

Five-axis machining with multiple clamping

The innovative Sputnik clamping block from the clamping technology specialists TRIAG International AG makes it possible for the first time to clamp up to eight components, so that they are accessible for machining from five sides with no interfering contours.

The innovative Sputnik clamping block enables workpieces to be almost completely machined on 5-axis machining centres. This significantly increases the productivity. The eightfold clamping reduces the unproductive downtime required for clamping, reclamping and unclamping the components to a considerable extent, especially in the case of smaller components.

Eight clamping surfaces on a compact clamping block

The body of the Sputnik clamping block is executed as an octagonal tombstone with a pyramid mounted at the top. The clamping surfaces of the pyramid are all offset by 45° to the clamping surfaces on the perimeter of the tombstone. As a result, all the clamped workpieces are accessible from five sides without interfering contours. For example, four components can be clamped for the first machining operation on the tombstone, four for the second operation on the pyramid. The 5-axis machining centre therefore finishes four components in one cycle.

The Sputnik clamping block has so far been available in two variants. The smaller one has MCZ40L30 mini-centric-clamping devices. These can hold workpieces with a width of up to 38 mm in their 40 mm wide, quick-change clamping jaws with a 10 mm clamping range. They work with a clamping force of up to 800 daN.

The larger variant of the Sputnik clamping block can accommodate eight MCZ 100L50 centric-clamping devices. These clamp workpieces with a width of up to



Eight workpieces in one fell swoop with five axes.

102 mm with various quick-change clamping jaws with a 20 mm clamping range with a clamping force of up to 1600 daN.

Mini-centric-clamping devices can be flexibly mounted

The main advantage of the mini-centric-clamping devices from TRIAG International AG is their high flexibility. They can have a floating or self-centering execution. They are based on a strictly modular design in accordance with the design concept of the Swiss specialists. The user can

select the appropriate executions for the workpiece and the machining from a large number of clamping jaws. They can be changed on the centric-clamping device in a very short time.

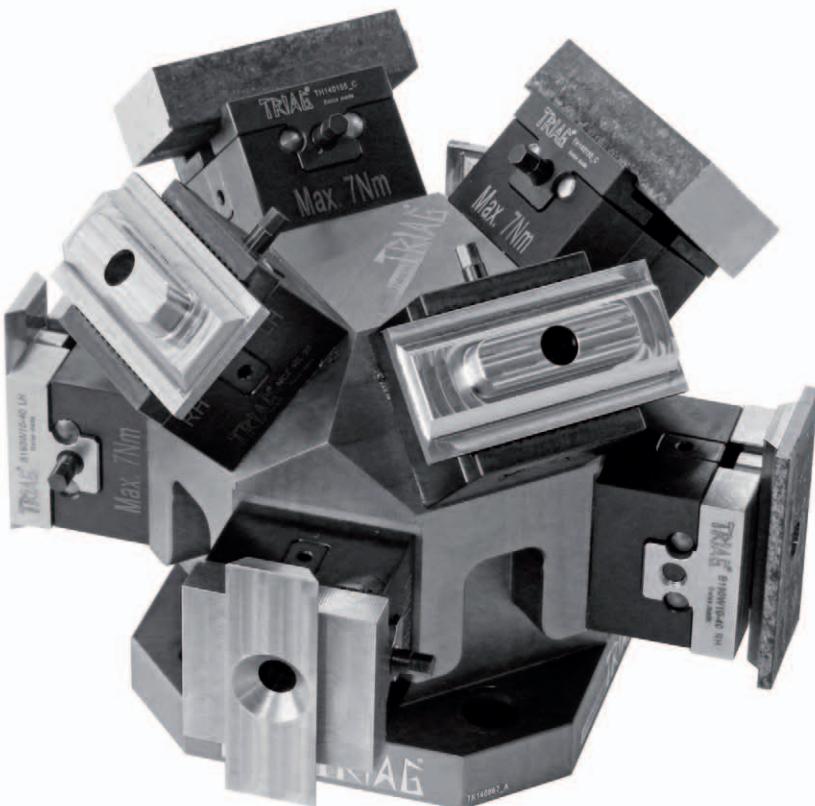
Variants with a stamping tooth system are suitable for clamping with a minimal blank oversize. Smooth, hardened and stepped jaws are also available. Executions made of unhardened heat-treated steel are available for fabricating individual clamping jaws precisely matched to the contours of the components to be clamped.

Another advantage of the MCZ centric-clamping device from TRIAG International AG is the compact tight design with all-round protection from dirt and coolant. As a result, these centric-clamping devices also work extremely reliably under difficult conditions.

**Combinable with the
oppSystem zero-point clamping
system**

As an alternative to the fixed design on rotary tables of 5-axis machining centres, the Sputnik clamping blocks can also be mounted on pallets of zero-point clamping systems. This further increases the productivity, since the complete Sputnik clamping block with eight clamped components can be changed within a very short time. The Swiss clamping technology manufacturer TRIAG International AG makes carefully tailored adapter plates available as standard for its advanced oppSystem high-precision zero-point clamping system.

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The Sputnik clamping block from TRIAG International AG significantly increases productivity on 5-axis machining centers with multiple clamping.