

300MM / 12" DICING SYSTEM

FROM PROTOTYPE TO PRODUCTION
AND EVERYTHING IN BETWEEN

TOTAL FLEXIBILITY, TOTAL CONTROL



nanospace

GET MORE OUT

From the latest wafer designs to ceramic components and everything in between. With cut depths of up to 13mm, the *nanospace* has all your dicing requirements covered.

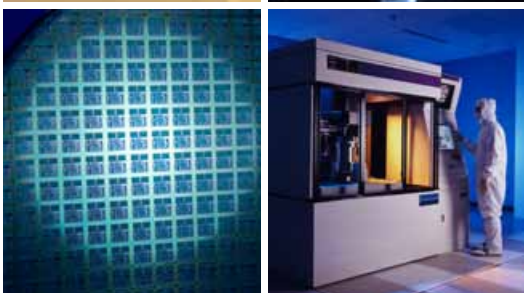
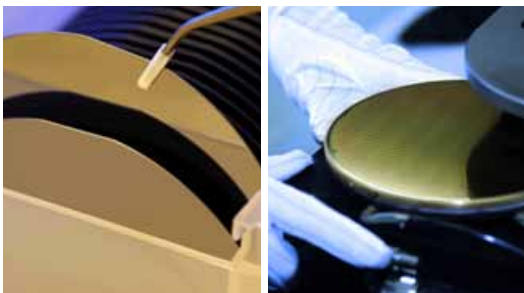
THE ULTIMATE IN SYSTEM PRODUCTIVITY

Need fast turnarounds?

Short run work?

Need to dice a wide range of jobs?

A diverse workload needn't be inefficient with easy work loading, quick tool changes, fast program entry.



nanoace

The **nanoace** is a micro dicing system that covers all aspects of dicing and scribing wafers and substrates. Fitted with Loadpoint's NanoControl, it has the flexibility for prototype trials and small batch runs and the automatic processes for larger production runs.

Materials processed include: Ceramic, FR3/FR4, GaAs, Germanium, Glass, InP, LED's, Lithium Niobate and Tantalate, ceramic and QFN, Piezo electrics, PZT, Quartz, sapphire and silicon amongst others.

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	OPTICAL
ELECTRONICS	MEDICAL
FERRO-ELECTRONICS	SOLAR
OPTO-ELECTRONICS	SONAR

STANDARD PACKAGE

NanoControl

- Windows based operating software
- Fast program entry even for complex cutting patterns

Vision & Alignment system

- Monocular video alignment system with pattern recognition
- Full 17" / 430mm monitor for alignment, data entry and machine monitoring
- Continuous live display of X,Y,Z and theta co-ordinates
- Z autofocus set up of alignment image, with offset option for depth of cut

Tooling

- Standard wheel carrier with 50 to 76.2mm diameter blade capacity
- Three direction coolant delivery; main blade coolant jet, blade side wash bars and wafer flood jets
- Plain wafer vacuum chuck, 300mm dia capacity
- Accelerometer based Z datum set, off-chuck height sensing system

Loadpoint Air Bearing Spindle

- Very low vibration improves the cut quality and reduces chipping
- DC brushless drive 1.2kW, 3,000 to 60,000 rev per minute
- Theta (θ) axis bearing rotary table with high resolution direct drive

Capacity

- X,Y,Z = 305 x 305 x 13mm
- Continuous rotation theta axis
- 50 - 76.2mm, hubbed and hubless, conductive and non-conductive 100mm blade option available for 16mm thick work piece capability

Vision and alignment system

Manual and automatic alignment modes:

- Pattern Recognition System (PRS)
- 2 point alignment with programmable off-set for off-cut alignment
- Manual and automatic (option) kerf and chipping measurement on machine
- 17" LCD monitor

Z height sensing

Off-chuck height sensing system ensures constant depth of cut without having to use conductive blades, providing a wider choice of blade diameters and suppliers.

Work holding

Standard packages include adaptable plain wafer chuck for use with wax and substrate mounting systems and tape rings. Loadpoint also manufacture standard and custom chucks for all standard tape ring and film frame mounting systems, with optional ceramic inserts for improved component support. Other custom designs inc. tape defined vacuum channels, mechanical vices, and designs to customer requirements.

OPERATIONAL SPECIFICATION

Work capacity (X, Y, Z)	300 x 300 x 16mm
Blade Capacity	50 - 76.2mm dia
X, Y, Z Axis Drives	DC Brushless
Y Index Range	0.0001 - 360mm
Y Index Resolution	0.0001mm
X Axis Range	0.1 - 340mm
X Axis Feed Rate	300mm 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 Speed Range	3,000 - 60,000 rev per min
Spindle Power	1.2kW

Optional connections available for external vacuum supply and cutting area extraction



LOADPOINT
MICRO-MACHINING SOLUTIONS

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