

SHIVPRIYA TEXCHEM · KNOWLEDGE SERIES

EliTe & EliTwist.

Compact spinning taken one step further.

EliTe is an aerodynamic compacting system for the ring frame. EliTwist takes the same idea and condenses two strands, twisting them into a single twin yarn. Between them they define the top end of what a ring frame can produce.

2 in 1

EliTwist condenses and twists two strands at one spindle

–40%

typical hairiness reduction against a conventional ring yarn

Suiting

the market where the premium is most reliably recovered

Bridging world-class spinning mills and your needs, since 2003.

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CHAPTER 01

What EliTe actually does

EliTe is a compacting system: a perforated apron running over a suction insert between the front roller and the twist point. The principle is the one shared by all compact spinning — the distinction lies in the geometry of the slot and the control it gives.



The suction slot is set at an angle to the fibre path — that angle is the design

01 A lattice apron

A fine perforated apron carries the drafted ribbon over a stationary suction insert.

03 Condensing plus orientation

The ribbon narrows and edge fibres are turned into the bundle rather than merely pulled in.

05 Twist into a narrow bundle

Twist is inserted into an already-condensed, already-oriented ribbon.

02 An angled slot

The slot is inclined to the fibre path, so fibres are drawn inward and slightly rotated as they travel.

04 A delivery nip

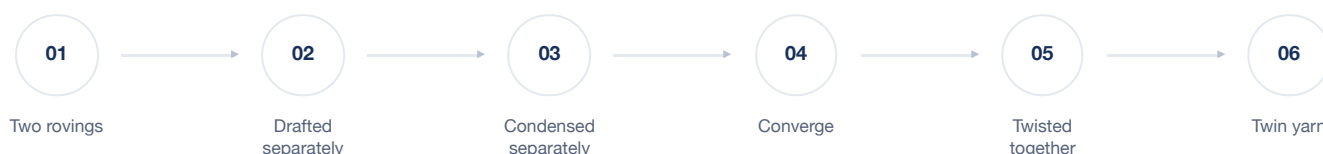
A second nip closes the condensing zone so twist cannot run back into it.

Why the angle matters. A straight slot pulls fibres inward. An angled slot pulls them inward **and rolls them into the bundle**. That additional orientation is what the system is selling, and it shows up most clearly in hairiness figures.

CHAPTER 02

Two condensed strands, one yarn

EliTwist is the more interesting idea. Two separately condensed strands are twisted together at a single spindle in one operation, producing a twin yarn with a structure conventional two-ply cannot achieve.



Both strands are compacted before they ever meet — the source of the difference

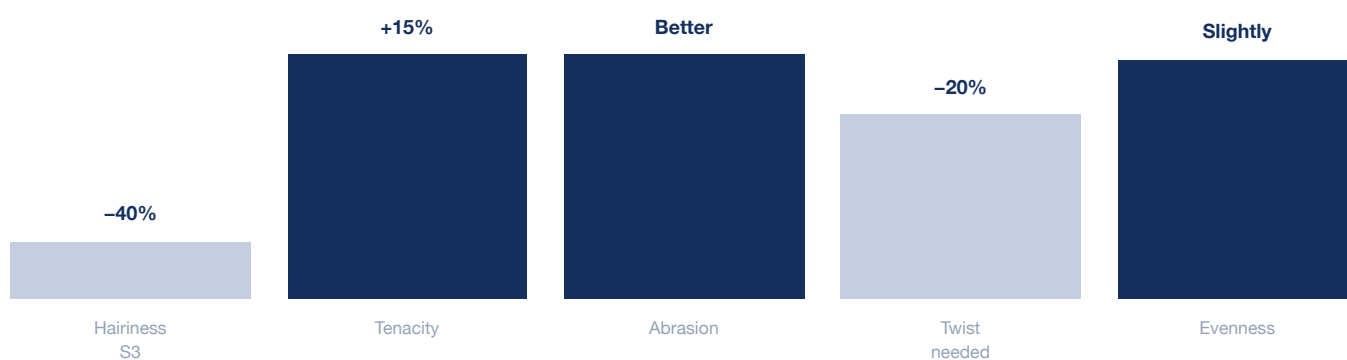
	CONVENTIONAL TWO-PLY	ELITWIST TWIN YARN
Operations	Spin, wind, twist — three machines	One spinning passage
Strand condition	Ordinary ring singles	Individually compacted strands
Twist directions	Singles and ply run opposite	Both run in the same direction
Surface	Two hairy strands twisted together	Two smooth strands, minimal residual hair
Handle	Round and full	Denser, smoother, more compact

Two-ply yarn twists two hairy strands together and accepts the result. EliTwist **removes the hair before twisting** — a different order of operations, and a different yarn.

CHAPTER 03

What the numbers do

The gains follow the pattern of all compact spinning, pushed further. Hairiness falls furthest; tenacity and abrasion resistance follow; handle becomes measurably denser.



EliTe compact yarn against a comparable conventional ring yarn

PROPERTY	WHAT FOLLOWS COMMERCIALY
Very low hairiness	Clean, dry surface — the defining requirement in worsted and fine cotton suiting
Higher tenacity	Allows lower twist at equal strength, which returns softness to a dense yarn
Better abrasion	Longer garment life and a fabric face that stays clean through wear
Lower twist required	A meaningful handle benefit; over-twisted fine yarn is hard and lifeless
Improved lustre	Regular fibre alignment reflects light evenly — visible in mercerised and worsted cloth
Better dye clarity	Fewer surface hairs means less light scatter and a cleaner, deeper shade

CHAPTER 04

Where EliTwist sits against the alternatives

EliTwist competes with two-ply yarn and with Siro. All three deliver two-fold character; they arrive there differently and are not interchangeable.

	TWO-PLY	SIRO	ELITWIST
Passages	Three	One	One
Condensing	None	None	Both strands
Twist directions	Opposed	Same	Same
Hairiness	Moderate	Low	Very low
Handle	Round, full	Firm	Dense, smooth
Cost	Highest	Moderate	Moderate to high

CHOOSE TWO-PLY WHEN

Buyer specifies ply

A round, full handle is wanted

Balanced torque is essential

CHOOSE SIRO WHEN

Cost is the driver

Sizing can be dropped

Worsted warp

CHOOSE ELITWIST WHEN

Surface is everything

Fine counts

Premium suiting

CHAPTER 05

Where the premium is recovered

These systems cost real money per spindle. The markets below are the ones that reliably pay for them.

END USE	WHY IT PAYS HERE
Worsted suiting	The clean dry surface is the entire aesthetic of worsted cloth; hairiness is the defect
Fine cotton shirting	High EPI weaving with sharp yarn-dyed patterns and minimal size pick-up
Mercerised yarn	Compacting and mercerising compound; lustre builds on a smooth dense body
Premium bedlinen	Fine sateen shows every surface hair as a dull cloudy face
High-end knitwear	Pilling grade and a clean face are the two things the buyer tests
Yarn-dyed checks	Colour boundaries stay sharp; hairiness blurs every line it crosses

- **Poor fit:** coarse counts below 20s, where the surface benefit is small relative to the cost.
- **Poor fit:** brushed and raised fabrics, which need the hairiness the system removes.
- **Poor fit:** any programme bought purely on price per kilo.

CHAPTER 06

What the system demands from the mill

Compacting is unforgiving of neglect. The equipment produces yarn whether or not it is condensing, and the difference is invisible until the fabric.

01 Suction discipline

Air pressure must be stable across the full frame length. A weak zone quietly stops compacting.

03 Slot cleanliness

A blocked slot on one spindle produces conventional yarn on that spindle, unnoticed.

05 Energy cost

Continuous suction adds 5–10% to frame power. It is a permanent operating line.

02 Apron condition

Perforated aprons wear and blind. Life is finite and monitoring it is a daily task.

04 Filter maintenance

The suction circuit collects fibre continuously. Filter neglect degrades the whole frame at once.

06 Spindle-level checking

Quality must be verified across spindles, not from a single representative cone.

The invisible failure. A compact frame with a third of its slots blocked produces yarn all day and it still gets labelled compact. **Cone-to-cone hairiness variation** is the only reliable way to see it from outside the mill.

CHAPTER 07

Cost, premium and where they meet

These are premium systems sold into premium markets. The arithmetic works at fine counts and stops working as counts get coarser.

LINE	DIRECTION	DETAIL
Capital / retrofit	Higher	A meaningful premium per spindle; retrofit is the usual Indian route
Power	Higher	Roughly 5–10% more per spindle for continuous suction
Consumables	Higher	Perforated aprons, filters and seals on a defined replacement cycle
Roving load (EliTwist)	Higher	Two rovings per spindle doubles speed frame demand
Doubling stage	Eliminated	For EliTwist — assembly winding and TFO both disappear
Yarn realisation	Higher	A clear premium in worsted and fine cotton; negligible at coarse counts

The count test. As a working rule, the premium is comfortable above 40s, arguable between 20s and 40s, and hard to justify below 20s. **Ask what count band the mill actually runs it on** before accepting a compact claim at face value.

CHAPTER 08

Verifying you received what you bought

Compact and twin-yarn claims are among the most frequently overstated in the yarn trade. Fortunately they are also among the easiest to check.

CHECK	WHAT IT TELLS YOU
S3 hairiness	The single most direct evidence that compacting is working. Ask for it on the delivered lot
Cone-to-cone variation	Reveals blocked slots and dead zones. Mean values from one cone hide everything
Twist multiplier	Genuine compact yarn is normally spun at a lower TM. Conventional TM invites a question
Tenacity CV	A good mean with a poor CV means only some spindles are compacting
Untwist test (EliTwist)	Should separate into two smooth twisted strands, not into loose fibre
Fabric surface	Weave or knit a trial. Compact yarn is visible in the cloth face immediately

A compact yarn is bought on its surface. **Test the surface** — on the lot, across cones, and in fabric.

CHAPTER 09

Specifying it properly

These systems carry brand names, and brand names create ambiguity in a quotation. Precision in the specification prevents most disputes.

01 Name the structure, not the brand

Specify “compact single” or “compact twin yarn” with the resultant count. Brand names vary by builder.

03 Fix the resultant count

For twin yarn, agree explicitly whether the quoted count is resultant or component.

05 Require cone-level data

Across-cone variation, not a single best cone. This is where the real difference lies.

02 State preparation as well

Combed compact and carded compact are very different yarns at very different prices.

04 Set an S3 ceiling

Put a hairiness limit in the contract. It is measurable, objective and enforceable.

06 Confirm the count band

Ask what counts the mill routinely compacts. Occasional running rarely produces stable quality.

How Shivpriya reads it. For premium suiting and fine shirting programmes we qualify mills on **hairiness stability across a full delivery**, not on their best sample. That single discipline separates mills that have genuinely adopted compact spinning from those that have merely bought the attachment.

IN CLOSING

The top end of what a ring frame can do.

EliTe and EliTwist are not a different way of spinning — they are the ring frame pushed to its practical limit, and in fine counts the difference is plainly visible in the cloth. If you are building a worsted or fine shirting programme and weighing compact, twin yarn and conventional two-ply, talk to us and we will work it through against your fabric and your price point.

TALK TO US

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