TruMatic 3000 fiber (K09)

A productive, versatile machine for high-quality punched and laser-cut parts.

The TruMatic 3000 fiber (K09) combines all the advantages of punching and laser processing in a particularly cost-effective

way. Contours can be laser cut, while parts can be punched, formed and provided with rolled threads. Intelligent automation is possible, and the entire system has an exceptionally compact footprint.

The unique Delta Drive system creates a dynamic and particularly compact machine. Whether used as a punching

machine or as a fully equipped combined punching and laser-cutting machine, the sheet does not need to move in the Y

direction.

The TruMatic 3000 fiber (K09) is based on proven TRUMPF punching and laser technologies, including three-dimensional

punching. In addition to punching, threads can be formed, tabs can be bent, sheet-metal forms can be produced and

components can be cut free by laser, simply, quickly and economically in a single processing cycle.

Technical configuration and specifications

CNC-controlled combined punching and laser-cutting centre in standard catalogue configuration with the following

specifications and equipment:

Working range

Combined, without repositioning Y = 1,250 mm / X = 2,535 mm

Punching, with full sheet support Y = 1,250 mm / X = 2,500 mm

Laser cutting, with full sheet support Y = 1,250 mm / X = 2,500 mm

Punching performance

Maximum punching force 180 kN

Maximum punching diameter 76.2 mm

Maximum sheet thickness 6.4 mm

Maximum sheet weight 150 kg

Simultaneous X-Y positioning speed 108 m/min

C axis, rotary axis 330 rpm

Maximum punching rate 800 strokes/min

Maximum marking rate 1,000 strokes/min

Maximum X-axis acceleration 10 $m/s^2$

Maximum Y-axis acceleration 8 $m/s^2$

TRUMPF TruDisk 3001 solid-state laser

Maximum laser power 3,000 W

Maximum mild-steel thickness, St 37 6.0 mm

Maximum stainless-steel thickness 6.0 mm

Maximum aluminium thickness 5.0 mm

Maximum copper thickness 6.0 mm

Maximum brass thickness 6.0 mm

All drive motors are maintenance-free DIGITAL AC motors. The punching axis is electrically driven and integrated into the

unique Delta Drive. The C axis rotates through 360° with a resolution of 0.01°.

Positioning accuracy ± 0.1 mm

Repeatability ± 0.03 mm

The accuracy achievable on the workpiece depends on factors including material type, pre-treatment, sheet size and

positioning within the working range. In accordance with VDI/DGQ 3441, measuring length 1 m.

The machine is equipped with a BOSCH REXROTH IndraMotion MTX CML 75 control, a 21.5-inch colour touchscreen and

two 120 GB SSD drives. 10 GB is available for customer programs. Functions include online help, internet-based

teleservice and diagnostics. USB, an RJ-45 network connection and the universal Central Link data interface are provided.

Safety equipment complies with applicable regulations, including a two-beam light barrier protecting the complete

working area and a fully enclosed working zone.

Additional machine equipment

• Compact cutting unit with fixed focus setting, collision protection and protective glass

• FocusLine for automatic focus setting and focal-position compensation

• ControlLine for height control and process monitoring

• TruDisk laser service functions, including operating hours by mode, last service date and a log of the last 16 faults

• NitroLine for oxide-free cut edges

• 21 tool stations arranged linearly on the X-axis beam, including RTC tool cassettes and die plates

• Three hydraulic clamps

• Ball-transfer support table for full support of sheets up to 1,250 x 2,500 mm throughout the working area

• Automatic repositioning using the hold-down device

• Fixed chute for parts up to 180 x 180 mm on the right-hand side; chute sensor recommended

• Programmable parts flap on the left-hand side for CNC sorting of parts up to 400 x 600 mm; parts flap 400 x 1,250 mm,

container supplied by customer

• Parts-discharge flap sensor

• Waste extraction with chip flap

• Punch spray lubrication

• Lubricant container

• Chip container

• Parts container for the parts chute

• Forming function

• Punch stroke counter

• Automatic machine shutdown

• Foot pedal for closing the clamps

• Working-area lighting

Optional equipment

Extended laser equipment

• Copper cutting package including cutting data

• Brass cutting package including cutting data

Extended punching equipment

• MultiTool function

• MultiBend function

• Thread-forming function with thread-former breakage monitoring; MultiTool required

• Deburring and rolling technology function

• Die spray lubrication

• Lowerable die

Extended machine equipment

• Additional hydraulic clamp, occupying one tool station

• Vibration-damped installation with mechanical vibration damper

• Chip conveyor with container at the front of the machine

Special equipment for thin-sheet processing

• Full brush table with auxiliary cylinders for loading sheets

• Automatic machine shutdown, for example in the event of sheet distortion during punching

SheetMaster Compact 2500 x 1250 mm (AK05)

• Loading platform and unloading carriage

• Suction frame for loading raw sheets and blanks

• Removal of micro-joint sheets and skeletons

• Extended table support and automatic closing of clamps

• Fanning magnets for sheet separation

• Double-sheet detection

• Compact installation with two-leaf swing doors, standard for K09

• The machine must be fitted with four clamps

• Extended sheet-separation system on the suction frame

• Extended suction-cup package

SortMaster Compact

• Machine-integrated automated storage for small parts

• Suction frame for depositing parts up to 600 x 400 mm, X x Y

• Two suction bars, each suction cup individually controlled

• Deposit area 600 x 800 mm, or 1,200 x 800 mm with extended X axis

• Vacuum sensors on the suction circuits

• Optional X-axis extension