

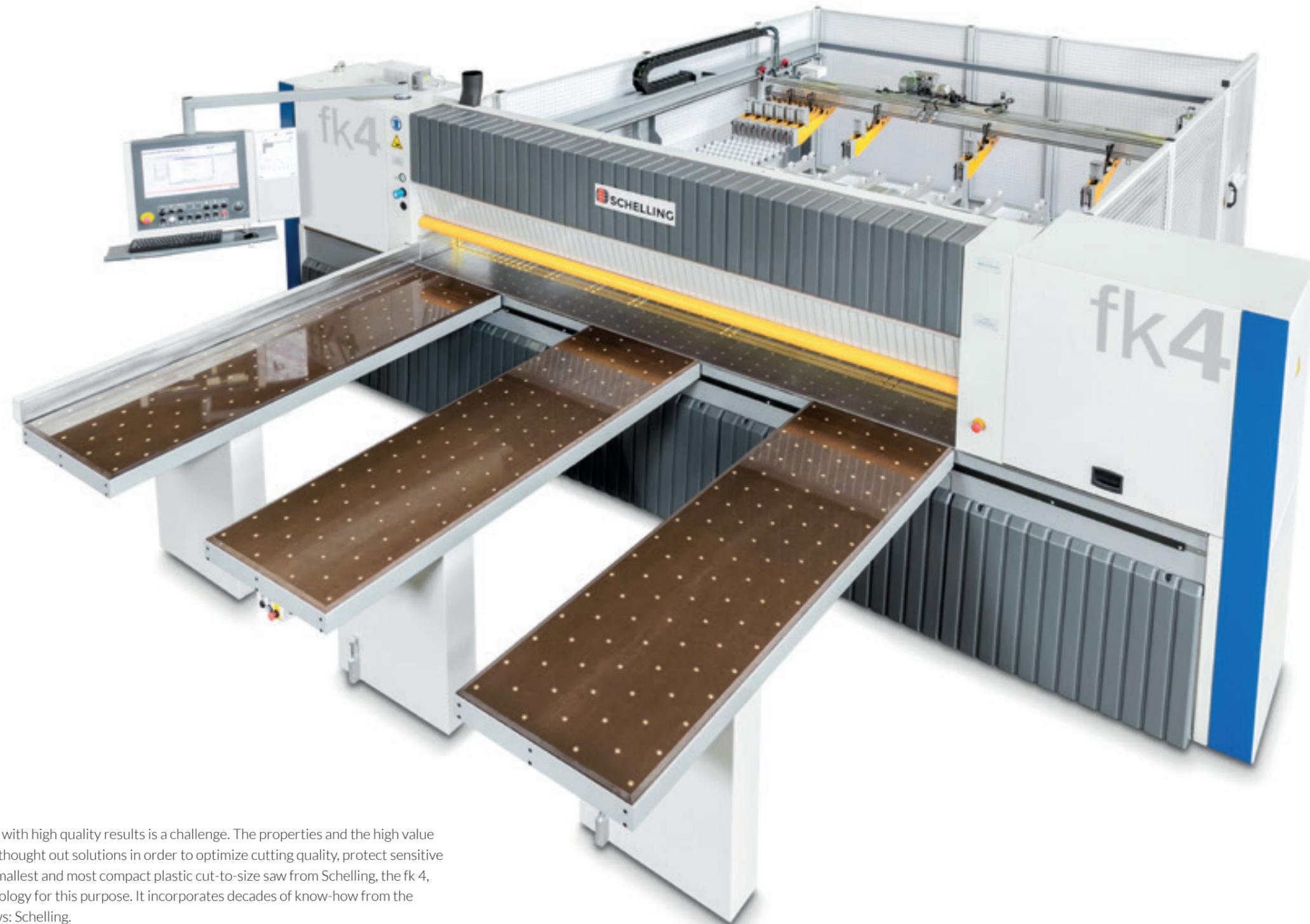


High precision cut-to-size saw fk 4

**Cutting plastic to size.
Professionally. Powerful.
Compact. Cost-conscious.**

schelling.com

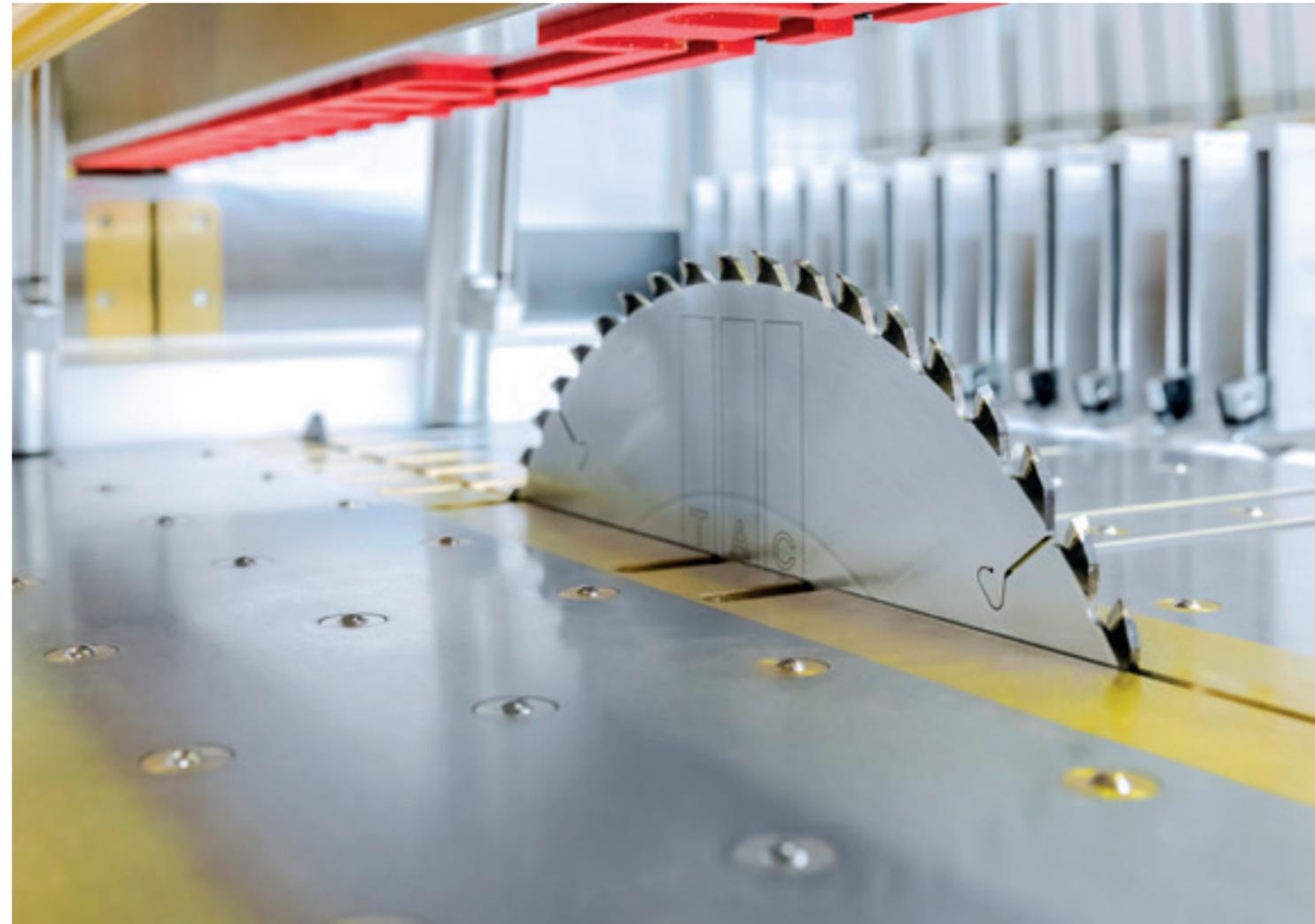
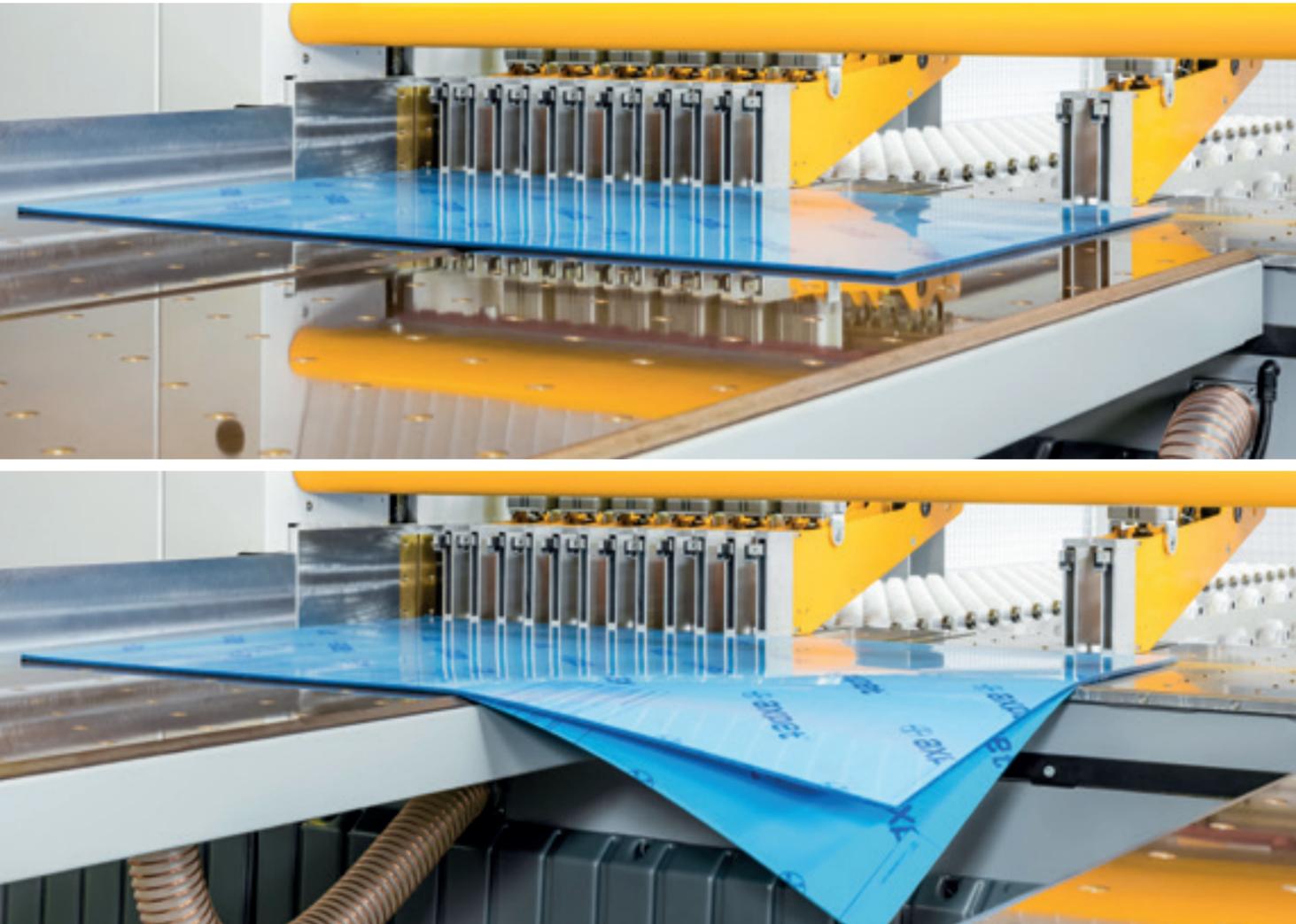
PERFECT CUTTING QUALITY
WITH LESS INEFFICIENCY.



Cutting plastic materials to size with high quality results is a challenge. The properties and the high value of these materials calls for well thought out solutions in order to optimize cutting quality, protect sensitive surfaces and avoid scrap. The smallest and most compact plastic cut-to-size saw from Schelling, the fk 4, provides tried and tested technology for this purpose. It incorporates decades of know-how from the market leader in cut-to-size saws: Schelling.

Robust construction prevents vibrations and torsion forces which is an important prerequisite for high precision. The unique drive concept with fixed saw motor allows a maximum power transfer of 21 kW to the saw blade. This makes it the most powerful saw in its class. Optimization of all saw processes reduces inefficient machine movements and increases the overall speed of the saw.

GENEROUS AIR FLOTATION TECHNOLOGY FOR IMPROVED ERGONOMICS AND MATERIAL SURFACE PROTECTION.



Moveable air flotation tables.

Does any other company consider ergonomics as much as Schelling? The answer is apparent from the details documented on these pages which combine to achieve substantial improvements in operating comfort, productivity and material surface protection. One of these is the ability to slide the moving air flotation tables. This makes it quick and easy to move small and large sizes effortlessly. By adjusting the moving air tables thin material that would normally sag in between fixed tables can be supported correctly. When material is supported correctly, material surface protection is also greatly increased.

Steel machine table with "built in" air flotation protects material surfaces and permits floatation handling.

Protecting the surface of plastic panels is of utmost importance to Schelling. For this reason, the fk 4 is equipped with two critical features. First, the integrated air cushion extends across the entire surface area of the air flotation tables. This minimizes friction, prevents scratching and also simplifies the handling of panels and smaller parts. Second, the design of the precision steel machine table includes "built in" air cushions which is a genuine first in this class! The air table and machine table surfaces are precision machined and virtually wear-free. These features combine to offer quality that can scarcely be found on any other machines of this size.

OPTIONS INCREASE SPEED AND SAFETY.

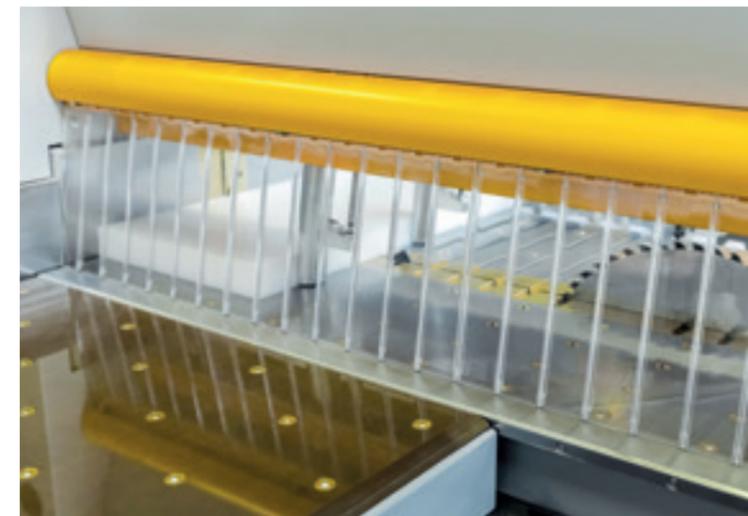
Simple removal of material: Scissor clamps push to the air flotation tables.

A unique, ergonomic and safety option on the Schelling fk 4 is the function that enables material to be pushed from the scissor clamps right up to the air flotation tables. In short, up to and beyond the sawing line! By pushing material through and up to the air flotation tables, it is no longer necessary to reach behind the saw line to retrieve cut parts and trims. This means a substantial increase in comfort because operators can work without excessive reaching, which in turn boosts productivity and safety. With this design no time is spent in danger areas.



Safety curtain provides screening.

The safety curtain can be swiveled in sections, enabling work to take place without any disruptive lifting of the fins. In cutting sequences with short stroke active, the pressure beam only opens for a moment, but the safety curtain remains closed at all times increasing productivity.





PRECISION WHEREVER YOU LOOK.

Solid construction for lasting precision.

Schelling's fk 4 is designed with solid construction, machine weights up to 7.5 tons, to prevent vibration and torsion while cutting. This ensures maximum accuracy, cut quality and provides for a long, highly profitable service life of the machine.

Strip aligning device before and after the cut.

The double strip aligning device, with one alignment shaft before and one after the cut line, is another feature that makes Schelling's fk 4 the technological leader in its class. The aligner has precise pressure control and ensures the correct contact pressure when sawing single sheets of thin material and shapes of any dimension. The aligner can also provide high aligning force which when combined with the robust cross aligning fence enables heavy panels to be processed very easily. As an option, additional aligners can be added in the roller table to ensure that even long strips can be pressed against the limit stop. This assures maximum angular precision.

Feeder carriage with robust drive.

The feeder carriage is designed to ensure constant precision when positioning plastic panels to the cut line. A major part of this is the robust drive unit. The plastic cut-to-size saw fk 4 confirms time and again the Schelling philosophy that is committed to heavy, robust machine designs. The heavy inserts and their robust design are a guarantee of high-precision positioning.

Double measurement system.

A unique feature that Schelling has designed into this class of machine is the double measurement system on the feeder carriage. On the one hand, an inductive magnetic measuring system acts as a master and measures the dimensions in a fully automated operation. Parallel to this is a second system that precisely determines measurement values on the basis of the motor speed in rpm. If the two measurements fail to produce a precise match, inaccurate cuts to expensive panel material is prevented automatically.

Brass table lips for greater precision.

In all cut-to-size saws table lips at the cut line are wear parts and their design has a decisive impact on cutting quality. This is why the table lips on the Schelling fk 4 are made of brass! Brass provides a more stable substrate than lips made of standard materials, and provide ultimate support to achieve the highest levels of precision and cutting quality. They also simply wear less and last longer.

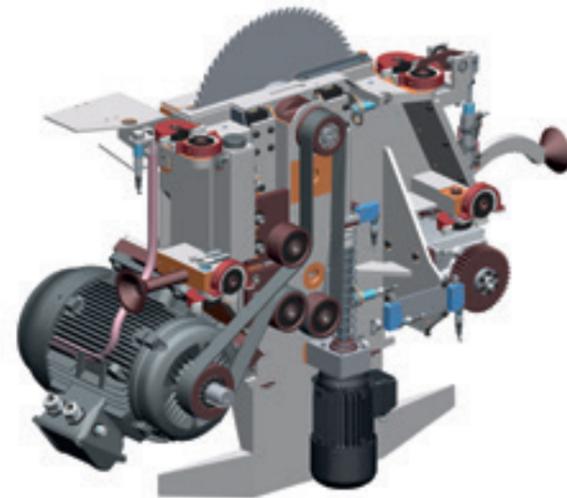
PRODUCTIVITY WITH POWER AND CAREFULLY CONCEIVED DETAILS.



Saw unit: Ideal implementation of force.

The Schelling fk 4 cut-to-size saw has the unique and patented "Evolution" drive concept and offers an optimally matched ratio of motor power and usable book height. The saw motor is fixed in place on the saw carriage, so it only moves horizontally with the complete saw carriage itself but not up and down with the saw blade. This design allows the use of stronger motors with higher power.

This also means less vibration, ultimate precision and cut quality. The chip routing system integrated in the saw carriage is specifically designed for the immediate disposal of chips from the cutting area. This in turn results in longer saw blade service life and cleaner cutting.



Encapsulated saw unit.

When sawing plastic panels it is critical chips are disposed of in a highly efficient manner. Schelling's fk 4 utilizes chip suction and a chip conveyor system in the saw unit to ensure precision is not impaired. Furthermore, this promotes machine service life because those chips do not find their way into seals and bearings.

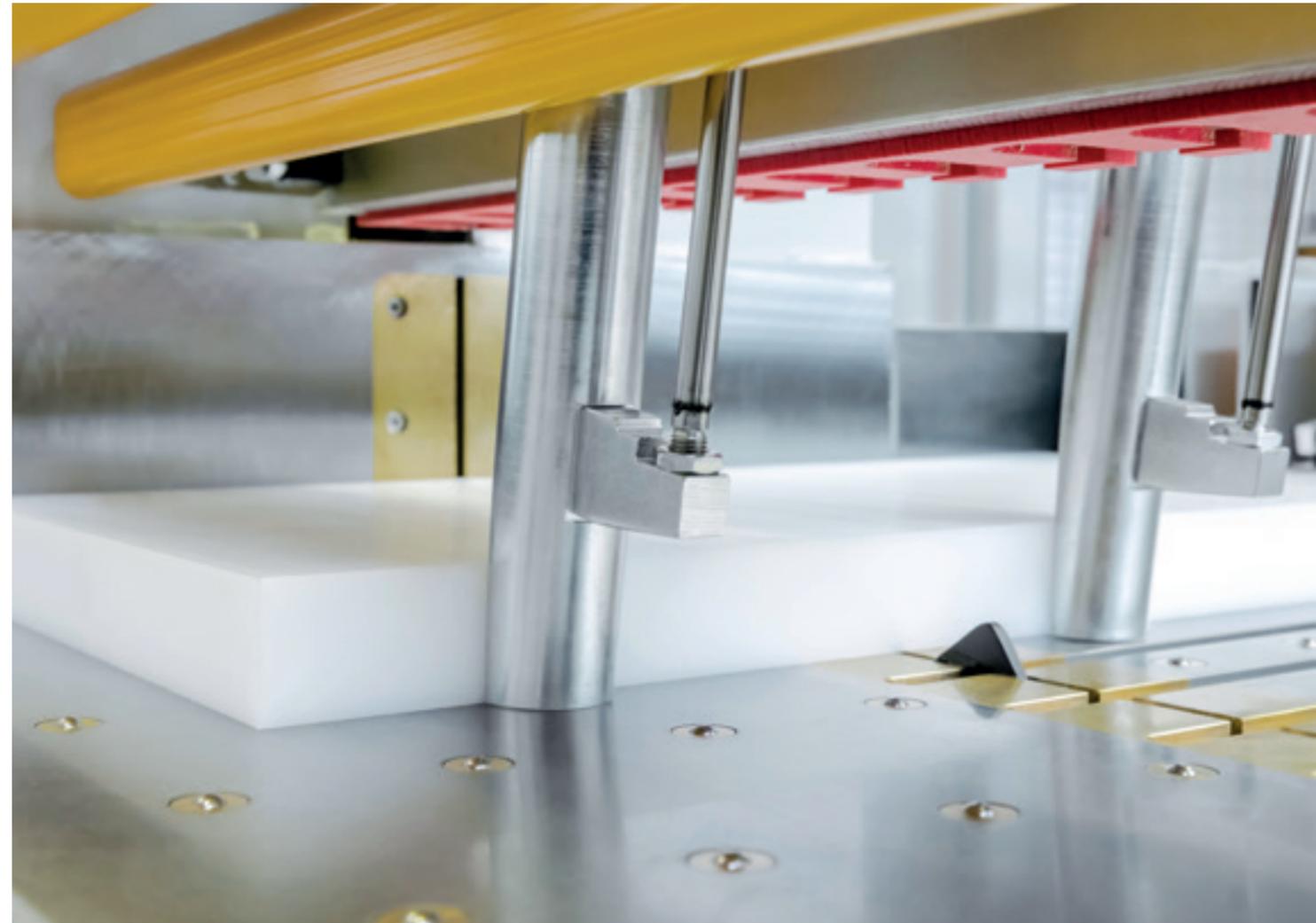


Frequency-controlled saw unit.

When cutting plastics matching the correct cutting speed, blade RPM, and blade type to specific materials is critical. Schelling's fk 4 is equipped with frequency controls for the cutting speed and blade RPM to allow easy selection for each material and cutting height.

Perfecting intelligent features, procedures and cut quality.

The fk 4 is equipped with many automatically monitored functions. This in turn guarantees optimized and harmonious operational sequences. Panel sizes, as well as cutting heights are detected via integrated sensor systems. Saw cutting speed and saw blade projection are set simultaneously, which results in shorter cycle times per cut.



Mechanical panel sensor provides two-fold security.

To prevent damage to valuable panels caused by cutting errors, the fk 4 uses a system with a double-failsafe feature. First, an optical laser sensor is used as standard equipment. However, to prevent problems from occurring with transparent materials or dirt, a second mechanical sensor safeguards the procedure. It races ahead of the sawblade to detect reliably that the material is positioned correctly.

Panel type parameter memory.

A program for storing panel type parameters makes ideal settings available at the touch of a button. This is extremely valuable for work on various plastics, each with their own individual and specific properties. Depending on the types of material, optimum combinations of sawblade RPM, sawblade types, cutting speed, beam pressure and other relevant variables can be saved and called up. The machine adjusts itself automatically to the different book heights and materials. Results include optimum cut quality, longer blade life and lighter workloads for operating personnel.

PERIPHERALS AND EXPANSION FROM A SINGLE SOURCE.

Customer-specific solutions.

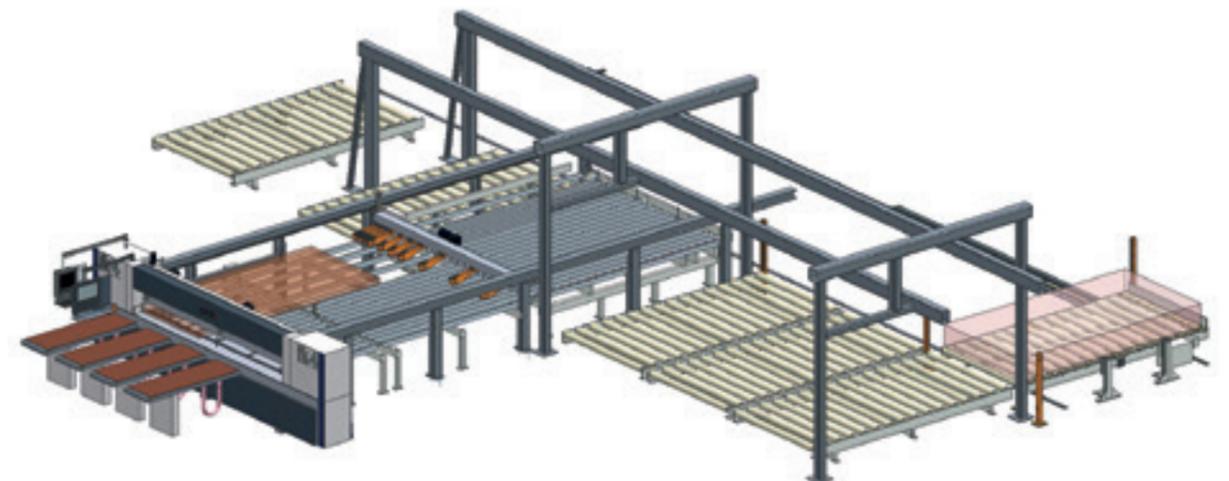
The core skills of Schelling include not only the design of practice-oriented standard saws, but also, and perhaps to an even greater extent, the planning and implementation of customer-specific solutions.

Extra comfort: Pivot arm and vacuum suction.

The pivot arm and vacuum suction unit are expansion options available for the fk 4 which speed up and automate handling. They allow the machine to be quickly and professionally loaded in the industrial environment.

Time gained by the preparation table.

When the fk 4 is equipped with the optional preparation table additional time is saved. The preparation table allows the next book to be prepared while panels are being cut-to-size on the machine. Unproductive idle time is greatly reduced because the next order can already be started while the previous order is being unloaded.



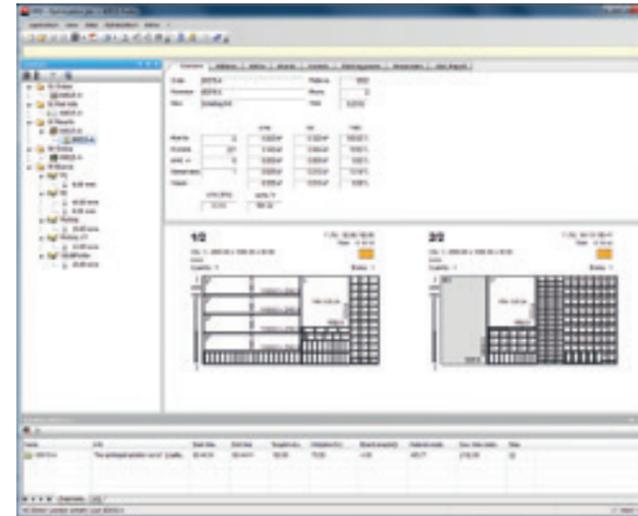
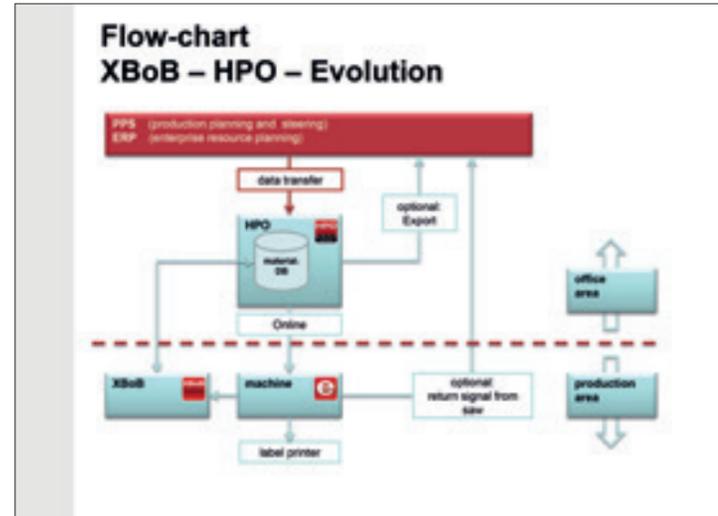
Flexible thanks to modular expansion.

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.

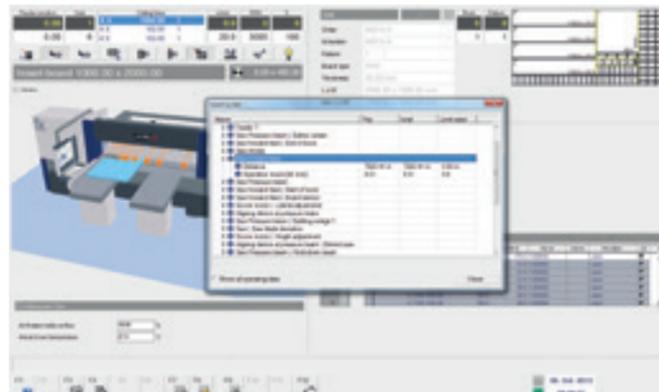


The Schelling MCS Evolution controller allows for efficient use of the fk 4 from the outset and makes it possible to rapidly implement a high degree of automation. Open interfaces mean that the machine can be easily integrated in existing systems and programmed from an office PC. A new diagnostic function 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

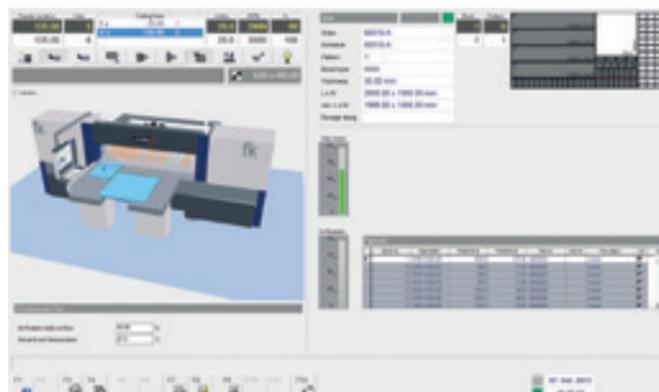
from state of the art hardware is effectively utilized. Thus computing times are reduced by as much as 60%. In addition, the system works with the latest calculation logarithms. Other new features include the appearance of patterns can be virtually set as desired, on request the optimal un-machined panel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



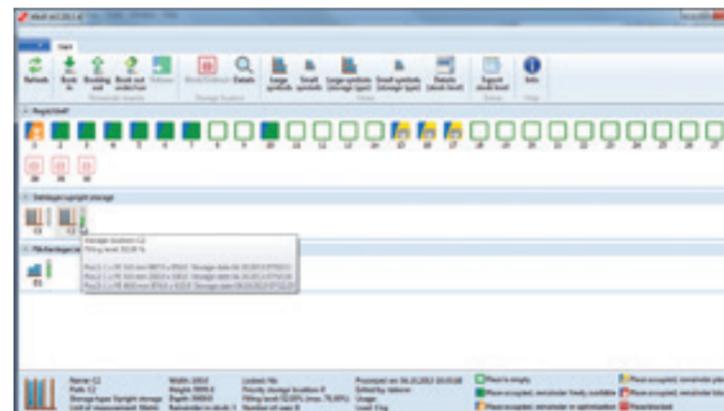
Available production data reporting of the MCS Evolution PLC logs all relevant operating data, such as operating hours and travel paths of the saw unit, feeder, pressure beam, etc. In addition, the running data of the saw blades are individually recorded.



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. Reminders 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.



TRAINING COURSES AND SERVICE DELIVER A COMPETITIVE EDGE.

More employee know-how increases productivity.

Training courses and seminars from Schelling contribute to the optimal use and care of the machines purchased by you right from the start and secure and increase productivity, precision, reliability, and life cycle.

Hands-on tuition, exchange of experience, training

Specific procedures and the exchange of knowledge enable your employees to add depth to their knowledge and skills. These are people who work in the areas of preparation, programming, operation, and logistics.

All training courses are able to be adjusted to your specific needs. Normally, your employees come to our premises in this case, which possess the ideal conditions in every regard.

All activities and procedures may be simulated optimally here. Presentation machines enable realistic visual lessons and hands-on work.

The Schelling training team will take care of transferring valuable insider knowledge in theory and practice to your employees on-location.



Anyone who chooses the best saws is entitled to great service.

Industrial companies and demanding craftsmen who choose cut-to-size and precision saws from us consciously select the world's leading and pioneering technology. We provide a level of quality that can hardly be beaten, which is based on our own research and development, solid construction, and high-quality components. We measure the lifetime of our machines in decades. With our decentralized organization, which features multiple locations and a global network, your Schelling service employees are quickly at your side, around the world.

Schelling service highlights:

- Free-of-charge* Hotline support throughout the entire service life of your Schelling saw.
- 25 years guaranteed replacement parts or available upgrades for discontinued parts.
- You always have the same customer support person at Schelling. He knows your machine inside out.
- We are available to you – from a place local to you.

* Applies during regular working hours, work days 7:00 am – 5:00 pm.

Preventive check.

A free test for even more availability. Anyone who has invested in a Schelling machine wants to ensure their value and productivity and remain prepared for possible adjustments to the current state of the technology. The prevention check is an instrument developed by Schelling. This is available free of charge and for the lifetime of the machine.

On site in a flash.

When worse comes to worst, speedy help is the best help. That's why Schelling's repair service organization is decentralized. It's also why Schelling also invested in a new, ultra-modern, central replacement parts warehouse, to provide spare parts as quickly as possible.



SCHELLING ECOMODE SAWING IN AN ENERGY-EFFICIENT AND COST-EFFECTIVE MANNER.

There are many reasons for making efficient use of resources. Environmental awareness and a sense of the value of money are two of them. In all of its new saw models, Schelling proves that both can be combined. Many measures multiply their effectiveness, consume less energy and materials, cause less wear, less workplace impact, shorter machining times, and through that the benefits accrue in ecological, health-related and economic terms.

In your company, those financial benefits will be tangible. Employee health will benefit and – depending on legislation – there may be scope for drawing down public-sector funding in support of energy efficiency. Not least though, a Blue Planet benefits cut by cut – and therefore so do all of us.



PROTECTING MAN & NATURE. SAVING ENERGY, TIME AND MONEY.

Schelling saws set standards that conserve resources, that save energy, time and money, that relieve employee workloads and that protect the environment – while cutting panels to size in a professional manner.

Standby mode Shut down automatically.

Without pressing a button. Clear reduction in consumption, noise level and costs with a standby mode that – once programmed – is a fully automated function.

Efficient motors More power. Less consumption.

The motors on new Schelling saws comply with the international IE2 standard. Optionally available with a frequency inverter.

Switch cabinets without air-conditioning units Intelligent design instead of costly cooling.

The switch cabinets on Schelling saws are designed in such a way that they do not require any cooling at ambient temperatures below 35 °C.

Load-dependent air flotation table control Air cushions only when you really need them.

Standby mode for air flotation table fan.

Reduction in compressed air energy Avoid where sensible. Use where helpful.

The use of compressed air is avoided wherever it is possible and sensible to do so. Greater energy efficiency, less prone to problems, less noise.

Optimum dust extraction Targeted dust extraction to suit prevailing needs.

Dust extraction points are integrated where chips are created. Intelligent activation of the suction slide valve. Coordinate engagement and disengagement cycles.

Thin-cut sawblades Double saving achieved with Schelling saws.

Even in its standard versions, Schelling uses smaller sawblade diameters and thicknesses. This achieves even greater savings, thanks to the use of thin sawblades.

Employee protection Quieter. Cleaner. More ergonomic.

Automatic disengagement of assemblies to reduce noise. Tried-and-proven dust extraction systems cut down dust levels. Ergonomics enhance health.

Prevention of scrap Optimize, recycle remainders and protect panels.

HPO optimization software uses the panel material to perfection. The optional remainder recycling program XBoB manages things in a practically appropriate manner.

Material and format-optimized saw settings Every movement goes only as far as necessary.

Feed speed, cut length, pressure beam stroke and insert positioning are optimized to achieve minimal standards.

Intelligent material flow control Here, everything is interconnected intelligently.

The combination of Schelling saw and Schelling's vs area storage system organizes the flow of materials to perfection.

Perfectly dimensioned machine construction As robust as necessary, as lightweight as possible.

The traditionally robust construction of Schelling saws is now as lightweight as appropriate, employing a high proportion of composites that are suitable for recycling.

Economic benefits Optimization at every corner and end really makes economic sense.

The environmentally aware and cost-conscious design of our saws are achieved by a plethora of detailed solutions that achieve great impact and that pay for themselves rapidly.

TECHNICAL DATA

Saw blade	
Diameter	400 mm / 15,748"
Projection	105 mm / 4,134"
Clamp opening	110 mm / 4,331"
Book height	80 mm / 3,150"

Performance	
Saw motor	21 kW
Saw motor	28.5 HP

Dimensions fk 4 manual

	330	430
a	3330 / 131.00"	4330 / 170.50"
b	5750 / 226.00"	6750 / 265.80"
c	3650 / 143.70"	4650 / 183.00"
d	7100 / 279.50"	8100 / 318.90"
e	4350 / 171.30"	5350 / 210.60"

Dimensions – mm / inch

Weight

330	6.500 kg / 14,250 lbs
430	7.500 kg / 16,500 lbs

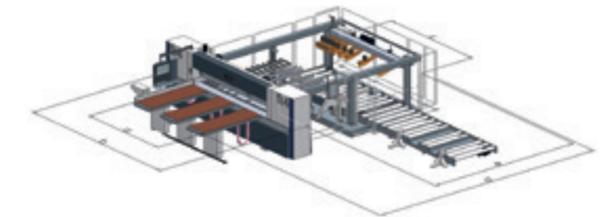
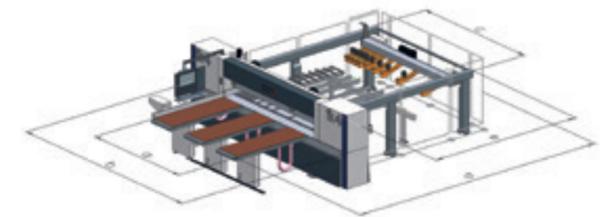
Dimensions fk 4 automatic

	330x160	330x220	430x160	430x220
a	3330 / 131.00"	3330 / 131.00"	4330 / 170.50"	4330 / 170.50"
b	5750 / 226.00"	5750 / 226.00"	6750 / 265.75"	6750 / 265.75"
c	3650 / 143.70"	3650 / 143.70"	4650 / 183.00"	4650 / 183.00"
d	7850 / 309.00"	8650 / 340.60"	8850 / 348.40"	9650 / 379.90"
e	5250 / 206.70"	6000 / 236.20"	6250 / 246.10"	7000 / 275.60"

Dimensions – mm / inch

Weight

330	9.000 kg / 19,750 lbs
430	11.000 kg / 24,250 lbs





**ONE GROUP –
ONE GOAL:
EXPERTISE IN
DEVELOPING
SOLUTIONS FOR
THE PLASTIC
WORKING
INDUSTRY**

The IMA Schelling Group is a reliable partner for implementing of sophisticated system solutions. The demands of our customers are a daily challenge to us, our know-how and creativity! We work with you to develop innovative and unique solutions for plastic processing.

www.schelling.com, www.imaschelling.com

Subject to technical modifications and amendments and to further developments. The offer, respectively the order confirmation is relevant in either case!
The picture of the machine could have been taken without complete protection devices. The protection device is part of the scope of delivery.
Photos could also be options, not being part of the scope of delivery.