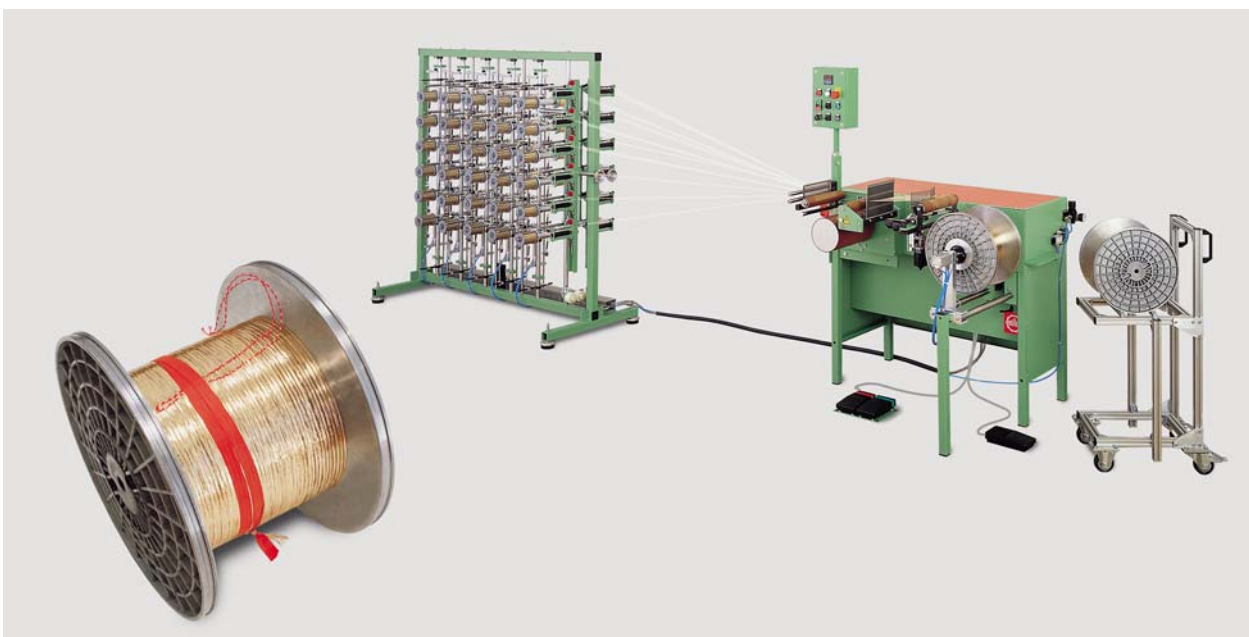
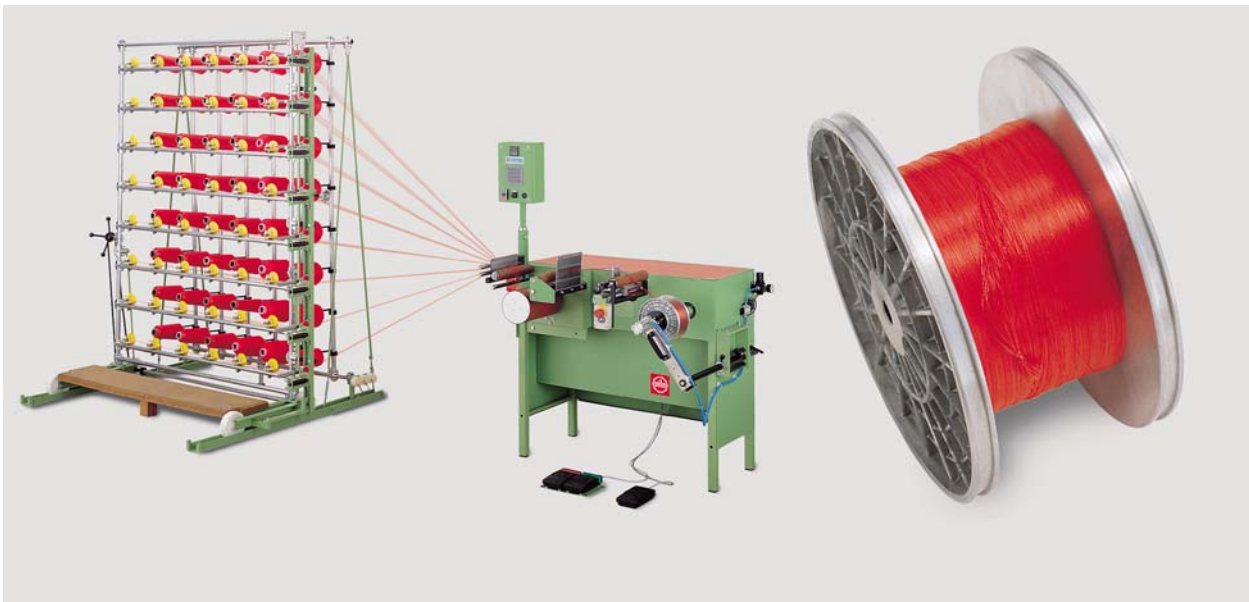


# Semi-automatic warping machine

HW-ZS + HW-ZR

for natural and man-made selvedge thread yarns,  
as well as for tapes on warp bobbins



## HW-ZS + HW-ZR

### Concept

This new generation of semi-automatic warping machines is equipped with the latest control and operating technology. The machine is of modular design, which allows a choice between two machine types:

- HW-ZR for wide warps only (laying using a motor with eccentric)
- HW-ZS for wide and tape warps (laying using a stepper motor)

### Advantages

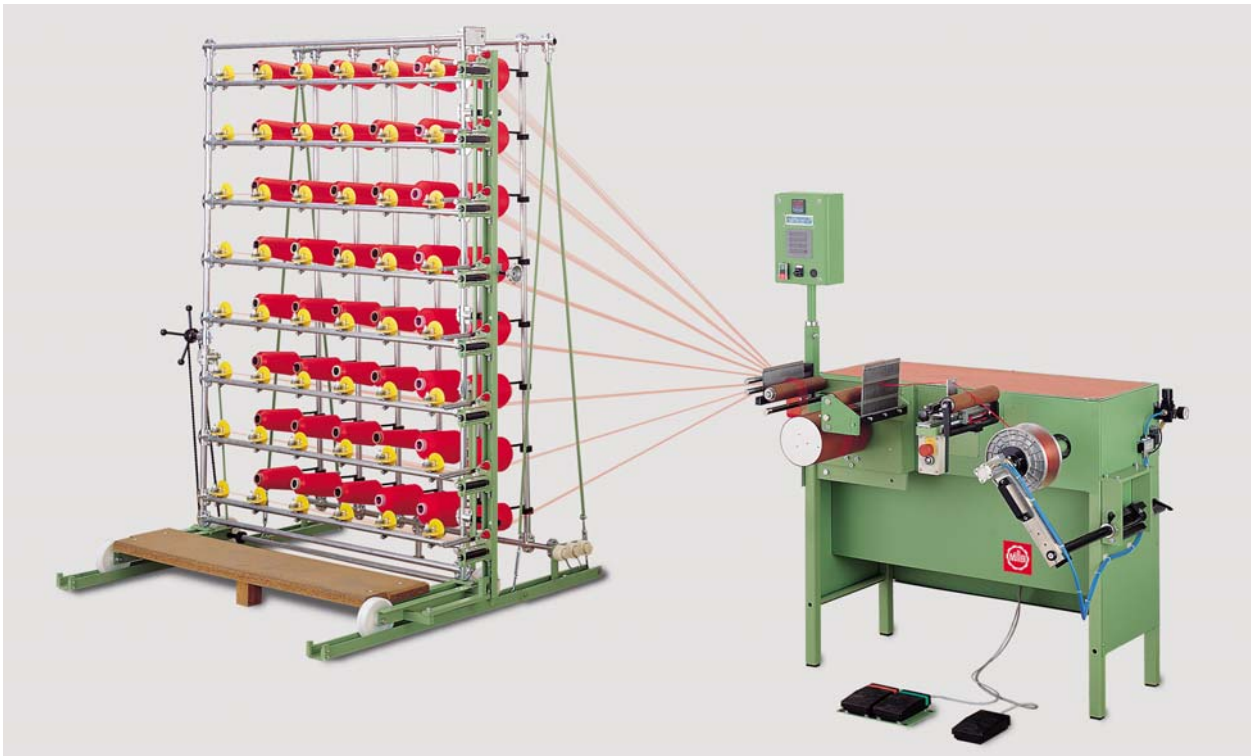
- Extremely flexible range of applications (HW-ZS)
- Simple operation and resetting with programmable and retrievable parameters (HW-ZS)
- Precise length measurement
- Microprocessor control with 250 memory units (HW-ZS)
- Perfect warps through precise yarn guidance

### Standard accessories

- Spindel-free, warp bobbin pick-up
- Length measurement device
- Constant thread speed and electronically regulated ramp function
- Laying drive for 50 - 280 mm with stepper motor for tapes and wide warps (HW-ZS)
- Cross-winding via a motor with eccentric for wide warps only (HW-ZR)
- Pneumatic thrust bearing with centering and pressure plate
- Automatic stop of the winding axis upon reaching the required meterage or in the case of thread breakage (at the creel transition point)
- Feed and cross-laying reed
- Expanding reed (HW-ZR)

### Optional extras

- Antistatic devices
- Warping creel for overhead running
- Roll-off creel with permanent- and stop brake for lurex and fancy threads, wires and normal yarns
- Enlarged outer bobbin diameter,  $D = 400$  mm
- Enlarged bobbin width,  $L = 400$  mm
- Storage and transport wagon for simple handling of the warp bobbins



HW-ZS overview with optional thrust bearing and fast GES/V warping creel

### HW-ZS

The HW-ZS model can be used for tape warping or wide warps. The switch from one operational mode to another only takes a few minutes.

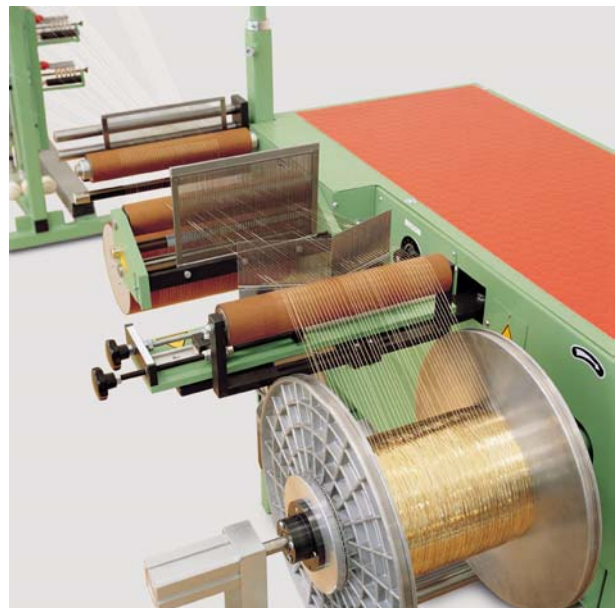
In the case of tape warping, laying takes place using a highly dynamic stepper motor, which ensures a precise selvage. The warping and laying parameters are controlled by microprocessor and can be

adjusted by the operating personnel. The parameters can be stored both as a recipe or under program names.

The maximum laying height during tape warping is 280 mm. Thread guidance takes place using an U-shaped thread guide.



HW-ZS for tapes and wide warps



HW-ZR for wide warps

**HW-ZR**

This model is intended exclusively for wide warps. An electronic metre counter is foreseen instead of microprocessor control. Thread guidance takes place via a straight or V-shaped reed. The straight reed can be rotated, in order to adjust the yarn sheet on the bobbin discs.

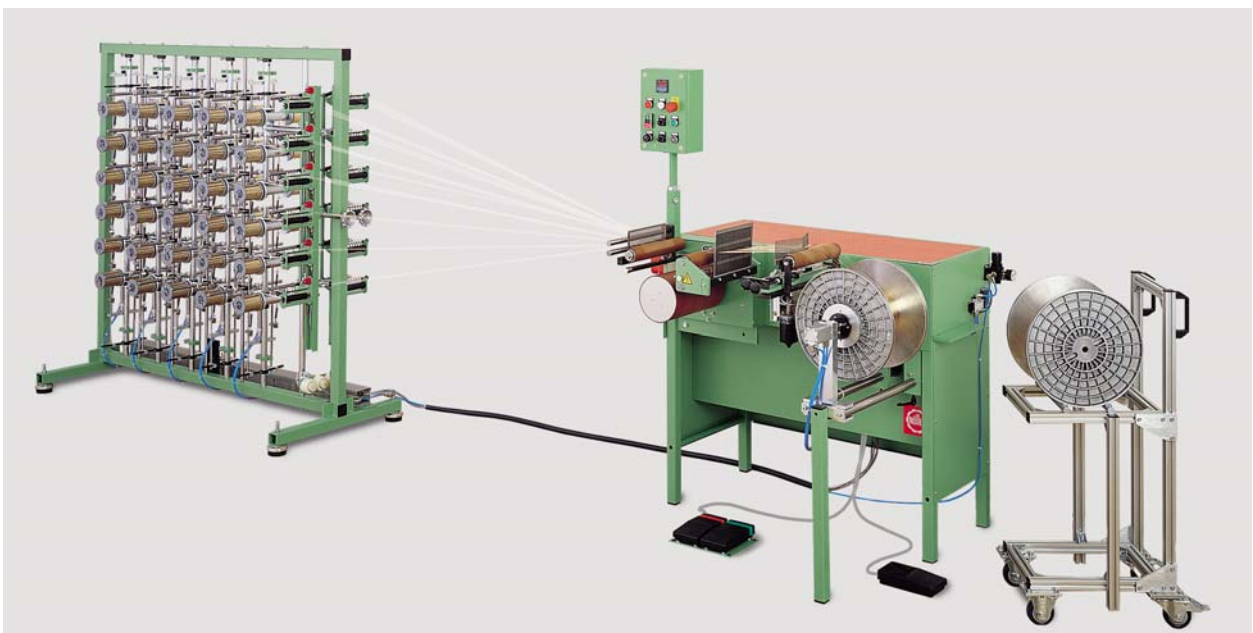
Lateral laying using a motor with eccentric (max. laying height +/- 5mm) ensures a smooth tree surface.



HW-ZS operating unit with microprocessor control and recipe management



HW-ZR operating unit

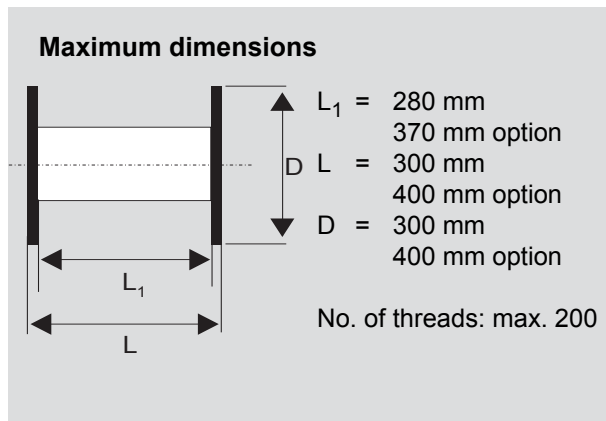


HW-ZR overview with roll-off creel and warp bobbin transport wagon



# HW-ZS + HW-ZR

## Technical data



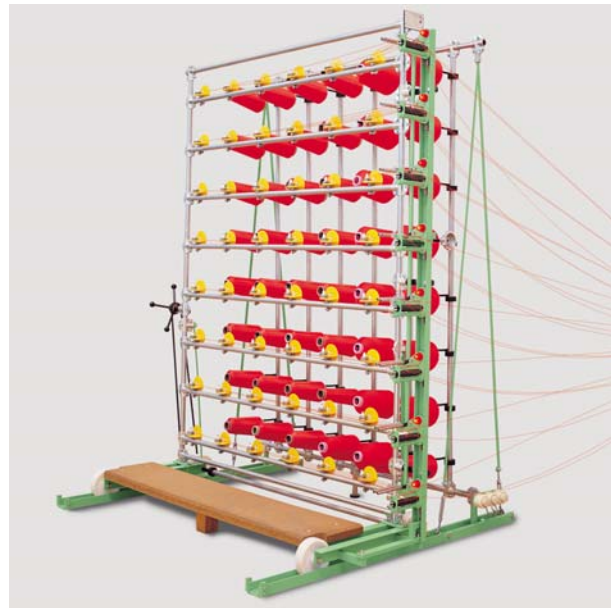
**Warping speed** ( $\varnothing$  dependent)  
HW-ZR + HW-ZS max. 400 m/min

### Connected load

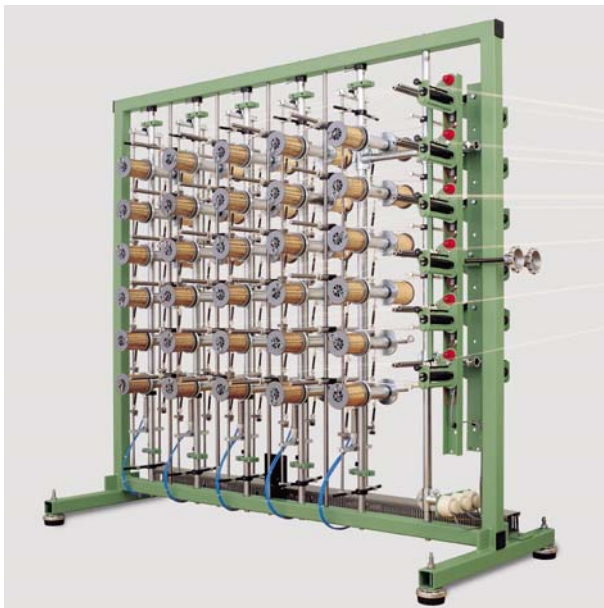
Rated output 2,0 kW  
Mains connection 3 x 230 V  
400 V+N+PE / 50 Hz  
Compressed air 6 bar, Consumption approx. 10 l/min

## Dimensions

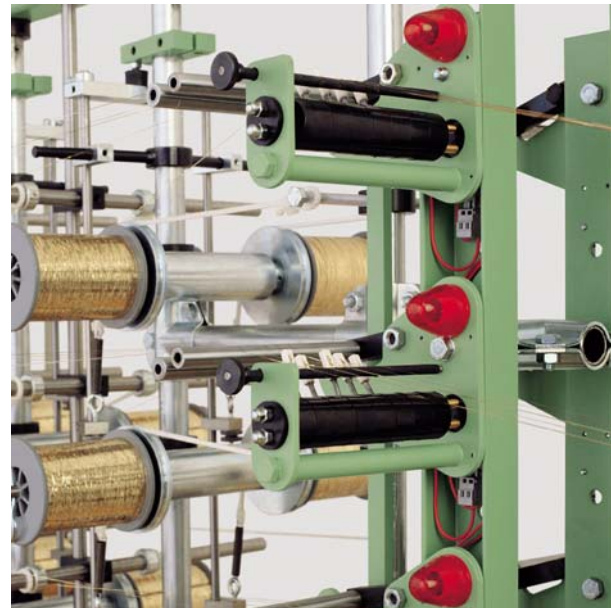
Width 1450 mm  
Depth 800 mm  
Height 1700 mm



GES/V creel for overend take-off



Creel for the roll-off of flanged bobbins



Detail of the single thread monitoring on the roll-off creel

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## Fascination of Ribbons and Narrow Fabrics Innovation in Machinery

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