

NANOACE 3200

FROM PROTOTYPE
TO PRODUCTION AND
EVERYTHING IN BETWEEN

LARGE 470MM X 270MM TOUCH SCREEN

200MM / 8" DICING SYSTEM

TOTAL FLEXIBILITY,
TOTAL CONTROL

**THE ULTIMATE
IN SYSTEM
PRODUCTIVITY**

LOADPOINT
MICRO-MACHINING SOLUTIONS



- **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**

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OPERATIONAL SPECIFICATION

Control System	Loadpoint NanoControl 2.1
Work Holding	Ceramic or Metal Vacuum Chuck
Work Capacity (XYZ)	200 x 200 x 13mm *
Blade Capacity (Diameter)	50.8 - 101.5
Spindle Power	1.8 KW @ 60,000 rpm
X Axis Cutting Range	340 mm
X Axis Resolution	0.1 µm
X Axis Feed Rate	0.1 - 500 mm/s
Y Axis Index Range	0.001 - 260 mm
Y Axis Resolution	0.1 µm
Y Axis Index Accuracy	± 3 µm / 200mm < ± 1µm / 10mm
Z Axis Index Range	0.001 - 20mm
Z Axis Resolution	0.1µm
Z Axis Index Accuracy	± 2 µm / 10mm
Theta Axis Drive	Direct Drive Torque motor
Theta Axis Range	360°(continuous)
Theta Axis Resolution	4 arc sec
Camera Type	Monochromatic or full Colour
Camera Alignment	Manual or fully automatic
Camera Resolution	2 MegaPixels
Camera Magnification	x150 - x200 - x300
Camera Illumination	Coaxial and ring (with dark field option)
Footprint (WDH) (height includes status light)	1046mm x 1030mm x 2048mm

Micromachining solutions for:

SEMICONDUCTORS	OPTICAL
ELECTRONICS	MEDICAL
FERRO-ELECTRONICS	SOLAR
OPTO-ELECTRONICS	SONAR

SERVICE REQUIREMENTS

Electricity	220/240v AC single phase 10A, 50/60Hz
Air supply	5.5 Bar (80 PSI)
	0.11m ³ /min (4 CFM)
	Dewpoint 5°C, Oil 0.005 PPM
Water supply	
Blade coolant	3 - 5 Bar (43 – 73 PSI)
	5 - 8 Litres/min (1.3-2.1 US gal/min)
Workpiece wash	3 - 5 Bar (43 – 73 PSI)
	5 - 8 Litres/min (01.3-2.1 US gal/min)
Spindle coolant	3 - 5 Bar (43 – 73 PSI)
	18 - 20°C Recirculating Coolant Temp
	1 Litres/min (0.26 US gal/min)
Vacuum supply	Not required, internally generate
Mist extraction	Mandatory 4m ³ /min
Drain	42 mm ID drain, free flow to waste
	Drain height < 600 mm (24") from base of m/c
Recommended Environment	Ambient temp of 20°C, humidity level < 40%
Weight	720KG on 4 adjustable feet (up to 10mm)
Floor Level	< 6mm across m/c footprint

PIPE SIZES

Port	Pipe Diameter
Cutting Wheel Blade Coolant In	10mm
Wafer Wash Water In	10mm
Spindle Coolant Water In	10mm
Spindle Coolant Water Out	10mm
Air In	10mm
Vacuum Venturi Exhaust	10mm
Mist Extraction Port	100mm or 40mm
Drain Port	40mm

STANDARD PACKAGE & OPTIONS

NanoControl

- Windows 10 based operating software with touch screen technology
- Fast program entry even for complex cutting patterns

Vision & Alignment system

- USB 3 camera

Tooling

- 50.8 – 101.6mm dicing blade capacity, coolant delivery
- Various work holding options; Ceramic vacuum chuck, solid chuck, either tape ring or film frame, Loadpoint also manufacture standard and custom chucks bespoke to customer requirements.
- Accelerometer based Z datum set, off-chuck height sensing system

Loadpoint Air Bearing Spindle

- Very low vibration improves the cut quality and reduces chipping
- Spindle: 1.8kW, 3,000 – 60,000rpm, Ultra low-vibration

A few features of the latest technology

- Multi-language display
- Option of x 2 image magnification with no loss of resolution

Screen

- NanoAce 3300 uses a large 470mm x 270mm touchscreen underpinned by the latest NanoControl software

Operational Flexibility

- Tracker ball has outer jog ring for high precision alignment of components

Ease of Use

User friendly NanoControl software with flexibility and ease of use at its principal core. This software is developed and updated at our headquarters to not only continually improve its flexibility and ease of use but also add feature requirements unique to a customer's application

Materials Processed

Ceramic, FR3/FR4, GaAs, Germanium, Glass, InP, LED's, Lithium Niobate and Tantalate, QFN, Piezo electrics, PZT, Quartz, Sapphire and Silicon amongst others.

This system is Windows 10 based and offers many features such as:

- Kerf check
- BBD
- Blade Wear Compensation