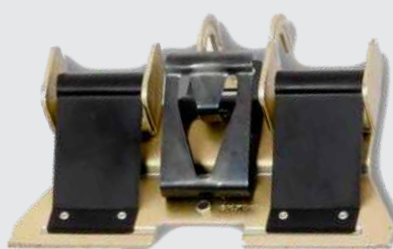


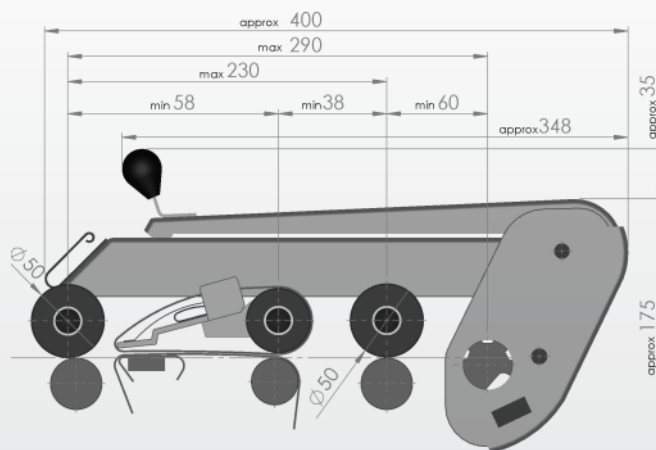
Precision components for
spinning machines



Drafting and spindles
for worsted spinning machines

QUALITY • RELIABILITY • INNOVATION

Weighting arms for worsted ring frames



TeraSpin weighting arms are characterised by their robust design and corrosion resistant finish. These weighting arms are built to last the lifetime of the ring frame. The loading springs used on TeraSpin weighting arms are pre-calibrated for specified loads and also last a lifetime. Each weighting arm exerts the same load on the top rollers irrespective of how long it is in use or at what position in the machine it is fastened.

Appropriate combination of cradle and top rollers

Cradle	Top roller at front and back position	Apron top roller	Recommended top apron size (mm) ⁽¹⁾	Fibre length (mm)
OH 554 - 000075	LP 314- 000075	LP 316- 000075	84.1 x 32 x 1 ⁽²⁾	Upto 200

Top roller loading and cot diameter

Roller position	Bottom roller ø (mm) ⁽³⁾	Cot ø (mm) ⁽⁴⁾	Top roller Load in daN			Weighting element
			Black	Green	Red	
Front	32-35	50	20	27	35	MD 5
Middle (with apron)	27-30	48 ⁽⁵⁾	9	12	15	XR 5-1
Rear	32-35	50	20	25	30	ME 5

Note: All dimensions are in mm

¹ Apron is not in the scope of supply

² One can use aprons of different thicknesses

³ Dia. of bottom rollers depends on machine manufacturers

⁴ Top roller cot dia. indicates the dia. of newly mounted cots and they are not in the scope of supply

⁵ Top apron roller is recessed

Models:

PK 1601-01 YB : Yellow passivation with black knob

PK 1601-01 SB : Silver passivation with black knob

Features

- Reliable loading through leveraged force of helical coil springs
- Choice of load selection on each top roller
- Partial load release

Benefits

- Consistent quality of yarn
- No height gauge setting required after cot buffing within the specified range of the cot diameters
- Free from vagaries of pneumatic pressure loss or pressure variations
- Suitable for a wide variety of fibres and yarn counts
- Virtually maintenance-free
- Long service life

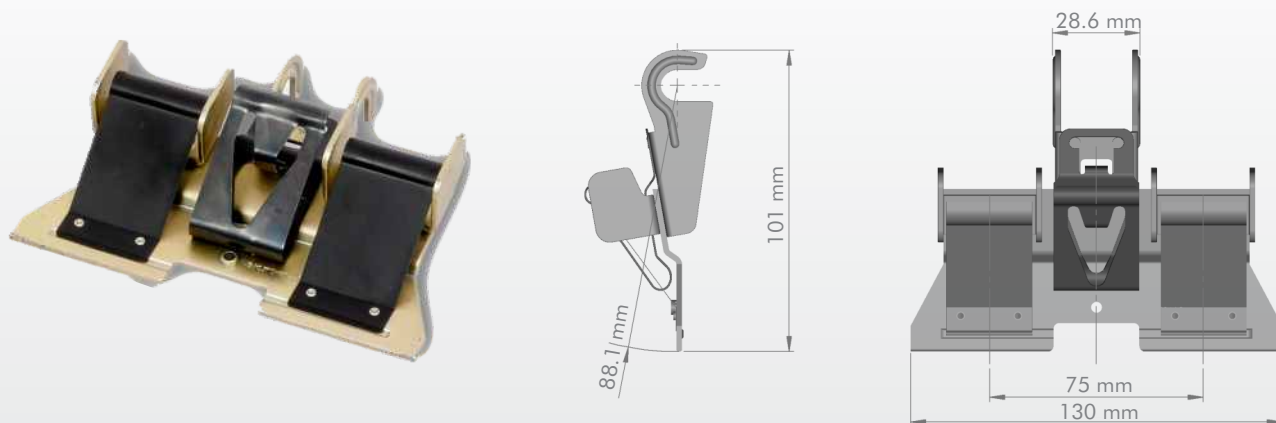
Application/s

Machine : Worsted ring frames with 3-roller-double apron drafting system

Process : Spinning

Raw material/s: Wool and its blends with man-made fibres and dry-spun bast fibres

Cradles for worsted drafting



Cradles discharge the important function of keeping the apron in position over the rotating apron top roller so that fibres are effectively guided in the main draft zone.

Worsted ring frame cradles

OH 554-000075 (metal cradle, 75 mm gauge)

Cradle	Suitable apron top roller
OH 554 – 000075	LP 316-000075

Features

- Rigid and stable structure for use under mill conditions
- Design ensures gentle nipping and effective fibre control

Benefits

- Consistent yarn quality
- Maintenance-free

Application/s

Machine : Worsted ring frame
 Process : Spinning
 Weighting arm/s: TeraSpin PK 1601-01
 Raw material/s : Wool and its blends with man-made fibres and dry spun bast fibres
 Fibre length : Up to 200 mm max.

Top rollers for worsted drafting



Top rollers consist of a pair of anti-friction, double row ball bearings with a common axle. Each top roller is manufactured such that the clearance between the hardened arbour and shell is perfectly matched with appropriately sized double row steel balls. The top rollers made for ring frames and speed frames are injected with just the right amount of a special grease – TRG 5. The ends are fitted with a uniquely designed seal to prevent leaks while in operation.

Worsted ring frame top rollers

LP 314-000075 LP 314-000825
LP 316-000075 LP 316-000825

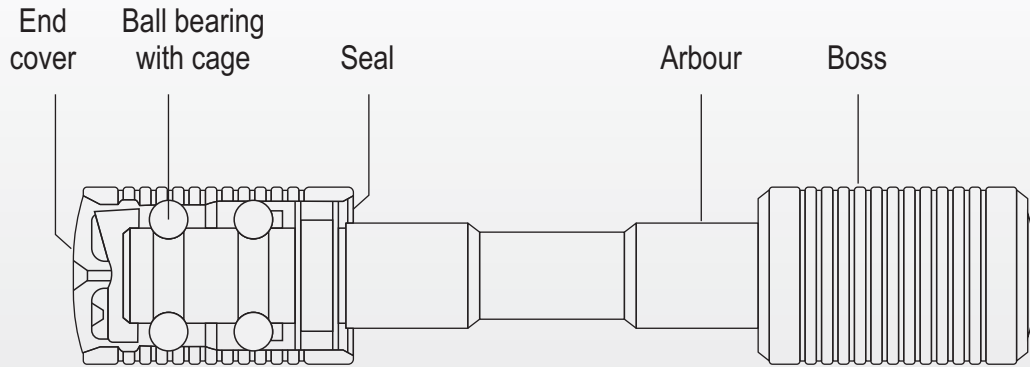
Features

- Sturdy double row ball bearings ensure smooth and even rotation
- Through hardening of axle and outer shells
- Effective U-type seal
- Lubricated with precise amount of special grease TRG 5

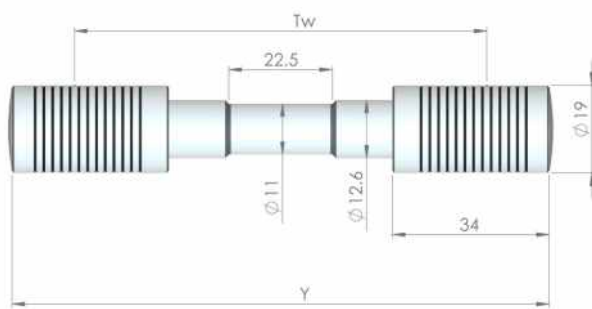
Benefits

- Higher load bearing capacity
- No ingress of foreign particles
- Long re-lubrication intervals reduce maintenance
- Smooth trouble-free operation under mill conditions
- Consistent quality output

Top rollers for worsted drafting



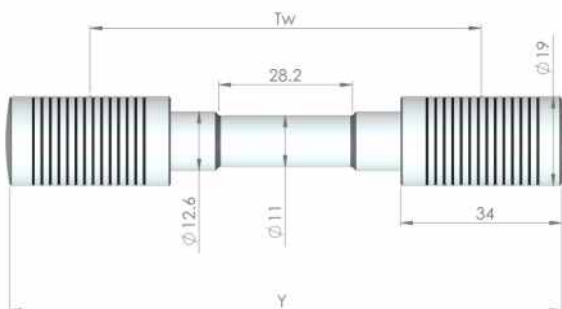
Double row ball bearings with specially designed end seals to prevent grease leakage during use



Type – Ref. No.	Gauge Tw (mm)	Total length Y (mm)	Colour of end cover
LP 314-000075	75	109	Orange
LP 314-000825	82.5	116.5	Orange

Application/s

Position/s : Front and rear top roller
 Machine : Worsted ring frames
 Process : Spinning
 Weighting arm/s: TeraSpin and SKF PK 1601-01
 Raw material/s : Wool and its blends with man-made fibres and dry spun bast fibres
 Fibre length : Up to 200 mm max.



Type – Ref. No.	Gauge Tw (mm)	Total length Y (mm)	Colour of end cover
LP 316-000075	75	109	Orange
LP 316-000825	82.5	116.5	Orange

Application/s

Position/s : Middle (apron) top roller
 Machine : Worsted ring frames
 Process : Spinning
 Weighting arm/s: TeraSpin and SKF PK 1601-01
 Raw material/s : Wool and its blends with man-made fibres and dry spun bast fibres
 Fibre length : Up to 200 mm max.

Spindles for worsted drafting



TeraSpin is one of the few spindle manufacturers who make complete spindles including 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 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)

Distance clips (spacers) for worsted drafting



The opening between the lower edge of the cradle and the nose bar in the drafting zone of a ring frame needs to be maintained at an optimum level to get the best quality yarn. If the opening is too wide, it results in poor yarn quality, whereas if the opening is too narrow, it leads to undrafted sliver/roving which then causes more end breaks.

TeraSpin distance clips (spacers) are designed to maintain a precise opening between the lower edge of the cradle and the nose bar, thus ensuring the best quality yarn. TeraSpin provides various types of distance clips and each type of distance clip is customised to ensure a precise opening when fixed on the different cradles as shown in the table.

TeraSpin distance clips (spacers) for worsted ring frames

Distance clips (spacers) for worsted ring frames		Opening (in mm) with cradle
Code	Colour	OH 554-000075
OLC 0964120	Black	2.6
OLC 0004587	Beige	3.7
OLC 0004588	Green	4.1
OLC 0004589	Pink	5.6

Application/s

Machine : Worsted ring frame
 Process : Spinning
 Weighting arm : TeraSpin PK 1601-01
 Cradle : TeraSpin OH 554-000075

TeraSpin, a business unit of A.T.E. Enterprises Private Limited, manufactures precision components for spinning machines at its state-of-the-art eco-friendly manufacturing facility at Sari, near Ahmedabad in Western India. TeraSpin product range includes complete drafting systems (weighting arms, top rollers and cradles) for roving frames and ring frames and spindles for ring frames. TeraSpin also provides customised upgrades for roving frame and ring frame drafting.

TeraSpin was formed with A.T.E.'s takeover of the textile machinery components business of SKF India Limited in the beginning of 2012. TeraSpin products are thus built on the strong foundation of SKF knowledge and expertise.

Through constant R&D at TeraSpin, these products have been further improved upon, thereby ensuring high performance and durability.

With a clear mandate of 'zero defect', 'zero rejection', 'excellence in quality', 'safety' and 'eco-friendly operations', TeraSpin has deployed a series of quality initiatives, such as ISO 9001:2015, ISO 14001:2015, and ISO 45001:2018. Thus, we ensure the quality of our products at every stage of the production process. All products are manufactured with a high degree of automation that helps achieve consistent quality on a mass scale.

TeraSpin's products are used by OEMs as well as by spinning mills worldwide including countries like Canada, Mexico, Germany, Italy, Spain, Nigeria, Egypt, Turkey, Kenya, UAE, Iran, Uzbekistan, Nepal, Bangladesh, Vietnam, China, Korea, Taiwan, Japan, and Indonesia.

Our network



Legend:

● A.T.E. Group offices/factories

● A.T.E. partner locations

partnering
people & the planet

Manufactured by

teraSpin

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