



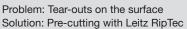
The powerpack by Leitz

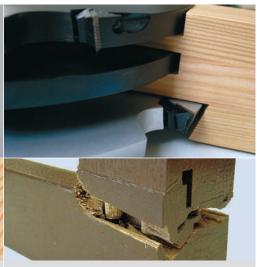
More efficiency and quality when producing windows and doors

- RipTec
- Integral technology
- High-Speed-Cutting
- Innovative tooling systems
- High power coating
- Hybrid technology
- Chip technology
- Engineering

RIPTEC BY LEITZ: GAIN MORE ON EVERY LEVEL







Ultra strong joint

- Rejects reduced to nearly zero
- 30 % increase in tool life
- 30 % increase in feed rate
- Significantly improved product quality

Leitz RipTec-technology for planing and cross grain cutting

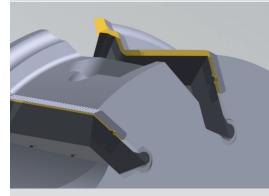
Even with pre-splitting woods, twisted fibres or knots, a Leitz innovation generates an optimized surface. The RipTec pre-cutting technology reduces the rejection rate to almost zero. By applying this technique, the feed speed can be increased and therefore improved productivity. Compared to a smooth profile, the ripple profile with its small glue gaps provides a high level of adhesion and gives a significantly more stable corner joint. In addition, these tools can be resharpened up to 20 times giving excellent value and tool life.

Leitz Integral technology for cutting along grain

The combination of a RipTec cutting edge and a finishing edge in one tool provides the best combination for performance and profitability. The arrangement of the cutting edges is paramount to this integral technology, where the first knife enables the pre-cutting and the second knife achieves the finish. This innovation prolongs the tool life of the finishing knife edge up to 30 percent, a significant cost saving in any application area.



Almost tear out free due to Leitz RipTec



Leitz Integral – pre-cutting and finishing knives in one tool

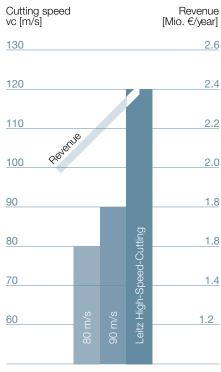
HSC-TECHNOLOGY BY LEITZ; PEAK PERFORMANCE AT HIGH SPEED AND MORE PROFIT • Cutting speed up to 120 m/s • 35 % higher RPM • Up to 50 % higher feed rate • 35 % reduced cutting time

Leitz ProfilCut Q Premium

The next generation of our proven and tested cutterhead system is setting the new benchmark in respect of power and cutting quality. Leitz increased the speed level to 120 metres per second taking the norm to a higher plateau. The new standard in performance is the result of combining technological innovations: The new clamping-system has been designed for the highest rim speeds, the functional coating allows for less friction, reduced heat build-up and lower impact load. Furthermore, the all-out lightweight construction of the tool body guarantees an enhanced dynamism.

Leitz ShrinkFit

The tools are clamped in a shrink-fit arbor or into a ThermoGrip shrink-fit chuck securely and without any play. This process reduces the interface tolerance to zero and therefore the balance and run out can be accurately controlled. The toolset rigidity is now as close to a monobloc construction as possible. Due to this technology, higher RPMs and feed speeds can be achieved resulting in a constant high quality finish quality. The Leitz ShrinkFit technology provides maximum stability, accuracy and thus arriving at the preconditions for an optimal finish quality and with the longest tool life allowing better productivity.



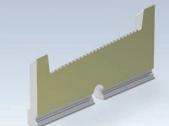
Calculation based on an estimated production of 30 windows per working shift

TOOLING SYSTEMS BY LEITZ: ALWAYS THE LATEST TECHNOLOG'









Tailored through diversity and know-how.

The combination of the resharpenable constant diameter tool systems ProFix and ProFix C, with the changeable knife system ProfilCut Q gives way to customized and thus profitable solutions for every client's need. This wide range of variation is unique and unrivalled in its flexibility.

ProfilCut-knives Marathon MC for high performance and best cutting quality.

The marathon high performance coating prolongs the tool life whilst maintaining the cutting quality. Consequently, the use of resources are optimised and the tool-performance enhanced.

New coated router cutters: Efficiency from the beginning.

- Reduction in operations due to roughing-finishing in one pass.
- Increased productivity through higher feed speed.
- Increased tool life due to the special coating.
- Increased profitability through the reduction in the machining costs.

New solid tungsten carbide spiral drills: Fast, clean cutting, accurate.

- 30 to 50 % higher feed rates.
- Precise dowel location and fit due to the cut and geometric qualities.
- No chipping on the workpiece at the bore entry.
- Low power consumption through optimal chip ejection.
- Precise plunging on bevelled faces.

Aluminium alloyed tools: Lower mass for more performance.

- Balanced and optimized finish quality.
- Reduced stress and wear on the machine bearings.
- Quiet running through optimized tool body design.
- Accurate tool mounting with Leitz ShrinkFit.
- Easy handling.
- Steel Heli-Coil inserts for thread security.
- No tool body corrosion.

Hard coated alloyed tools for the most demanding of conditions.

Reduction of tool body wear especially during the machining of abrasive work pieces.

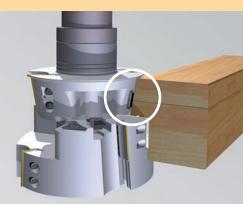
HYBRID TECHNOLOGY: PERFECTION BY LEITZ



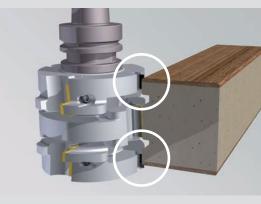
- 50 % extended life time of TC knives
- Constant quality over the product life cycle
- Reduction of rework and reject rate
- Reduced setup times

At Leitz, true Hybrid technology means the combination of two tooling systems to achieve the optimisation of a production process. The combination of a TC-tooling system with diamond knives reduces the cost of processing composite materials i.e. glued joints as well as abrasive coatings considerably.

The diamond knife acts as a protective knife for the HW knife by machining the abrasive area of the workpiece allowing the HW knife to machine the softer material therefore extending the tool life. For the customer this means consistent quality during a long product life cycle. A reduction of rework and scrap, as well as reduced set-up times. These factors can significantly decrease production costs.



Efficient processing of glue joints ...



... and abrasive coatings with Leitz Hybrid technology

LEITZ CHIP TECHNOLOGY: LESS SET-UP TIME



- Maximum operator safety through easy and secure handling
- Reduction of the setup costs
- Significant increases in productivity
- Risk free of tool colliding into the machine

For the application on CNC-machines, Leitz provides intelligent tools with an integrated memory chip. This provides the machine control centre with essential geometry and technology data such as tool length, diameter as well as RPM and direction of rotation.

The risk of false manual input is reduced as the microchip in the tool automatically updates the machine. E.g. for resetting the tools for different window types.

Through intelligent Leitz tools, the incorrect use of the tool is eliminated therefore high working and process safety is achieved. Automatic radius offset correction after sharpening prevents producing an incorrect profile, thus reducing scrap costs and therefore improving profitability.



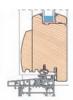


Flexibility in wondow systems





Wood and wood/aluminium window Front door





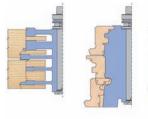
Lifting-sliding door





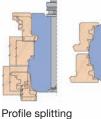
Rebate change

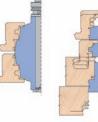
Exemplary tool layout

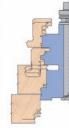












Those who want to be one step ahead of a growing international competition - from the planning phase onwards - can rely on Leitz. Being a competent partner, we serve any project with tailor-made, profitable solutions for the production of modern window and door systems. After assessing their capability, Leitz's clients get their personal, profitable powerpackage in cooperation with machine and software-developers.

For example, if there's a need for high flexibility, tool sets will be split. Is productivity of most crucial priority, complete toolsets are the most effective solution.

Leitz is on the forefront of market Trends. Constantly in contact with the top and most popular testing institutes, fittings and seal manufacturers and through experience, know what is necessary for window construction. Using CAD, Leitz design their own construction from the know-how developed. The company is keen on passing this know-how to the next generation.

Feel free to ask, our application engineers will advice how to achieve the best for you from your windowproject.

Leitz is 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

Leitz GmbH & Co. KG Leitzstraße 2 73447 Oberkochen, Germany Tel. +49 7364 950-0 Fax +49 7364 950-662 leitz@leitz.org www.leitz.org Leitz GmbH & Co. KG Leitzstraße 80 4752 Riedau, Austria Tel. +43 7764 8200-0 Fax +43 7764 8200-111 office.riedau@rie.leitz.org www.leitz.org

