



High precision cut-to-size saws fk 6 and fk 8

**Precise and clean cut-to-size of plastic materials.**

[schelling.com](https://schelling.com)

## PERFECT CUTTING QUALITY WITH LESS INEFFICIENCY.



Cutting plastic materials to size with high quality is a challenge. The properties and the high intrinsic value of these materials calls for well thought out solutions in order to optimize cutting quality, protect sensitive surfaces and avoid scrap. The Schelling fk 6 / fk 8 provides tried and tested technology for this application. The fk 6 / fk 8 incorporates decades of know-how from the market leader in cut-to-size saws. Schelling.

Robust construction prevents vibrations and torsions forces which is an important prerequisite for high precision. The unique drive concept with fixed saw motor allows a maximum power transfer of 30 kW. Harmonization of the processes reduces inefficient machine movements and increases the overall speed of the saw. The chip guiding and extraction system is also responsible for precision and cleanliness. This includes Schelling's unique CLEAN-UP system designed for chip removal from dust cuts (scrape cuts). Thus the machine is capable of extracting up to 99.5 % (!) of the chips generated by the cutting process.

## PRODUCTIVE MATERIAL HANDLING: TURNTABLE.



The patented turntable with 90° rotation makes operation even simpler and the cutting process more productive. Schelling invented the turntable 30 years ago and has continuously developed it since that time. Today, the entire machine is adapted to the turntable. It is mobile and semi-automatic. In an instant materials and strips are first cut lengthwise, then crosswise.

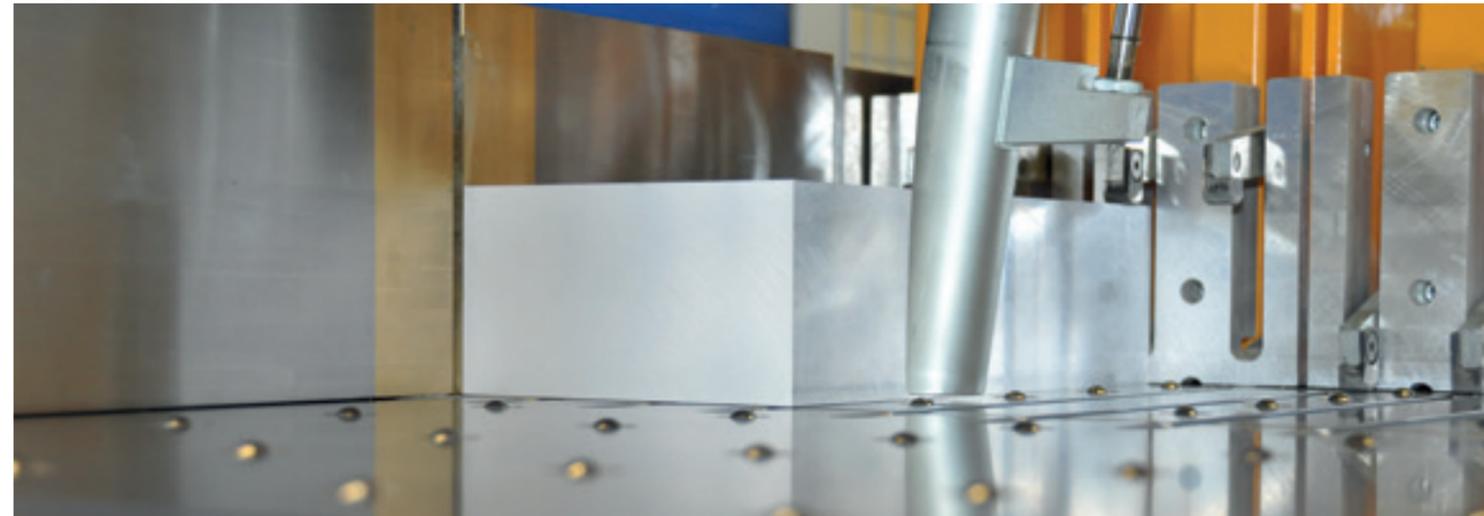
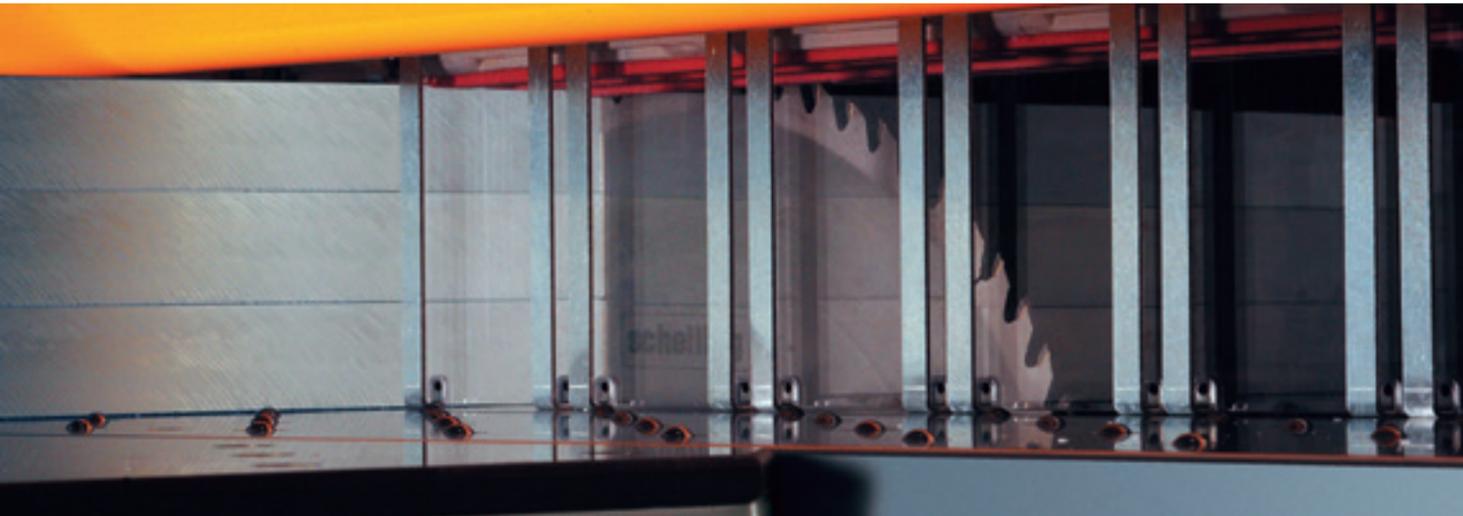
The turntable offers many advantages:

- 1.)** Material surface protection as the work pieces no longer need to be moved relative to the table. The material moves with the table and is not scratched.
- 2.)** Improved ergonomics and productivity since there is no handing of individual parts. The turntable rotates all parts at once and this operation offers more time savings and is less work intensive.
- 3.)** Advantages for both very thin and very thick material. Thin material does not sag and thick material is fully supported by air floatation. This offers clear advantages to machine versions with fixed air tables.

Because the turntable is designed as an air floatation table, the surfaces of the plastic materials can be handled without resistance and with little effort, and are completely protected.

The fk 6 / fk 8 with turntable is the first stage of automation. The system specialist, Schelling, can provide additional solutions that include fully automatic implementations as required.

## CLEAN SOLUTION: 99.5 % CHIP-FREE.



### **"Goodbye to chips" with clean-up cut.**

Removing chips produced by dust cuts (scrape cuts) was no easy task. But Schelling's CLEAN-UP system has also mastered this challenge.

### **Closed chip guiding system**

A closed chip guiding system guides chips away with the aid of kinetic energy. The pressure beam, hold down beam and chip guard enable a constantly sealed channel that allows up to 99.5 % removal of chips and dust.

The design of chip guiding and extraction systems are some of the most important requirements for clean and precise cutting. Schelling has integrated designs into the fk 6 / fk 8 that ensure almost one hundred percent removal of the chips generated by the cutting process.

These systems make intelligent use of the kinetic energy of the chips in order to remove them in a targeted manner. The guided dust and chip protective curtain serves as a suction channel along the entire length of the pressure beam. The curtain fits exactly to the contour of the material.

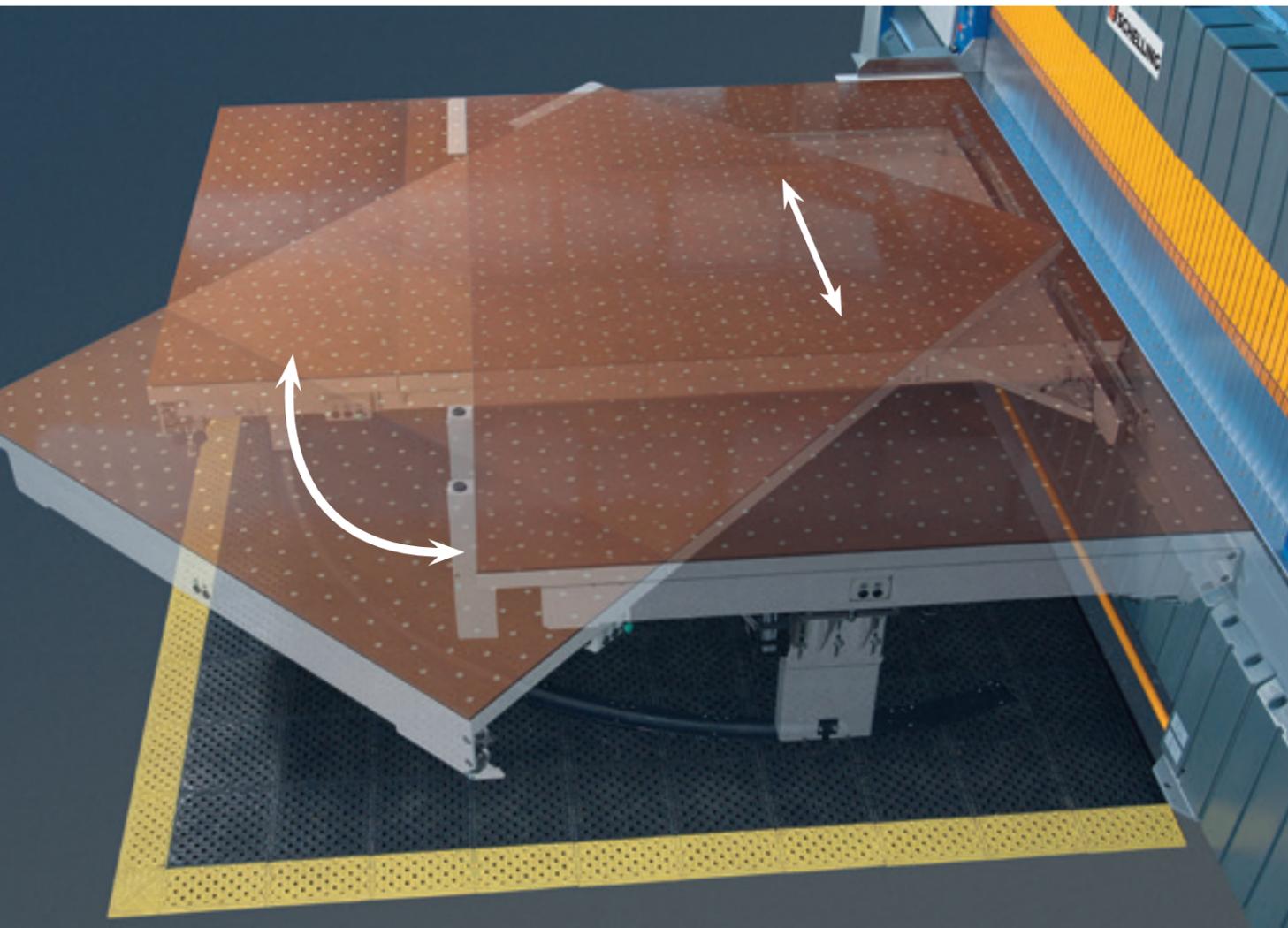
Schelling has solved the demand for the creation of a fully closed suction channel before, during and after cutting with a practical solution. The key element here is the solid pressure beam (no "cut outs") that was only possible through Schelling's development of an additional hold down beam.

## TURNTABLE: FAST PRECISION MATERIAL HANDLING.

The patented Schelling turntable (optional) stands for extremely easy handling of materials and parts. All long strips are effortlessly rotated in one process. This significantly reduces the amount of time required for turning strips from rip cuts to cross cuts by 15 – 20 %, increases productivity and protects material surfaces. The generous size of the table also allows manipulation of material directly at the operator control desk.

### **Lateral positioning device.**

The turntable is movable in order to cut small work pieces to size with ease. The movability of the table also allows perfect access to the cross aligning fence.



### **Simple removal of material: Scissor clamps position to the table.**

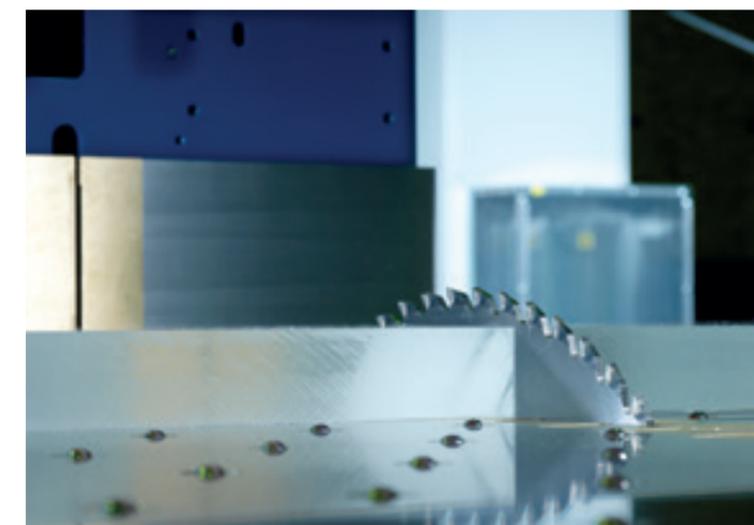
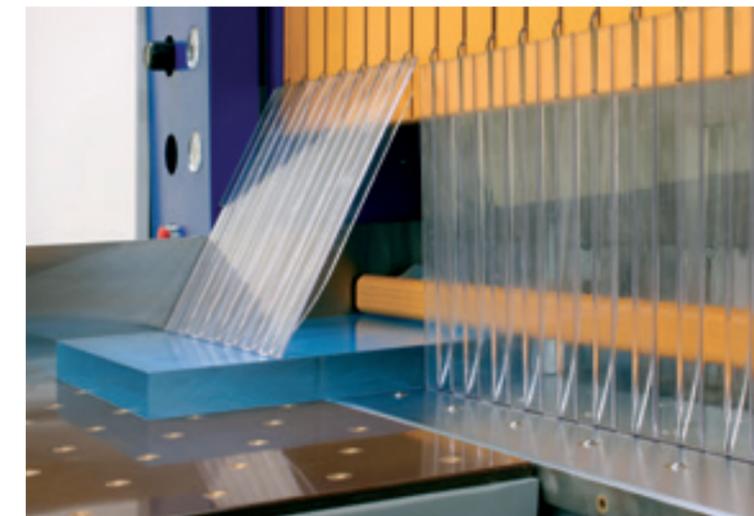
Material is pushed by the scissor clamps past the saw line directly to the air floatation tables or turntable. With this design, the saw operator does not have to reach past the cutting line to remove final parts or trims. Not only does this mean greater convenience, it is also means greater safety.

### **Safety curtain shields.**

The safety curtain can be pivoted, and also optionally raised and lowered. The combined pivot/raise/lower function allows work to continue without any disruptive lifting of the clear plastic safety guards, thus speeding up cutting. In cutting sequences with short stroke active, the pressure beam is optimized to lift just above the material and the safety curtain remains lowered for fast cycle times.

### **Hard chrome plated steel table protects surfaces.**

Protecting the surface of plastic materials is of utmost importance. Schelling utilizes two important features to achieve this goal. First, the precision steel machine table can be optionally hard chrome plated. Second, the entire steel machine table can be equipped with air floatation. Air floatation also simplifies the handling of material and cut-to-size parts.

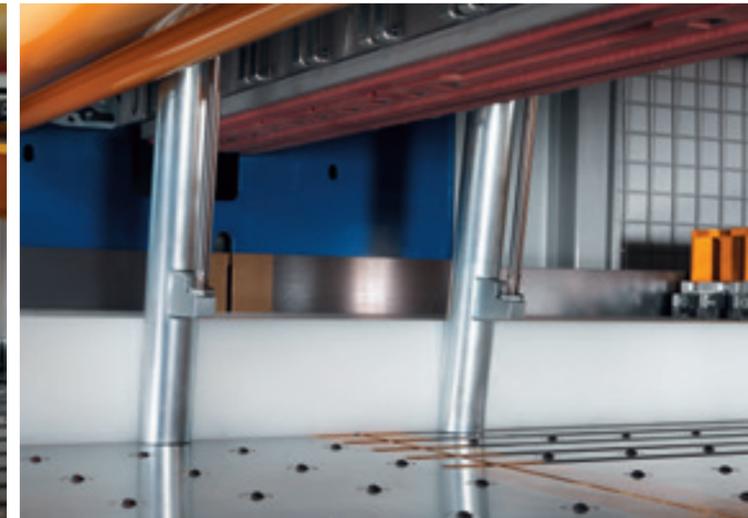


## SOLID CONSTRUCTION FOR LASTING PRECISION.

Schelling's fk 6 / fk 8 is designed with solid construction, up to twelve tons, which prevents vibration and torsion due to cutting forces and ensures maximum angular accuracy. This also leads to a long and profitable machine service life.

### Feeder carriage with robust drive.

The feeder carriage ensures constant precision when it comes to positioning plastic materials for cutting. A major part of this is the robust drive unit. Optionally, the feeder carriage can be equipped with an integrated second brake on the feeder drive shaft. This automatically locks the feeder in position prior to cutting which guarantees high dimensional accuracy.



### Strip aligning devices before and after the cut line.

The double strip aligning device positioned before and after the cut line is a feature that makes Schelling's fk 6 / fk 8 the technological leader in its class. The aligner is equipped with adjustable pressure control which ensures the correct contact pressure based on material type and thickness. Due to high aligning forces, even heavy materials can be processed with high precision. Additional aligners can be added into the roller table to ensure that even long strips are reliably pressed to the fence. This ensures highest angular precision.

### Precise to one hundredth of a millimeter: Gantry drive.

For the customer who needs more than just high precision, Schelling offers an optional gantry drive for the feeder. With this option, precision in the hundredth of a millimeter range is a productive reality.

## PERIPHERALS AND EXPANSION STAGES.

The core skills of Schelling Anlagenbau include not only the design of industry proven standard saws, but also, and perhaps to an even greater extent, the planning and implementation of customer-specific solutions.

### Highly convenient: Pivot arm and vacuum suction unit.

The pivot arm and vacuum suction unit are available options which speed up and automate handling. They allow the machine to be quickly and professionally loaded and unloaded in the industrial environment.

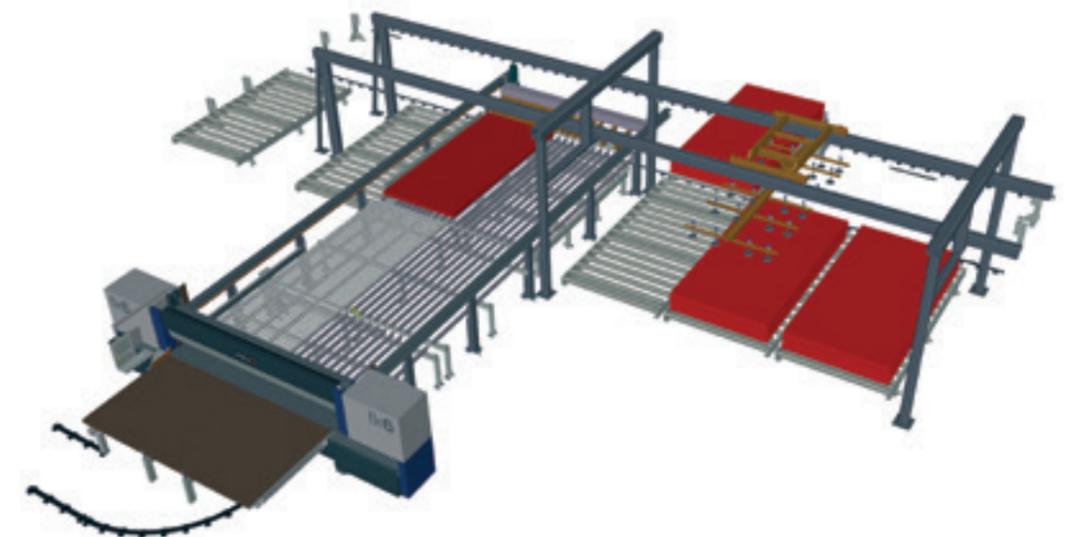
### Time saved thanks to the preparation table.

The fk 6 / fk 8 can be equipped with an optional preparation table that reduces loading and cycle times. The design allows the next book to be prepared while materials are being cut-to-size on the machine. With the use of the preparation table, the saw can start rip cutting the next book while the previous order is still being unloaded. By eliminating idle time the saw is more productive.



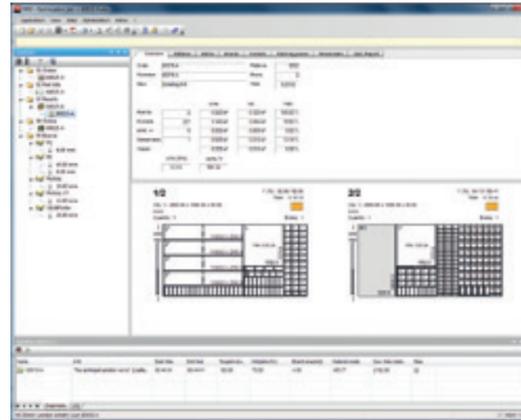
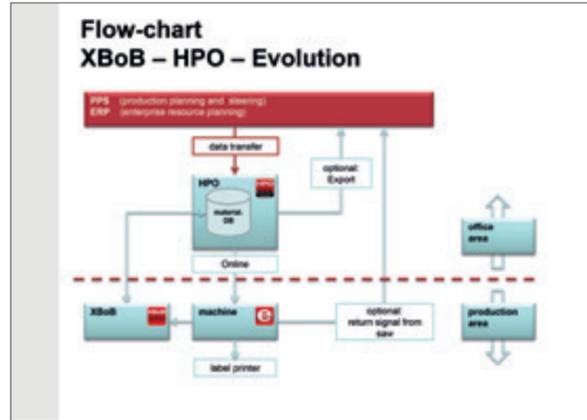
### Flexible thanks to modular expansion.

Expansion by modular features ensures even greater industrial capacity. All conceivable, precisely adapted solutions for loading, material handling and stacking can be planned. Everything is from a single source – from the technology leader in cut-to-size saws: Schelling. From planning to start up Schelling is your partner. This means there is just one contact person who is responsible for ensuring that all components work seamlessly together from the very first moment.



## INTELLIGENTLY CONTROLLED FOR HIGHER OUTPUT.

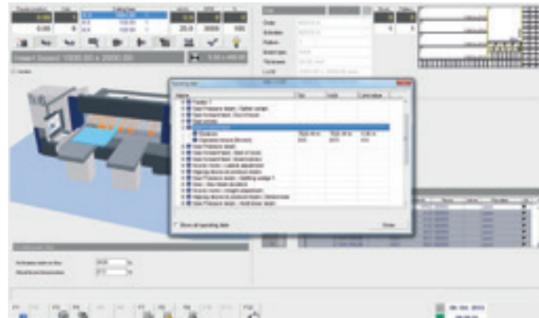
The Schelling MCS Evolution controller allows for efficient use of the fk 6 / fk 8 from the outset and makes it possible to rapidly implement a high degree of automation. Open interfaces mean that the machine can be easily integrated in existing systems and programmed from an office PC. A new diagnostic function for peripherals facilitates the work of machine operators, maintenance personnel and remote hotline maintenance and proves it's worth right from initial commissioning. The control desk with the MCS Evolution and the Schelling HPO optimization software turns work into a pleasure. Sequences are presented in real-life mode – with unsurpassed fault diagnostics. Self-explanatory operator guidance practically excludes handling errors, and increases availability and saw efficiency.



### HPO cutting pattern optimization saves time and money.

The latest version of HPO cutting pattern optimization offers new functions for productivity and operating convenience. Multi-core use ensures the speed

available from state of the art hardware is effectively utilized. Thus computing times are reduced by as much as 60%. In addition, the system works with the latest calculation logarithms. Other new features include the appearance of patterns can be virtually set as desired, on request the optimal un-machined panel can be determined, the print function can be configured and searching has been even more clearly designed.



Available production data reporting of the MCS Evolution PLC logs all relevant operating data, such as operating hours and travel paths of the saw unit, feeder, pressure beam, etc. In

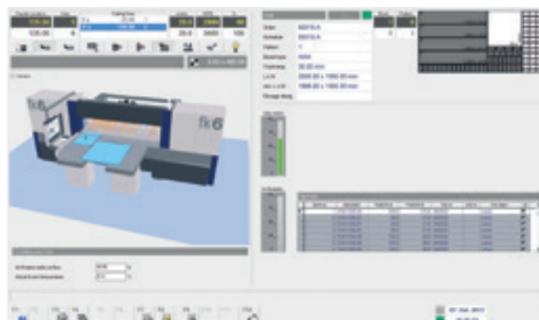
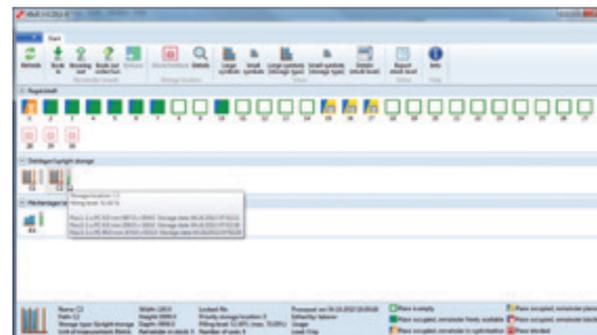
addition, the running data of the saw blades are individually recorded.



### XBoB brings order to waste.

With the XBoB remainder management program, material remainders can be easily managed by the saw operator. Remainder material is automatically booked in and out through interaction

with the machine controller. In addition, XBoB is the interface from the machine controller to the optimization program. Remainders that accumulate can be reused without delay in the optimization. XBoB offers an easy and safe system for maximum utilization of material.



MCS Evolution also displays the current cutting plan, cut in process, the order and the material on the screen. The newly developed optical power display aids easy sight monitoring of the saw motor power.

## TECHNICAL DATA

Saw blade	fk 6	fk 8
Diameter	460 mm / 18.1"	520 mm / 20.5"
Projection	135 mm / 5.3"	165 mm / 6.5"
Clamp opening	135 mm / 5.3"	158 mm / 6.1"
Book height	120 mm / 5.0"	150 mm / 6.0"

Power	fk 6	fk 8
Saw motor	21 / 27 kW	34 kW
Saw motor	28 / 36 PS	46 PS

### Dimensions fk 6 / fk 8 manual

	330	430	580	630
a	3330 / 131.00"	4330 / 170.50"	5830 / 229.50"	6330 / 249.25"
b	6450 / 254.00"	7450 / 293.25"	8950 / 352.25"	9450 / 372.00"
c	3860 / 152.00"	4860 / 191.25"	6360 / 250.50"	6860 / 270.00"
d	7100 / 279.50"	8100 / 319.00"	9600 / 378.00"	11000 / 433.00"
e	4600 / 181.00"	5600 / 220.50"	7100 / 279.50"	7600 / 299.25"

Dimensions – mm / inch

### Weight

330	7.500 kg / 16,500 lbs	430	10.000 kg / 22,000 lbs
580	11.000 kg / 24,250 lbs	630	12.000 kg / 26,500 lbs

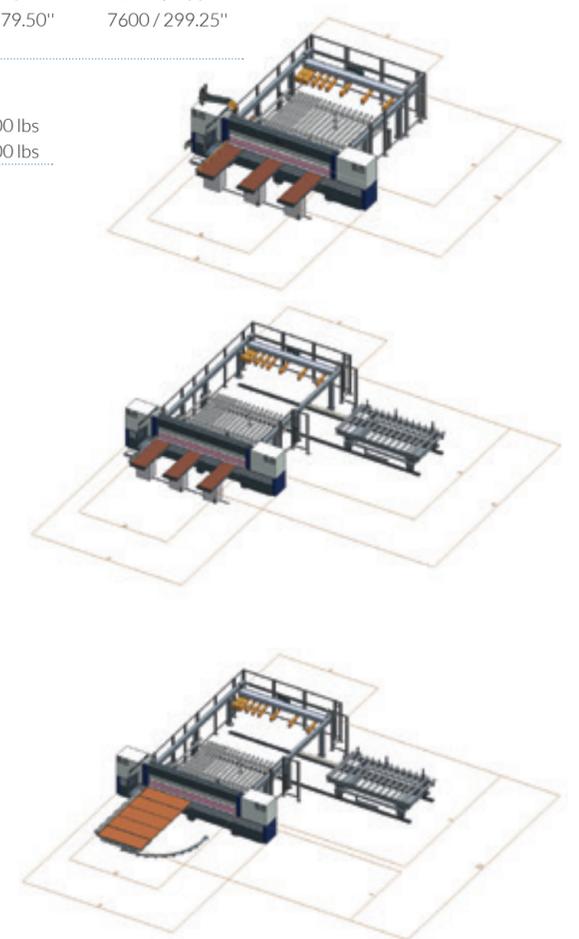
### Dimensions fk 6 / fk 8 automatic

	330x220	430x220
a	3330 / 131.00"	4330 / 170.50"
b	6450 / 254.00"	7450 / 293.25"
c	3830 / 150.75"	4830 / 190.25"
d	8900 / 350.50"	9400 / 370.00"
dDT	10000 / 393.75"	11460 / 451.25"
e	6400 / 252.00"	6850 / 269.75"
f	3600 / 141.75"	4600 / 181.00"

Dimensions – mm / inch

### Weight

330	10.500 kg / 23,100 lbs
430	13.000 kg / 28,700 lbs





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SOLUTIONS  
FOR THE PLASTIC  
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