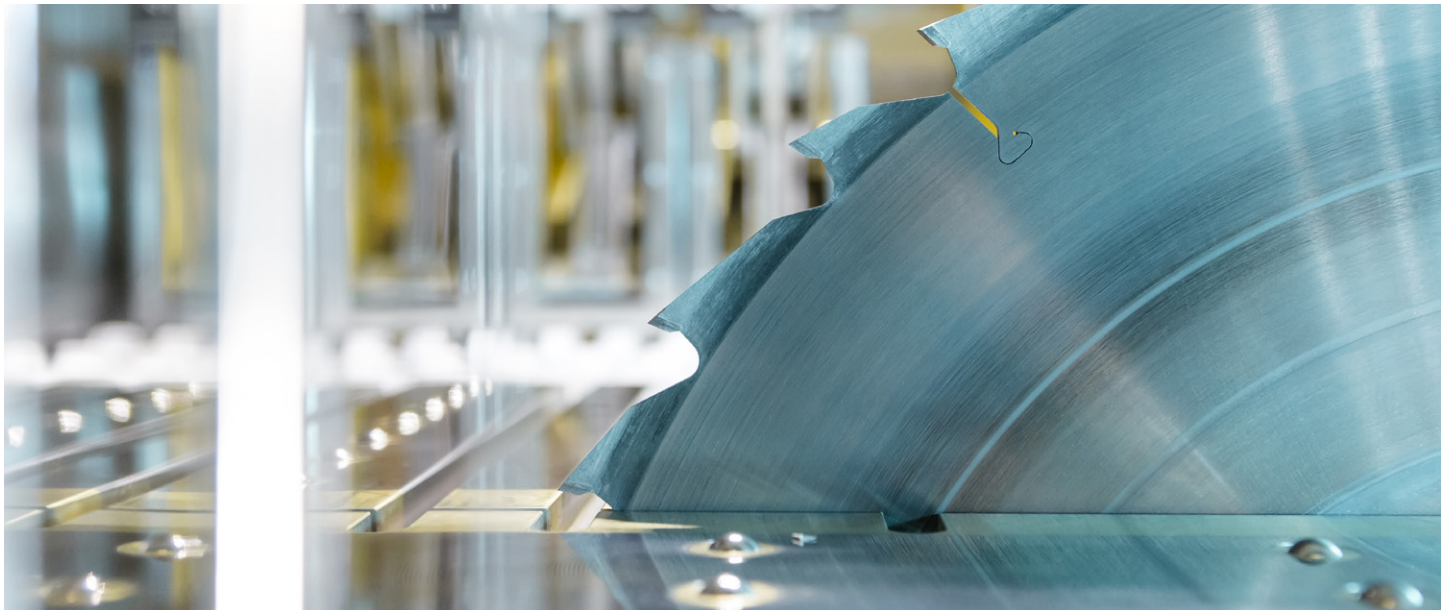
High-precision panel saw fm 10 / fm 12

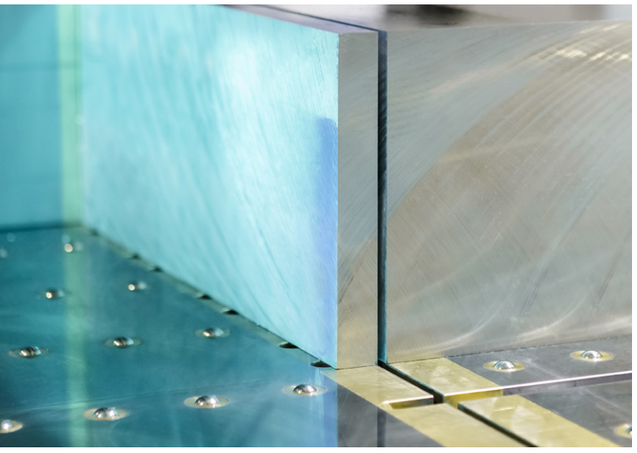
The flagship of the NE metal saw range



CLEAN. PRECISE. PRODUCTIVE.

With its new fm 10 and fm 12 machine series, Schellling is setting new technological standards in sawing aluminium and non-ferrous metals. The series stretches the processing spectrum compared with existing technology, especially in relation to demanding aluminium alloys. The two saws feature solid design, which practically eliminates twisting, vibration and thermal effects, thus opening the way to high precision and long service life. The design supports powerful, high-speed motorization, which reduces production times. In addition, numerous detailed improvements cut back non-productive times, increase productivity and increase ease of operation. The fm 10 and fm 12 are thus destined to become international benchmarks for cut-to-size in the demanding industrial production segment.

SOLID CONSTRUCTION COMBINED WITH AMPLE POWER.



The extremely robust

fm 10 and fm 12 following in the tradition of the Schelling solid construction philosophy. Torsional forces and vibrations are suppressed a priori. Even under high and long-term loading, the cut remains accurate. The service life is also increased – yielding an optimum combination of precision over the entire life cycle.

Double strip aligning device

The double strip aligning device before and after the cutting line means that cutting material of any size can be precisely firmed down. Due to the high aligning force, heavy boards can be moved precisely up to the cross aligning fence. Long strips are pressed against the cross aligning device by an additional aligner in the roller table. The result is the highest degree of angular precision over the entire length of the strip.

Machine table with high-performance guides

The drive unit cart is guided by lateral ball bearing running guides, feed is driven by pinion. The use of a new motor concept is reflected in the size of the table surface, making it possible to reduce its width by 100 mm. The advantage is that it is easier to hold the cut material. Table rims and chip conduits perfectly round off the operability of the machine table.

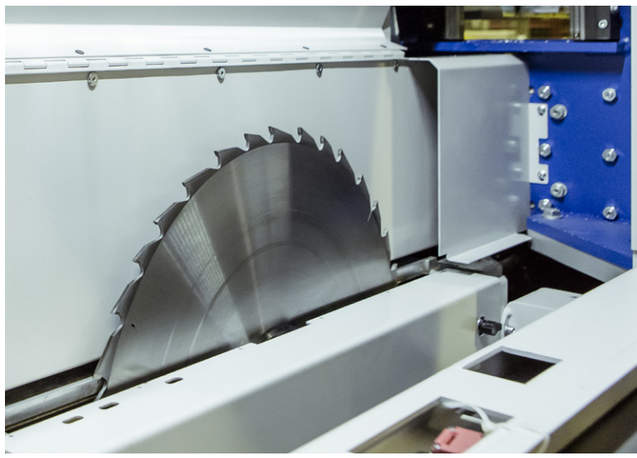
The tabletop is offered in four different types:

- Precision machined steel table
- Precision machined steel with air cushion
- Wear-resistant steel table
- Wear-resistant steel table with air cushion

Water-cooled saw motor

The water-cooled saw motor offers a number of advantages, directly or indirectly associated with this feature. First and foremost, the motor can be operated 100 %, i.e. constantly under load, even at low speeds. In general the design supports the use of more power and speed, which is reflected in the equipment of the fm 10 and fm 12 with high-performance 55 kW and 68 kW „Power“ saw motors.This increasing the chipping power and increases the range of materials that can be machined: A useful innovation in everyday application is the speed monitoring. It compares the actual speed with the setpoint and stops the machine when this deviation becomes critical to protect the mechanical systems (saw blade, drive) and workpiece. The maximum saw blade diameters of the fm 10 and fm 12 are 680 mm and 780 mm respectively, the maximum projection is 218 mm and 268 mm respectively, that maximum package height 200 mm and 250 mm respectively. Various design version enable maximum cut lengths of 2,300 to 6,300 mm.

The pressure beam zone has been redesigned to minimize material wastage and optimize the suction action.



SIMPLE MATERIAL INFEED, PRECISE POSITIONING.

Roller table in front of the saw

In the area in front of the saw, the material on the roller table is moved forward on plastic rollers. In the standard design, weights up to 700 kg/m², with a total weight of 5,000 kg can be handled - optionally even more.

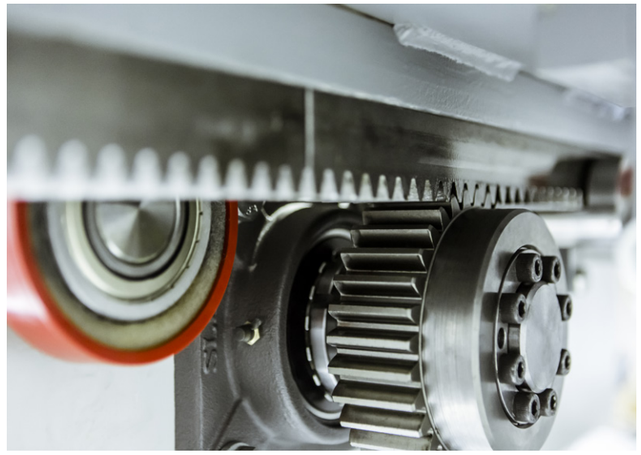
Cross aligning fence and Strip aligning device in the roller table

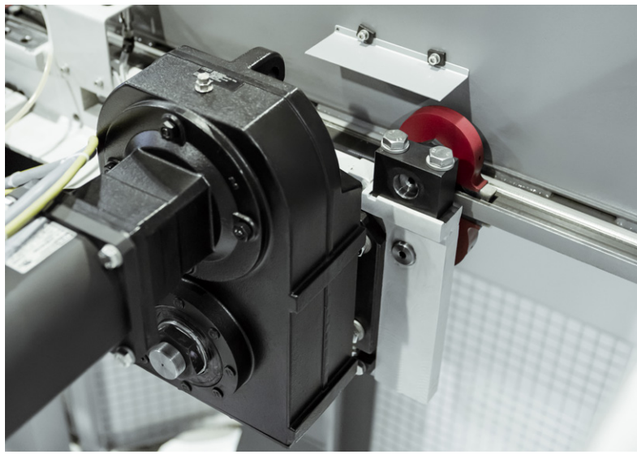
The cross aligning fence in the roller table ensure a high degree of precision.

The strip aligning device in the roller table pushes long strips against the cross aligning fence. This results in higher angular precision over the entire strip length.

Powerful feeder

A feed cart with pinion drive and two holding brakes supports travel speeds of up to 30 m/min.. The feeder ensures constant precision, optionally even down to hundredths of millimetres.





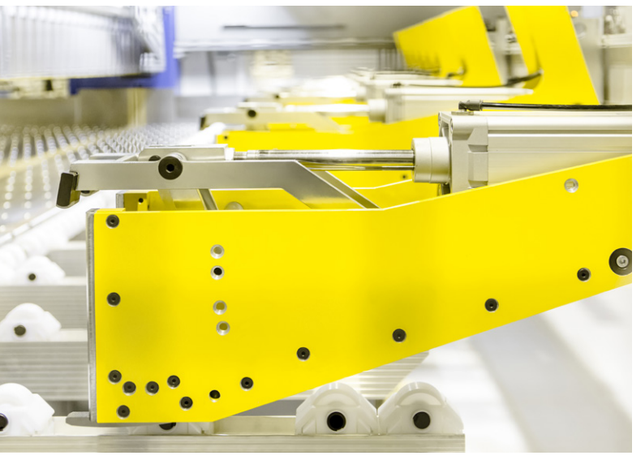
Gantry-drive

The feeder can optionally be equipped with a gantry system. Here too, travel speeds of up to 30 m/min. can be obtained.

CLEANNESS MEANS PRECISION.

Schelling Clean-up System

The Schelling fm 10 and fm 12 cut-to-size saws for aluminium and non-ferrous metals are characterized by a previously unattainable cleanliness in the complete working and peripheral range. Some 99.5 % of the chips are reliably removed. This means more precision and even less risk of the board surfaces becoming scratched. This degree of clean working is achieved by numerous details and detailed improvements. The centrepoint is formed by Schelling Clean-up Technology. The modified design of the pressure beam makes it possible to improve the disposal of chips. The positioning of the three suction connections on pressure beam, saw unit and cross aligning has been yet further improved. When a dust cut is used, the the suction quantity is now controlled to obtain a maximum suction effect with minimum suction power. A dust protector can optionally be mounted in front of and behind the pressure beam.



The extremely robust double fingers in the clamps grip the work pieces and position them with the feeder at the exact sawing dimension. The material can be pushed over the sawing line up to the edge of the basic machine which facilitates its removal for the operator. In this process the lower clamping claws are retracted.

ERGONOMIC HANDLING.

Air flotation table

Air flotation tables with an areas of 800 x 2,100 mm make for simple handling downstream of the saw. With a special controller, they ensure that the applied pressure is constantly correct at any weight. The noise from the blow is reduced by separate encapsulation. The air outlets have a tried & tested steel ball nozzles. The air flotation table can optionally be equipped with steel or an extremely wear-resistant tabletop.

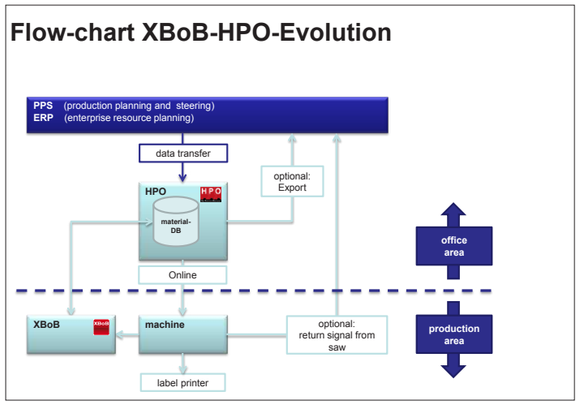
Turntable saves time

The optional turntable makes material handling even easier. Long strips can be turned in parallel in one pass. In addition, the board surfaces are protected. The turntable air cushion is supplied from the central blower.

Material transport

Material charging and handling are key elements in increasing the efficiency of a cut-to-size saw. Shelling offers specially adapted charging, material handling and stacking variants that can be adapted to individual requirements. A single source for everything from planning to commissioning.

INTELLIGENTLY CONTROLLED FOR HIGHER OUTPUT.



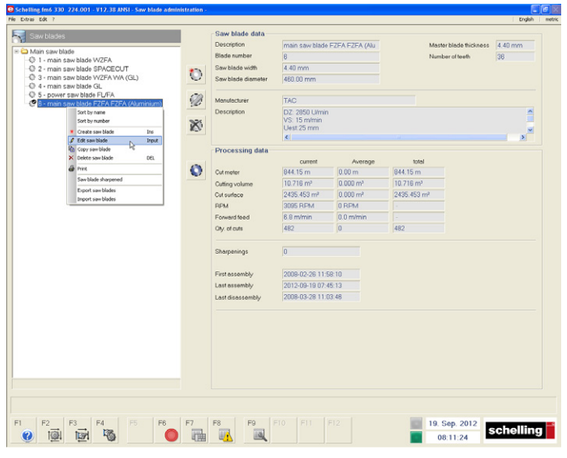
Everything in view!

The Schelling MCS Evolution logic controller makes the use of fm 10 and fm 12 efficient right from the start and makes it possible to rapidly implement a degree of implementation.

Open interfaces mean that the machine can be easily integrated with existing systems and easily controlled 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 pays off right from initial commissioning.

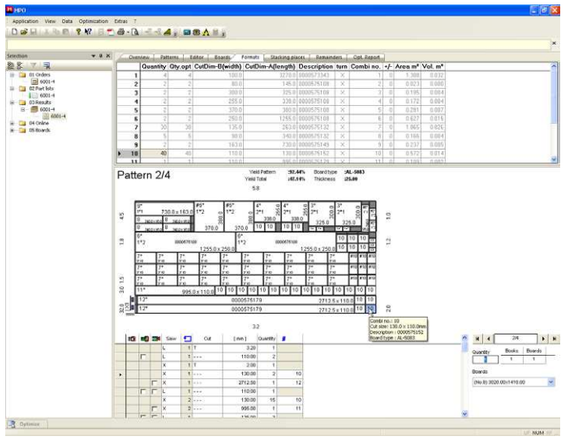
The newly developed optical power display aids easy sight monitoring of the saw motor power. The control desk with the MCS Evolution and the Schelling HPO optimization software makes work into a pleasure. Sequences are displayed in real-life mode – with unexcelled fault diagnostics. Self-explanatory operator guidance practically excludes the handling errors and increases availability and saw efficiency.

The operation data reporting of the MSC evolution PLC logs all relevant operating data, such as operating hours and travel paths of the saw unit, feeder, pressure beam etc. The running data of the saw blades are only individually captured.



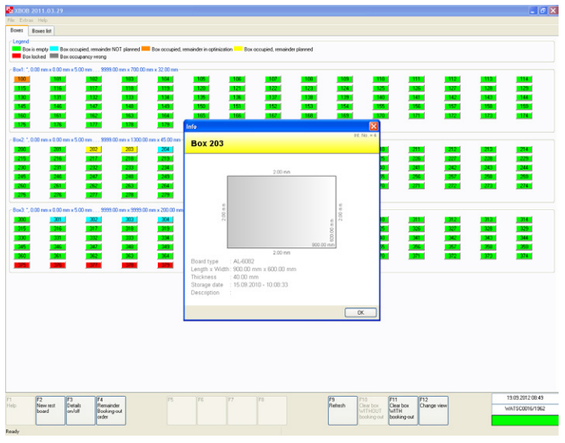
Saw blade management with saw blade data and running data

HPO cutting plan optimization saves time and money.

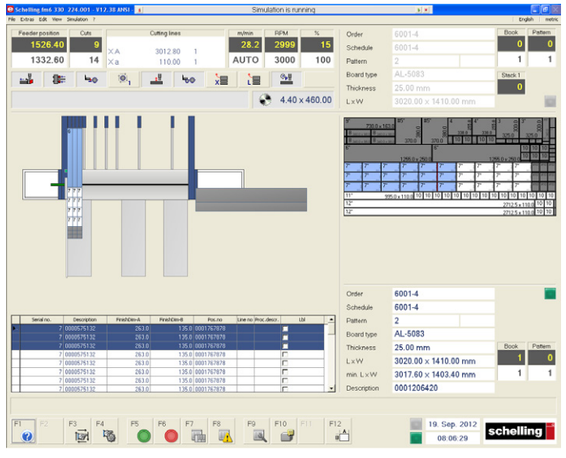


The latest version of the HPO cutting plan optimisation offers new functions for productivity and operating convenience.
Multi-core use ensures the speed available from state-of-the-art hardware is effectively utilised. Thus computing times are reduced by as much as 60 %. In addition the system works with the latest computer core. Another new feature is that the appearance of plans can be virtually set as desired, on request the optimal unmachined panel can be determined, the print function can be configured and searching has been even more clearly designed.

XBoB brings order to waste.



With the XBoB remnant management program, panel remnants can be managed in a manual store. Remnants automatically are booked in and out in interaction with the machine controller.
In addition XBoB is the interface from the machine controller to the optimization program. Remnants that accumulate can be replaned and used without delay in the optimization. An easy and safe system for maximum capacity utilization of material.



Control: Data of actual production on the screen

Display of the current cutting pattern, the cut, the order and the material on the screen.

Technical specification

	fm 10	fm 12
Saw Blade		
Diameter (mm)	680	780
Projection (mm)	218	268
Clamp opening (mm)		
Cutting height (mm)	200/8˝	250/10˝
Feeder speed		
forward (m/min)	0 – 25	0 – 25
backwards (m/min)	0 – 30	0 – 30
Saw Carriage speed		
forward (m/min)	0,1 – 80	0,1 – 80
backwards (m/min)	80	80
Power		
Saw motor (kW)	55	68

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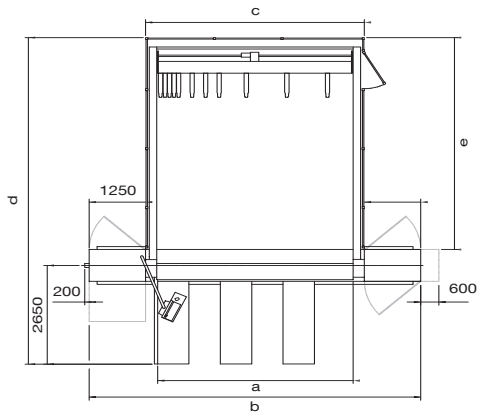
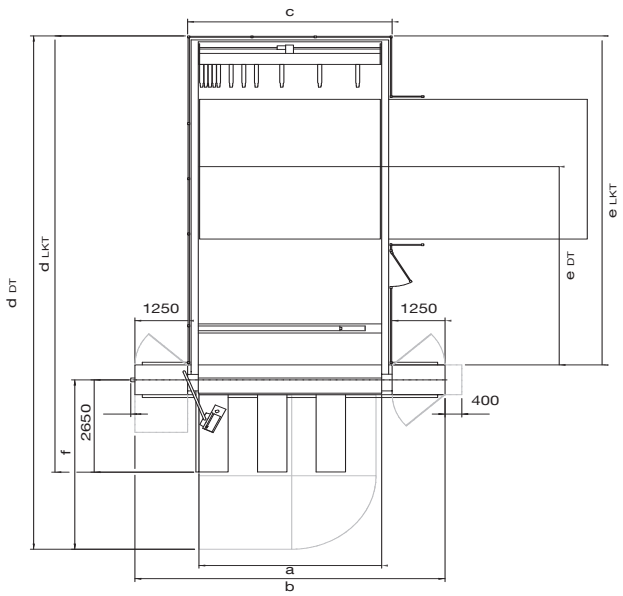
Dimensions **fm 10/fm 12** man



fm 10 / fm 12 man			
Cutting length	**330**	**430**	**630**
a (mm)	3330	4330	6330
b (mm)	7200	8200	10200
c (mm)	3860	4860	6860
d (mm)	7120	8120	10120
e (mm)	4200	5200	7200
Weight (kg)	**8.500**	**11.000**	**14.000**

Dimensions **fm 10/fm 12** auto



fm 10 / fm 12 auto			
Cutting length	**330**	**430**	**630**
a (mm)	3330	4330	6330
b (mm)	6350	7350	9350
c (mm)	3860	4860	6860
d_{LKT} (mm)	7900	8900	10900
d_{DT}	8927	10927	14927
e (mm)	4775	5775	7775
f	3677	4677	6677
Weight (kg)	**11.000**	**13.000**	**17.000**

DT - Turntable / LKT - Air floatation table

ENG 10/2012 | 200 Stück | v1

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