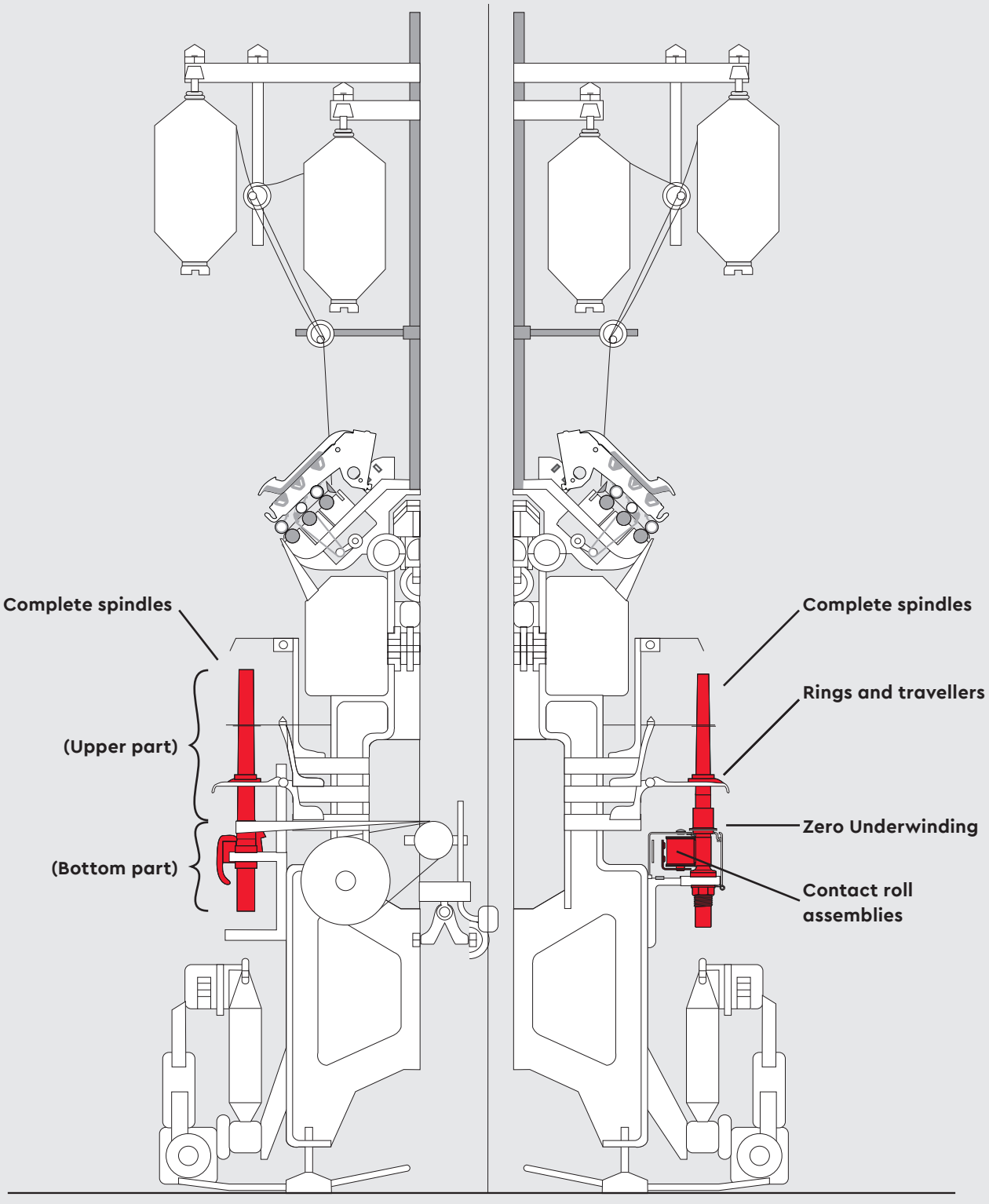
SAURER.

Indispensable.

Spindles & Zero Underwinding Systems

EN


Complete spindles
(Upper part)
(Bottom part)
Complete spindles
Rings and travellers
Zero Underwinding
Contact roll assemblies

Texparts offers high quality components for the textile industry including drafting systems and spindles, spinning rings and travellers as well as bearings for the ring-spinning and rotor-spinning area, winders and twisters. Texparts is a world-class partner for its customers in the field of mechanical engineering for spinning machines as well as for its customers in the spinning mills. Texparts complete spindles are available for the machines of all well-known manufacturers or can be produced according to customer's request. The spindles will be equipped with the most suitable spindle bearings. Furthermore a wide ranged variety of different flange-, brake- and locking types as well as other spindle accessories are available.

Contents

Complete spindles

→ Outstanding running properties

→ Lowest energy consumption

→ Better yarn values thanks to lower vibration

→ Noticeably lower noise emissions

→ Highest spindle speeds
- CS 1: up to 20 000 rpm
- CS 1 S: up to 30 000 rpm
- Eshape: up to 30 000 rpm

→ For all ring spinning applications

Individual spindles for the ring spinning process

Nowadays CS spindles are standard equipment for leading ring spinning machine manufacturers all over the world. Due to their outstanding running behaviour and load capacity, CS spindles are used in a broad range of ring spinning applications and Texparts can deliver a range of top part designs together with the CS spindle bearings. These include aluminium plug top parts with spring loaded or centrifugal tube clutches as well as top parts with Texparts Zero Underwinding system Spinnfinity.
In combination with the high-performance Eshape spindle, you will get the perfect solution for automated and efficient ring spinning processes.

- Highest spindle speeds
- High availability – less machine downtimes
- Suitability for auto doffing
- Robust design for manual doffed applications
- Low vibration and noise level
- Bearing movability without hysteresis
- Equability with all spindles within the machine
- For a broad range of applications
- Low consumption of lubrication and energy
- Long service life

Customised spindles

For the spare parts market, Texparts can supply the replacement spindles that correspond to the ring frame manufacturers' standards. We provide tailor made solutions and bespoke customer service in order to meet the individual demands of each customer.

The high precision of the Texparts spindle bearings and the system-inherent low bearing forces ensure low-noise spindle operation over the full speed range.

Quiet Running Behaviour
Additional noise reduction effects can be achieved with the double-elastic spindle bearing system (Eshape and CS 1 S), which generates lower acoustic pressure levels thanks to lower bearing forces.
For this reason, the use of double-elastic spindle bearing units is recommended whenever the noise level and high spindle speed is a major criteria for the assessment of the machine.

Furthermore, rising energy costs are an important reason to develop new products that consume less energy. By reducing the wharve diameter to 17.5 mm, Eshape enables energy savings of up to 6%. In addition, the double elastic bearing increases the stability and rigidity of the spindle.

Outstanding running properties

All Texparts spindle bearing units are equipped with metal-elastic spring elements thus giving radial resilience to the bearing places. The top part of the spindle can rotate – together with the unbalanced bobbin – around the common axis through the centre of gravity, thus minimising bearing forces and spindle vibrations. In addition, the spring elements ensure that the top part of the spindle is always returned to the initial position centred on the spinning ring after being moved.
The damping system is optimized for specific applications and effectively surpresses spindle vibrations over the whole speed range.
The carefully matched spring and damping qualities of Texparts spindle bearings guarantee outstanding running properties in the spindles.

Texparts offers two bearing principles for spinning and twisting spindles:

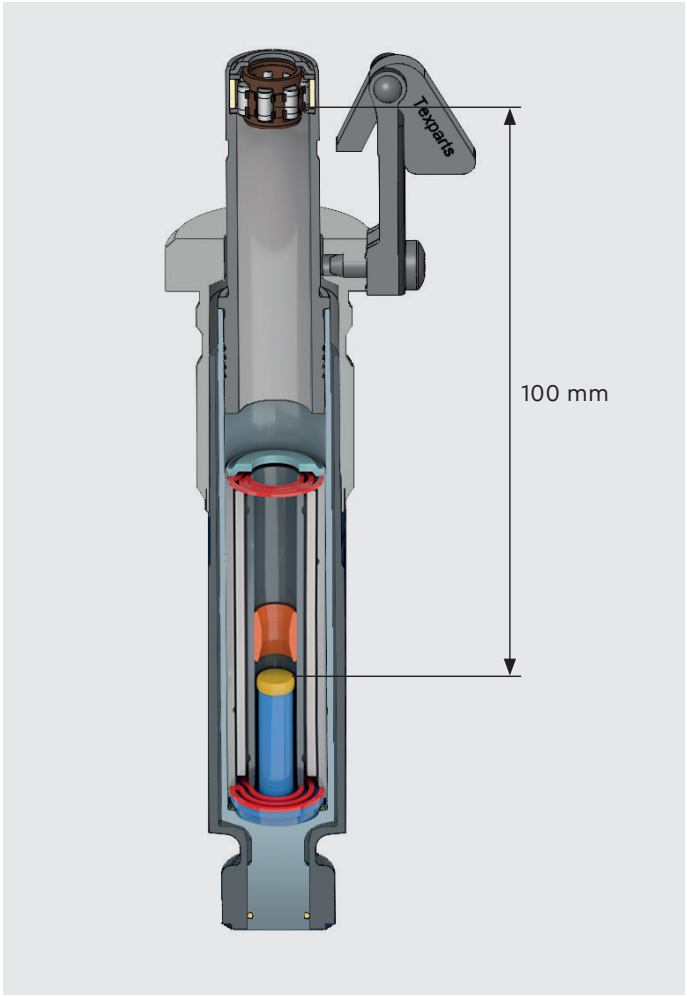
Single-elastic spindle bearings
In these bearing units the footstep bearing is kept radially movable by a metal spring (types Texparts CS 1, CS1 12, CS 21 12). Visco hydraulic damping forms an integral property of the spring system. The single-elastic bearings are of robust design and set the standard for the majority of applications in spinning and twisting. They can be used in conjunction with high-quality upper parts and tubes as well as for high-speed applications.

Double-elastic spindle bearings
These bearings are additionally equipped with a second metal spring which affords radial resilience in the neck roller bearing (types Texparts CS 1 S and Eshape). This second spring also has a wear-free damping function.
The double-elastic spindle bearing units allow the spindle upper part to shift the centre of gravity axis even more exactly towards the rotation axis, thus achieving a major reduction in bearing forces and noise level.
The double-elastic spindle bearing units therefore are the ideal choice mainly for the high and maximum speed range. Their mechanical design permits speeds far above the limit imposed by the ring/traveller system.

Minimized energy requirements
The oil-lubricated neck bearing and footstep bearing of Texparts spindle bearings are precisely matched to the blade of the spindle upper part for good bearing performance, and ensure minimum bearing friction in all speed ranges. Furthermore, the low dynamic bearing forces mean that roller bearings and wharves can be made smaller, and in turn permit low belt speeds and tension roller speeds. This results in considerable energy saving of the machine. Models CS 1, CS1 S and Eshape have specially been designed for high-speed ring spinning spindles. The small neck bearing diameter allows an extremely small wharve diameter of 17.5 mm (Eshape) resp. 18.5 mm (CS1, CS1 S) connected with low energy consumption.

High Centering Precision
The centering of the spindle inside the ring is a crucial factor for minimizing breakage rates and maximizing cop filling.
Here Texparts spindle bearing units offer ideal conditions:
• the spring elements of the spindle bearing counteract every movement of the spindle upper part with sufficient high resetting forces to restore it quickly to its initial centered position
• the flange underside and the centering collar of the spindle bearings are made with high precision and are fully aligned with the axis of the upper part.

Long service life
Minimized bearing forces plus high manufacture precision of the Texparts spindle bearing units are the basis for long service life. The robust designed elements of the spindle bearings also ensure the bearings to withstand occurring stresses such as during deceleration and doffing.



Eshape – High performance spindle bearing

Energy saving – high and advanced performance
With our customer needs always top of mind: Texparts' manufacturing precision guarantees a long service life. Our latest spindle bearing innovation Eshape optimises energy consumption resulting in lower energy costs and giving you a head start. Eshape has a reduced wharve diameter of 17.5 mm and is based on the CS 1 S, which has proven its worth over many decades. Outstanding running properties up to 30 000 rpm and approx. 6% energy saving are the decisive key performance factors.

Bearing type
- Double-elastic spindle bearing
- Neck bearing dia 6.8 mm
- Bearing distance 100 mm
- Spindle speed: up to 30 000 rpm

Application
- Fine and medium yarn counts
- Recommended spindle speed up to 30 000 rpm
- Sintered yarn cutter for optimum doffing performance

Tube length
- 180–210 mm

Design features
- The special designed sleeve increases the protection of the lower part of the spindle from dirt and fibers
- Burnished wharve with significantly increased durability

Invincible.

Eshape combined with the best system for spinning without underwinding – Spinnfinity* – is the perfect fit for automated and efficient ring spinning.

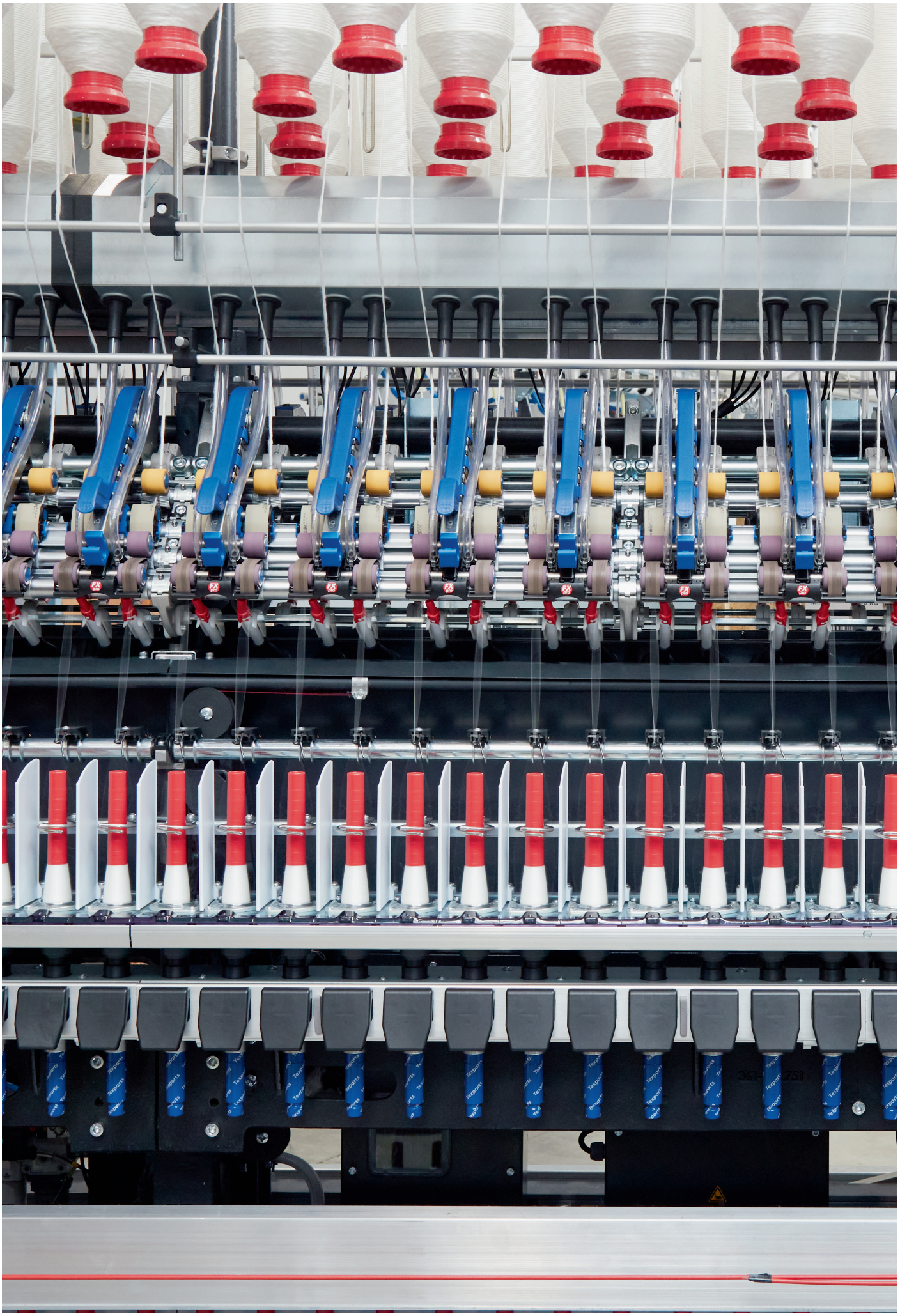
No dust and fibre collection minimizes energy consumption with three functions of its position: opening, closing, cleaning

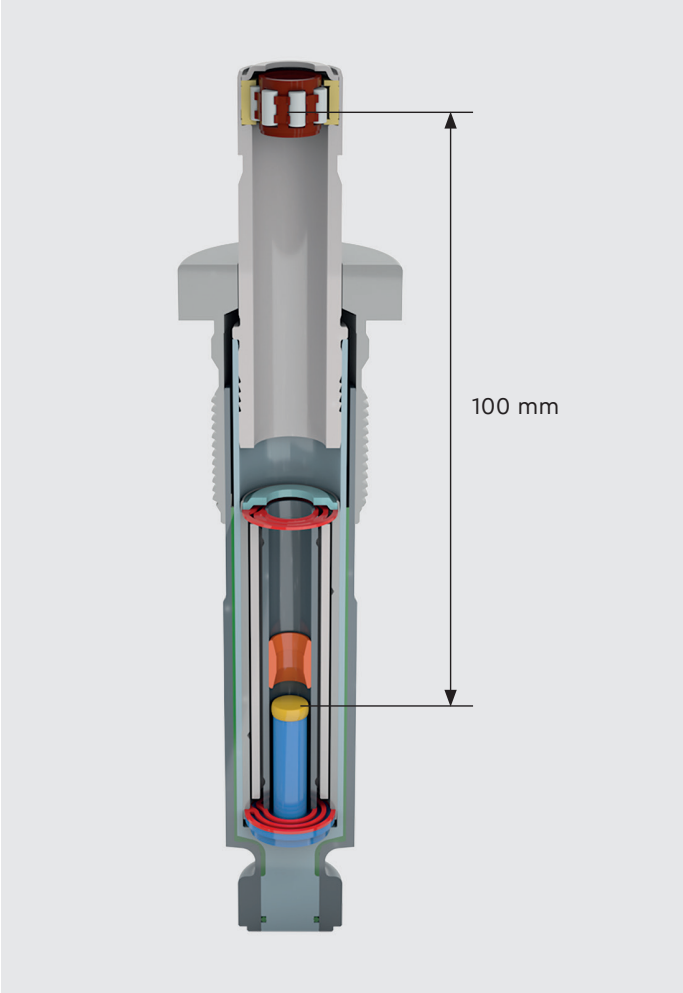
Burnished wharve with significantly increased durability

Special neck bearing design to reduce energy consumption

Sleeve protects spindle for a clean and reliable solution

* For more information see pages 16–19.





CS 1 S – Spindle bearing for highest spindle speeds

This spindle bearing should be the first choice for highest spinning speeds or deployed if low noise and low vibration levels are required from the ring spinning machine.

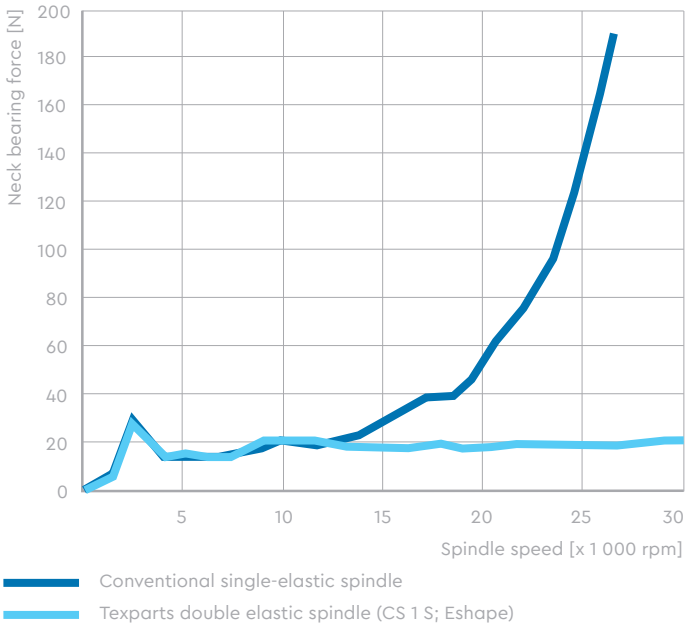
Bearing type
- Double-elastic spindle bearing
- Neck bearing dia 6.8 mm
- Bearing distance 100 mm
- Spindle speed: up to 30 000 rpm

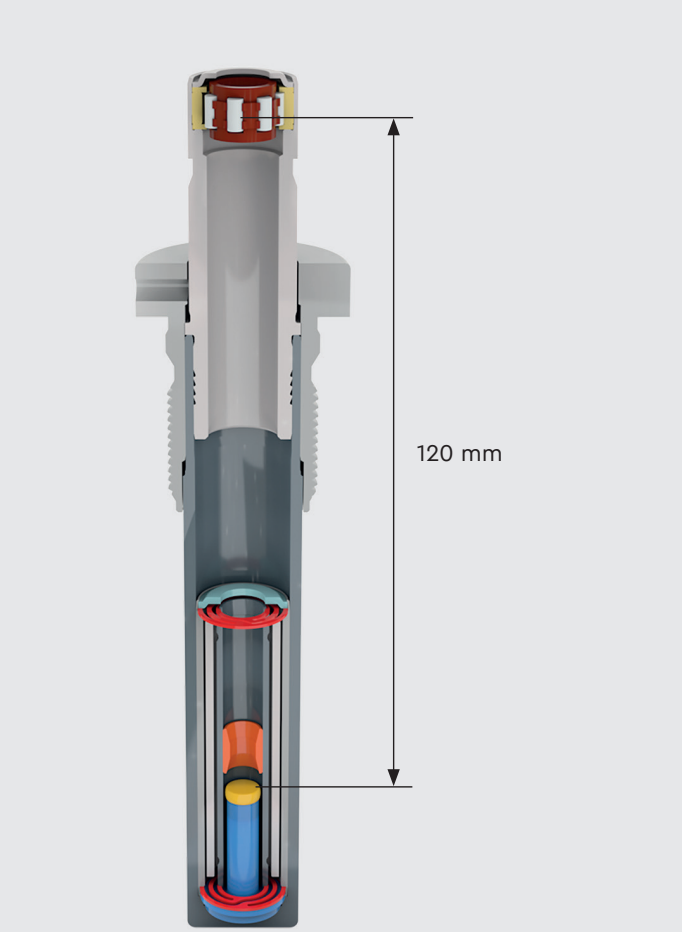
Application
- Fine and medium yarn applications
- Highest production speeds
- Longest operation life
- Low noise and vibration level

Tube length
- 180–260 mm

Important features of the spindle are strongly depending on the neck bearing forces:
- Noise level
- Vibration level
- Life time
- Energy consumption

Comparison between single-elastic spindle bearing and double-elastic spindle bearing





CS 21 12 – Spindle bearing for more flexibility

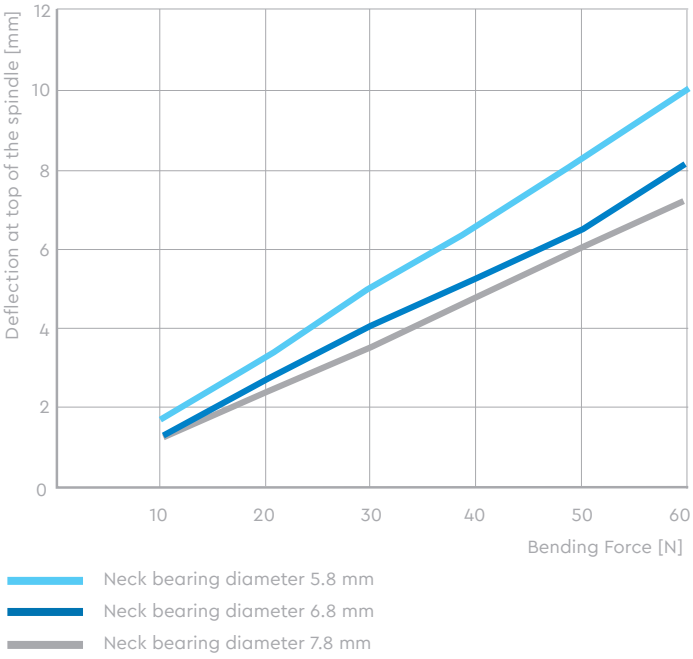
The installation of the CS 21 12 spindle bearing enables spinning mills to gain more flexibility for the future with regards to the yarn count.
As market demands are changing continuously, our flexible equipment enables increased competitiveness and the ability to respond flexibly to changing market needs.

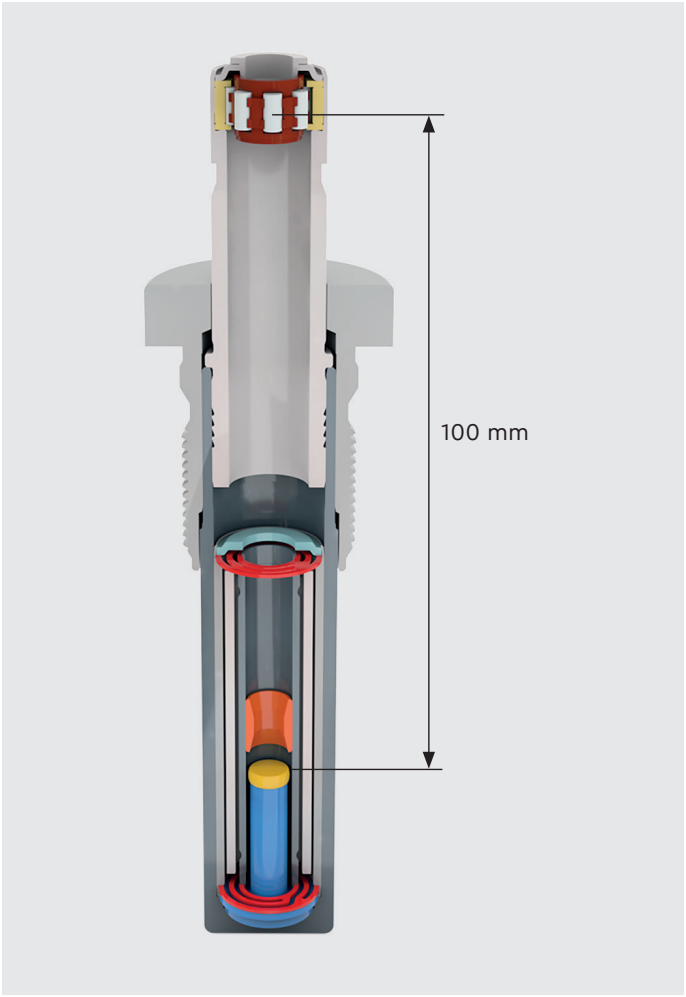
Bearing type
- Single-elastic spindle bearing
- Neck bearing dia 7.8 mm
- Bearing distance 120 mm
- Spindle speed: up to 20 000 rpm

Application
- Coarse yarn applications
- Robust design for manual and auto-doffed applications

Tube length
- up to 280 mm

Comparison of stiffness between spindles with 5.8 mm, 6.8 mm and 7.8 mm neck bearing diameter





CS 1 – The standard spindle bearing in ring spinning

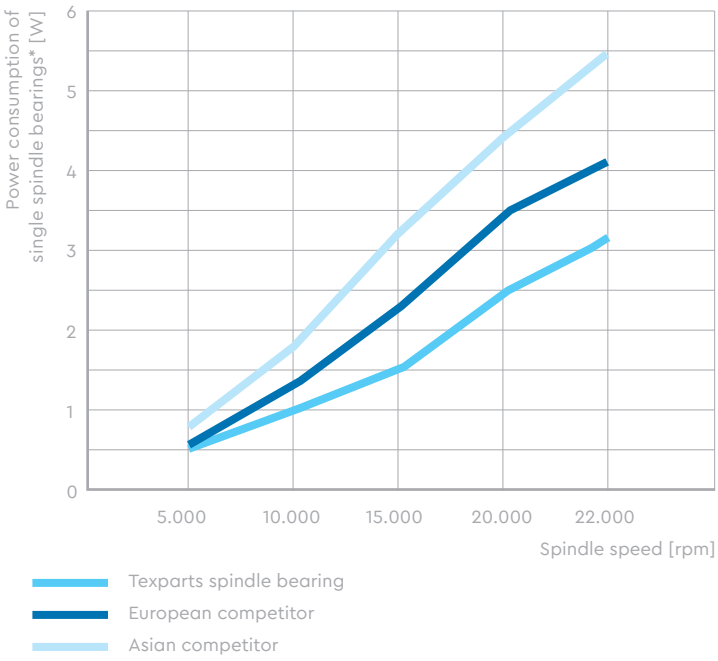
The CS 1 spindle bearing is used in short and long staple ring spinning machines. With its outstanding running properties the CS 1 has set the bar high and is the standard spindle bearing of modern ring spinning machines.

Bearing type
- Single-elastic spindle bearing
- Neck bearing dia 6.8 mm
- Bearing distance 100 mm
- Spindle speed: up to 20 000 rpm

Application
- From fine to coarse yarn applications (standard application)

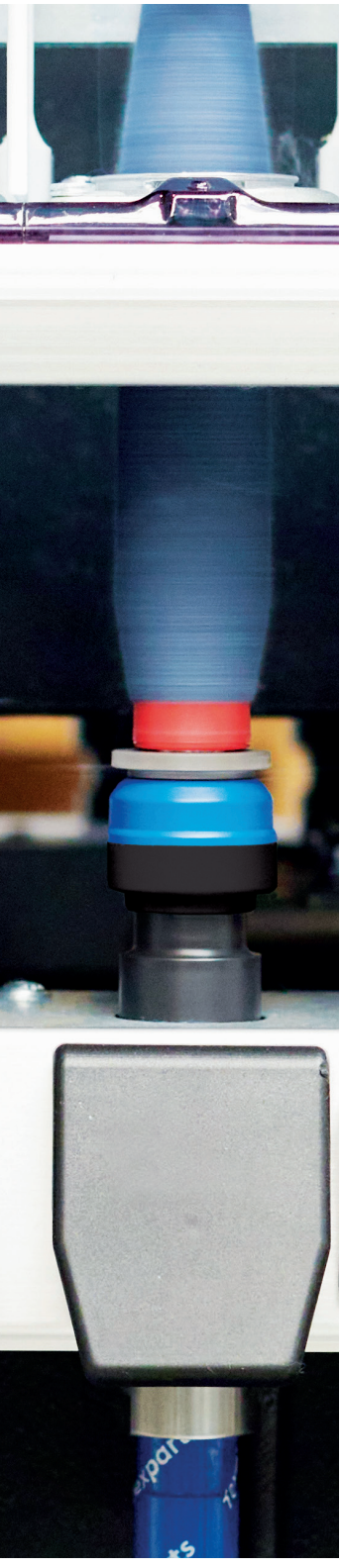
Tube length
- 180–260 mm

Texparts CS 1 – Reduction of energy consumption



* Measurement of single spindle bearings

Zero Underwinding Spinnfinity



→ Less energy consumption

→ Superior design

→ Significantly reduced maintenance costs

→ Improved ergonomics

→ Reduced yarn waste

1

Zero Underwinding Spinnfinity

Spinnfinity is the most modern device for doffing without underwinding on the market. Dirt-resistant, durable and lightweight – these are the qualities that enable Spinnfinity to reduce costs, increase productivity and improve ergonomics.

Increasing automation in spinning mills places ever greater demands on all components. Spinnfinity scores well in this context, both as regards function and through the reduction of yarn waste.

2

3

Lower energy consumption
The new solution from Texparts is the lightest on the market. The spring reduces the centrifugal forces and friction of the spindles. This in turn, reduces energy consumption.

Additional function: practical cleaning position
Spinnfinity can be locked into a cleaning position and gently cleaned with compressed air. This means that personnel can have both hands free.

Areas of application
- Short staple spinning
- Yarn counts from Ne 7 and finer
- Ring diameter: Ø 36 mm or larger
- Spindle types: Eshape, CS 1, CS 1 S, CS 1 12, CS 21 12*
- Minimum spinning speed: 10 000 rpm
- Closing speed: 2 500 rpm ± 500 rpm

* max. DUI 22 mm

1 Spinnfinity closed
(position during doffing process)

2 Spinnfinity half-open
(position during spinning process)

3 Spinnfinity open
(fixable cleaning position)

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