26 slots  
Sequential  
Programmable access controllable via  
external I/O  
Auxiliary wafer tray  
Quick single wafer insertion and extraction  
Cross slot wafer detection  
Quickloader station  
Intelligent Quickload Pipelining

## Accuracy

$\pm 4\mu\text{m}$  (system accuracy includes X , Y  $\varnothing$  and Z)\*\*  
\*\*definition available upon request

## XY Positioning

Travel – 19.80" (503mm) X  
9.42" (239mm) Y  
Maximum Speed – 10.0 in/sec (254.0 mm/sec)  
Maximum Acceleration - 1.1G X axis, 0.53G Y axis  
Resolution – 0.01 mils (0.25 $\mu\text{m}$ )  
Repeatability -0.01 mils (0.25 $\mu\text{m}$ )

## Z-Stage

|                          |                                 |                                 |
|--------------------------|---------------------------------|---------------------------------|
| Resolution Z             | 0.25mil                         | 0.125mil                        |
| Load                     | 25 lbs(11.3 kgs)                | 40 lbs(18.0 kgs)                |
| Speed                    | 390 $\mu\text{sec}/\text{step}$ | 390 $\mu\text{sec}/\text{step}$ |
| Probing range            | 230 mil(5.8mm)                  | 230 mil(5.8mm)                  |
| Travel – Full            | 400 mil(10.2mm)                 | 400 mil(10.2mm)                 |
| Repeatability Z          | 0.25 mil(6.4 $\mu\text{m}$ )    | 0.125 mil(3.2 $\mu\text{m}$ )   |
| $\varnothing$ Travel     | $\pm 5^\circ$                   | $\pm 5$                         |
| $\varnothing$ Resolution | 0.000917 $^\circ/\text{step}$   | 0.000917 $^\circ/\text{step}$   |

## Chuck Tops

Standard – ambient probing  
Hot – ambient to 130 $^\circ$  C  
Specials – other ranges (hot and cold) available  
Available in Au, Ni, Al (unplated)

## Automation

PTPA\* - Probe to Pad Alignment  
Aluminized Wafer  
DPS II – Direct Probe Sensor II  
APPV – Automatic Probe Position Verification  
PTPO\* - Probe to Pad Optimization  
OCR\* - Optical Character Recognition  
PMI\* - Probe Mark Inspection  
IDI\* - Ink Dot Inspection  
STAA - Self Teach Auto Align  
WSSC - Wafer Stepping and Scaling Calibration  
APCC\* - Automatic Probe Cleaning and Continuity Pad

## System Architecture

Multiple processors based around a Pentium\* core  
Flash memory (core program)  
PCI bus internal PCBs (Serial and Video)  
PCI bus Ethernet PCB providing 10 and 100 MHz I/O speeds\*

## Interface Capabilities

Tester Interface Packages  
All major ATE manufacturers  
Motorized Probe Card Theta or Semi-Automatic Probe Card Changer  
are available on a variety of tester application packages.  
GEM – Generic Equipment Model\*  
SEMI standard communications for factory automation and control  
AUI - Advanced User Interface  
FPD - Flat Panel Display, 10.4" Active Matrix Display  
Touch Screen – Standard feature  
Elastomer Keyboard\*  
Cleanroom Compatible  
AT Style

## Networking and Tester Communications

Standard Interfaces  
RS232C, TTL(Parallel I/O), GPIB (IEEE-488)  
Standard Protocols  
EG Enhanced, RDP  
Interfaces and Protocols\*  
Ethernet (10/100 Mbps)  
GEM/HSMS compliant

## Software

EG Commander – a modular , object-oriented software system  
balance of test environment flexibility designed for a and operational  
ease of use  
Design Feature Benefits  
User Configurable Operator Screens  
Permits the user to set up simple operating screens for production  
use while maintaining the power and flexibility of EG Commander  
Recipe Structured  
Probing process customization and optimization  
Graphic Control Map Editor  
Designed probing modes to maximize productivity  
Checklists  
Ensures repeatable probing process  
EG Prober Vision Compatible  
Transfer most current Electroglas 2000/3000 test programs

## Dimensions

Footprint– 45.3" (115 cm) W x 35.2" (89.4 cm) D  
x 34.2" (88 cm) H  
Weight – 1027 lbs (462 kgs)

## Facility Requirements

|             |       |      |       |
|-------------|-------|------|-------|
| Electrical: | Volts | Amps | Hz    |
|             | 100   | 16.5 | 50/60 |
|             | 115   | 15.0 | 50/60 |
|             | 230   | 7.5  | 50/60 |

Air - minimum 85 psi CDA, 3.0 SCFM  
Vacuum –22 in Hg minimum

\*Optional

All specifications are subject to change without notice