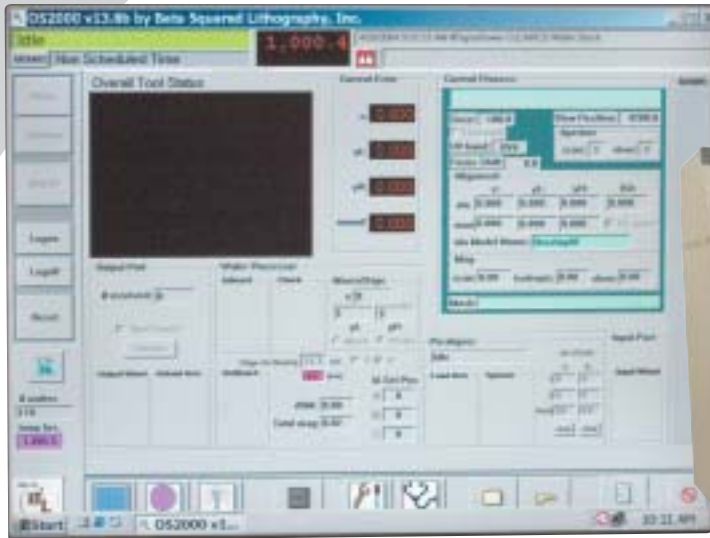# OS2000 Control System With Load & Go™

Micralign™ 5/6/700 Control System Replacement

▶ Overview

The OS2000 is a complete replacement of the control system in the ASML/SVGL (Perkin-Elmer) Micralign™ 5/6/700-series micro-lithography tools. The current OS, AFA, Sequencer, SEMI, and AIM computer and software systems are replaced by a single Windows™-based object-oriented computer and software control system.

▶ Features

- LCD/Touch Screen User Interface
- Windows™-based Industrial Computer
- New AFA System with full-field CCD camera
- AFA Auto-Contrast Control, wafer-to-wafer
- Automatic Processing Loading
- Pre-Process Checking
- Smart Focus™
- 1st Level IA Limit
- Auto IA Set
- IA -> Prealigner Feedback Loop (thru-put)
- Sensor Timeout Dialogs
- Active 'Watch-Dog' Limit Checking
- Preventative Maintenance Wizards
- Data Logging (Error, History, Uniformity, Overlay, Focus, Session, and Wafer Logs)
- SEMI-GEM E30/E37/E587 Host Link
- Flexible software allows; quick modifications for custom applications, easy version upgrade (non prom-based)

Beta Squared Lithography, Inc.

OS2000 Control System With Load & Go™

Micralign™ 5/6/700 Control System Replacement

▶ Benefits

Increased throughput
◆ Increased capacity; all levels NOW Automatic
◆ Decreased setup time
  • Mask and Wafer stages go to last setup position
  • Parameter setting via download is faster than manual entry
  • Scan Arms are positioned automatically

Decreased Rework
◆ Decreased mis-processing
  • Process checking prior to processing
  • Focus System eliminates hitting the wafer with nozzles with Smart Focus™
  • Carriage Balance check to prevent banding
◆ Decreased mis-alignment
  • Tighter alignments on the tougher levels and fewer mis-alignments due to full field CCD

Decreased Downtime
◆ Increased MTBF
  • COTS components and fewer components
  • Prealigner software prevents flexure breakage (similar to M700)
  • Prealigner/IA feedback prevents wafer stage flexure breakage
  • Actuator/Sensor failure reports help prevent catastrophic failures
  • Joystick check at Process start to prevent lockup at Viewing
  • Carriage Balance check to prevent overloading A201 PCB

◆ Decreased Scheduled Downtime
  • Mask Load position and uniformity hold flag software adjustable
  • Focus Matrix & Adjustment (no calculations and/or mistakes)
  • Overlay & Adjustment (no calculations and/or mistakes)
  • Uniformity/Exposure Meter & Adjustment (no calculations and/or mistakes)

◆ Increased MTBA
  • Retries avoid assists from Operators

◆ Decreased MTTR
  • No more sequencer listing required when machine stops and doesn't say what's wrong
  • Easier, faster repair & diagnostic procedures, (I/O screen with everything available, point and click)
◆ Decreased Costs
  • Lowered Repair Costs through use of COTS components
  • Lowered training costs due to User-Friendly Windows interface

▶ Physical Specifications

Dimensions: 21" W x 13" H x 21" D
Power: 120V or 240V, 50/60Hz   200 watts
Weight: 55 lbs/22 Kg

Beta Squared Lithography specifications subject to change without notification.