BARREL-FORM END MILL 48E_

Highly economical finishing tools
Improved surface quality and shorter machining times
High precision barrel geometry
Unique interchangeable head solution
Diameters Ø12/Ø16
Product Overview

The proven exchangeable head system "ChipSurfer" is extended for the area of finish machining with multiple axes.

The new series of barrel-form end mills is designed to handle especially long-lasting finishing operations with standard ball nose end mills or toric mills in less time while improving the surface quality. The high-precision ground barrel shape geometry is suitable for larger path offsets in semi-finishing and finishing operations. The large radius creates a softer transition of the machined paths and thus a sensible, visible and measurable improved surface quality.

The barrel-form end mills cover the diameter range Ø12 and Ø16 mm.

Application Range

Thanks to the unique cutting geometry of the tool - the 6-flute design paired with the advantages of the ChipSurfer interchangeable head system - the barrel cutter covers finishing applications on 90° shoulders as well as steep free-form surfaces where we do not expect collision due to clamping and/or part profile. The special design of the barrel-form end mill also enables it to be used on 3-axis machines and components, for which machining on deep cavities represents an enormous challenge.

Grade IN2005 together with the special cutting edge geometry ensure best results in mould & die industry as well as in aerospace industry. Steels from material group "P", stainless steels from material group "M", difficult-to-machine materials from group "S" and cast materials from group "K" can be machined excellently.

Technical Features

Due to the high-precise insert’s profile tolerance of +/- 10 µm and the exchange accuracy of the ChipSurfer system of +/- 20 µm the tools can be exchanged directly at the machine spindle, which allows much easier tool handling in practice. The long-proven ChipSurfer system provides any type of shaft extensions. The short-designed steel extensions and the overlong vibration-damped carbide and heavy metal shanks make the ChipSurfer barrel-form end mills multi-purpose to meet the different requirements with respect to machining cavities, machines, and above all, workpiece conditions.

If necessary, particular attention must be paid to suitable CAD/CAM-systems, which are able to program multi-axis machining with circle segment cutters and to develop appropriate machining strategies.

Advantages

- Highly economical finishing cutters
- Improved surface quality and machining times several times faster than ball nose cutters
- High precision barrel geometry
- Unique interchangeable head system
- Diameters Ø12/Ø16 mm
- Shaft extensions in steel / carbide / heavy metal
- Profile accuracy: +/- 10 µm, exchange accuracy: +/- 20µm
Successful machining results depend on many factors, so cutting data recommendations can only be a rough guideline. Therefore in any case of doubt do not hesitate to contact your Ingersoll partner.
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