

Overview of Machining Capabilities



<u>EQUIPMENT TYPE</u>	<u>MODEL / MAKE</u>	<u>SIZE CAPABILITY</u>	<u>NUMBER OF MACHINES</u>
CNC Milling 3 - Axis	SNK / Mazak / Kitamura / Awea	1600 x 3000 x 1000 mm	17 Machines
CNC Plate Gun Drilling	Ixon Auerbach	1200 x 2000 x 400 mm	1 Machine
CNC Horizontal Plate Milling	SNK	1600 x 3000 x 1000 mm	4 Machines
CNC Plate Grinding	Perfect	1200 x 2000 x 600 mm	4 Machines
CNC Plate Squaring	Sachmann	1200 x 2400 x 600 mm	4 Machines
Bandsaw Plate Cutting	Behringer	1200 x 2000 x 600 mm	4 Machines



Material Store

UTP Mould & Die has, for the last couple of years imported its own high quality steel from Sweden SSAB to ensure that Toolox 33 & 44 steel is always available. We have increased our raw material storage capacity, allowing us to keep larger quantities of uncut material on site.



Bandsaw

Our mould manufacture starts with good quality Tool Steel cut with precision on our Bandsaws.

At UTP we offer, top grade Tool Steel, such as, Toolox 33, Toolox 44 and 1.2311. Toolox 33 and 44 are offered in thicknesses 20 to 165mm while 1.2311 is offered in thicknesses of up to 250mm ex-stock. Block sizes of up to 500mm can be supplied on request.

Precision Bandsaw cutting is of paramount importance at UTP. That is why we rely on a Behringer Vertical Bandsaw capable of cutting plates up to 2500 x 1200 x 600 mm with a loading capacity of 3 Tons.

Plates are cut to a high accuracy using the latest laser measuring technology to check and correct the straightness of the cut. The deviation is less than 1mm on a 1000mm cut unit.

Maximum plate dimensions:

1200mm x 2000mm x 600mm

Maximum mass:

3000 kg per plate





Horizontal Milling

The second stage of high quality mould manufacture is the horizontal machining stage. State of the art CNC and NC equipment specifically designed for the process is used to mill all plates to the required dimensions. Plates are milled in a 'dry' condition to remove all stresses remaining in the plate after the cutting process. Horizontal Milling is of paramount importance at UTP. That is why we rely on a SNK CNC milling machines capable of milling plates up to 3000 x 1600 x 600 mm with a plate loading capacity of 5000Kg.

Maximum plate dimensions:
3000mm x 1600mm x 600mm
Maximum mass: 5000 kg



Surface Grinding

Accuracy during the grinding process is very important this is why we rely on 4 Precision Surface Grinders to grind all of our machined plates to the exact tolerances specified. Surface roughness is within 0.8 um and flatness of opposing surface within 0.02mm.

Maximum plate dimensions:
1200mm x 2000mm x 800mm
Maximum mass: 2000 kg



Squaring

The specialized machine utilised at UTP is a more automated process, operating with a rotating table, which machines three sides of the work-piece in a single operation. Customers can select exactly how they want their blocks to be machined and the required accuracy. Two, four or six sides can be milled within a tolerance of 0.05mm. Optional Chamfers can be added as per customer request. All commonly available steels can be machined and include: Mild Steel, Tool Steel and Aluminium.

Maximum plate dimensions:
1200mm x 2700mm x 800mm
Maximum mass: 2000 kg



Where the highest precision and quality is required, you can rely on UTP to assist you in completing your project accurately and on time. At UTP we stand by our customers as a specialist for special processing and machining of all your mould base and press tool plate requirements. UTP has a modern machine park, meeting the demands and requirements of the Toolmaking Industry today.

The high-precision machining services include 3,4 and 5-axis machining, as an extension to your own manufacturing capacity and expertise. We manufacture according to your specifications and customer data.

Complex Press Tool, Progression Tools and Moulds can be pre or finish machined as per your CAD model.

Maximum plate dimensions :

1200mm x 2000mm x 600mm

Maximum mass:

Horizontal: 900 Kg per plate



UTP offers its customers fast and precise deep hole drilling of cooling channels at very competitive prices. Water channels are drilled using single lip gundrills with internal cooling using oil at 120 bar pressure, ensuring very accurate drilling and straightness of the bores. As an additional service UTP can also machine the countersunk bores to protect the water connectors and tap the required BSP threads.

Machine specification:

Ixion 4 axis CNC deep hole drilling machine

Drilling of Plates 600 x 800 x up to 3000Kg

Maximum drill depth 1000mm per side

Drilling of shafts up to diameter 400mm

Drill sizes 5 - 25mm diameter

Excellent gun drill finish

Accuracy within 0.1mm / 100mm depth.

Full milling function milling of concealed connector pockets

Holes drilled & tapped, connector fitted

Drilling pattern directly from mould design

Super fast turn around times

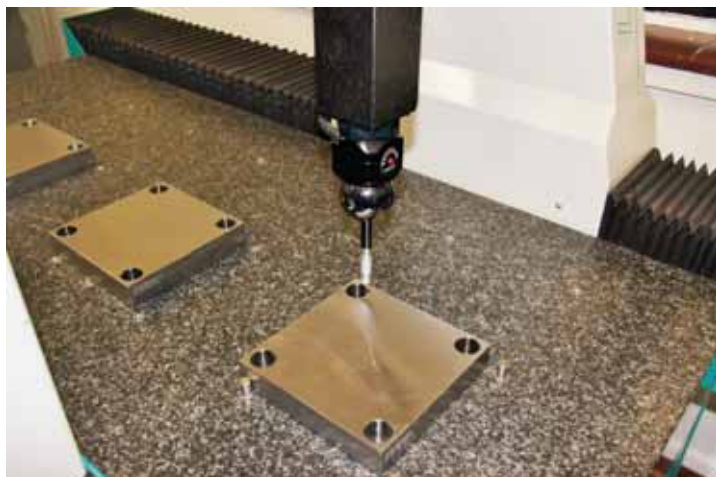
Drilling of all mould base materials

Maximum plate dimensions:

1200mm x 2000mm x 400mm

Maximum mass: 3000 Kg per plate





Measuring

At UTP we take quality seriously, highly accurate quality control measurements are performed on each plate after they have been through a marking and labelling process this serialises the plates and checks for accuracy, quality and tolerance. Reports assist the customer in picking up the centre of the plate and identifying the bore sizes. A PDF QC report is generated and saved and is available on request.



Plate Store

Our plate store is stocked with a large stock holding of blank and drilled plates, this enables our clients and UTP Business Partners to shorten their time to market for moulds, it also enables UTP to deliver timeously and on its promise - order today, get it tomorrow.

Plates are pin-stamped with steel grade and serial number to track production batches.

All plates are fully interchangeable.



Component Store

We have large stock holding of European size TDM components & manufacture a limited range of the DME Components. Our large and well stocked component store allows us to

99% of all ex-stock items are available immediately.

Other items are available within 8 working day.

Order today - dispatch tomorrow



Assembly

All moulds are assembled and checked prior to delivery to the customer. Moulds are packaged and strapped to Euro pallets to ensure that the client receives them as intended.



Delivery

UTP has teamed up with professional local delivery service company's to ensure that all our customers around South Africa benefit from fast, efficient and reliable delivery of their ordered goods. This ensures that our customers can plan their production process and be assured that what they have ordered will arrive "Just In Time."

The returning of goods is also carried out by our professional local delivery partners, and issuing of credit notes is done by our efficient and helpful internal sales staff.

