

VERTICAL SPINDLE SYSTEM

**FROM PROTOTYPE TO PRODUCTION
AND EVERYTHING IN BETWEEN**

TOTAL FLEXIBILITY, TOTAL CONTROL



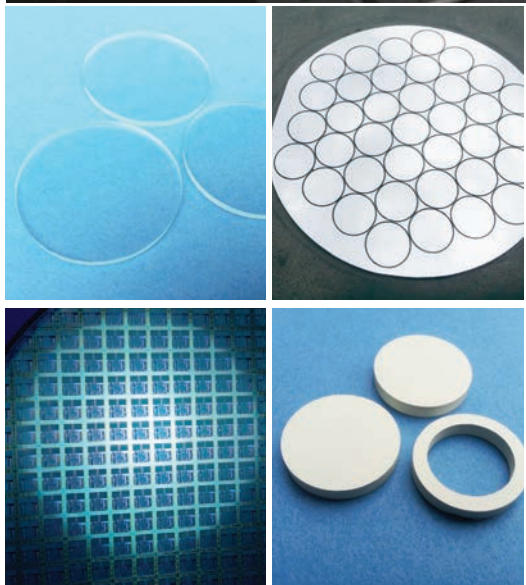
MacroAce II VS

GET MORE OUT

Glass encoders, PZT components, ceramic disc and "donut-nut" profiles, power semi-conductors, micro-drilling... with substrate depths of up to 40mm. The **MacroAce II VS** has all your dicing requirements covered.

THE ULTIMATE IN SYSTEM PRODUCTIVITY

Air bearing spindle for minimum vibration and best quality of cut
Sensitive cutting process protects substrates from damage
No need for subsequent edge finishing
Automatic alignment and program features
Optional CNC style control interface
Variety of diamond tools available for process optimisation



MacroAce II VS



The **MacroAce II VS** is a vertical spindle drilling system that can be used for core drilling, micro drilling and milling of a variety of substrates. The **MacroAce II VS** utilises an air bearing spindle to provide the best performance in regard to accuracy and quality of cut. Full automatic program control is achieved via Loadpoint's own Nanocontrol System. Alternatively, for users who prefer a more CNC style interface, the **MacroAce II VS** can be fitted with a full G-Code CNC control system.

With a positioning resolution of 0.001mm, even the most challenging specifications are achieved. The **MacroAce II VS** has the flexibility for prototype trials and small batch runs but also has full functionality for high volume production work.

STANDARD PACKAGE

Loadpoint Nanocontrol

- Pattern Recognition System
- 2 point automatic work piece alignment
- Simple to use interface for easy creation of even the most complex programs

Vision & Alignment System

- Monocular video alignment system
- Full 17" / 430mm monitor for alignment, data entry and machine monitoring

Tooling

- Collet with 10mm shank capacity
- Accelerometer based sealed Z datum set off-chuck height sensing system

Features

- 500 - 40,000 rev per min with 1kW DC
- Theta (θ) axis bearing rotary table with high resolution direct drive
- Service pack covering minor tools for routine weekly service and maintenance
- Air filter set, Manual, CE mark
- Integral venturi vacuum system

OPTIONS

Control System

CNC style programming, configured to handle the vertical spindle, gives flexibility and capacity for complex machining operations, with full 3D capability.

Options for Heavy Duty Applications

- Increased Z capacity to 40mm
- Increased spindle power, optimised for thick substrates. 2kW, 100 - 8000 rev per min

OPERATIONAL SPECIFICATION

Work Capacity (X, Y, Z)	250 x 250 x 20mm
Work Capacity (optional)	250 x 250 x 40mm
X, Y, Z Axis Drives	DC Brushless
Y Index Range	0.0001 - 360mm
Y Index Resolution	0.0001mm
X Axis Range	0.1 - 250mm
X Axis Feed Rate	0.1 - 250mm per sec
Z Axis Resolution	0.0001mm
Theta Axis Drive	Direct drive torque motor with rotary encoder
Theta Axis Range	360° (Continuous rotation)
Theta Axis Speed	90° per sec
Theta Axis Resolution	0.00004°
Spindle Drive	DC Brushless
Spindle Spec	1kW, 500 - 40,000 rev per min
Spindle Spec (optional)	2kW, 100 - 8000 rev per min

Tooling

Loadpoint can supply and develop tooling to suit a wide range of applications. We can manufacture bespoke Drills and Core Drills optimised for customers applications. In addition to drills we can also supply diamond Milling and Profiling tools for the micro machining of hard materials.



Loadpoint Expertise

Every Loadpoint system incorporates a Loadpoint air bearing spindle that has been continuously developed over 40 years. Our customers trust Loadpoint to help them develop class-leading products. We have helped many customers develop task orientated solutions for ultrasound scanners, inkjet printers, SAW filters, MEMS devices and a whole range of silicon based products.

Micromachining solutions for:

SEMICONDUCTORS

ELECTRONICS

FERRO-ELECTRONICS

OPTO-ELECTRONICS

OPTICAL

MEDICAL

SOLAR

SONAR/ULTRASOUND

ENGINEERED TODAY FOR THE TECHNOLOGY OF TOMORROW

Chelworth Industrial Estate, Cricklade, Swindon, Wiltshire, UK, SN6 6HE Tel: +44 (0)1793 751160 www.loadpoint.co.uk