OXFORD ENGINEERING

# CNC TURNING/MILLING integrated Machining

## **MATSUURA CUBLEX-63/PC18 – 5 AXIS MILL / TURN MACHINING CENTRE – Jan 2015**

*This advanced machining centre has 18 pallets along with the latest technologies for high performance processing:-*

Max. Turning Diameter – 630mm

Max. Turning Height – 450mm

Max. Work piece Weight – 350 Kg

18 Pallet system

X axis travel 760mm

Y axis travel 845mm

Z axis travel 660mm

C axis 360 travel degrees

## **HANKOOK VTC100 VERTICAL TURNING CENTRE**

*This VTC has a Ram & Turret type C axis and Driven Tools.*

*Capabilities:-*

Max. Turning Diameter – 1250mm

Max. Turning Height – 800mm

Max. Work piece Weight – 4000 Kg

 1mtr - Chuck

## **MAZAK VERTICAL INTEGREX e 1060 V – Vertical Turning/milling centre.**

**5 AXIS** (integrated B & C axis) twin spindle machining cell

Maximum swing 1250mm

Maximum length 1875mm

X axis travel 1875mm

Y axis travel 1365mm

Z axis travel 1045mm

B axis 150 travel degrees

C axis 360 travel degrees

1mtr - Chuck

## **MAZAK INTEGREX 400 – Turning/milling centre**

**5 AXIS** (integrated B & C axis) twin spindle machining cell

Maximum swing 760mm

Maximum length 1504mm

X axis travel 1504mm

Y axis travel 230mm

Z axis travel 1585mm

B axis 225 travel degrees

C axis 360 travel degrees

12” Chuck

## **MAZAK INTEGREX 200 – Turning/milling centre**

**5 AXIS** (integrated B & C axis) twin spindle machining cell

Maximum swing 660mm

Maximum machining length 1016mm

X axis travel 580mm

Y axis travel 160mm

Z axis travel 1045mm

B axis 225 travel degrees

C axis 360 travel degrees

10” Chuck

## **DAEWOO PUMA 400M – Turning/milling centre**

**4 AXIS** (integrated C axis) turning/milling cell

Max swing over bed 700mm

Max swing over saddle 480mm

Max machining diameter 460mm

Max work length 1050mm

X axis travel 362mm

Z axis travel 1105mm

C Axis (rotating)

All axes simultaneously controlled

15” Chuck

## **DAEWOO PUMA 400LM – Turning/milling centre**

**4 AXIS** (integrated C axis) turning/milling cell

Max swing over bed 770mm

Max swing over saddle 590mm

Max machining diameter 560mm

Max work length 2028mm

X axis travel 362mm

Z axis travel 2155mm

C Axis (rotating)

All axes simultaneously controlled

12” Chuck

**HITACHI SEIKI HICELL CA23 – Turning/milling centre
 4 AXIS** Integrated “C” axis Turning cell
 Maximum swing 400 mm (15.75) inches
 X axis 215 mm

 Y axis 100 mm
 Z axis 530 mm
 C axis (rotating)

 All axis simultaneously controlled
 Hydra feed short bar loader

 10” Chuck

**HITACHI SEIKI HICELL CA23 II – Turning/milling centre (x 2)
 4 AXIS** Integrated “C” axis Turning cell
 Maximum swing 400 mm (15.75) inches

X axis 265 mm
Y axis 120 mm

Z axis 530 mm

C axis (rotating)
All axis simultaneously controlled

10” Chuck

# CNC MILLING

## **HELIOS 2i Model 425 VERTICAL MILLING CENTRE**

**5 AXIS**

X axis travel 4200mm

Y axis travel 3200mm

Z axis travel 1000mm

C axis 2.5 degrees increments

4.0 x 2.0 mtr bed

Maximum part envelope 3.5 mtr x 2.5mtr x 0.7mtr

**BOKO F63-100**

 **4 + 1 AXIS** CNC universal milling and boring machine.
 X axis travel 2400 mm
 Y axis travel 1200 mm

 Z axis travel 1360 mm
 W axis travel 300 mm
 fully controlled 360 degree table rotation

**BOKO F63-100**

 **4 + 1 AXIS** CNC universal milling and boring machine.
 X axis travel 2000 mm
 Y axis travel 1200 mm
 Z axis travel 900 mm
 W axis travel 300 mm
 Fully controlled 360 degree table rotation
 Touch probe for rapid set up and co-ordinate measuring capabilities.

## **MATSUURA HP300**

Twin pallet **4 AXIS** horizontal high speed (20,000 RPM) machining centre.

X axis travel 500mm

Y axis travel 500mm

Z axis travel 500mm to spindle nose

Automatic tool probing, 80 tool cassette automatic changer

**HAAS VF9**

Vertical machining centre
 20 tool capacity automatic changer

 Fully integrated fourth axis control.
 Work area 2000 x 1016 mm (78 x 40 inches).

**MAZAK Vertical nexus 510** Vertical machining centre
 30 tool capacity automatic changer
 Work area 1050 x 510 mm (41 x 20 inches).

**HAAS VF4**

 Vertical machining centre
 20 tool capacity automatic changer
 fully integrated fourth axis control, Haas control system
 High speed spindle
 Work area 1016 x 508 mm (40 x 20 inches).

# TURNING CNC

**BINNS & BERRY DATA 90 CNC Turning Centre**
 1200 mm Dia swing
 3000 mm Dia between centre’s

 1030 mm Dia over bed

**BINNS & BERRY DATA 90 CNC Turning Centre**

 1600 mm Dia swing
 2500 mm Dia between centre’s
 1100 mm Dia over bed

**COLCHESTER**

**ALPHA 550** CNC controlled X & Y axis
 554 mm swing
 830 mm in the gap
 2000 mm between centre’s
 Variable surface speed

**COLCHESTER**

**ALPHA 400** CNC controlled X & Y axis
 245 mm swing
 585 mm in the gap
 Variable surface speed

## All the above CNC Lathes & CNC Mills are DNC linked to a CAD CAM facility

# LARGE VERTICAL TURNING

**WEBSTER /BENNETT**

EM72 Vertical borer, 2540 mm maximum turning diameter

#### WEBSTER/BENNETT\*\*

#### EB60 vertical borer

2100mm maximum turning diameter

\*\*Current weight limitation of crane is 500Kg\*\*

# ASSEMBLY, WELDING & TESTING EQUIPMENT

 Fully customized and dedicated individual facilities in-line with customers needs,

25,000 sq ft Capabilities include:-

**CLEAN ASSEMBLY ROOM**

1000sq ft of positively pressurized assembly facility for UHV Diagnostics assembly and vacuum testing

 **WELDING**

5 Tig, 2 x Mig, 1 x Orbital and 1 x Gas Welding

 Manipulators x 5

 Plasma cutting

 **STRESS RELIEVING**

 1 x Vibratory

 **SOLDERING**

Hard & Soft Soldering

 **TESTING**

Leak Detection - Mass Spectrometers x 5

 Pressure Testing (Pneumatic and Hydrostatic)

 Earth Bond Testing x 1

 DVM x 4

 Granite Surface table 1.5mtr x 1.0mtr

**CLEANING**
 3 x Hot Wash Detergent line with ultrasonic cleaning

 Large (2 Stage) - 1.5mtr x 1.5mtr x .5mtr

 Medium (4 Stage) – 0.8mtr x 0.8mtr x 0.8mtr

 Small (4 Stage) – 0.5mtr x 0.3mtr x 0.3mtr

**DRYING / BAKING**

 3 x OVENS

# MARKING EQUIPMENT

**SIC MARKING SYSTEMS**

P123 Hand Held Unit with e10 Controllerand Bar Code Reader

P122 Hand Held Unit with e6 Controller

# COMPUTER SYSTEMS

**EDGECAM**

Cad Cam System, reading DXF/IGES/DWG/SAT/PAR files, Multi tasking, post process control

Of DNC linked machines. Surface Design & 3D m/cing capability, Multi plane m/cing via Solid

Modeling and tool path verification packages.

**SIEMENS
 Solid Edge Software - Solid modeling CAD system** Interfaces with Edge Cam and facilitates transfer of 3D designs to CNC files

**WINDOWS NETWORKING SYSTEM**Pentium processor file server running, Javelin (production control system), Exchequer accounts package, Act contact CRM database

# INSPECTION EQUIPMENT / NDT

**CREAFORM**

Handy Probe C780

 7.8m3 measuring volume

55um single point accuracy

85um total volume accuracy

**JOHANSSON**

**T**opaz 10-6 CNC Co-ordinate measuring machine
 Measuring range (mm)

 X 1000
 Y 1000
 Z 500
 Accuracy 10 microns
 Resolution 0.1 microns
 Repeatability 3.5 microns
 Speed (m/min) 30• Max. Component weight (kg) 1000

**MITUTOYO**

Surf test, surface roughness measuring machine.

**MIC TRAC**

Gauge Maker New

A fully complimentary range of inspection, shadow graphing & workshop equipment is available, traceable to national standards

**DYE PENETRANT TESTING**

PCN LEVEL 2 (x1 Inspector)

 PCN LEVEL 1 (x3 Inspectors)

**DEMAGNETISING**

500mm x 500mm Capacity

### CONVENTIONAL MACHINING

# MILLING

**PROTRAK 2000**

**2 Off** CNC controlled X & Y axis
 Work area 1220 x 254 mm

#### BRIDGEPORT EZYTRAK

CNC controlled X & Y axis
 Work area 1220 x 254 mm

**BRIDGEPORT**

**3 Off** Series (1) universal milling machines. Work area 760 x 670 mm (30 x 26 inches). Slotting and right angled head attachments

# TURNING

**COLCHESTER**

**MASTIFF**

370 mm swing over bed

 1300 mm between centres’s
 780 mm in the gap

#### COLCHESTER MASTER

 **4 OFF** 170 mm swing over bed
 250 mm in the gap

#### COLCHESTER TRIUMPH

 **4 OFF** 190 mm diameter over bed
 300 mm in the gap

**COLCHESTER**

**2500 (vari speed)** 190 mm diameter over bed
 300 mm in the gap
 constantly variable surfacing speeds

**FORK LIFTS / ELEC PALLET TRUCKS**

**HELI – Diesel – 3500kg**

**HYSTER – Electric – 1600kg**

**BT STAXIO (x2) – 800kg**