

High speed spindles for ring spinning machines



QUALITY • RELIABILITY • INNOVATION

Standard spindles



TeraSpin is one of the few complete spindle manufacturers who make spindles and inserts that enable ring frames to attain speeds up to 25,000 rpm (mechanical).

Spindles are available with many different design combinations:

- Aluminium plug type
- For manual doffing ring frames
- For auto-doffing ring frames
 - with TeraSpin Smart Yarn Catchers
 - with knurling and cutters
 - with seal-band and cutters
- Suitable for
 - 4-spindle tape drives
 - tangential belt drives
- Equipped with
 - self-locking inserts or external locking hooks
 - spring type buttons or centrifugal type buttons

TeraSpin high performance HF series spindle inserts are well proven in design and widely accepted by spinning mills and spindle manufacturers.

HF 100

for spindle speeds of up to 25,000* rpm (mechanical)

HF 1

for spindle speeds of up to 22,000* rpm (mechanical)

HF 21

for spindle speeds of up to 20,000* rpm (mechanical)

HF 21C

for spindle speeds of up to 18,000* rpm (mechanical)

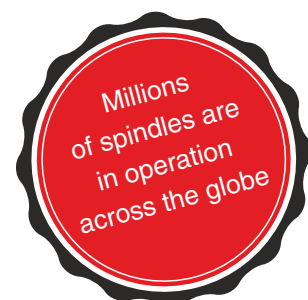
**when used under the right conditions*

Features

- Reduced blade length to 100 mm (HF 100)
- Only two point contact (at footstep and neck bearing)
- Spring support for axial load
- Well proven conical foot step design
- Flexible centering sleeve

Benefits

- Self centering ensures concentric running
- Low coefficient of friction
- Very steady even at high spindle speeds
- Spindle oil requirement reduced by up to 20% (HF 100)



Premium series spindles

TeraSpin introduces new Premium series spindles manufactured with a high level of precision and superior quality of components.

TeraSpin Premium series spindles are of two types:

1. Premium spindles
2. Premium ES (Energy Saving) spindles

Premium spindles

TeraSpin Premium spindles are specially designed for smooth running at high spindle speeds. Optimisation of various design parameters, a high level of manufacturing precision, and high quality German components reduce the vibration and noise level of the spindle.

TeraSpin Premium spindles may be equipped with HF 1/HF 100 spindle bearing units with a minimum 18.5 mm wharve diameter, and also with HF21 spindle bearing units with a minimum 20.2 mm wharve diameter.

Premium ES spindles

Since energy cost is a major factor that eats away profits of spinning mills, reduction in energy consumption is a top priority for every spinning mill to stay competitive.

TeraSpin Premium ES spindles are the best solution to reduce spinning energy cost. These spindles, which are available with HF1/HF100 spindle bearing units with 18 mm wharve diameter are specifically designed to reduce energy consumption significantly. The well proven, strong, and sturdy design of HF1/HF100 spindle bearing units make the spindles suitable for both manual and auto doffing machines.

TeraSpin Premium series spindles are available with many different design combinations:

- Aluminium plug type
- For manual doffing ring frames
- For auto-doffing ring frames
 - with TeraSpin Smart Yarn Catchers
 - with knurling and cutters
 - with seal-band and cutters
- Suitable for
 - 4-spindle tape drives
 - tangential belt drives
- Equipped with
 - self-locking inserts or external locking hooks
 - spring type buttons or centrifugal type buttons



Features

- Wharve diameter: 18 mm for Premium ES spindles and 18.5 mm minimum for other Premium spindles
- Suitable for both manual and auto doffing
- Higher level of manufacturing precision for all spindle components
- Only two point contact (at footstep and neck bearing)
- Compact neck bearing manufactured with higher precision
- Optimised damping of spindle vibrations with improved design and German components
- Well proven conical foot step design manufactured with higher precision

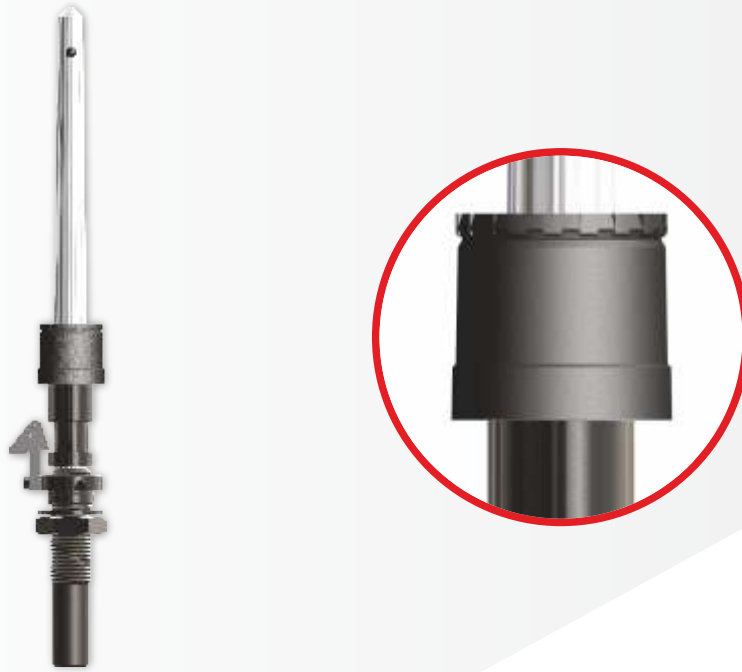
Common benefits of Premium and Premium ES spindles

- Low vibrations
- Low noise level
- Long life

Additional benefit of Premium ES spindles

- Significantly lower energy consumption

Smart Yarn Catcher



Accumulation of residual yarn on ring frame spindles at the end of every doff has been a perennial problem for the spinning industry. The accumulated residual yarn is not only a waste of material, but also needs to be manually cleaned, which takes up many man-hours and also affects the productivity of the ring frames.

No more accumulation of residual yarn –
with the TeraSpin Smart Yarn Catcher (patent applied)

Continuous innovation is TeraSpin's hallmark. TeraSpin has developed a Smart Yarn Catcher that is self-cleaning. The residual yarn left behind after every doff is expelled by centrifugal forces – putting an end to a major pain area in the operation of ring frames!

Features

- Automatic opening & closing of clamping faces with change in spindle speed
 - Clamping faces open at about 10500 rpm
 - Clamping faces close at about 4000 rpm
- Firm grip of yarn between upper & lower clamping faces which can align precisely with each other due to unique mechanism
- Special cutter for yarn cutting

Benefits

- Minimum yarn used for clamping
- No accumulation of residual yarn – the flat annular clamping faces enable the clamped yarn to move out of device easily by centrifugal forces
- No cleaning of residual yarn – less labour hours
- Reduced start-up breaks
- Improved ring frame productivity
- Very long service life



A.T.E. ENTERPRISES PRIVATE LIMITED

(Business Unit: TeraSpin)

T: +91-2717-699061

E: sales@teraspin.com

W: www.atigroup.com/teraspin

CIN: U51503MH2001PTC132921

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