

ProfilCut and ProfilCut Plus

**For maximum precision
and cut quality when producing windows,
doors, furniture and flooring**

Profiling with ProfilCut ...



The system with the unbeatable application variety

ProfilCut is a cutterhead system that proves its superiority by covering the widest range of applications. Earning you money ProfilCut meets all profiling requirements, whether they be challenging, unusual or not. Both for manual and industrial production of windows, doors, furniture and flooring as well as bespoke interior and exterior elements ProfilCut is characterised by precision and cut quality. ProfilCut's reliability and efficiency has been appreciated by leading companies in these industry sectors for many years.

ProfilCut tools are available in diameters up to 650 mm. It has the same clamping system for both straight and profiled throwaway knives. A further system advantage is the low tool weight; the tool bodies are made of aluminium so suitable for high cutting speeds. The tongue and groove connection between the clamping wedges and knives covers the total cutting width. This ensures safe form-fit clamping. When tightening the screws, the knives are automatically centred axially and radially.

The clamping wedges are designed to control the chip flow. Trouble free chip and dust removal contributes to a perfect finish. Noise is reduced by the profile matching tool bodies. Parts subject to wear are designed in steel for a long service life. Precise balance quality increases quiet running and protects the machine spindle bearings.

... means to gain profile in the competition

More effective

Low production costs per running metre from

- high performance time,
- low maintenance time,
- reduced machine down time,
- economy by combining standard straight and profiled throwaway knives.

More quality

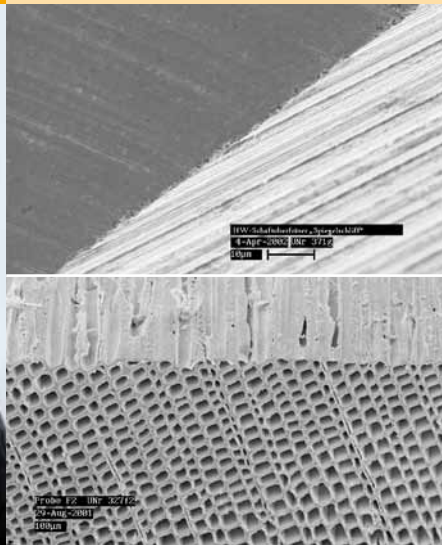
Minimum rejects, less rework and machined surfaces to finish quality by

- a choice of tungsten carbide grades including fine grain grade carbides,
- precise cutting edges with polished faces,
- high balance quality.

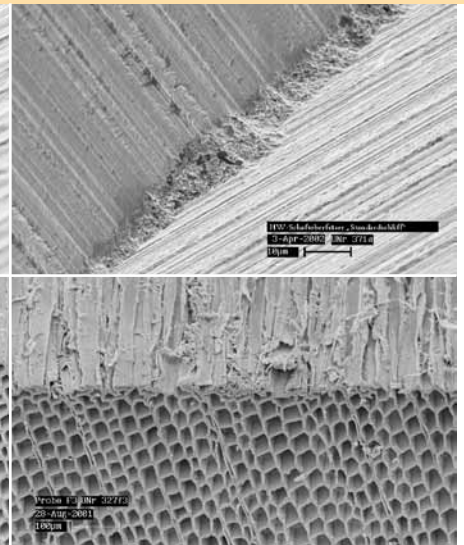
More usability

Short set-up times combined with user friendliness

- automatic knife positioning without setting gauges,
- possibility of changing knives in the tooling sets,
- Aluminium tool bodies for better balance,
- same clamping system for straight and profiled throwaway tungsten knives,
- dust protected clamping screws,
- repeat accuracy at every knife change,
- reduced noise.



Surface cut with ProfilCut: low cutting pressure gives, precise fibre separation.



Conventionally cut surface: compressed wood fibres causing a rough surface after lacquering.

ProfilCut Plus – The resharpenable system supplement

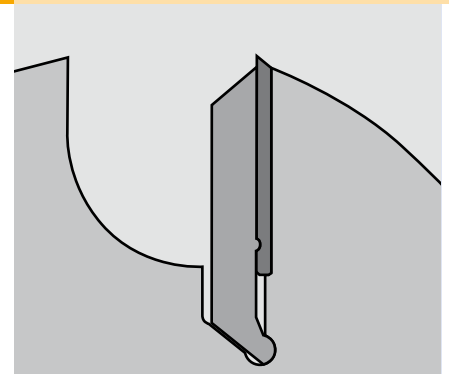


With innovative development of the clamping technology and the profile knives, the ProfilCut system has been expanded with an economic variant to use resharpenable knives, tailored for a special range of tasks.

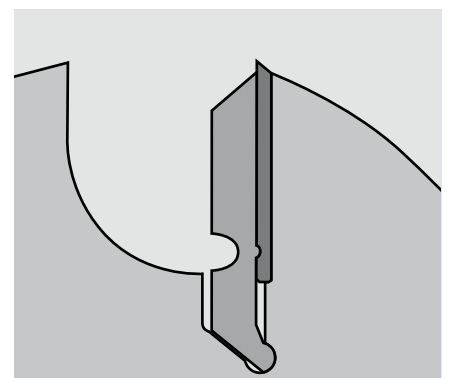
The clamping elements have been redesigned, so the elastic deformation guarantees uniform clamping of the resharpened knife. For safety reasons, resharpenable knives cannot be used in standard ProfilCut cutterheads.

ProfilCut Plus is ideal for producing standard and special profiles, interior and exterior profiles for windows as well as post and soft forming profiles.

The 0.3 mm sharpening zone allows repeated sharpening so for suitable applications increases efficiency considerably compared to a 1-life throwaway knife system.



ProfilCut



ProfilCut Plus

ProfilCut and ProfilCut Plus – the application at a glance

ProfilCut:

- glue joint profiles,
- window profiles,
- panel raising profiles,
- slot and tenon profiles,
- interior and exterior profiles,
- post and soft forming profiles.

ProfilCut Plus:

- interior and exterior profiles,
- window profiles,
- post and soft forming profiles.

Machining processes

For all profiling operations – small, medium or large volume production. Also suitable for HSC (High-Speed-Cutting) with cutting speeds of over 100 m/s.

Working materials

The following materials can be machined by ProfilCut and ProfilCut Plus:

- soft and hardwoods,
- wood derived materials such as plywood, fibre board, block board and chipboard
- plastics such as duromers, plastomers, gluelam and compound materials.

Cutting materials

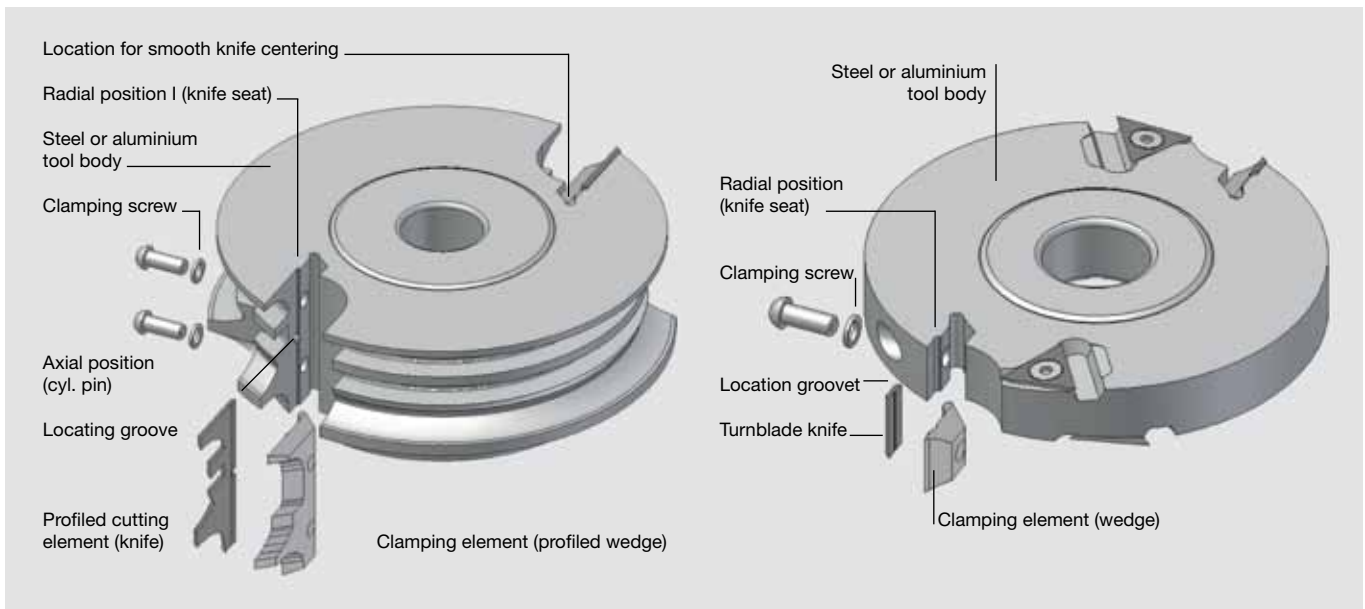
Knives of different tungsten carbide qualities including ultra-fine are available for the different working materials and machining processes. The wide range of cutting materials is completed by diamond coated knives.

Machine types

For all conventional cutting machines with manual (MAN) or mechanical feed (MEC).



Technical features



Diameter

Shank tool 0 – 400 mm
Tools with bore 70 – 650 mm

Cutting width

8 – 80 mm ProfilCut
8 – 120 mm turnblade

Tool body

Steel or aluminium

Number of teeth

One-sided profiles:

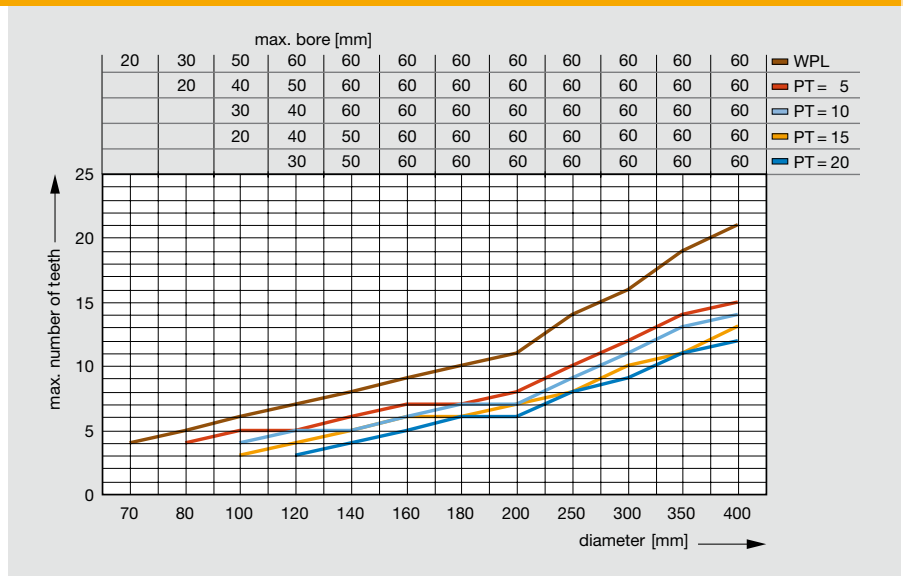
Z1 – up to zero diameter 40 mm
Z1/1 – from zero diameter 40 mm
Z2 – from zero diameter 50 mm

Closed profiles:

Z2 – from zero diameter 60 mm up
Maximum number of teeth depends on diameter.
See diagram

Profile depth

PT max. 20 mm (straight tool body)
PT >20 mm (cranked tool body)



For special surface quality demands, we recommend splitting the cutting edge (2-part design instead of a 1-part design – independent of the cutting width).

The best tuning for tools and machines



Leitz HSC-technology: high speed to maximise performance and profit.

The tools are mounted play free by a special mounting method on HSK shrink clamp arbours (bore tools) or in ThermoGrip shrink clamp chucks (shank tools). This process optimises concentricity, balance quality and dynamic rigidity. This technology allows considerably higher RPMs and higher feed speeds with a consistent workpiece finish quality.

The Leitz RipTec process: profit on all levels.

Ripple technology avoids tear outs during the cutting process and the reject rate falls towards zero. This results in the possibility of increasing the tool feed speed to improve machine productivity. RipTec is especially suitable for window and door production end grain operations (slot + tenon and counter profile) and for length cutting. RipTec creates stronger corner joints, a higher finish quality and prevents chip impact marks.

Leitz Chip Technology: intelligent tools save set up time.

For applications on CNC-machines, Leitz offers intelligent tools with integral memory chips to provide the machine controller with important geometry and technical data such as tool length, tool diameter, RPM and direction of rotation. This prevents incorrect tool use so giving a high process security. Automatic radius compensation after sharpening prevents production of faulty parts and saves cost.

Leitz – your competent partner



Leitz offers partnership and market leading tool knowledge and technology offering 3 components for your success:

- Innovative tooling systems, resource saving plus enhanced quality for better production
- Bespoke, modular or comprehensive Tool Management for enhanced efficiency
- Excellent service, reliable, near to customers all around the world

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