

# SEMI-AUTOMATIC WAFER BUMP TESTING

## DAGE 4300FP

### Features

- Shear testing using Dage's patented air bearing frictionless intelligent load cell system
- Fully automatic wafer handling via customer's third party robot handler (SMIF/FOUP equipment)
- Wafer handler and bondtester can operate in isolated environment with minimum operator interaction
- Joystick manipulation of 100% of wafer surface under test head without repositioning of wafer
- Semi-automatic test routines using 2 reference points (no camera system required) per wafer enable bondtesting of entire wafer surface without repositioning
- 460mm x 300mm XY stage with robot compatible chuck. Pneumatically operated pins allow wafer exchange using a robot handler
- 360 degree load tool rotation - optional
- Automatic calibration and linearity checks
- Integrated analysis including statistics and SPC functions
- ODBC compliant



### Benefits

- **Eliminates manual handling of expensive wafers**
- **Improved cleanliness through isolation of bondtester and wafer handler**
- **Increased productivity through semi-automatic testing**



# DAGE 4300FP

## SPECIFICATION

4300 specification General (excluding robot pre-alignment stage and FOUF port, etc.)	Size (W x D x H)	Without Image Capture: 1100mm (excluding PC) x 850mm x 670mm With Image Capture: 1250mm (excluding PC) x 850mm x 670mm
	Weight (unpacked)	170kg
	Power supply	100 /110V, 220/240V AC, 50/60Hz selectable
	Pneumatic supply (machine)	4 bar, 6mm OD/4mm ID plastic pipe
	Interfaces	RS232, optional network card, Centronics
	Illumination	20W Halogen floodlight
	Vacuum supply (workholders)	Min 500mm Hg plastic pipe
Wafer Chuck	Vacuum	Suitable for both 200mm and 300mm wafers. Pneumatic pins facilitating wafer exchange
Load cartridge	Bump/Shear	250g and 250g with 360 degree rotating tool
	Solder Ball	5kg and 5kg with 360 deg rotating tool
Load cartridges - special order	CBP	Up to 5kg (limited to 2kg due to vacuum chuck restrictions)
Load cartridges - general specification		All load cartridges have 4 software selectable load ranges as standard. All shear cartridges have intelligent Z positioning
	Accuracy	Total system accuracy +/- 0.25% of load range selected. Maximum load cartridge accuracy and repeatability to within 0.01% (100ppm under controlled conditions)
Test Parameters	Programmable	Shear speed, step back height, landing speed, fallback, over travel, loop height, grade list and product group fields
Calibration		Automatic and software controlled on all cartridges, automatic alarm notification
Operator Interfaces	PC	Please consult factory
	Monitor	17 inch LCD
Compliance		European CE regulations- EMC directive, low voltage directive and mechanical safety directive
Analysis Features	Statistics	Standard parameters
	Charts / SPC	Histogram, Trend, Pareto, Force <i>versus</i> Displacement or Time
	Z (Step back)	Total stepback accuracy (BS250 cartridge over a 25 micron travel) +/- 1 micron
Image Capture System	Optional	Please consult factory for details
Workholder / Adapter Plates	Optional	Please consult factory for details
General	Specification	In accordance with the DAGE4000 except for shear which is limited to 20kg

### Standards

- CBP JEITA EIAJ ET-7407 (max pull force 2kg due to chuck limitations)
- BUMP SHEAR - JEDEC JESD22-B117a
- BALL SHEAR - JEDEC JESD22-B116 and ASTM F1269