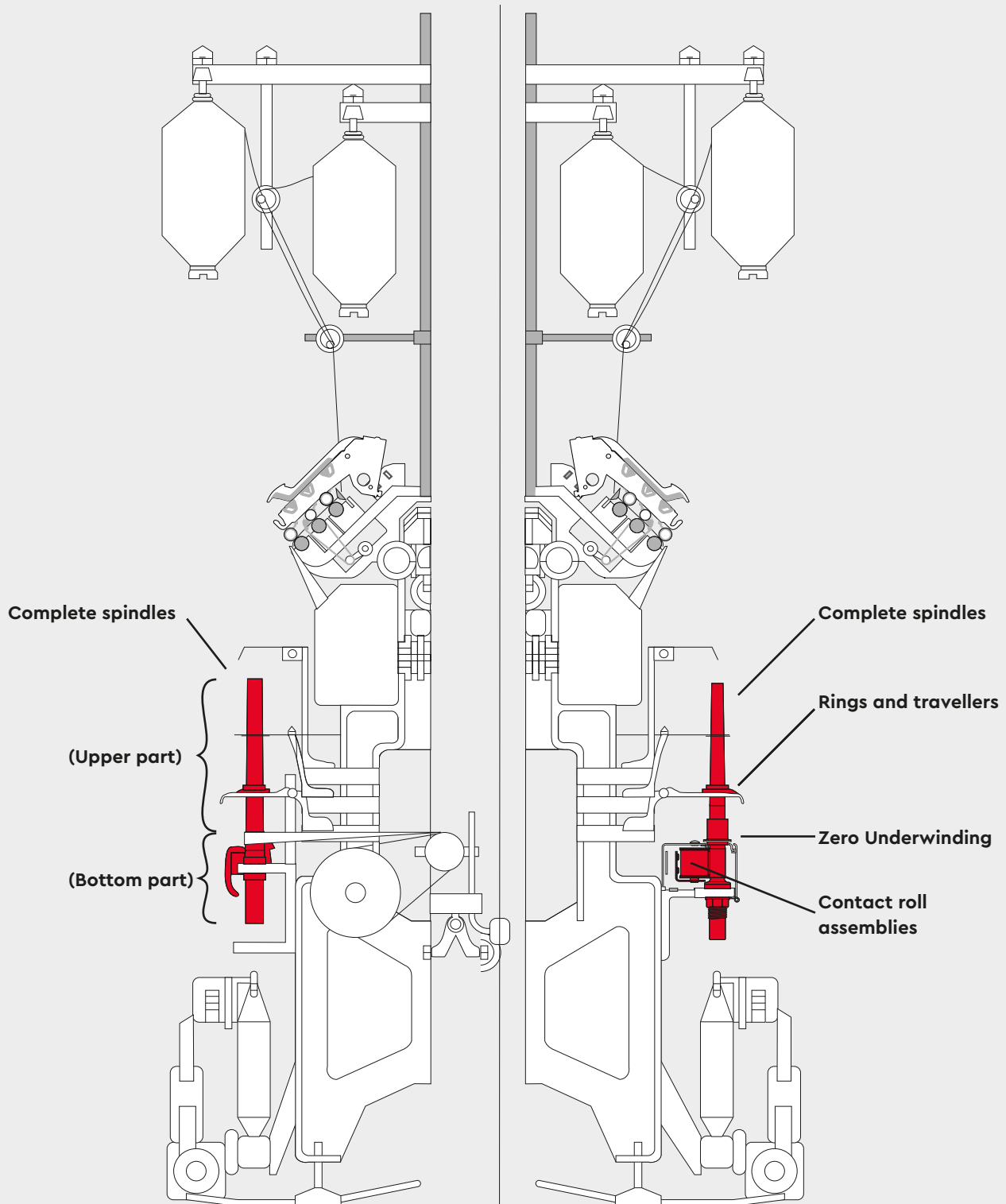


**SAURER.**



# Indispensable.

Spindles, rings & travellers



**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 twistors. 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.**

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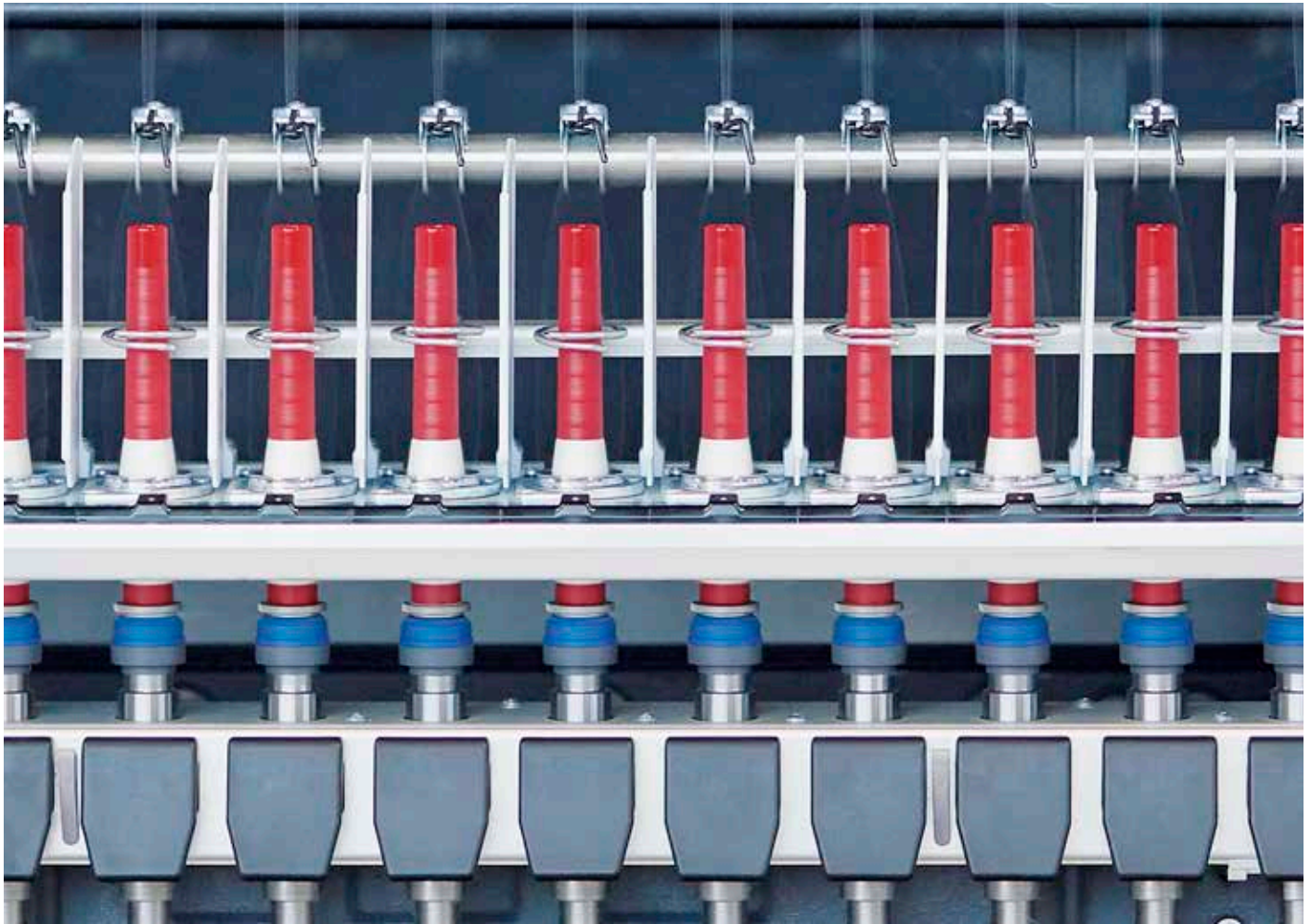
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# Complete spindles





- Outstanding running properties
- Lowest energy consumption
- Better yarn values thanks to lower vibration
- Noticeably lower noise emissions
- Highest spindle speeds
  - CS 1: spindle speeds up to 25 000 rpm
  - CS 1S: spindle speeds up to 30 000 rpm
- For all ring spinning applications



## The standard spindles for ring spinning

**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 systems.**

- 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.

Additional noise reduction effects can be achieved with the double-elastic spindle bearing system (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.





## Top spindle speeds

Texparts offers two bearing principles for spinning and twisting spindles:

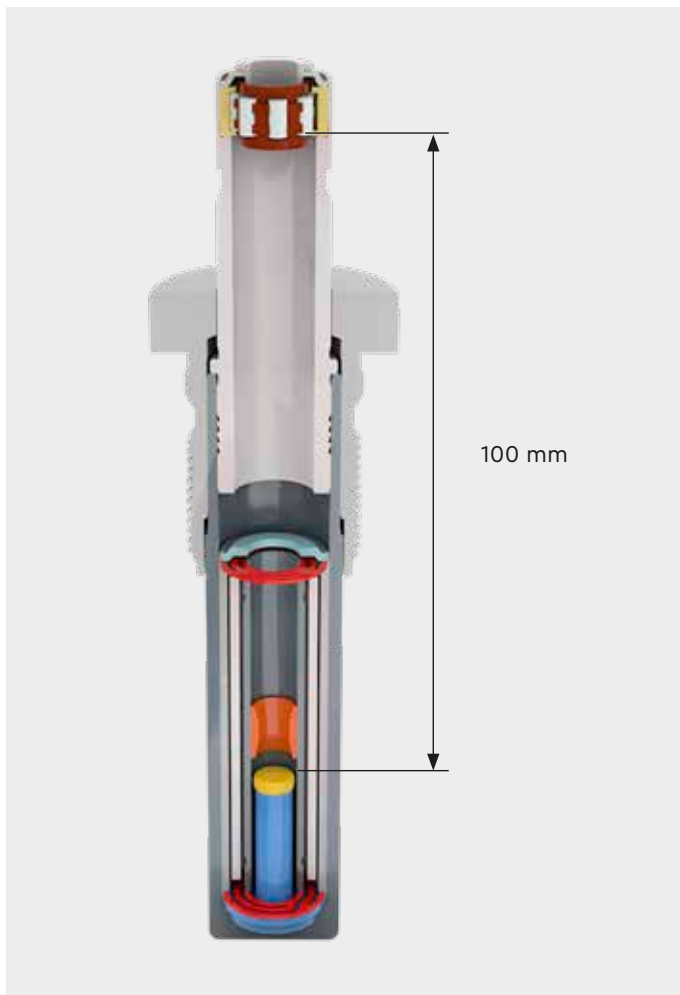
### Single-elastic spindle bearings

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 (type Texparts CS 1 S). 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.





## CS 1 spindle bearing

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 25 000 rpm

### Application

- From fine to coarse yarn applications (standard application)

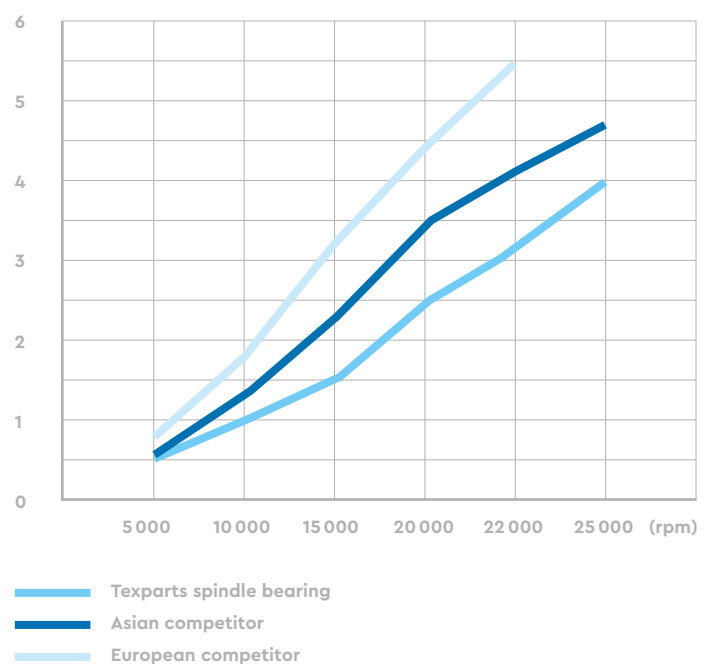
### Tube length

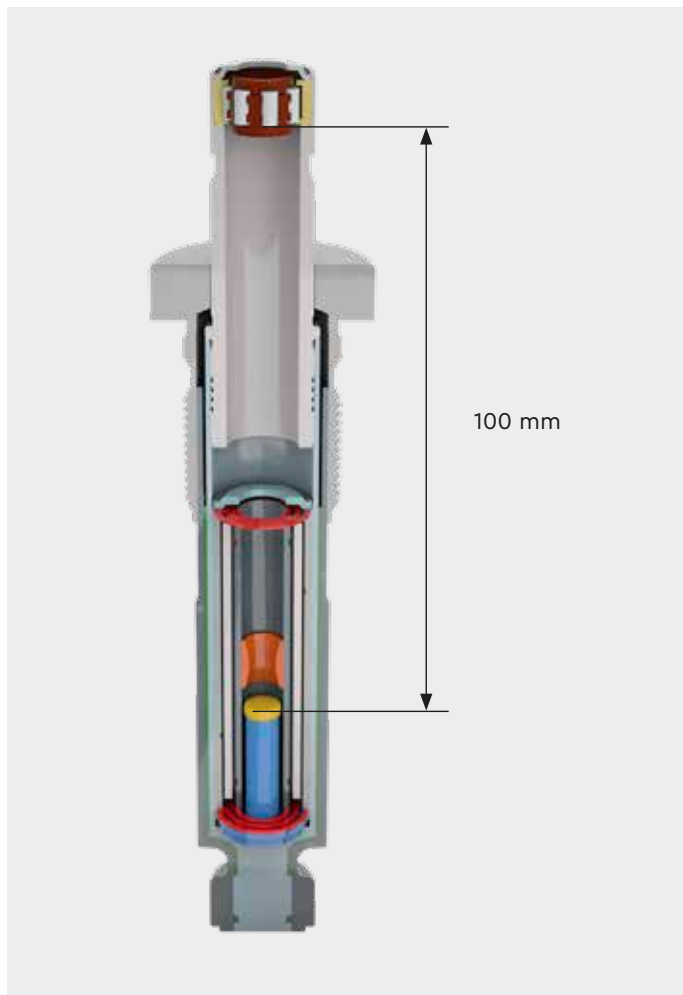
- 180–260 mm

### Texparts CS 1 –

#### Reduction of energy consumption

Power consumption of single spindle bearings\* (W)





## CS 1 S spindle bearing

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

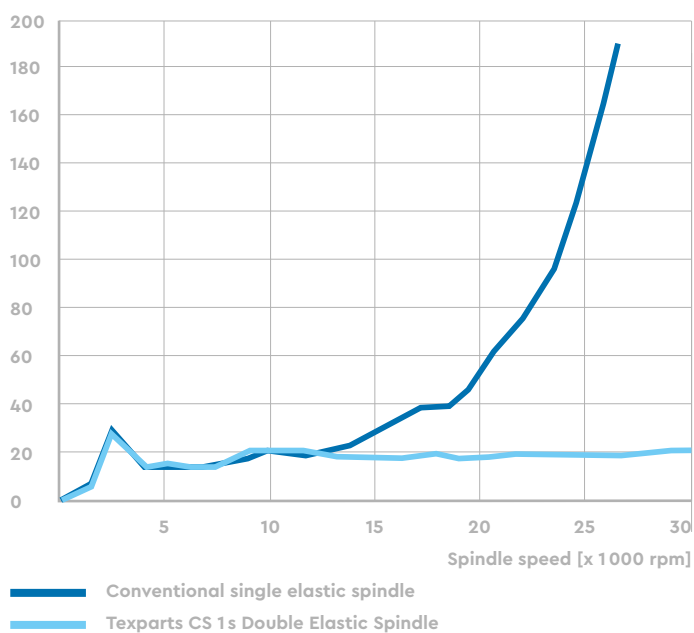
- 180–260 mm

Important features of the spindle are strongly depending on the neck bearing forces:

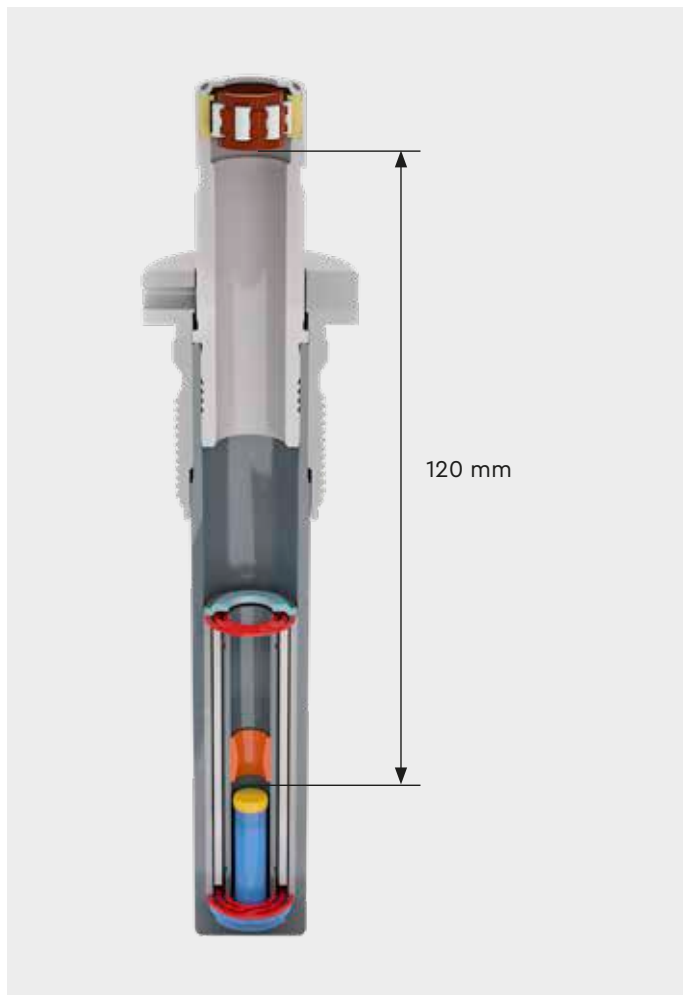
- Noise level
- Vibration level
- Life time
- Energy consumption

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

Neck Bearing Forces (N)



\* Measurement of single spindle bearings



## CS 21 12 spindle bearing

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 22 000 rpm

### Application

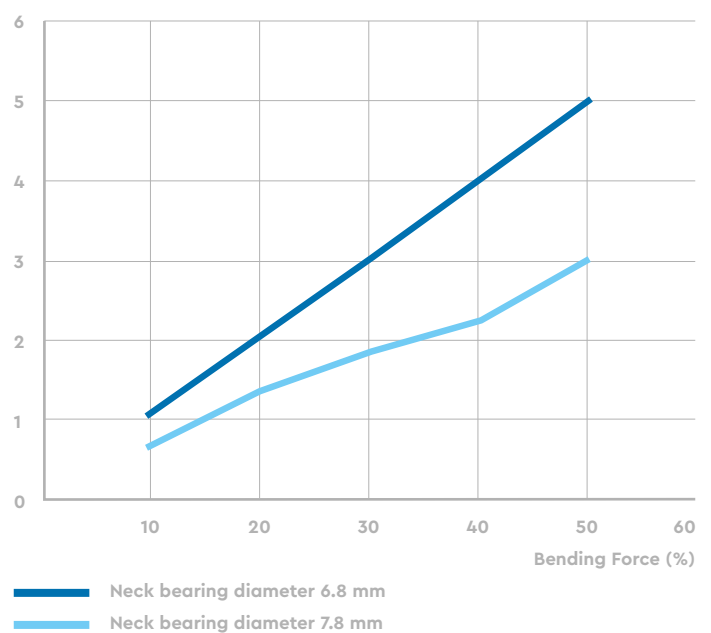
- Coarse yarn applications
- Robust design for manual- and auto-doffed applications

### Tube length

- up to 280 mm

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

Elongation at top of upper part (mm)



# Zero Underwinding Spinnfinity





- **Less energy consumption**
- **Superior design**
- **Significantly reduced maintenance costs**
- **Improved ergonomics**
- **Reduced yarn waste**



## 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
- Yarn counts from Ne 7 to Ne 150
- Ring diameter 36 mm or greater
- Spindle types: CS 1, CS 1 S, CS 1 12, CS 21 12\*
- Closing speed: 2500 rpm
- Opening speed: 7300 rpm

\*Exclusively for Zinser spindles, depending on tube format

1 Spinnfinity (closed)

2 Spinnfinity (open)

3 Spinnfinity (cleaning position)



# Rings and travellers





- **No running-in time**
- **Consistent smooth running behaviour**
- **Perfect roundness, no vibration during spinning**
- **No variations in ring sizes**
- **High speed spinning for all fiber materials, yarn types and vast yarn count ranges**
- **Smart traveller design with specific coatings for an optimized balance between traveller speed, life time and yarn quality**
- **Universal suitability**



## Rings and travellers

**Rings and travellers are the dominant elements in the ring-spinning process. Key to success is the reduction of the friction coefficient to the lowest level possible. At this point you will get the perfect balanced spinning geometry – that means the spinning tension is on a constant balanced level.**

The reduction of friction will be achieved if the rings and travellers establish a symbiosis. Therefore we focused on the ideal combination of rings and travellers. The aspired ideal friction stands for:

- Higher traveller speed
- Lower working temperature
- Extended ring and traveller life time
- Avoidance of yarn tension peaks
- Better yarn quality (reduction of hairiness)
- Reduction of end breaks

Furthermore the ideal friction strikes the balance between:

- Traveller drive angle to ring
- Traveller weight
- Traveller and ring geometry
- Traveller and ring coating
- Ring positioning



## Ring diameter (mm)

Flange 2	Coarse Count	Ne 6-20
Flange 1	Medium Count	Ne 20-60
Flange 1/2	Fine Count	Ne 60-140

[illegible]

\* Maximum values under optimum spinning conditions, depending on material type and roving quality.

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