

Ultra-compact: saw manufacturer HOLZMA develops a beam saw system for SIMONA AG with a mere 15 x 25 metre footprint

SIMONA AG, with its registered office in Kirn, Germany, is one of the world's leading manufacturers of semi-finished plastic products. These also include the production of large plastic sheets. HOLZMA Plattenaufteiltechnik GmbH designed and constructed a suitable saw to cut this material gently and efficiently to customised sizes. The special challenge: the installation had to fit in the smallest of spaces in the production hall in Kirn.

SIMONA produces plastic sheets (made of PE, PP, PDVF and others) not only in so-called sales-related sizes, i.e. standard sizes, but also in customised sizes. These sheets used to be cut on a gantry-type cutting machine. The company also had two single saws and one saw with a lift table. This solution was no longer able to cope with the company's requirements and led increasingly to capacity bottlenecks and inaccurate cuts, because the cutting height of 100 mm was no longer sufficient. The gantry-type cutting machine no longer permitted ergonomical handling of the big (up to 6200 x 2100 mm) and heavy (up to 1.3 t) sheets.

SIMONA therefore purchased a new, high-precision cut-to-size installation for sheet material from HOLZMA. It was tailored to match the specific requirements of the company. Saw manufacturer HOLZMA acted as general contractor and offered SIMONA the entire installation from one source.

The new installation is based on the HOLZMA angular plant HFL 33 and is designed as a stand-alone solution. Despite SIMONA's three-shift operation, it was not production capacity that was given priority in the requirements specification. They were rather looking for a solution enabling them to process extremely large, heavy boards efficiently

and without damage to the boards. At the same time, the installation was to be very compact – despite the large boards – and so ideally suited to SIMONA's site conditions. This meant that a substantial streamlining of the material flow in comparison to the previous solution could also be achieved.

The installation has a vacuum feeding and destacking system in an element designed as a ring solution. Cut boards are offstacked by means of two mobile carriages that, when laden, move along rails away from the installation so that the books can easily be collected by a fork-lift truck.

Furthermore – and this is unique – the installation also reliably sorts parts according to thickness tolerance: cut-to-size parts are measured by a thickness gauge specially developed by HOLZMA, recorded and correspondingly offstacked.

The new installation went into operation in January of this year. It meets the required production output effortlessly and still has a lot in reserve for the future. This is what HOLZMA achieved for SIMONA with the new installation:

- ✓ Improved material flow
- ✓ Significant increase in output
- ✓ Reduced manpower requirements with significantly improved ergonomics, resulting in hazard reduction
- ✓ Faster, more efficient operation
- ✓ Integrated product quality assurance, reduction of production steps and improved product quality

Information box: information on the installation

Machine Model:	HFL 33 angular plant
Board materials:	PE, PP, PVDF
Board size max.:	6 200 x 2 100 mm
Board size min.:	2 000 x 1 000 mm
Board thickness max.:	160 mm
Board thickness min.:	10 mm
Weight of boards:	up to 1.3 t
Material density:	between 1.0 and 1.4 t/m ³
Saw blade projection:	185 mm
Rip saw cutting length:	6500 mm
Crosscut saw cutting length:	2 200 mm
Saw carriage speed	20 m/min as set value with automatic speed limitation, if necessary
Special features of the installation:	<ul style="list-style-type: none">... Vacuum feeding... Measuring device for board thickness located behind the crosscut saw with a measuring accuracy of +/- 0.15 mm... Ultra-compact design: dimensions, including infeed and off-stacking system, are approx. 25 x 15 metres Despite the large board sizes, the installation is very narrow and short... chips sorted into two specified materials for virtually unmixed disposal... Labelling

Important Key Data: SIMONA AG

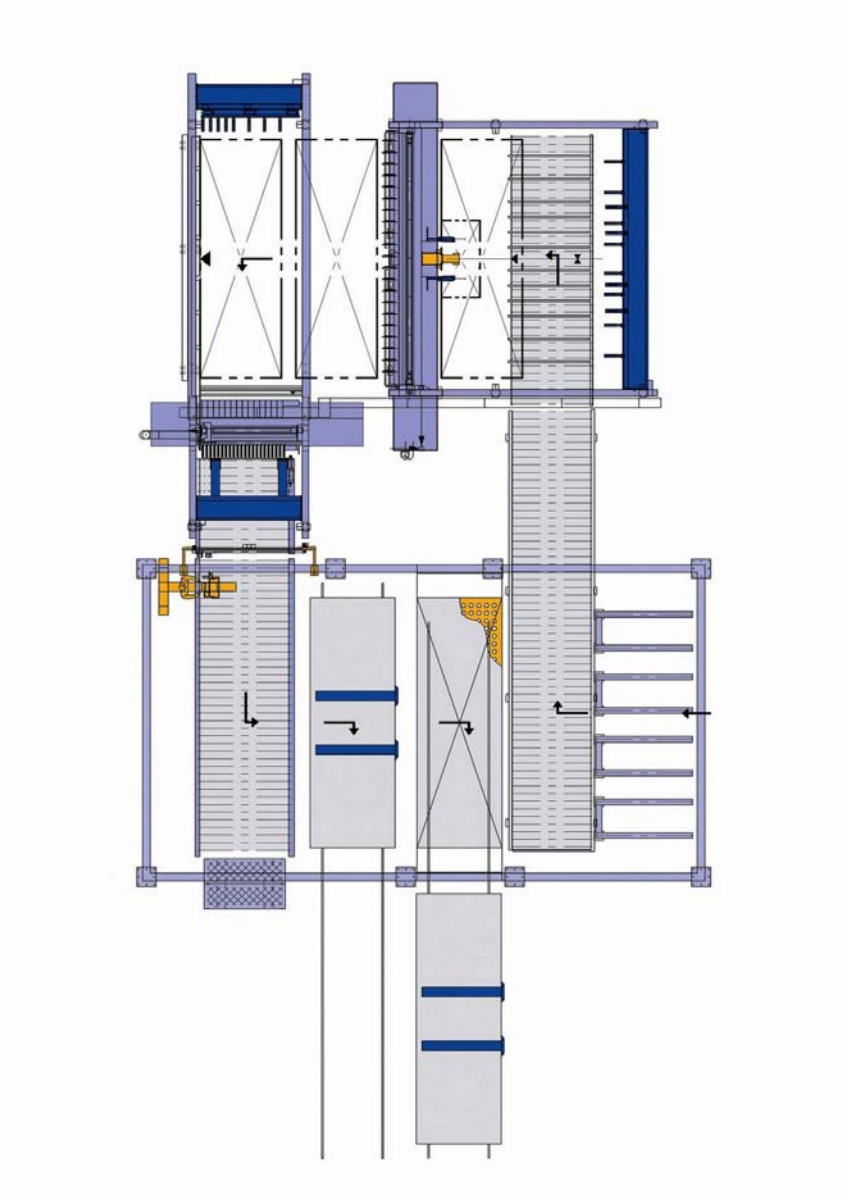
Theodor und Heinrich Simon founded the leather factory 'Lederfabrik Carl Simon Söhne' in Kirn in 1857. From 1960 onwards, production gradually switched from leather to plastics. Today, SIMONA is one of the leading European manufacturers and distributors of thermoplastic, semi-finished plastic products with over 1000 employees worldwide. Alongside extruded and pressed sheets, solid and hollow rods, profiles and welding rods, standard products also include pipes and fittings, electro-fusion sockets and valves. Following materials are processed ...

- ✓ Polyethylene (PE)
- ✓ Polypropylene (PP)
- ✓ Polyvinyl chloride (PVC-U) hard and expanded
- ✓ Polyethylene terephthalate (PETG)
- ✓ Polyvinylidene difluoride (PVDF)
- ✓ Ethylene-Chlorotrifluoroethylene (E-CTFE)
- ✓ As well as special materials, for example for use in orthopaedic technology

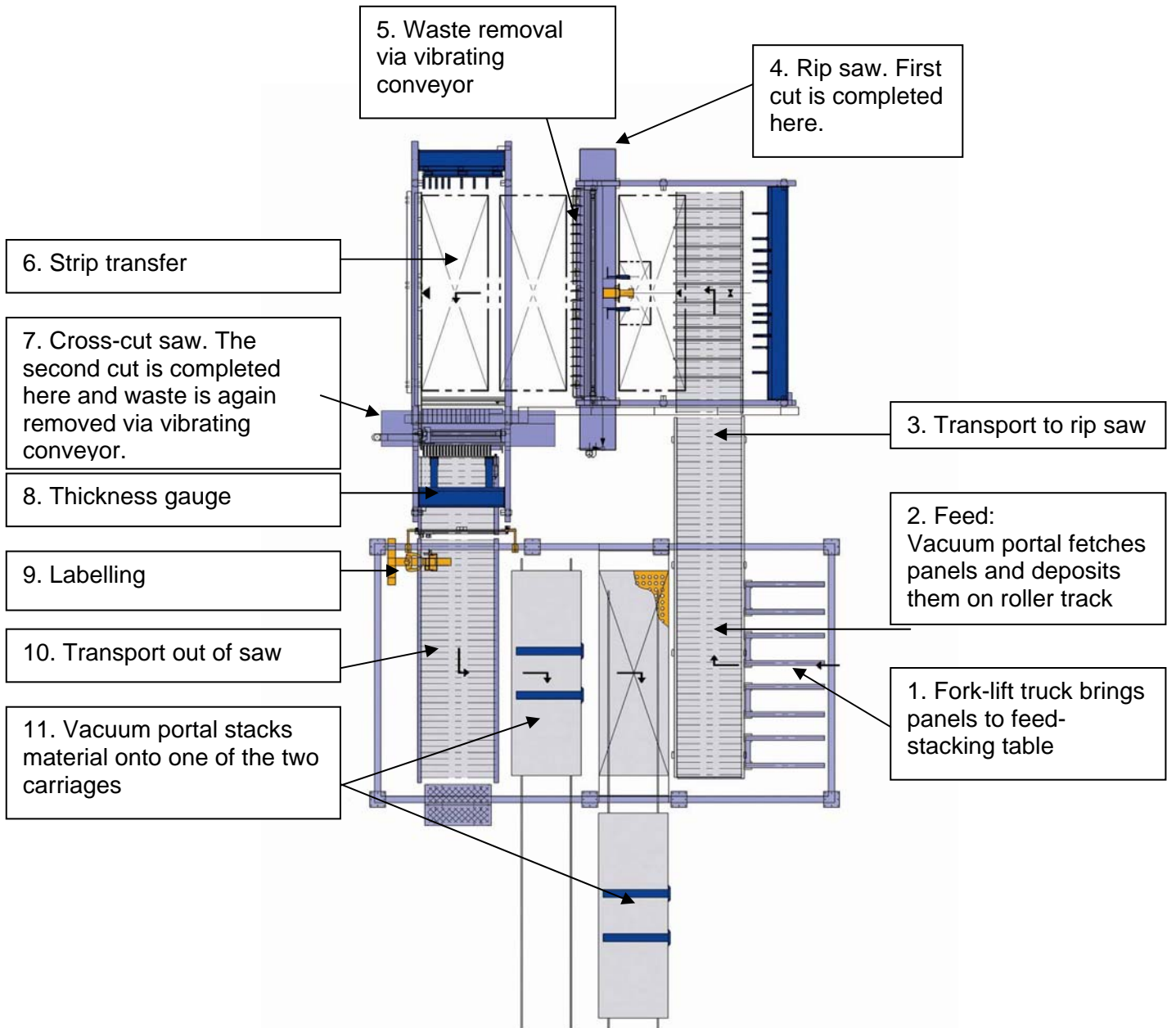
SIMONA is represented all over the world. With a total of nine subsidiaries as well as representative offices in Southeast Asia, SIMONA is present on all the important markets.

The SIMONA Group reported a double-digit growth rate in the first six months of 2006. The sales revenues in the Group totalled 125.0 million euros as of 30th June 2006 compared to a Group turnover of 230.6 million euros in 2005. The operating profit (EBIT) was 10.0 million euros, corresponding to an EBIT margin of 8.0 per cent.

Pictures: HOLZMA



Simona's installation viewed from above. Explained on the next page for better comprehension.





Picture 1



Picture 2



Picture 3



Picture 4

Pictures 1 to 4 are individual pictures, not a sequence:
Vacuum feed system deposits panels on machine table.



Picture 5: stacking



Picture 7

Pictures 7-9: The program fence moves the panel, gripped in its clamps, into the cross-cut saw for the second cut. In the background: The next book leaves the rip saw and is pushed by the outfeed fence across the cutting line onto the intermediate table where it is aligned and then forwarded to the program fence of the cross-cut saw.



Picture 8



Picture 9



Picture 10: SIMONA AG in Kirn, Germany



Picture 11: Cut panels produced by SIMONA

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