

## Holbro Engineering Ltd - Capacity List

We work as part of your team to genuinely understand your business, your production processes and component requirements, delivering the best service from concept to completion.

Our capabilities include:

- CNC Turning
- CNC Folding
- Centre Lathe Turning
- CNC Milling
- Vertical Milling
- Horizontal Milling
- Boring, Slotting & Drilling
- Grinding—Cylindrical/Surface
- Fitting—Sub Assembly work
- Laser Profiling/Cutting
- Fabrication
- Prototype Work
- CAD/CAM Workstations
- Inspection (CMM Inspection)
- Kitting of Components
- 3D Scanning
- 3D Printing
- Sub Assembling Kits and Components
- Repairs to Original OEM Specification
- Retrofit to Original OEM Specification
- Electric Bench Mounted Resistance Welding
- Spark Eroding
- Brazing
- Powder Coating
- Painting
- Zinc Plating
- Anodising
- Mouldings

### CNC Turning

Machine	Max Dia (mm)	Max Length (mm)
Doosan Puma 280M	410	1030
Doosan Puma 2600LY II	550	2100
Colchester Tornado T8M	390	540

### Centre Lathe Turning

Machine	Max Dia (mm)	Max Length (mm)
Colchester Mastiff	800	1400
Colchester Student	300	1000
Colchester Mastiff 1800	554	2000
Colchester Mascot 2000	460	1500

## CNC Milling

Machine	X (mm)	Y (mm)	Z (mm)	No. of Axis
Doosan DNM 650	1270	670	625	4 & 5
Bridgeport VMC 800	800	510	450	3
Quaser MV 184	1000	500	700	4 & 1
Bridgeport VMC 560	540	410	480	3

## Manual Milling

Machine	
Turret Mill Machines (x2) Cincinnati Milacron Horizontal Miller	complete with electrical readouts

## Milling, Slotting and Drilling

Machine	Table
Bridgeport Turret Mill	48" x 9"
Chester Turret mill	54" x 10"

## Spark Eroding

Machine
Charmilles Isopulse P25

## Grinding - Cylindrical/Surface

Machine	Max Size (mm)
Jones & Shipman 1430 Surface Grinder	600 x 300

## Press Brake

Machine	Beam Length (mm)	Throat Depth (mm)	Working Height (mm)
Amada HFE M2 5020	2090	420	960

## Laser Profiling/Cutting

Our new Laser Cutting office has the capability to cut a wide range of metals with a variety of thicknesses.

Machine	Working Range X x Y x Z (mm)	Power	Max. Axis (m/min)	Cutting Thickness
<b>AMADA LCG-AJ Series</b>	3070 x 1550 x 100	4000W	170	-
(AMADA LCG-AJ) Mild Steel	-	-	-	20mm
(AMADA LCG-AJ) Stainless Steel	-	-	-	18mm
(AMADA LCG-AJ) Aluminium	-	-	-	16mm
(AMADA LCG-AJ) Brass	-	-	-	10mm
(AMADA LCG-AJ) Copper	-	-	-	8mm
(AMADA LCG-AJ) Titanium	-	-	-	10mm

## Inspection (CMM Inspection)

Our inspection department is run by experienced and qualified staff with the help of a CMM measuring machine linked to a database running state of the art software.

Machine	X (mm)	Y (mm)	Z (mm)	Resolution
<b>Nikon Altera 8.7.6</b>	813	710	610	0.05µm

Machine	Max. Capacity			
<b>Micro Vertex 750-1000</b>	1000mm	Air Pressure Base		Double Tool Setting Points

## 3D Scanning Equipment

Our maximum 3D Printing capabilities are 320mm x 130mm x 150mm. Software used is Autodesk Power Shape and Featurecam.

Machine	Measuring Range	Point Repeatability (mm)	Volumetric Accuracy (mm)	Laser Accuracy
<b>Nikon LC60DX Laser Scanner</b>	Unlimited	-	-	6µm
<b>Nikon MCAx 7-Axis</b>	2.5m	0.049	0.069	66µm

## CAD/CAM Workstations

Installation of our Edge Cam Solid Cad Cam Production System and our new DNC link system brings the interface between the programming and machining together.

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