

The economical cable carriers of the Mono series with fixed carrier widths are available in various sizes, with fixed or openable brackets, and can be delivered ex-stock.

Reliable, Economical And Long Lasting Cable Carriers

More Than 30 Years Of Successful Partnership

Whether you are building sunrooms, completely wooden houses, roofs of trade fair halls or futuristic wooden structures: Krüsi wood processing machines are used when machining precision, economical application and long service life of the machinery are a must. One of the reasons that the installations have such a high level of reliability is the use of cable carriers manufactured by Kabelschlepp of Siegen, Germany.

With cable carriers made of steel and plastic or combined with aluminum stays, the comprehensive Kabelschlepp product range comprises over 100,000 variants in every size and width, accurate for every application, some of which are available in 1 mm width sections. The company attaches great importance to trust-based business relationships with its customers, one of which is Switzerland's Krüsi AG.

Based in Schönengrund, Switzerland, and founded in 1961, Krüsi is a medium-sized company with a staff of about 20 employees. A manufacturer of machine tools for wood processing, Krüsi specializes in the development and manufacture of timber processing

centers, timber frame joinery mills, dovetail mills, length cutting sawmills and log home cutting machines. The Swiss place great value on precision, high quality and reliability in the manufacture of their products. Some 35 to 40 machines are produced annually, 80 to 90 percent of which are marketed worldwide with the exception of Asia and South America.

Krüsi is considered to be a pioneer with regard to machines for log-home construction. About 2,000 machines have been sold since their development in 1966. The Krüsi machines are used to automatically prefabricate house elements from a CAD design, allowing the house to be assembled on the construction site in one to two days. The first CNC controlled timber processing center originated in Switzerland

In 1986 Krüsi built the world's first CNC timber processing center under the designation Lignamatic, and it is still operating today. The system is suitable for 5-axis processing of very large glued laminated timber with maximum dimensions of 1,500 x 800 millimeters and a length of 22 meters, without re-clamping the timber.

All machining processes that are required in wooden construction, like saw cuts, milling, planing, filleting, folding, drilling, and grooves can all be done with this machine very precisely. To do this, the machine is provided with a 15-position tool magazine. The production programs generated from the CAD and structural analysis data are fed directly into the machine control unit.

The following facts make it clear that Lignamatic is not just a "tuned cutting sawmill": The largest version of this custom system that has been built to date has a length of 45 meters and a width of 3.60 meters as well as four carriages that run in the X-direction. "The elements for such spectacular buildings like the ExpoDach 2000 in Hanover and the Chesa Futura in St. Moritz designed by British star architect Foster were fabricated on machines like these," says Urs Iseli, Production Manager at Krüsi.

A cable carrier type for all applications

Since 1972 Krüsi has been successfully using plastic cable carriers made by Kabelschlepp in Siegen to protect and route cables and hoses laid not only in its Lignamatic systems but also in its length cutting and edging sawmills. Kabelschlepp can fall back on more than 50 years of experience in development and production to offer a multitude of cable carriers and systems in metal, plastic and hybrid versions; in other words, the combination of plastic bands and aluminum stays.

All the systems use the very economical and robust Mono series, to be precise type 0450.41 about 4 meters in length in the Y and Z-axis and 48 meters in each of the four X-axes. These solid plastic cable carriers with fixed carrier widths comprise single-part carrier elements, available with either fixed or retractable brackets. Krüsi uses a cable carrier type with an inside height of 24 millimeters and an inside width of 58 millimeters as well as fold-out and removable brackets on the outside to quickly and economically equip cable carriers or replace defective cables. The cable carriers in the X-axis have ten cables to supply power and four pneumatic hoses to clamp the timber horizontally and vertically. Several versions also include a vacuum hose. The cable carrier is equipped with the TS0 divider system to safely separate and route cables and hoses. This plastic divider system divides the carrier cross section vertically into individual chambers. Its optimum separation prevents cables and hoses from being damaged by friction or squeezing.

Contamination not an issue

The entire cable carrier system runs above the track system. Processing takes place within an encapsulated processing unit, meaning that Krüsi does not have to deal with accumulating wood dust and chips, a common problem in the timber industry. For this reason, it was possible to use an open cable carrier like Mono 0450 without having to fear problems with contamination. The carriers are routed in a special sheet-metal channel open at the



In the four X-axes of the Lignamatic, Kabelschlepp cable carriers of the Mono series, type 0450.41 with a length of up to 48 meters are used. The illustration shows the cable carrier in a gliding arrangement.

Machining Technology

The Lignamatic CNC timber processing center is suitable for 5-axis processing of very large glued laminated timber with maximum dimensions of 1,500 x 800 millimeters and a length of 22 meters.



bottom. This additionally ensures that any chips that have accumulated can fall off. Kabelschlepp also offers covered solutions with plastic or aluminum lids for applications with increased chip or dust accumulation. The variants with aluminum lids are available in 1 mm sections, allowing cable carriers to be adapted to given spatial conditions in an optimum manner. Not a single millimeter goes unused. At the moment the cable carriers are still being equipped and the cables pre-assembled on site at Krüsi; however, this

should change in the near future. Once the ongoing control engineering rework of the Lignamatic has been completed – the systems are being retrofitted with a new control type – Iseli plans to make use of the Totatrxax service from Kabelschlepp. Within the scope of this service, the company will supply a complete cable carrier system that is ready for installation, including all pre-assembled cables of the proprietary Life-Line series, which have been specifically designed for operation in cable carrier systems. This service offers enormous cost advantages: the customer has only one contact person for everything, only needs to place one order, receives one complete delivery and has only one payment transaction. Furthermore, storage costs are low, the customer receives matched components that fit and the complete system is under warranty.

Krüsi will continue to rely on Kabelschlepp cable carriers

Iseli can only report about positive experience with his supplier. The first supplied Lignamatic, which has been running in two

The solid plastic cable carrier Mono is a simple, cost-effective solution and can be quickly installed. Usage periods of more than 10 years in 3-shift operation are quite common.

shifts for the past 20 years, only recently had to have some of the cable carriers replaced – a sign of the high quality and long service life of the carriers used. “This is an outstanding, extremely satisfactory result,” says Iseli.



Iseli continues, “We are very satisfied with the Kabelschlepp products and will not use anything else.” He is equally satisfied with the advice and services provided by Kabelschlepp’s Swiss distribution partner, Hans Hess + Co AG. The supply capability of the partner is also excellent: orders are processed within the shortest time possible. Iseli sums up his experience as follows: “Since the cable carriers have proven their worth over such a long period of time, Krüsi will continue to use Kabelschlepp products exclusively.”

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