

PRODUCT GUIDE

Chapter 1

TeraSpin spindle bearing units and complete spindles



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Research and Development is a continuous process. Hence, some of the information provided in this PRODUCT GUIDE may have become obsolete with TeraSpin's new developments in technology.

TeraSpin is a business unit of A.T.E. Enterprises Private Limited, a company engaged in the service of the textile industry since **1939**. TeraSpin came into existence in 2012 after A.T.E.'s takeover of SKF India's textile spinning component business. Since then it has been innovating and making continual improvements in quality and reliability in the service of spinning mills and machinery manufacturers around the world.

TeraSpin's product range consists of weighting arms, top rollers & cradles for roving frame and ring frame, spindle bearing units and complete spindles for ring frames and doubling frames. TeraSpin also offers customized upgrades for existing ring spinning and roving frames.

Website: www.teraspin.com
Email: sales@teraspin.com

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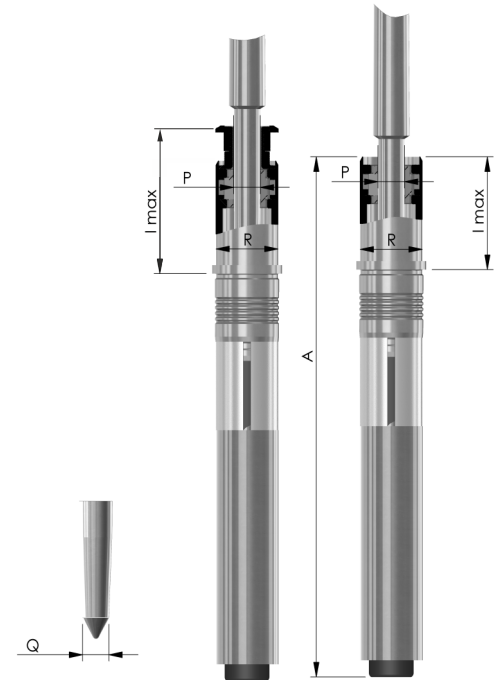
HF series of spindle bearing units without bolsters

Technical parameters

Type – Ref. No.	Dimensions (mm)					Weight (kg)	Locking
	A	R	P	Q	I max.		
HF 100-0025144M	121	16	6.8	4.5	26.5	0.097	External
HF 100	121	16	6.8	4.5	32.5	0.099	Self-locking
HF 1-0025144	141.5	16	6.8	4.5	26.5	0.107	External
HF 1-1252520	141.5	16	6.8	4.5	32.5	0.109	Self-locking
HF 21-0013802	141.5	17.5	7.8	4.5	20.5	0.112	External
HF 21-1251595	141.5	17.5	7.8	4.5	26.5	0.114	Self-locking
HF 21C	141.5	19.5	7.8	4.5	20.5	0.118	External
HF 21C SL	141.5	19.5	7.8	4.5	26.5	0.120	Self-locking

Application/s

- Machine/s : Ring frame, doubling frame
- Process/es : Spinning, doubling
- Raw material/s : Cotton, worsted, man-made fibers and their blends
- Load/s : Light and medium



Configuration of HF series of spindle bearing units

Spindle bearing unit	HF-100	HF-1	HF-21	HF-21 C
Maximum design speed (rpm)	25,000	22,000	20,000	18,000
Tube length (mm)	Up to 190	Up to 210	Up to 270	Up to 300
Ring dia (mm)	Up to 40	Up to 42	Up to 54	Up to 54
Min. wharve Ø (mm)	18/18.5*	18/18.5*	20.2	22.2

* Regular spindles: min. wharve dia. of 18.5 mm

Premium ES spindles: min. wharve dia. of 18 mm

Premium ES spindles are with spindle bearing unit HF-1 or HF-100 only

Premium ES spindles are suitable for 4-spindle tape drive only
(not for spindles suitable for tangential belt drive)

Premium ES spindles are available either for manual doff type or with knurling and cutter or with Smart Yarn Catcher (SYC) device

Premium ES spindles are suitable for all yarn counts

Spindles with Smart Yarn Catcher (SYC)

Operating speed

- Clamping faces open at about 12500 rpm (+/- 1000 rpm)
- Clamping faces close at about 6000 rpm (+/- 500 rpm)

TeraSpin SYC unit is suitable for

- Ring dia. - 36 mm min.
- DUI - 20 mm max.
- Breaking strength of yarn <600 g
- Yarn twist - 'Z' twist only
- Yarn count - Ne 30s and finer

Yarn count (Ne) wise max. workable yarn strength for SYC		
Yarn count (Ne)	Max. workable RKM	Max. workable CSP
10	10.16	1524
12	12.19	1828
14	14.22	2133
16	16.25	2438
18	18	2743
20	20	3047
22	22	3352
24	24	3657
26	26	3962
30	30	4571
32	33	4876
34	35	5181
38	39	5790
40	41	6095

Complete spindles



TeraSpin offers a comprehensive range of complete spindles for all makes and models of ring frames and doubling frames.

Based on the application, TeraSpin spindles are equipped with suitable spindle bearing units (inserts). The spindles are manufactured with the highest level of precision to ensure steady and vibration free operation as well as a long service life.

Features:

- ✓ High speed spindles
- ✓ Minimum vibration at highest speed
- ✓ Minimum spindle oscillation
- ✓ Minimum power consumption and noise level

Types:

- ✓ Spindles of aluminum plug type
- ✓ Spindles with and without yarn cutter
- ✓ Spindles suitable for 4-spindle tape drive and tangential belt drive
- ✓ Spindles with Smart Yarn Catcher
- ✓ Spindles with external locking and self-locking system
- ✓ Premium ES spindles with 18 mm wharve dia. (with HF-1 and HF-100 spindle bearing unit)

All spindles are being optimized considering

- ✓ The bobbins (tubes) to be used
- ✓ The type of spindle drive
- ✓ The minimum and maximum spindle speed
- ✓ The spindle brakes to be used

Application/s

- Machine/s : Short staple spinning frame, doubling frame
- Process/s : Spinning, Doubling
- Raw material/s : Cotton, worsted, man-made fibers and their blends
- Load/s : Light and medium



A.T.E. ENTERPRISES PRIVATE LIMITED

(Business Unit: TeraSpin)

Survey no. 251, Sarkhej Bavla Highway (N.H. no. 8A)

Village: Sari, Taluka: Sanand, Ahmedabad - 382 220, India