



DRIVE OFF AND SLIT LENGTHWISE

The development of an automatic cutting machine for the automatic and parallel cutting of ski and snowboard surfaces requires both skill and know-how. Together with the customer, Metzner has solved this challenge with a pioneering system that meets the requirements.

Again and again, the five small blades move up and down in parallel. They repeat this process twenty times a minute. The only thing you hear from them is the short cutting sound when they pierce the thin film. Behind the blades are piles of 1.70-metre-long foils, on which enterprising ski and snowboard fans will be breaking down the slopes a few months later...

Using the full range

Before Metzner developed this machine,

the customer could only cut one film at a time. An automated, individual setting of different widths, as is the case today, was not possible. This limited the efficiency of production. At that time, it was clear to the company that something had to change. And the changes were firmly defined: In addition to the parallel longitudinal slitting and cross-cutting of the films, the line also had to be integrated into the already existing line concept. Thus, fixed external dimensions were specified. It was also important to

set up the line on a sliding system so that the complete Metzner line can be docked to each of the extruders within the extrusion centre. And in order to keep the set-up times for the respective set-up of the line as short as possible, the line had to be accessible from all sides.

The conception

In order to be able to process the thin films that come directly from the extrusion line, a slack control system was first integrated,

The facts

Customer profile

The customer is a well-known manufacturer of bases for skis and snowboards. With its products, the company occupies a leading market position in this segment and supplies many of the well-known ski brands.

Requirements

In addition to numerous technical specifications, the following main requirements had to be met:

- Cutting system for particularly flat materials
- Integration into the existing line concept
- The line design must be based on a shifting system in order to dock the line to each extruder within the extrusion centre.
- Accessibility from all sides in order to minimise set-up times for the respective set-up of the line

Benefit

The longitudinal slitting device allows the maximum extrusion width of the line to be fully utilised. In addition, the quality is improved by integrating the cutting system directly into the extrusion centre: Since the material is not yet fully cured after extrusion, the knives can make a clean cut.



which serves as a guide and at the same time as a weighting device. The thin film is then fed directly into the slitting unit via a system of several guide rollers. Once inserted into the machine, the film is processed by up to ten slitting blades. As it was very important to the customer to process different material spreads, all blades can be adjusted to the desired width. Blades that are not needed are folded into the inner area of the machine (with its own safety cover). This reduces injuries that could result from reaching into a running system to almost zero.

Precise cutting to length

After the longitudinal slitting, a positioning feed takes over the work. With a width of 1000 millimetres and a working length of 200 millimetres, the feed ensures the length precision of the ski pads.



The films cut into strips are then cut to the desired length by a cross-cutting module. During the design phase, particular emphasis was placed on quick knife changes.

Automatic removal

A conveyor belt is connected downstream of the system for the removal of the cut film, from where the film is transported to the removal point. When the film is slit lengthwise, two edge strips are produced which are fed separately to a recycling process via an additional unwinding system.

Fast production and satisfied customers

Metzner designed and manufactured the system within three months; the customer was so satisfied with the result that they ordered further systems of this type shortly afterwards.