



ULTRA-PRECISION-TURNING MACHINE

MTC 400

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 and Z = 400 mm
Speed:	X- and Z-axis max. 2000 RPM
Stiffness:	800 N / μ 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:	Spindle mode 100 – 2500 RPM, C-axis mode 0 – 1500 RPM
Load capacity:	100 Kg
Workpiece diameter:	up to diameter 600 mm, optional up to 800 mm (31,5")

OPTIONS:

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

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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 MMC 400 features a travel of 400 mm for both linear axes and the possibility to machine workpieces of up to 100 kg of weight and 800 mm (31,5") in diameter.

The MTC 400 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. Different vacuum chucks for workpieces of up to \varnothing 800 mm (31,5") are available.

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. Tool holders and a mechanical interface for the in process camera as well as different measuring devices like 3D-touchprobes or LVDTs can be mounted to the Z-slide. 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 400 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

