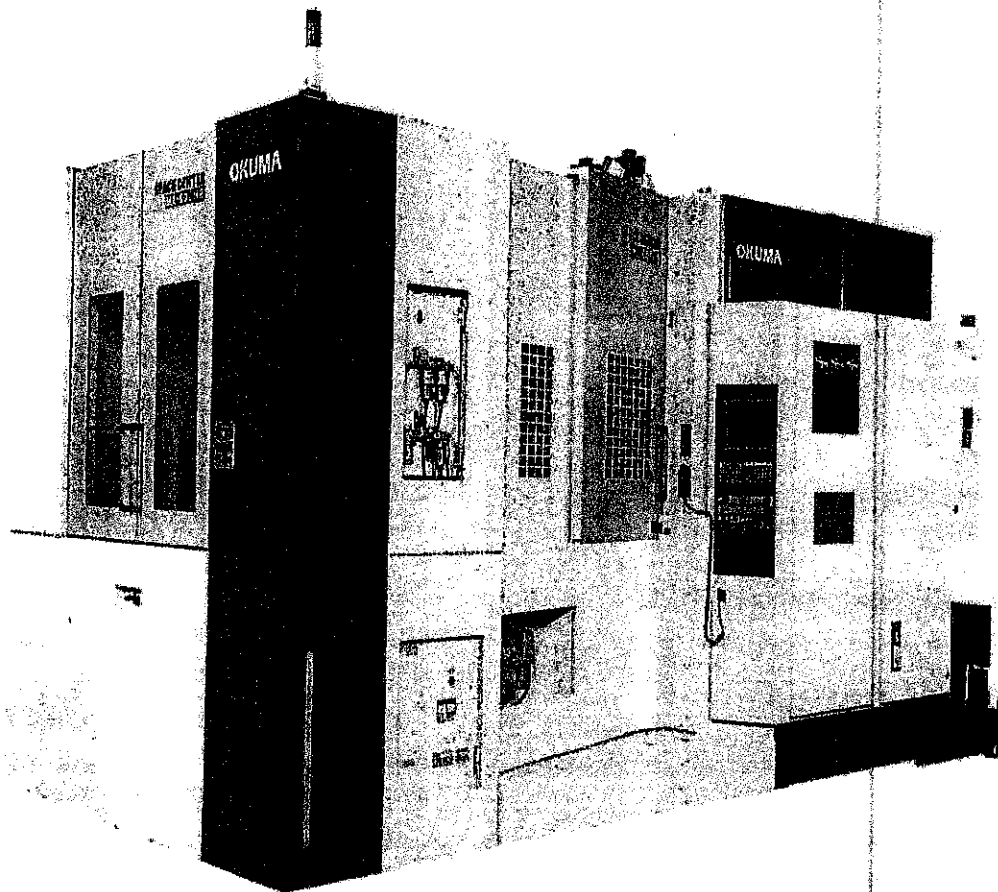


Quotation to:	Date:	16 December 2010
Okuma Model MA600-HB Horizontal Machining Centre Fitted with Okuma OSP-P200M CNC Control System		
Price:		
Okuma MA600-HB		



Okuma Model MA600-HB Horizontal Machining Centre Fitted with Okuma OSP-P200M CNC Control System

Machine Specification

Travels

'X' axis movement	1,000 mm
'Y' axis movement	900 mm
'Z' axis movement	1,000 mm

Spindle

Spindle nose	BT 50
Spindle speed std	6,000 rpm
Spindle drive	VAC 30/22 kW (10 min./cont.)

Pallet

Pallet size	630 x 630 mm
Max. weight on pallet	1200 kg
Pallet indexing	1°
Pallet change time	12 seconds
Maximum work piece size	Ø 1000 x 1000 high

Axis Drives

Feed rate, X, Y, Z-axis	1 – 60 m/min
Rapid traverse, X, Y, Z-axis	60 m/min

Accuracy

Positioning accuracy	+/- 0.004 mm/full stroke
Repeatability	+/- 0.0015 mm

Automatic Toolchanger

No of tools	40 (Options 60, 100, 150, 200, 240, 320, 400) <u>285 ATC.</u>
Tool selection	Random Random (fixed address for 100 tools +)
Tool shank	MAS-BT50 (MAS2 through pullstud)
Max. tool dia./length (with adjacent tools)	Ø 140 x 450 mm
Max. tool weight	25 kg
Tool change time T-T	2 seconds
Tool change time C-C	4.4 seconds (MAS)

Machine Weight

Approx. 26,000 kg

Floor Space

3,380 x 6,495 mm

Standard Specification

ATC air blower

Tool release lever (*BT50*)

Spindle taper hole cleaning rod

Hand tools

Spindle cooling system

Maximum Acceleration in rapid traverse : 0.7G

Spindle -through-coolant supply system 15 kg/cm²

Chip air blower, nozzle type

Work light, halogen lamp

Internal Chip Conveyor

Chip pan

Two-layer signal tower (*Blue; operation end lamp/Yellow; alarm lamp*)

Foundation washers

Totally enclosed guard

2-Pallet swivel type APC (*with two sets of MAS pallets*)

CE mark and EMC

IEC standard

OSP-P200M 3D-E Kit Standard

Auto Programme Schedule Update

Work Co-ordinate System Selection, 100-sets

Helical Cutting Function

Synchronized Tapping II

Programmable Travel Limit

Arbitrary Angle Chamfering

200-sets each of Tool Length Offset and Cutter Radius Compensation

Tool Life Management Function

Auto Power Shut-off Function

Sequence Stop

3D Simulation Function

Interactive MAP Function (I-MAP)

Programme Storage Capacity – 2GB

Simple Load Monitor

NC Operation Monitor

Thermo Active Stabilization - Spindle (*TAS-S*)

Thermo Active Stabilization – Construction (*TAS-C*)

5951001 **Okuma Model MA600-HB Horizontal Machining Centre
Fitted with Okuma OSP-P200M CNC Control System**

MACHINE AND CONTROL OPTIONS TO

- 5952012 Application for Big Plus for standard 6000 min-1
- 5952101 Absoscale X/Y/Z axis
- 5952203 285-tool ATC i/o std. 40 ATC (Base frame for 285 ATC magazine)
- 5952301 B axis NC rotary able instead of standard 1 degree indexer
- 5952431 Shower coolant
- 5852456 Ball screw cooling
- 5952524 Pre arrangement for chip conveyor type M-B
- 5952607 2 sets of edge locators
- 5952704 Auto zero offset function, Renishaw RMP60/BT50 shank
- 5955016 FMS-APC for stacker crane instead of standard pallets (including 2 pcs FMS pallet)
- 5955019 Stacker crane interface Type-II (for Ethernet version)
- 5955021 DNC-C Ethernet version)
- 5955022 Turning cut function
Spindle path control function
- 9231816 One touch spreadsheet (Excel machining)
- 9231043 Up grade of control to 3D-M 'D' Kit, see extra options below
 - > Programmable Message
 - > Work Co-ordinate System – 200-sets
 - > Tool Length / Tool Diameter Offset – 300-sets
 - > Programmable Mirror Image (G62)
 - > Enlargement and Reduction of Workpiece (G50, G51)
 - > Manual Gauging System (without touch sensor)
 - > Mid Block Restart
- 9231701 Super-NURBS Type A for basic 3 axis
Balluff tool ID system for 285 ATC

TOTAL MACHINE PRICE TO ABOVE SPECIFICATION

TOTAL PRICE FOR TWO MACHINES

UK ITEMS

Renishaw NC4 laser broken tool detection system

Inspection plus software

High pressure coolant unit

- > 70 bar 70 ltr/min coolant pump
- > Chiller unit
- > Delivery and installation

Coolant filtration and mist extraction

- IAD drum filter & chip conveyor
- Wash gun and holster
- Chip bucket
- ODF1000 oil mist extractor
- Oil skimmer
- Installation

TOTAL PRICE PER MACHINE

TOTAL PRICE FOR TWO MACHINES

FMS System Including Material Handling

- Fastems MLS-MD as per our Layout E1780-07
 - 1-off DMC-MD stacker crane
 - Material station conveyor MSC-2
 - 2 off Loading station LSF-MD
 - Fastems MMS Enterprise (Manufacturing Management System)
 - MMS-2000 automatic storage
 - MMS-3100 capacity simulation
 - MMS-4100 NC program library and tool checking
 - MMS-4200 tool data management
 - MMS-5000 machine data logging
 - MMS-5100 remote alarm
 - MMS hardware and system software licenses
 - MMS-3110 PPS Interface for the Fastems System (This will enable the FMS system to be connected to production control system)
 - Machine Interfacing
- 16 x Additional pallets for FMS including edge locators

Note: The above includes 6 additional pallets to enable the 10 fixtures outlined below to be loaded into the FMS, (4 pallets included with the 2 off MA-600HB's), and an additional 10 pallets to allow further components to be added to the system.

Tool Room Equipment

- Speroni tool pre-setter model Esperia STP 46 CNC A3
(As detailed in quotation ref: 0216-001S)
- 1 off Cabinet rack to accept 150 BT 50 tool tapers
 - 1 off Bench for assemble
 - 1 off Draw cabinet
 - 3 off Tool trolleys with a capacity of carrying 42 tools
 - 1 off Tooling mate tightening fixture and wrenches