passion
for precision

fraisa

E-Cut Alu – maximum efficiency in aluminum machining

NEW

Simplification and improved process reliability in production

FRAISA presents the **E-Cut Alu family** for machining aluminum: The totally new, smooth-edged, high-performance milling system includes **over 272 articles** with, for the first time, constant l/d ratios throughout. A new standard that makes these tools much easier to use and gives them improved performance, especially the standard and medium-long versions.

The milling cutters of the **E-Cut Alu family** have a very easy-cutting geometry that makes them particularly versatile. Mirror-finish cutting faces ensure rapid and low-friction chip removal. Adhesion is virtually impossible on these faces – a key reason why the **E-Cut Alu tools** can also be used in autonomous production with maximum process reliability. The high-precision, ground cutting edge is created by a very fine-grained and high-hard carbide substrate.

Among the impressive advantages offered by **E-Cut Alu milling cutters** are a long tool life, excellently finished faces and low energy consumption. Optimum l/d ratios and load-oriented neck transitions result in a unique tool composition.

Perfectly coordinated cutting parameters determined in countless machining tests can be called up for these new tools in FRAISA ToolExpert®.

This in combination with our industrial tool reconditioning service **FRAISA ReTool®** enables us to guarantee you maximum economic and ecological benefit.

What's more, our **E-Cut Alu tools** are genuinely easy to use and set new benchmarks in aluminum machining.

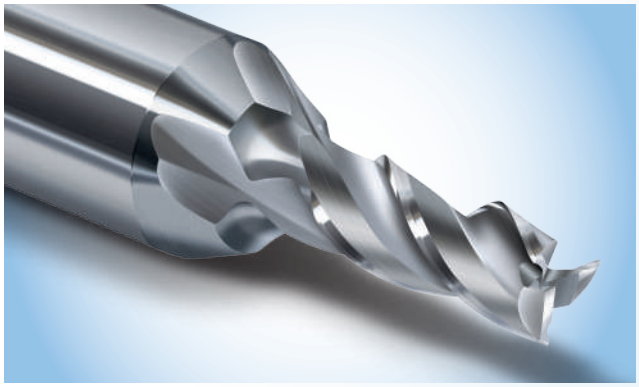
The advantages

- **Tool family comprising 272 totally new tools with diameters from 1 to 20 mm**
- **Constant l/d ratios throughout to keep things simple and to increase performance**
- **Energy cost savings thanks to 20% less power required to drive the spindle**
- **Suitable for all new high-performance and existing milling applications**
- **Perfect coordination of the tool geometry for a better quality of finished component**
- **Improved performance through optimized neck transitions for tools < 6 mm**
- **Extremely consistent quality thanks to new grinding technology and FRAISA ReTool®**

FRAISA tool design:
high performance and reproducibility

With its **E-Cut Alu**, FRAISA has developed a totally redesigned tool system. Thanks to optimum coordination between the easy-cut geometry and the guide elements, the tools boast a **20% reduction in spindle power consumption**. The optimized transition from the shank and to the cutting edge provides a significant increase in stability for tools < 6 mm.

Extremely sharp cutting edges, perfect chip removal thanks to mirror-finish cutting faces, high substrate hardness and low cutting forces guarantee a very high performance level and a long service life.



Your benefits:

- ☑ High performance with reduced energy consumption
- ☑ Better component quality and less burr formation and tool deflection
- ☑ Ideal for use in autonomous production thanks to high process reliability

FRAISA tool range:
consistently simple with constant l/d ratios up to 5.6xd, diameters from 1 to 20 mm

With over 272 separate articles, the new **E-Cut Alu range** covers a wide spectrum of potential applications. To enable you to easily and quickly find the right tool for your needs, the range is clearly structured. You can call up the optimum application parameters at any time in FRAISA ToolExpert®.

The new **constant l/d ratios** ensure consistent performance throughout the entire tool system and make it easier to select the right tool regardless of diameter.

Your benefits:

- ☑ Clearly structured tool range for quick and easy tool selection
- ☑ Extensive range for all applications and sizes of workpiece

03 FRAISA application know-how:
many years of expertise and intensive training

Understanding the process is key to success: In addition to their many years of professional experience, our FRAISA application engineers attend intensive training workshops several times a year to ensure they are always up to date with the latest technology. We sell solutions that make our customers' production more efficient and cost-effective.

Your benefits:

- Your account manager at FRAISA knows your specific requirements and uses their expertise to find the best possible solution for your needs.

FRAISA E-Cut Alu

04 FRAISA ReTool®:
reliability you can rely on

Carbide tools consist mainly of highly valuable raw materials such as tungsten and cobalt, which means reconditioning them normally makes sense. FRAISA has a highly automated service center for industrial tool reconditioning and it's this that enables us to guarantee we can restore your tools to their original new-tool performance level.

Your benefits:

- Your reconditioned FRAISA tools can be used again and again in autonomous processes and still guarantee full process reliability.

05

FRAISA cutting data:
for greater efficiency in production

We invest around 50% of our total development budget in compiling cutting data that has been tested and evaluated under real-life conditions. The result is “plug & play” solutions that mean there’s absolutely no need for you to try out expensive on-the-job experiments.

In addition to the cutting data for aluminum alloys, application parameters applicable to copper and plastics have also been calculated for the tools of the **E-Cut Alu range**. Various applications such as HPC and HDC milling, grooving, penetration, and 3D machining using tools with a corner radius were considered.

Your benefits:

The extremely high-quality cutting data provided by FRAISA ToolExpert® guarantee fast and reliable implementation of your autonomous processes.

Scan this QR code for more information on FRAISA ToolExpert®.

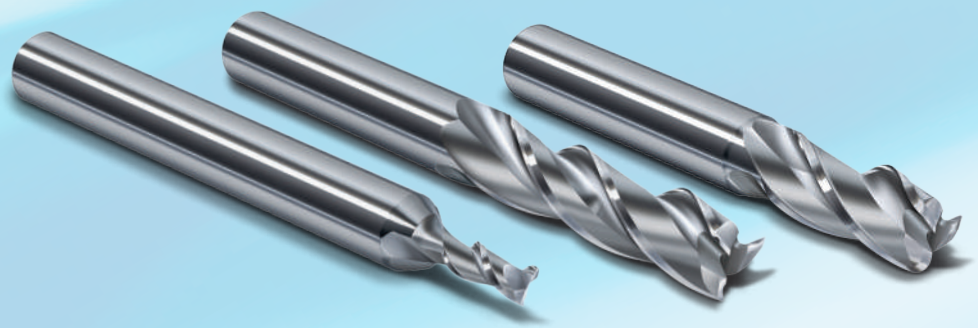
06

FRAISA CAM integration:
efficient data import through online interfaces

Manual integration of tool and application data is often error-prone and time-consuming. FRAISA works with the major manufacturers of leading CAM systems to develop and maintain fully automated online interfaces to our FRAISA ToolExpert® database. These facilitate automatic and error-free import of all tool-relevant data into your own CAM system.

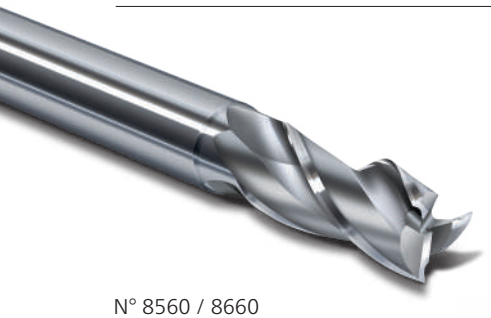
Your benefits:

Importing cutting data directly into your CAM system reduces time and labor, cuts out errors, and increases efficiency.



Milling tools for aluminum and copper

E-Cut Alu – the complete range



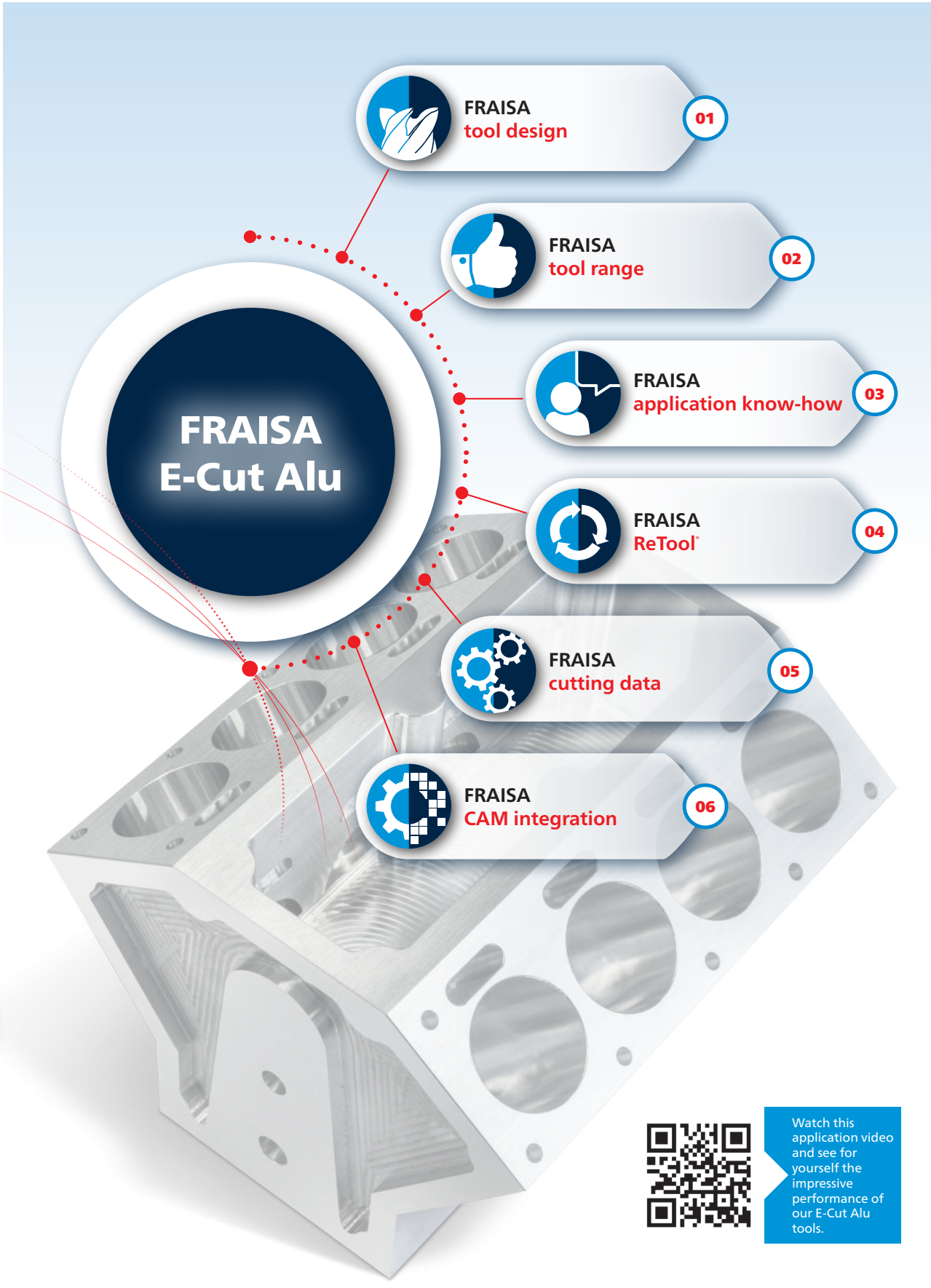
Smooth-edged, cylindrical

N° 8560 / 8660	**Normal version** 90° d_1 3–20 mm z 3	Roughing HPC Finishing		$l_2 = 2.2xd_1$ $l_3 = 3.0xd_1$
N° 8561 / 8661	**Normal version** 90° d_1 1–10 mm z 2	Roughing HPC Finishing		$l_2 = 2.2xd_1$ $l_3 = 3.0xd_1$
N° 8578 / 8678	**Medium length version** 90° d_1 3–20 mm z 3	Roughing HPC Roughing HDC Finishing		$l_2 = 3.7xd_1$
N° 8570 / 8670	**Medium length version** 90° d_1 3–20 mm z 3	Roughing HPC Finishing		$l_2 = 2.2xd_1$ $l_3 = 4.5xd_1$
N° 8571 / 8671	**Medium length version** 90° d_1 1–10 mm z 2	Roughing HPC Finishing		$l_2 = 2.2xd_1$ $l_3 = 4.5xd_1$
N° 8580 / 8680	**Long version** 90° d_1 3–20 mm z 3	Roughing HPC Finishing		$l_2 = 2.2xd_1$ $l_3 = 5.6xd_1$

Smooth-edged, with corner radius – also for 3D machining

N° 8567 / 8667	**Normal version** r 0.2, 0.5, 1.0, 2.0, 3.0 d_1 3–20 mm z 3	Roughing HPC Finishing		$l_2 = 2.2xd_1$ $l_3 = 3.0xd_1$
N° 8576 / 8676	**Medium length version** r 0.2, 0.5, 1.0, 2.0, 3.0 d_1 3–20 mm z 3	Roughing HPC Roughing HDC Finishing		$l_2 = 3.7xd_1$
N° 8577 / 8677	**Medium length version** r 0.2, 0.5, 1.0, 2.0, 3.0 d_1 3–20 mm z 3	Roughing HPC Finishing		$l_2 = 2.2xd_1$ $l_3 = 4.5xd_1$
N° 8587 / 8687	**Long version** r 0.2, 0.5, 1.0 d_1 3–20 mm z 3	Roughing HPC Finishing		$l_2 = 2.2xd_1$ $l_3 = 5.6xd_1$

E-Cut Alu
High-performance milling system – made to perfection



Watch this application video and see for yourself the impressive performance of our E-Cut Alu tools.

Scan this QR code to find more information on the FRAISA Group.

The fastest way to our E-Shop.

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passion for precision

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