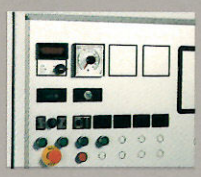
VTS-06/-07/-08/-09

Two-for-One Twisting Systems for Staple Fibre Yarns with High Technological and Economical Advantages



Volkmann

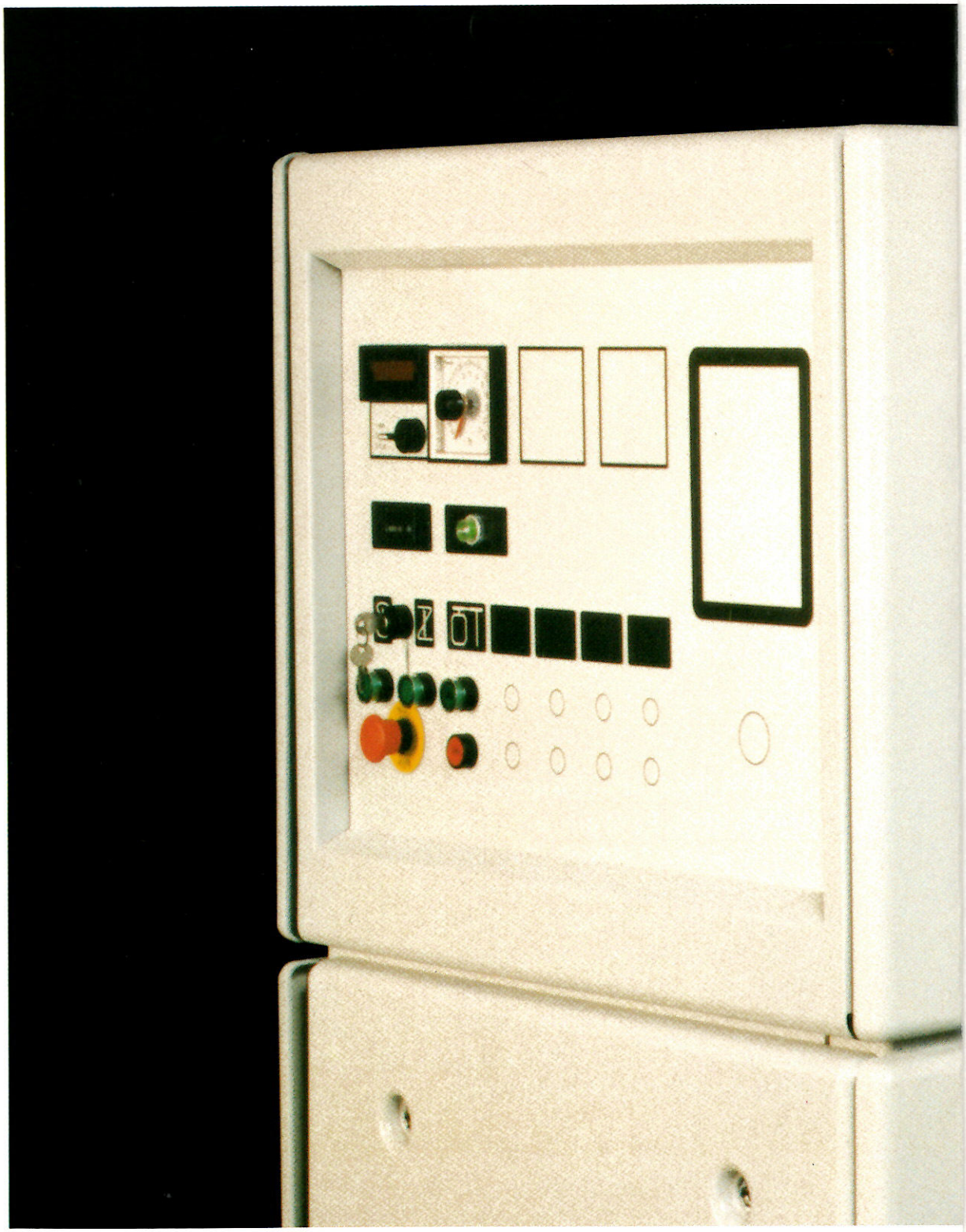
Twisting Systems

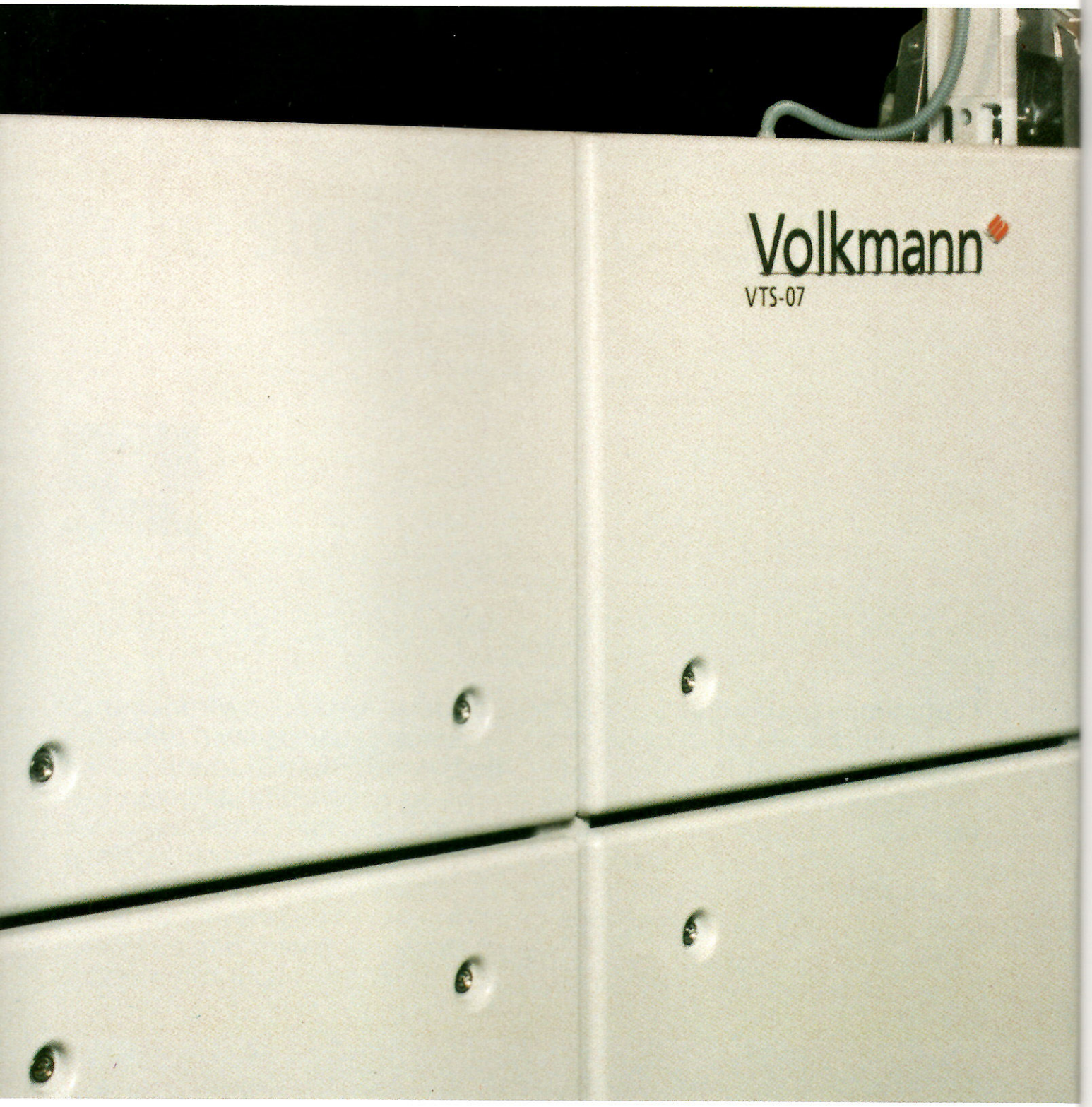
Contens

During Two-for-One twisting large feed packages are twisted and wound on cross-wound packages in one single process

Volkmann Two-for-One twisting machines have achieved dominant share of market due to their technological and economic advantages. More than 2 million spindles have been supplied so far. The Two-for-One concept combines several manufacturing processes and smoothly adapts to modern production methods.

Two-for-One twisting eliminates process steps by permitting a wide variety of feed packages to be both twisted and wound in a single process. Additional process steps (waxing, lubricating, singeing) may be performed simultaneously.

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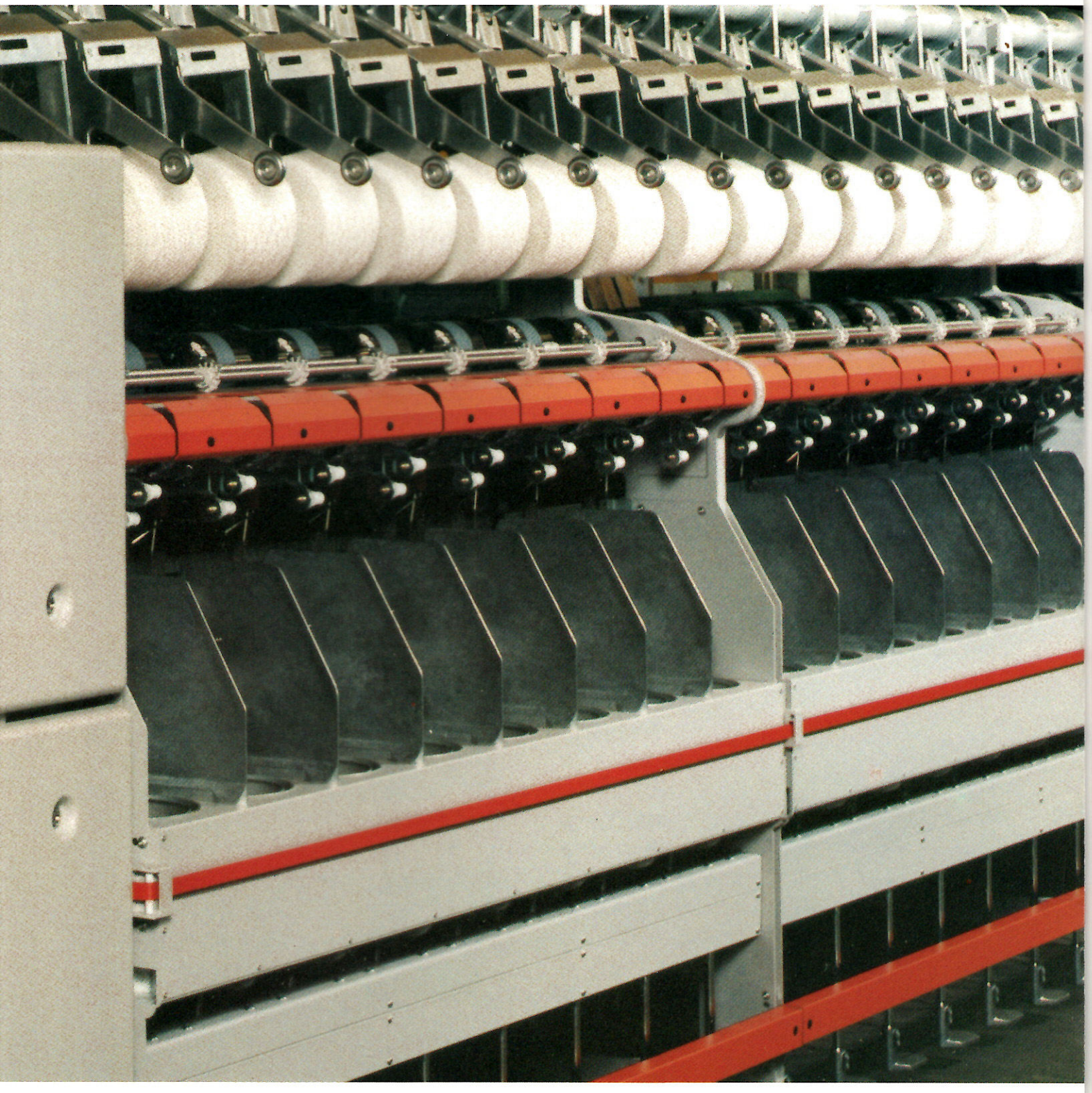
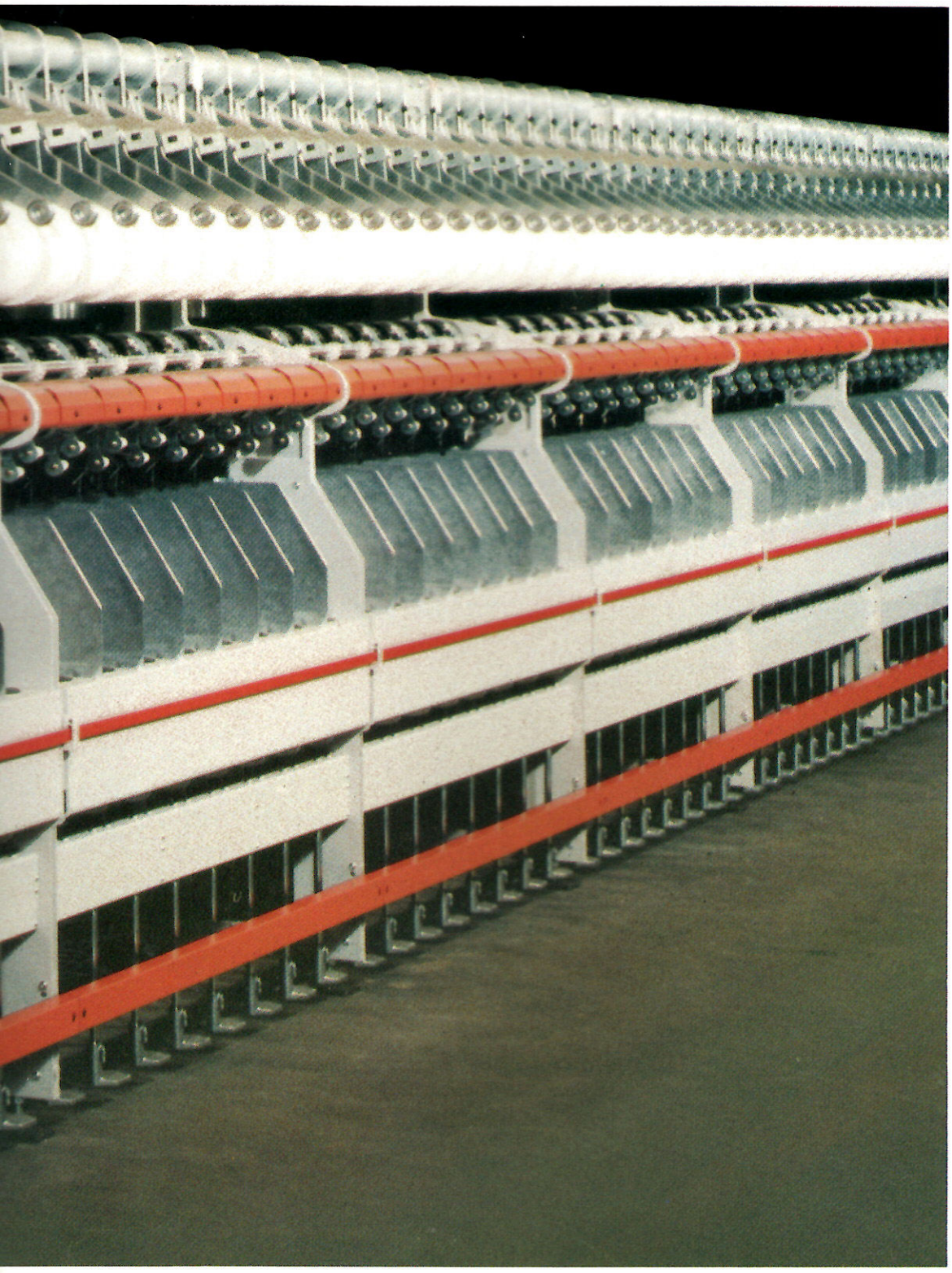




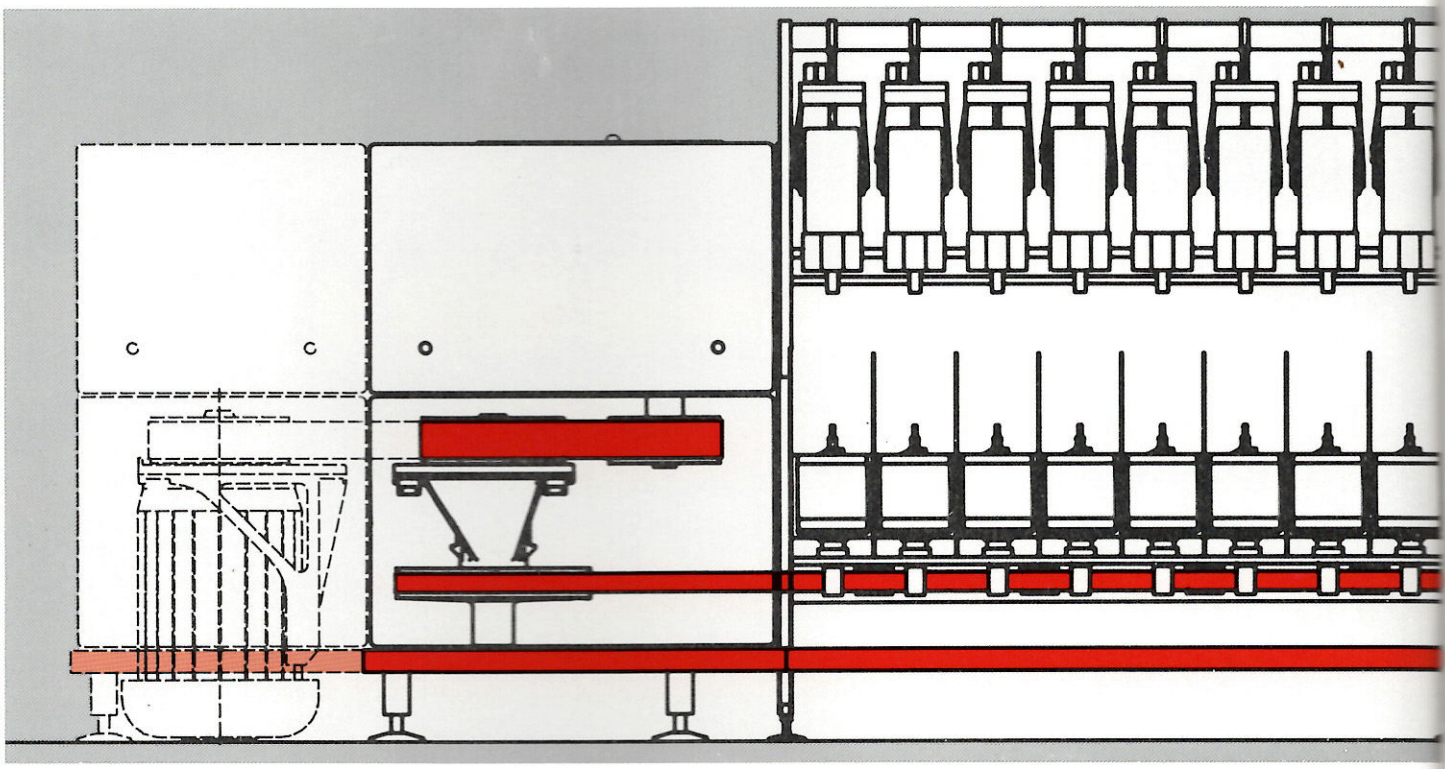
Continuous research and development as well as close cooperation with our customers offer high efficiency and quality to the users of our machines

In close cooperation with our customers we have developed machines which meet changing demands of the market and bring high efficiency and best possible quality to the user.
We shall strive to maintain Volkmann leadership through a continuing program of research and development.

The essential features and advantages of our machines are:

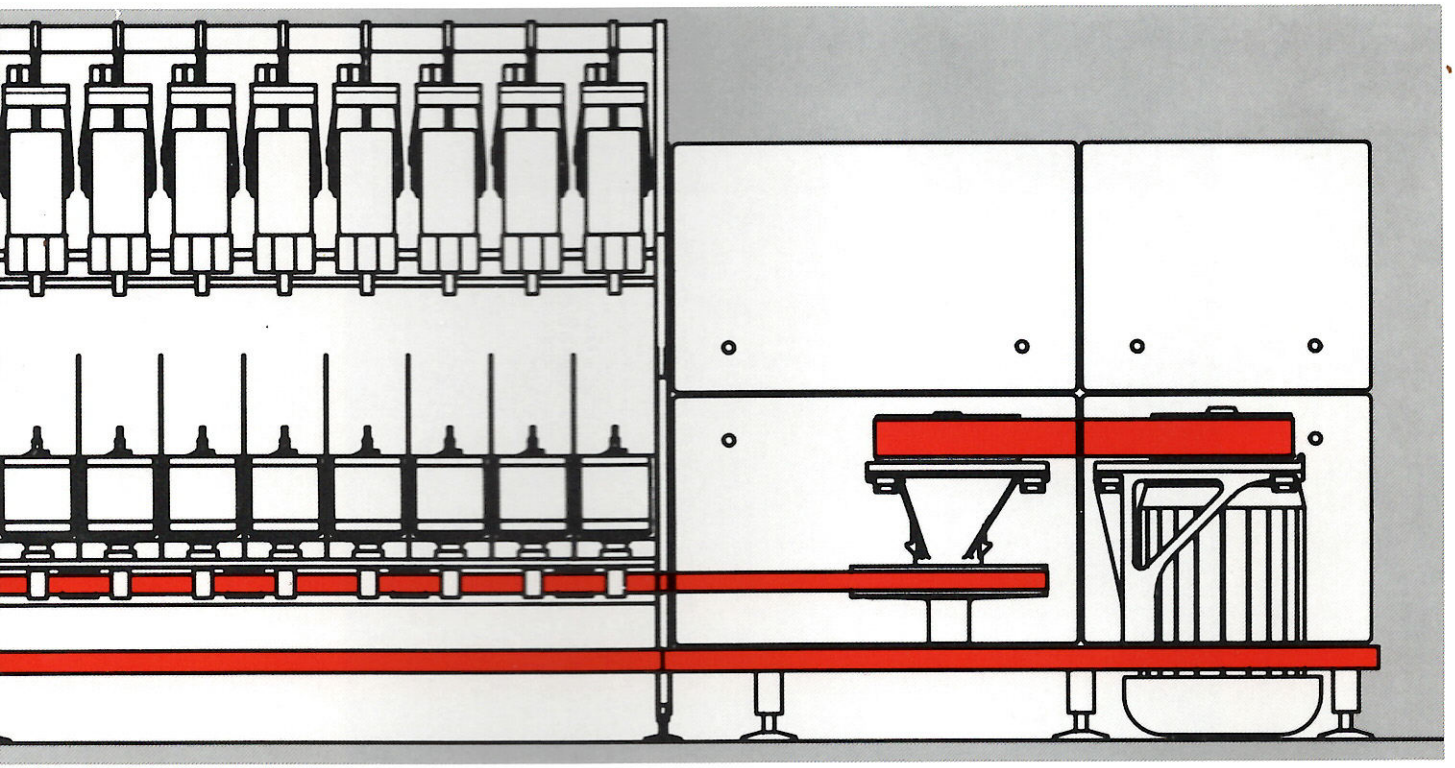
- wide range of machine and spindle types
- efficient use for floor space
- low energy consumption
- reduced noise level
- long machines with up to 360 spindles
- easy operation
- safety features
- modern, rational design

Drive System



According to requirement and number of spindles, our drive system allows either 1 or 2 drive motors per machine.
Two motors may drive up to 360 spindles by means of a tangential belt.

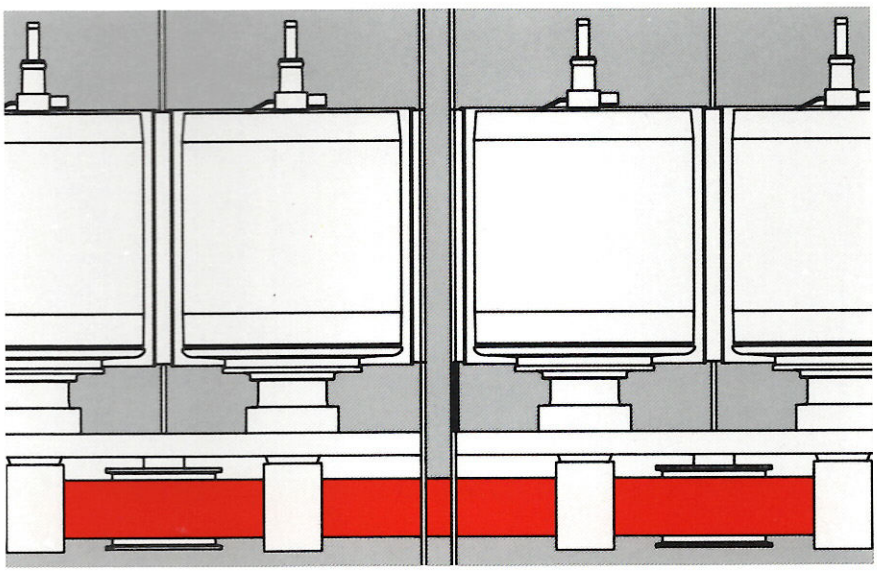
In order to achieve lowest energy consumption, deflection of the tangential belt may be adjusted by the belt guide pulleys. These belt guide pulleys, behind every second spindle, adjust the deflection angle in relation to the spindle whorl. For maintenance and adustment the belt guide pulleys are easily accessible.
The textile portion of the spindle is separated from its drive portion. Noise abading devices reduce noise levels.



The motors drive the intermediate gear by means of a flat belt. The inverted position of the drive motor makes belt pulley, therefore spindle speed changes, easy.

No adjustment of belt tension is required for belt pulley changes, which favours high efficiency and means consistently low power consumption.

Variable speed motors are available for applications requiring frequent or infinitely variable speed adjustment.

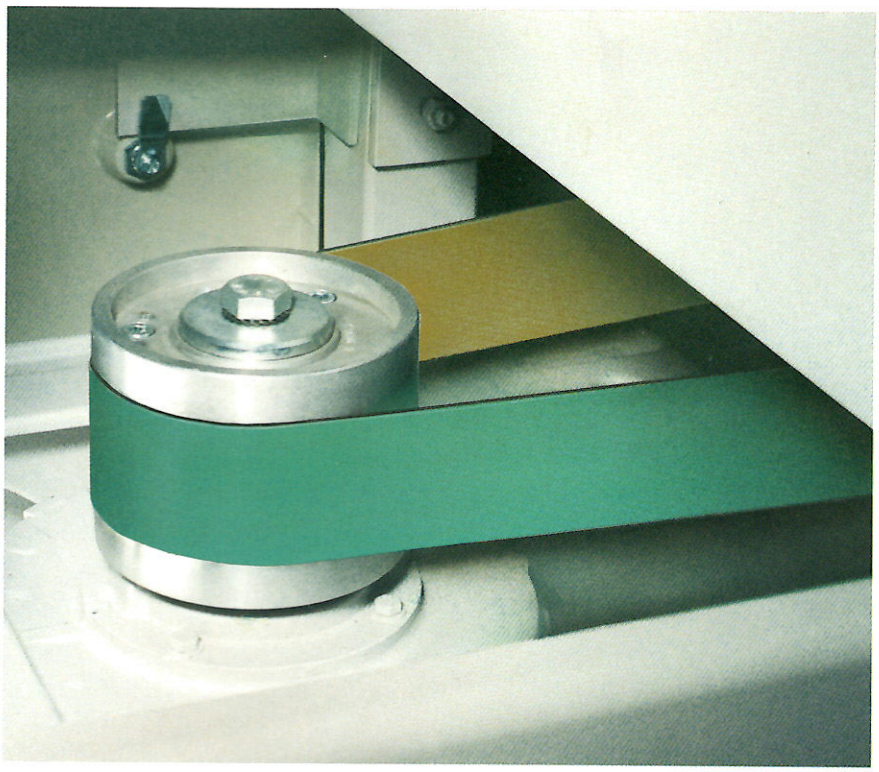


Motor Section

The upper part of the motor section contains the instrument panel with digital indicators for spindle speed, take-up speed and turns per meter.

The twist direction S or Z may be adjusted by means of a key locked switch.

The electrical system is located behind the side panels of the motor section easily accessible and enclosed for noise reduction.



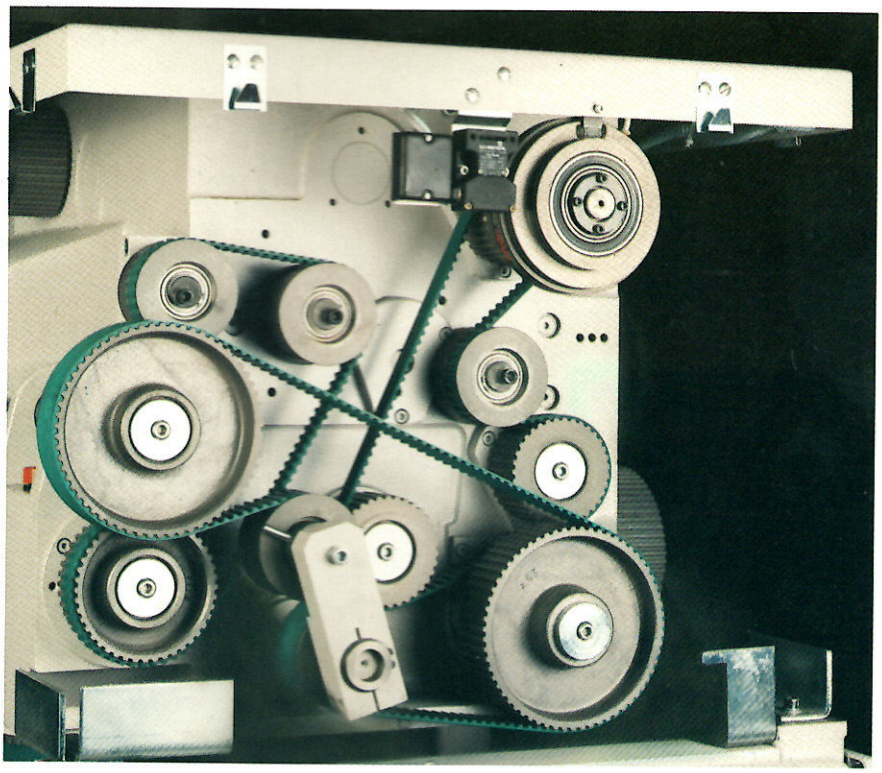
For changing the motor pulley the cover at the side has to be taken away.

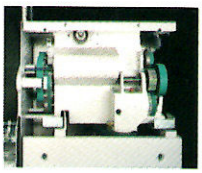
The motor pulley change is fast and convenient because of the motor's inverted position.

Gear Section

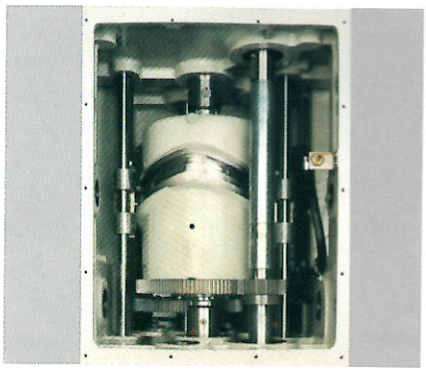
The gear section is divided into three zones.
The front section, which is oil-free, permits convenient twist level and crossing angle adjustment by means of toothed belts and pulleys. The traverse guide cam is located in the middle section and is oil-lubricated by continuous circulation.

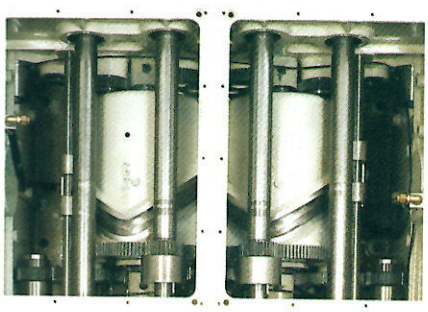
Speed of the overfeed or pre-take-up roll shaft is controlled in the rear section, by toothed belts.
The anti-patterning device is electronically controlled.
Its interference pulse is suppressed at the traverse extrems, to produce faultless take-up packages. Special gear section executions are available for parallel-wound heat set drums or packages with soft edges, using the breathing gear option.
Yarns of different twist directions may be processed on opposite machine sides using the optional dual cam gear section.





Side view of gear-box





Two-for-One Spindle

Large feed packages, due to optimal space utilisation.

Self-cleaning by means of well-directed air-stream.

Possibility to connect the pneumatic yarn clamp (integrated yarn stop) within the inlet tube.

Wear-resistant storage disc.

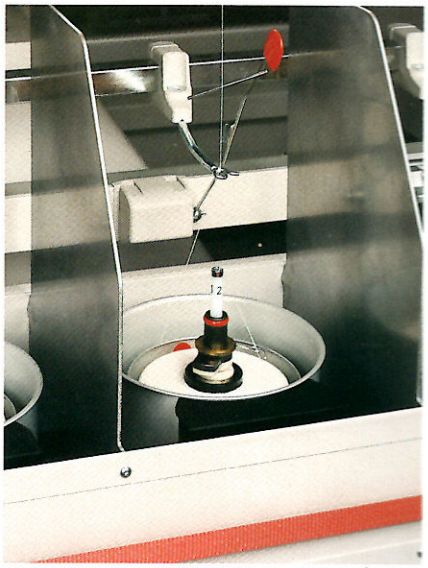
The spindle pot is protected against vibration.

Tunnel-shaped, self-cleaning yarn channel.

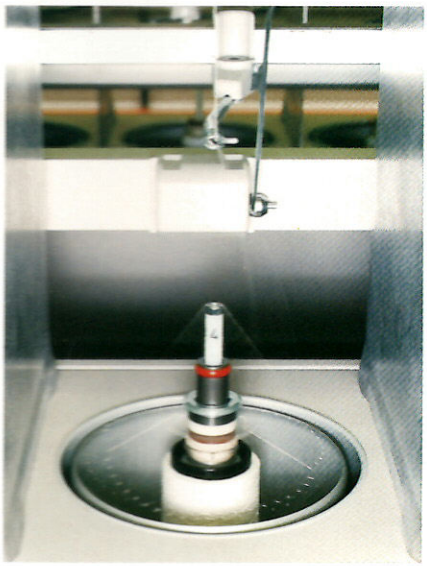
Volcojet – a threading system, for easier and faster threading of the spindle.

Aerodynamic coordination of rotor and protection pot.

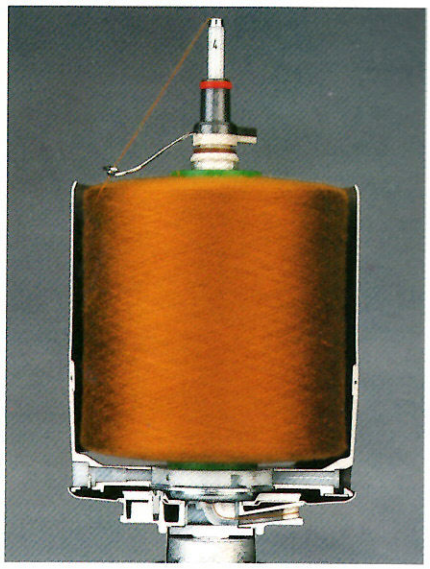
Low spindle height, and therefore minimal balloon dimensions and low yarn tension.



Large separators prevent spindle-to-spindle contamination and yarn breaks.

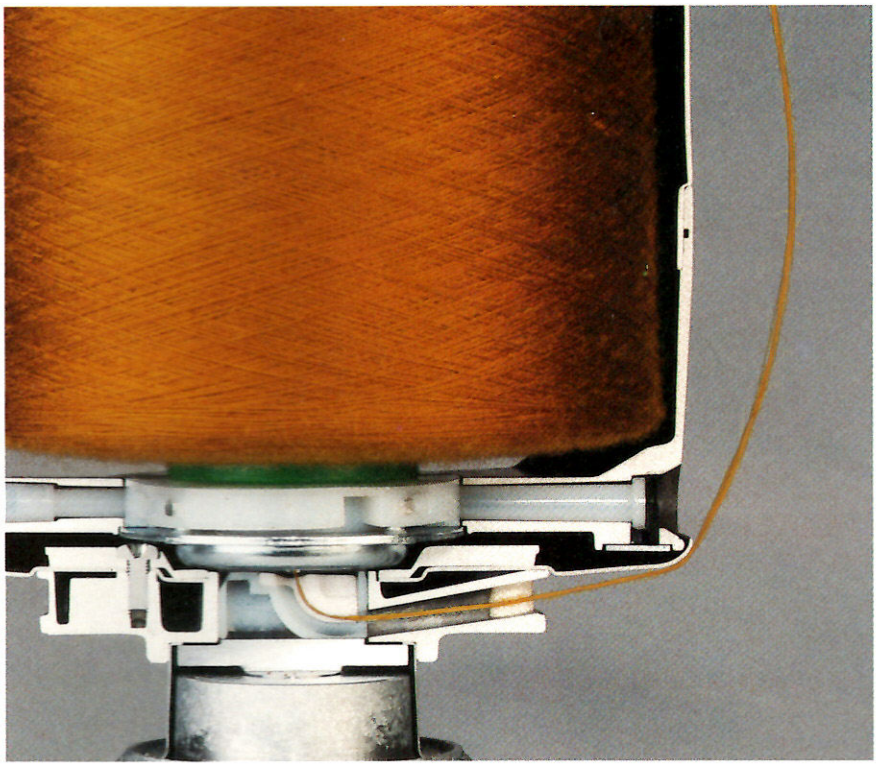


Yarn balloon remains stable in spite of fluctuation within the feeding package.



All spindle parts coming into yarn contact, including protection pot and balloon limitor, are made of wear-resistant, specially finished metals.

Volcojet



Volcojet is a proven threading system for spindles with and without balloon limitors.

Actually actuated by the foot lever, compressed air guides the thread through the hollow portion of the spindle.

No manual locking or unlocking of the tension capsule is required. Element times are therefore minimal.

This automatic functioning of Volcojet prevents incorrect operation.

Further advantages:

- low threading times
- increased production/operator/hour
- low operating cost
- easy to maintain
- no mechanical threader required

By a two-step action and by pressing down the foot pedal the spindle is stopped.

By further pressing down the foot pedal the pneumatic threading is actuated. The compressed air is brought into the stationary part of the spindle and the yarns are being blown through the hollow axle.

The yarn is guided by the air stream in such a way that the operator can grasp it above the spindle.

During the threading process the capsule is giving way to ensure free threading. Opening of the hollow axle is done automatically by actuating the compressed air.

After the threading process the capsule moves automatically back into the working position. For opening and closing of the yarn break no additional manual interference is required. During re-start of the spindle the yarn is automatically tensioned.

Cradle

According to the individual requirements and to the machine execution the Two-for-One twisting machines can be equipped with a one-bar or a four-bar cradle.

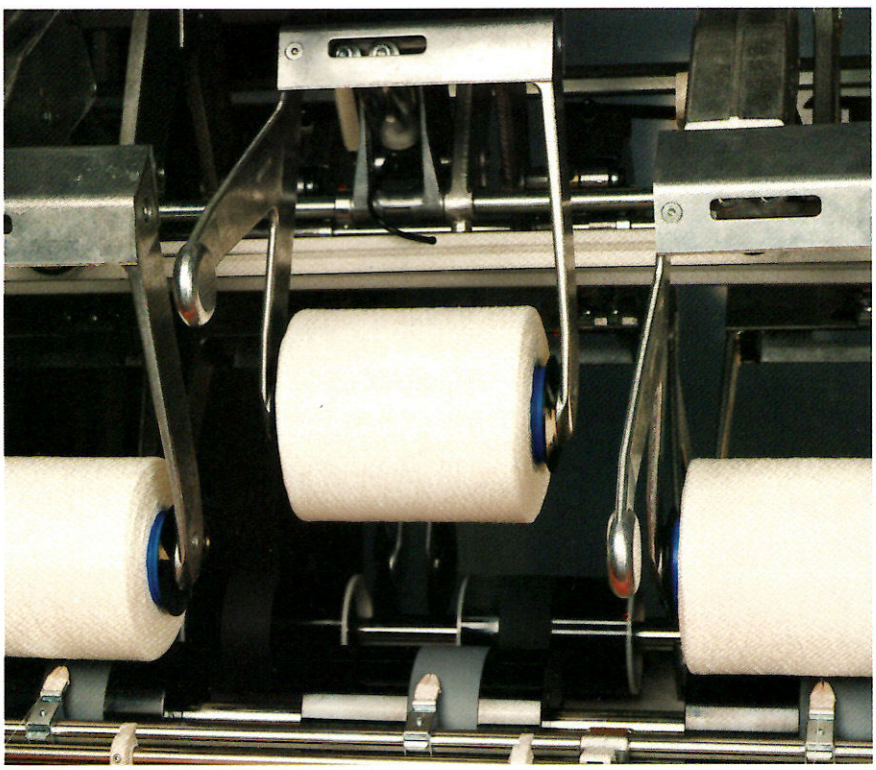
The one-bar cradle can be installed in narrow machines with a maximum package diameter of 250 mm only.

The cradle makes a simple and fast changing to various package and tube types possible.

The large traverse triangle provides uniform take-up tension across the package surface.

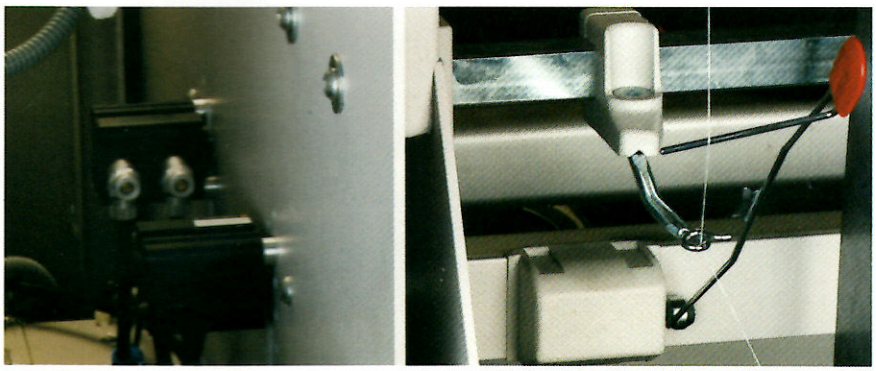
The take-up tension is adjusted by changing the deflection angle at the pre-take-up roller.

The four-bar cradle can be installed in wide and narrow machines with a maximum package diameter of 350 mm.



Pneumatically Controlled Yarn Stop Blocking

In case of machine shut down or power failure, yarn stop feelers are pneumatically blocked in their working positions. Yarn feelers are automatically released when the machine is started, after a timed delay which avoids yarn breaks and false break indications during the start-up phase.



Info-Pack

You will find the entire technical documentation in the black case:

- spare parts catalogue
- maintenance manual
- operation manual