



## ULTRA-PRECISION-TURNING MACHINE

# MTC 650

### SPECIFICATIONS:

Control:	Delta Tau Power Pmac
CNC-axis:	X, Z and B, C
Bearing Type:	hydrostatic oil bearing design
Drive system:	X- and Z-axis linear motor
Travel:	X= 650 mm and Z = 400 mm
Speed:	X- and Z-axis max. 2000 mm/min
Stiffness:	800 N / $\mu$ m

### B-AXIS:

Bearing Type:	hydrostatic oil bearing design
Drive system:	brushless DC motor
Rotation angle:	360°
Speed:	10 RPM

### MAIN SPINDLE:

Bearing Type:	air bearing design
Drive system:	DC servo motor
Speed:	850-10000 RPM depending on type of spindle
Load capacity:	200 Kg
Workpiece diameter:	up to diameter 800 mm, (31,5")

### OPTIONS:

Process camera
Toolmeasuring system
Formmeasuring system
Balancing Software
Minimum quantity lubrication
B-, C-axis
3D- touch probe

## ULTRA-PRECISION-TURNING MACHINE

# MTC 650



# MTC 650

ULTRA-PRECISION-TURNING MACHINE

non ferrous metals  
plastics and crystals

The MTC series of machines (micro turning center) was designed according to the needs of ultra precision machining. By using diamond tools, optical surface quality can be achieved on a wide range of materials like crystals, nonferrous metals and plastics. The MTC 650 features a travel of 400 mm in Z and 650 mm in X, as well as the possibility to machine workpieces of up to 200 kg of weight and 800 mm (31,5") in diameter.

The MTC 650 has a T-shaped natural granite bed. X- and Z-axis slides, as well as the housing of the main spindle are made of granite as well. Both slides and the optional B-Axis use hydrostatic (oil) bearings. The main spindle features an air bearing and is mounted to the X-slide. The spindle can be equipped with different types of vacuum chucks.

A tool setting camera can be mounted to the main spindle housing, either with a fixed connection or with a removable one using an industrial pallet system for easy and accurate remounting. The increased travel of the X-axis allows to use the toolsettings even with a large workpiece mounted to the spindle. Mounting all the tooling and measurement equipment to the faceplate of an optional rotary table, provides additional system capabilities, such as the usage of the B-axis as a tool turret. The rotary table also can be used to keep a constant cutting point on the tool or to selectively change the cutting point if the tool is worn out.

Besides many other accessories, that make the MTC 650 an all purpose tool, there is the possibility to make customized solutions, to adapt the machine to your needs. Please do not hesitate to contact us.

- Single point machining
- Aerostatic and hydrostatic bearing technology
- Granite machine base
- Active vibration isolation system
- Form measuring system
- Integrated tool measuring system
- Process camera
- Form tolerance: 100 nm within 100 mm dia.
- Roughness: 2 nm (Ra)

U P - M A C H I N E S

