



**Vector
X-Cel**

Quality, Integrity, Experience

ENGINEERING RESOURCES

Revision 02 / April 2019



Key Capabilities

- **CONTRACT PRODUCTION**
- **CELLULAR MANUFACTURING PARTNERSHIPS**
- **PROJECT MANAGEMENT**
- **40 TONNE LIFT**
- **MILLING TO 22m x 1.5m x 1.3m**
- **5 SIDED MACHINING TO 10m x 3m x 1.3m**
- **5 AXIS MACHINING TO 2.4m x 1.2m x 1.3m**
- **VERTICAL BORING TO 3.7m x 2.1m**
- **HORIZONTAL BORING TO 2.5m x 2.4m x 2.2m**
- **FULL RANGE OF CONTOURING HEADS**
- **TURNING TO Ø0.76m x 12.0m long**
- **TURN/MILL Y+C AXIS + DRIVEN TOOLING Ø0.47m x 1.4m**
- **DEEP HOLE BORING TO 10m to chuck 11m through chuck**
- **DEEP HOLE BORING MAX BORE DIA Ø8.0"**
- **ASSEMBLY AND TEST**
- **PRESSURE TEST**
- **SURFACE COATING TO MARINE / SUBSEA STANDARDS**
- **NDT – DYE PEN, ULTRASONIC, MPI, BRINTRONIC**
- **CMM INSPECTION TO 4m x 1.5m x 2.0m**

Please contact the Sales Team direct on **01709 724260** or email us at sales@vectorx-cel.com to discuss the tangible business benefits that can be realised through a manufacturing partnership with Vector X-Cel Ltd.



Milling

- **ASQUITH BUTLER MILL (3+1 Axis, Heidenhain TNC 426)**
Travel: 22,000mm x 1,500mm x 1,250mm
Comments: CNC Dividing head or rotary table
- **ASQUITH BUTLER GANTRY MILL (3+1 Axis, Siemens 840D)**
Travel: 10,000mm x 3,000mm x 1,250mm
Comments: Ø1,000mm contouring dividing head or rotary table
- **SORALUCE SP8000 MILL (3+1 Axis, Heidenhain TNC 426)**
Travel: 6,000mm x 1,600mm x 1,200mm
Comments: Ø2,000mm rotary table 25 tonne max load
- **SORALUCE FP8000 MILL (3 Axis, Heidenhain TNC 430)**
Travel: 8,000mm x 2,000mm x 1,200mm
Comments: Fully Orthogonal head + Twin indexing tables
- **SORALUCE SP10000 (3+1 Axis, Siemens 840D)**
Travel: 8,500mm x 1,600mm x 1,200mm
Comments: Ø1,000mm horizontal or vertical rotary table
- **BOKO WF4/12 (6 Axis, Heidenhain TNC 426)**
Travel: 2,400mm x 1,200mm x 1,360mm
Comments: Capable of contour milling using 5 axis
- **BOKO F63.100 (6 Axis, Heidenhain TNC530)**
Travel: 2,400mm x 1,200mm x 1,360mm
Comments: Capable of contour milling using 5 axis
- **XYZ SM 3500 (Protrax)**
Travel: 134mm x 280mm x 510mm
- **XYZ CNC/MANUAL BED MILL (3 AXIS, Proto TRAK EDGE SM)**
Travel: 787mm x 508mm x 584mm
Comments: TURRET MILL

Continued overleaf...



Milling (continued)

- **KAFO KMC-4140 (Fanuc Series 31i Model B)**

Travel: 4100mm x 4000mm x 1100mm

Comments: Double Column Machining Centre

- **FANUC ROBODRILL D21 (Fanuc Series 31i-B5)**

Travel: 700mm x 400mm x 330mm

Comments: 24,000 RPM Spindle



Horizontal Milling

- **STARRAG DBF 630 (4 Axis + U Axis, Siemens 840D)**
Travel: 1,000mm x 750mm x 1,200mm
Comments: Twin auto-change pallets, Radial Facing Slide
- **HELLER MCH 280 (4 Axis, Siemens 840D)**
Travel: 1,000mm x 800mm x 800mm
Comments: Twin auto-change pallets, 70 bar coolant pressure
- **HELLER MCH 280 (4 Axis, Siemens 840D)**
Travel: 1,000mm x 800mm x 800mm
Comments: Twin auto-change pallets, 70 bar coolant pressure
- **CNC TOYODA FH100S (3 + 1 Axis)**
Travel: 1,600mm x 1,400mm x 1,150mm
Comments: Twin auto-change pallets, Spindle output 45kW
- **GIDDINGS + LEWIS G50RT (Siemens 840D)**
Travel: 2,500mm x 2,390mm x 915mm spindle x 2180mm table
Comments: Ø130mm spindle, CNC indexing table 1,600mm x 1,250mm
max load 11.36t, Contouring Heads
- **HARTFORD PBM 115AG (Fanuc 21i-MB)**
Travel: 2,000mm x 1,600mm x 500mm spindle x 1,500mm table
Comments: 110mm spindle, Full B Axis



Vertical Boring

- **CNC WEBSTER BENNET (Siemens 840C)**

Max turned size: Ø3,710mm

Table size: Ø3,050mm

Max component height: 2,090mm (under elevating rail)

- **CNC SCHEIS FRORIEP (Siemens 840C)**

Max turned size: Ø2,500mm

Table size: Ø2,200mm

Max component height: 1,800mm

Comments: C Axis with 22.5kw live spindle and RA heads

- **CNC TOSHULIN (Fanuc 16TB)**

Max turned size: Ø1,000mm

Table size: Ø1,000mm

Max component height: 750mm

Comments: C-axis with driven tooling



Turning + Turn/Mill

- **COLCHESTER COMBI 6000 (Fanuc 210i-T)**
Swing over bed: Ø930mm
Max: Ø400mm x 3,000mm
Boring bars to Ø800mm deep, Spindle bore Ø170mm
- **DAEWOO PUMA 480L (Fanuc 21i-TB)**
Swing over bed: Ø900mm
Max: Ø610mm x 2,155mm
Spindle bore: 166mm
- **DAEWOO PUMA 400LB (Fanuc 18i-TB)**
Swing over bed: Ø700mm
Max: Ø550mm x 2,129mm
- **BINNS and BERRY Data 90 (Fanuc 18i-T)**
Swing over bed: 940mm
Max: Ø760mm x 10,100mm
Comments: Various turn through steadies.
- **BINNS and BERRY Data 1000 (Fanuc 18i-T)**
Swing over bed: 800mm
Max: Ø620mm x 12,000mm
Comments: Various turn through steadies.
- **Hwacheon 450ALYMC (Fanuc 0i-TF)**
Swing over bed: 700mm
Max: Ø420mm x 1,237mm
Comments: Y+C Axis 12 Station driven tooling.
- **Hwacheon 450ALYMC (Fanuc 0i-TF)**
Swing over bed: 700mm
Max: Ø420mm x 1,237mm
Comments: Y+C Axis 12 Station driven tooling.



Deep Hole Boring

- **TACCI DHB**

Max length 10m to chuck, 11m if through chuck and below Ø10"

Max bore diameter 8" from solid

Min bore diameter 1"

Can pull bore up to 16"

Max clean/turned/peeled bar diameter held direct on steady Ø550mm

Max bar diameter if held in spider Ø350mm

- **RYZAN – LONG**

Max length 5m to chuck

Max bore diameter 127mm from solid

Min bore diameter 1"

Can c/bore up to Ø150mm

Max clean/turned/peeled bar diameter held direct on steady Ø400mm

Max bar diameter if held in spider Ø300mm

- **RYZAN – SHORT**

Max length 3m to chuck

Max bore diameter 127mm from solid

Min bore diameter 1"

Can c/bore up to Ø150mm

Max clean/turned/peeled bar diameter held direct on steady Ø300mm

Max bar diameter if held in spider Ø250mm

- **RYZAN – SHORT**

Max hone length – stroke 3m, 6m if honed half and half

Minimum hone diameter Ø2.5"

Max hone diameter Ø16"

Max bar diameter Ø450mm



Add on + NDT

- **STRESS RELIEVING FURNACE**

Control: Vartex VT26 / West P6700 + Eurothem 4012C/M

Max Temp: 680°C – Max Load 400kg

Max size component: 1200mm x 800mm x 800mm

- **STORK COOPERHEAT HEAT TREATMENT MODULE**

70 KVA with 6 Output Channels

12 Point Fuji Chart Recorder with 12 Thermocouple Points

Comments: Associated process equipment, Ceramic Pads, Blankets

- **Internal NDT for Weld Cladding operations**

- Ultrasonic
- King Brinell
- Brintronic
- Fischer Scope
- Magnetic Particle Inspection
- Liquid Penetrant Inspection



Inspection

- **POLIGLOBO (CANTILEVER TYPE) CMM**
Travel: 4,000mm x 1,500mm x 2,000mm
Comments: Fully programmable Renishaw PH10 probe
- **LK G-80C (BRIDGE TYPE) CMM**
Travel: 1,500mm x 1,000mm x 1,000mm
Comments: Fully programmable Renishaw PH10 probe
- **BROWN & SHARPE DEA MISTRAL CNC (BRIDGE TYPE) CMM**
Travel: 1,000mm x 1,500mm x 860mm
- **CIMCORE 3000i PORTABLE MEASURING ARM**
Maximum reach: 2,800mm
- **KING BRINELL AND BRINTRONIC**
Hardness test equipment
- **VARIOUS GRANITE SURFACE TABLES**
To a maximum size of 3,600mm x 1,800mm
- **BOWERS MICTRAK AND MRP TAPER and API GAUGES**
- **ULTRASONIC INSPECTION**
- **TRIMOS VERTICAL MEASURING SYSTEM**
- **DYE PENETRATION INSPECTION**
- **MAGNETIC PARTICLE INSPECTION**
- **SURFACE FINISH INSPECTION**