



Werkzeugtechnik

Modulare Aggregatetechnik

Thread whirling

Thread whirling units with quick-change system

The mounting and removal of the whirling unit when changing the cutting insert and the associated alignment, is a thing of the past thanks to the use of modular thread whirling units.

With the tapered thread screws easily accessible on the face side, only the swivel insert is exchanged, with a second insert already fitted with new cutting plates outside the machine. This reduces the machine downtime caused by the tool change to a minimum. Due to the high runout accuracy of the interface and the resulting even wear of the cutting plates, a significant increase in the service life of the cutting tools can be achieved.

Efficiency through flexibility

The objective is to work as close as possible to the guide bush. This reduces unwanted vibrations to a minimum, improves the surface quality of the screw and increases the service life of the cutting inserts. This is not always possible due to the swivel angle, cutting circle diameter or the machine itself. In order to whirl directly on the guide bush, our standard whirling heads are available in different heights. By optimizing the adaptation of the whirling head to the production conditions, the distance to the guide bush can in turn be reduced and better machining results can be achieved.

Our whirling devices are available in different transmission ratios. It is thus possible, depending on the requirements, to work in the optimal range between the speed and torque of the machine. Likewise, screws can be manufactured more efficiently, the manufacture of which requires higher cutting data.

Our blank principle

You can easily order our whirling inserts from your preferred cutting tool manufacturer. The insert manufacturer takes over the plate design and brings the corresponding insert seats into the blank.

Patented interface for highest precision

Through the interaction of cone-flat system with cylindrical covenant, we reach highest accuracy in the interface and also a user-friendly change of the whirling adapter with only three screws.



Process reliability through effective cooling

Turning tools with internal cooling have been standard for a long time. The great advantage here is that the coolant can be directed through the holder to the cutting edge. In close cooperation with Paul Horn GmbH, we have succeeded for the first time in implementing this technology in the field of whirling technology. Particularly in the area of screw production for medical technology, significant improvements in productivity can be achieved as a result.

Difficult-to-machine materials such as titanium or special alloys are used here. The materials, the geometry of the production parts and their required surface quality pose a challenge in the production of bone screws. The efficient cooling of the plates directly on the cutting edge significantly reduces their wear. Due to the optimized cooling, higher cutting data can also be achieved. Chips are also diverted particularly effectively from the cutting edge and prevented from jamming in the whirling head. This prevents chip nests between the cutting inserts. External cooling lines are no longer required, which makes it easier to access the interior of the machine. This also eliminates another chip catcher.

The resulting increase in the service life of the cutting inserts, the higher process reliability in machining paired with the use of our high-precision quick-change system, reduce machine downtimes and increase productivity and process reliability.

- reduced plate wear
- longer service life
- better surface quality
- less chip nests
- higher cutting speeds
- shorter machine downtimes
- increased productivity
- more stable processes



„combining our strengths“

Thread whirling inserts with internal cooling for our whirling devices are available exclusively from our cooperation partner Hartmetall-Werkzeugfabrik Paul Horn GmbH.

