



WARP PREPARATION

PRO-SMARTCON®

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our division  
sectionar warper  
silk reeling machine  
sekiyone  
urdidor secciona

## SECTIONAL WARPING

With the **PRO-SMARTCON®** PRO-SMH offers a compact and versatile machine with various technological innovations to cope with today's work, in which business success is a question of flexibility because rapid production changes are essential.

The development of the machine is based on our team's decades of experience in the field of weaving preparation and, in particular, sectional warpers. In addition to the newly designed and highly innovative machine, PRO-SMH guarantees fast and competent service, upgrades and high-quality spare parts.

The **PRO-SMARTCON®** is the perfect machine for a wide range of warps, such as fine shirting, wool and cotton drapery, wide upholstery and curtains, table linens, nets and sheer filter-cloths.

A special version of the machine is also available for warps of heavier counts, higher density and generally higher warping and beaming tension requirements.



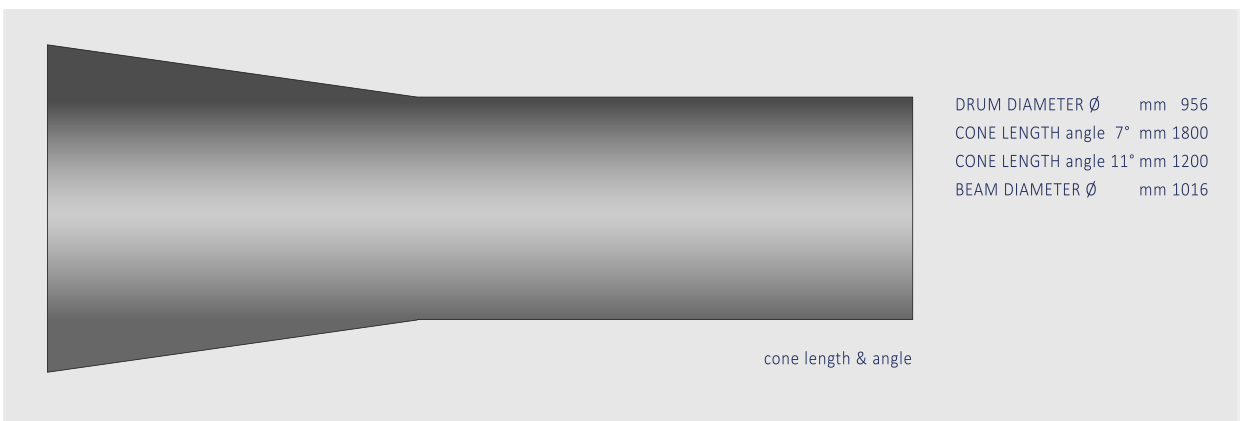
## SECTIONAL WARPING



With its newly developed second generation of sectional warper **PRO-SMARTCON® PRO-SMH** is setting again new standards. The **PRO-SMARTCON®** guarantees more efficiency and productivity to your weaving department thanks to progressive warping and pro-active beaming.

The machine is manufactured according to German quality standards using only high-quality components that ensure trouble-free operation over a long period of time, even when making very long and wide warps.

## PROGRESSIVE WARPING



**PRO-SMH** PRO-CONE®



The accurate warping process starts with a precise measurement of the traverse by a laser sensor which carefully controls the warped diameter.

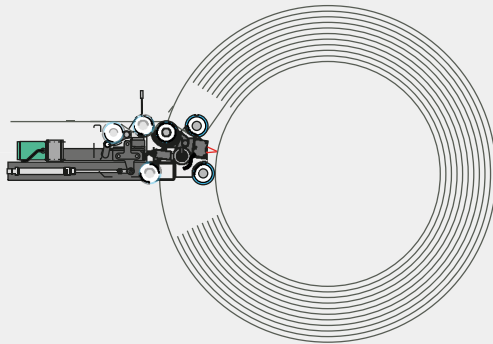
A compacting roller acts at the same time smoothly adjusting the warping band while onboard electronics keeps the diameter under control.



## PROGRESSIVE WARPING

The computer-operated system progressively controls and adjusts the build-up of warping bands from the first section onwards, reliably eliminating any difference in the length of the warp. This results in a perfectly wound beam which will run smoothly and fast on the weaving machine.

The system is a very strong and reliable tool in the hand of even less experienced operators avoiding faulty settings and waste of time and yarn.

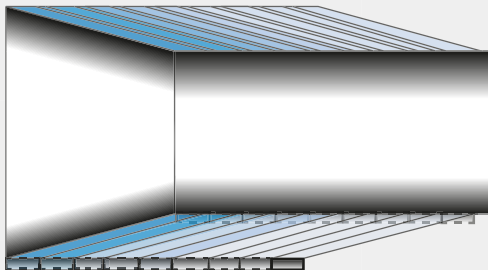


progressive compacting

The laser sensor accurately controls the warped diameter, while a compacting roller ensures a smoothly adjusted compression of the warping band.

Precise measurement of the traverse is then accompanied by the pressure applied immediately to keep the yarn build-up and band flatness on the sections with progressive and carefully adjusted pressure, thereby reliably eliminating differences in the build up. All rollers are equipped with magnetic brakes.

**PRO-SMH** PRO-SMARTCON®



traverse calculation

- the compacting roller has kick-back movement at stops
- brushless motors controlled by machine computer operate the system
- the system acts on accurate re-circulating ball screw

**PRO-SMH** PRO-SMARTCON®

## PRO-TENSOMAT®

The **PRO-SMARTCON®** is equipped with the **PRO-TENSOMAT®** system to improve the warping process. Our holistic Newton control philosophy starts at the creel with adjustable smart tension units which are controlled by load cells on the warping table.

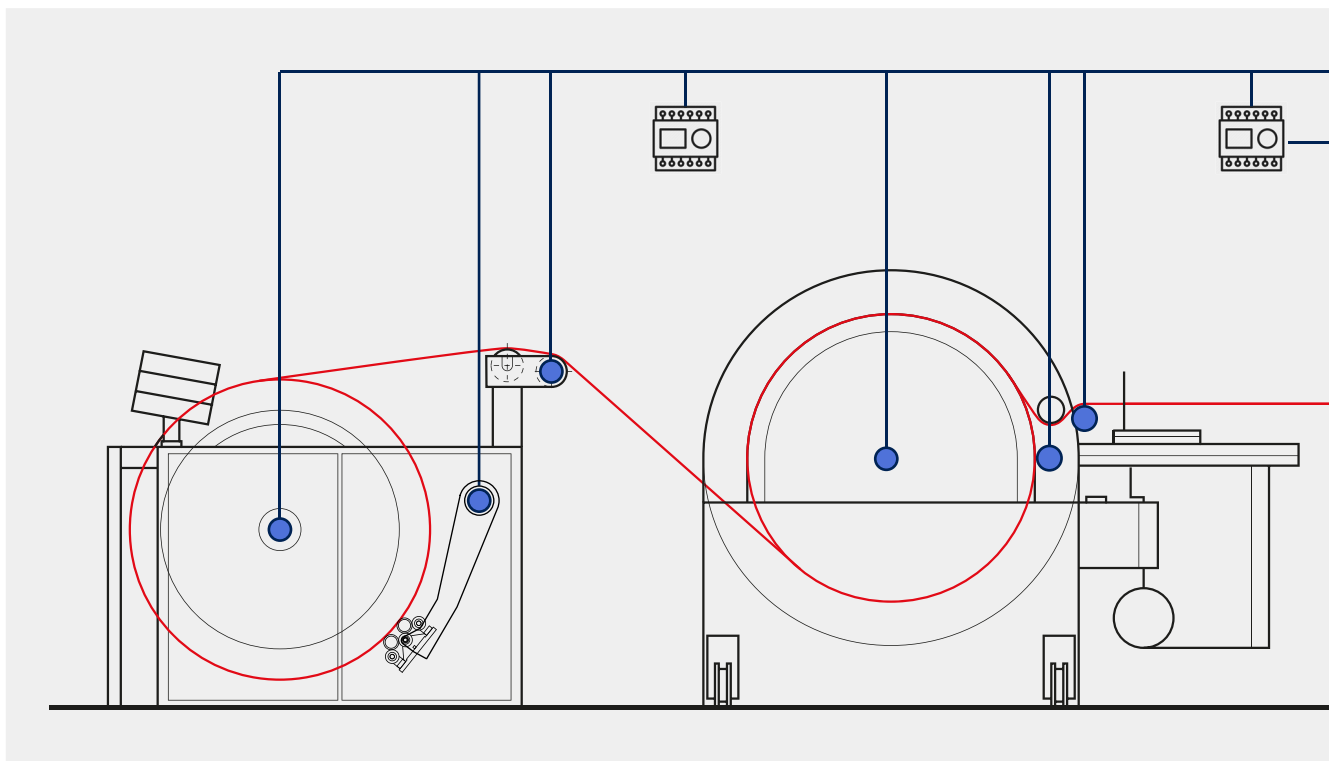
The progressive compacting roller together with the laser control guarantee that the perfect tension of the warp on the drum is applied.

At beaming stage the computer controlled pro-active system activates the motor brake system in order to have a perfect and regular tensioning of the warp there as well. A load cell between the drum and beam provides the computer system with constant feedback on the actual tension so that the system can perfectly and automatically monitor the settings.

An accurately calibrated pressure device performs the final required hardness of the warp on the beam.

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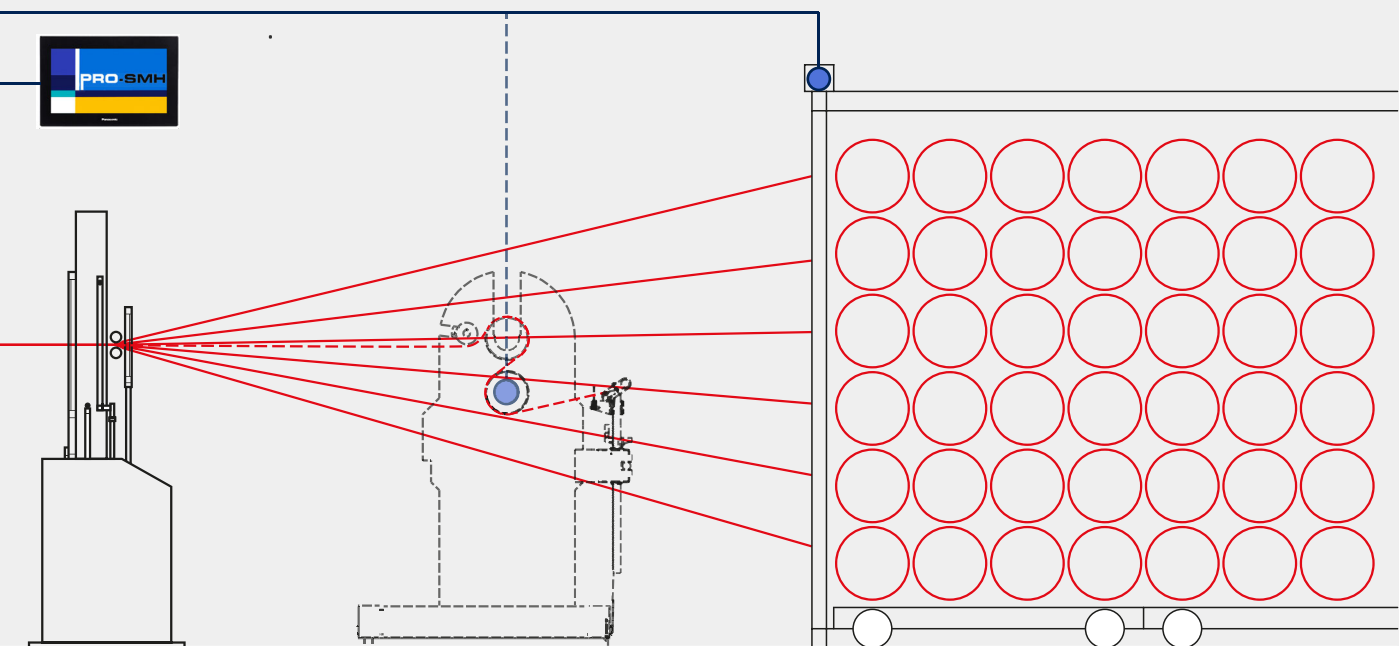


## PRO-TENSIONAT®

If higher tension is required, an optional motorized S-Roller can be connected between the creel and leasing device. The S-roller increases and equalizes the tension regardless of fiber, speed, shape and diameter of the bobbins.



S-Roller unit for tension increase and equalization



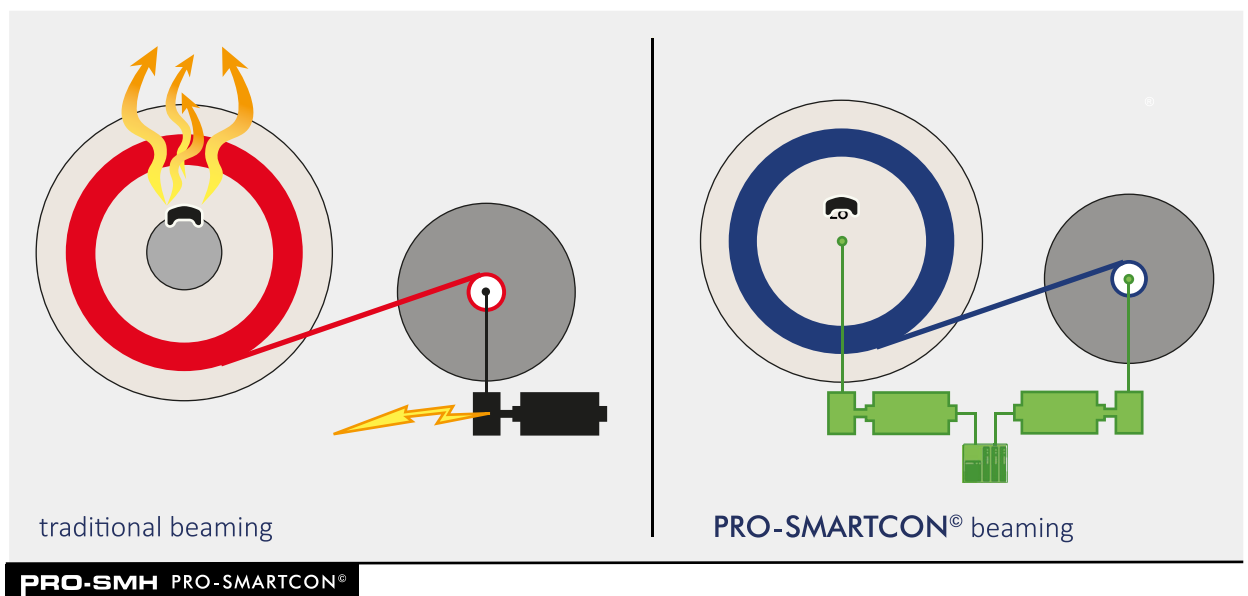
## PRO-ACTIVE BEAMING



Modern weaving machines require perfect beams with regular warp. The **PRO-SMARTCON®** is equipped with a pro-active beaming system that adjusts the beaming tension by motors: the drum motor continuously acts as a brake and precisely adjusts the beam motor for perfect control of the tension.

This system operates without any mechanical friction and with regular tension whilst avoiding the wear of disc brakes. A wide range of tension is possible with smooth adjustment. No limits in no tension and no extra tension at start and stop will damage the beaming operation. .

At beaming stage the computer-controlled pro-active system activates the motor brake system in order to have a perfect and regular tensioning of the warp there as well. A load cell between the drum and the beam keeps the actual tension under control and gives continuous feedback to the computer-managed system.

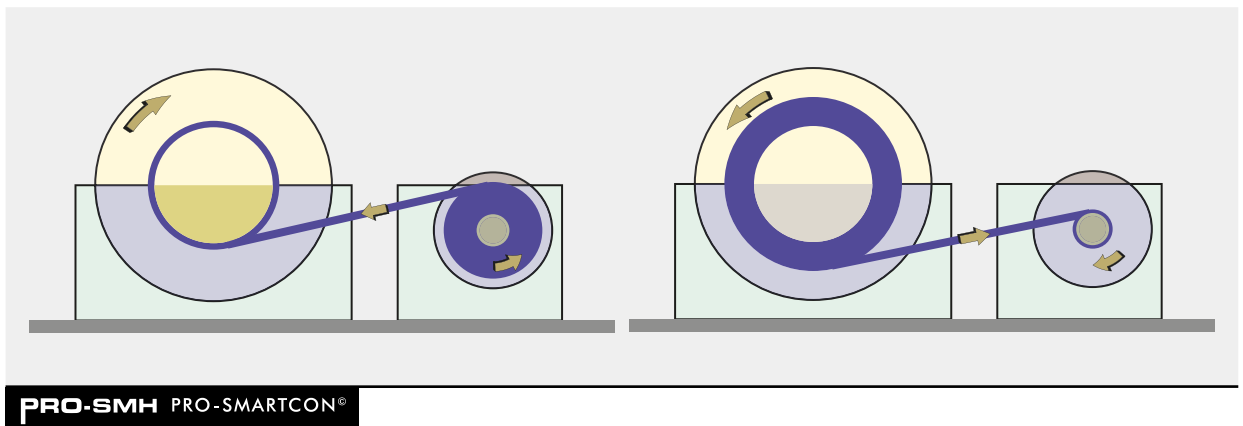




## PRO-ACTIVE BEAMING

The system offers some additional advantages: the reduction of energy consumption for a more sustainable and profitable production. The pro-active beaming is controlled by a computerized system through load cell feedback.

This system allows already warped beams to be unwound back to the drum and rewound onto. This rebeaming pack is a powerful tool which allows you to easily repair faulty warped beams.



## PRO-CREEL®

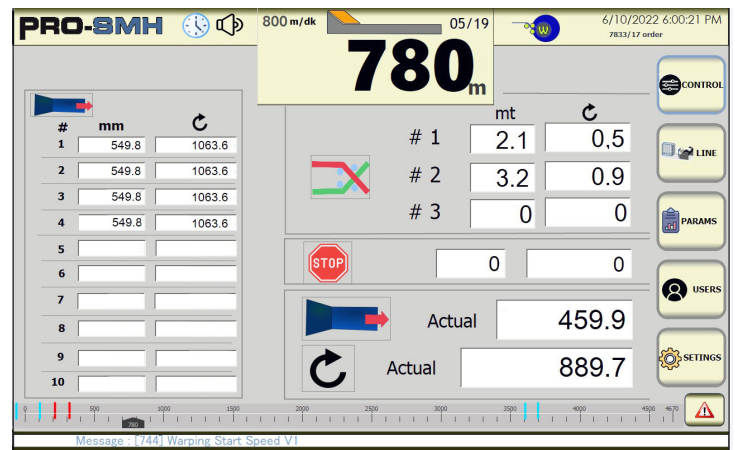


The **PRO-SMARTCON®** can be combined with “tailor-made” creels to suit the customer's requirements and the space available, from the inexpensive standard creel to the magazine creel (suitable for any shape and weight of bobbins), to swivel frames and trucks creels designed for any type of application. Also a wide range of rolling creels is available for special applications.

For more details please see our special **PRO-CREEL®** catalogue.

## MACHINE CONTROL

The machine control is based on a PLC from Siemens and a drive system from Lenze. This ensures maximum reliability and operational safety of the system. All other electronic components come almost exclusively from first-class Western European manufacturers.



The system is operated via a Siemens HMI with touch function. Only self-developed software is used here, as this is the only way to ensure that the operator can work intuitively, effectively and almost error-free.

The menus are structured in such a way that there is always a maximum overview of all relevant settings and processes.

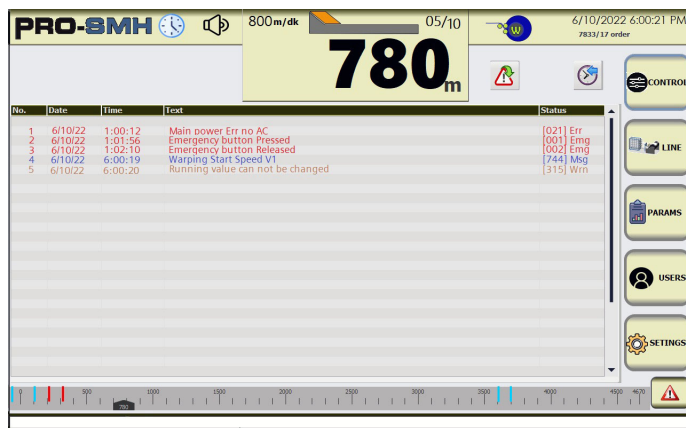


## MACHINE CONTROL

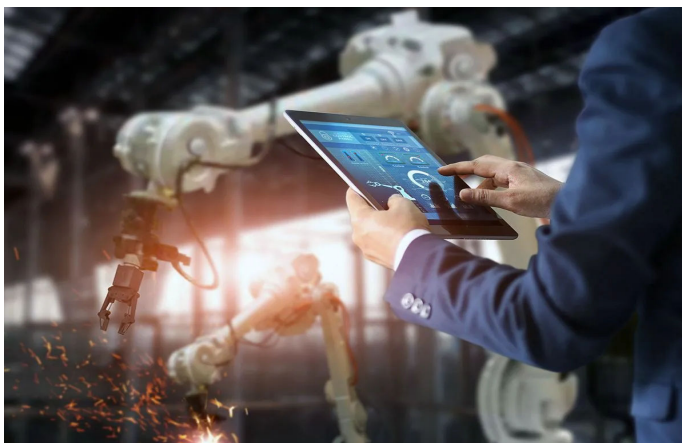
Only a machine with high availability guarantees a short-term return on investment. In order to make this possible, we equip our machines with a sophisticated diagnostics and error management system that enables the user to eliminate faults quickly and effectively.

The error messages are in plain text, so that almost all errors can be corrected by the operator immediately and usually without calling in specialist personnel.

In the extremely rare case that the fault cannot be eliminated with the help of the fault management system, our technical service will be happy to assist you. On request, we can establish direct connection to your machine at any time via the standard built-in router in order to find a solution to your problem using the extensive diagnostic tools.



Our machines are Industry 4.0 ready and enable full connection to the digital future. Of course, all our machines comply with the applicable CE regulations and the high standards of other European machine directives.



# PRO-SMH

IN COOPERATION WITH



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