



GITA MARKETING CO.

TECHNICAL DATA SHEET

POLYESTER ROUND SLING

EN 1492-2:2000 — Star Lifting & Securing — Technical Data Sheet

Gita Marketing Co.

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1. Product Overview

Star Lifting & Securing Pvt Ltd — EN 1492-2:2000

Polyester round slings — also called roundslings or endless round slings — consist of a continuous load-bearing core of high-tenacity polyester yarns enclosed within a seamless tubular polyester cover. The endless loop construction eliminates metal hardware from the primary load path, making round slings exceptionally gentle on delicate, polished, or coated surfaces. Their circular cross-section distributes load uniformly around the item being lifted, reducing the risk of surface marking or deformation during precision lifts.

Round slings are widely used in power generation, petrochemical, heavy engineering, wind turbine assembly, and aerospace manufacturing — wherever surface protection, flexibility in rigging geometry, and high strength-to-weight ratio are priorities. Each sling is EN 1492-2:2000 certified, colour-coded to its WLL class, and supplied with a fixed data tag for full traceability.

2. Construction & Materials

Core Yarns	High-tenacity polyester (PES) — continuous filament, twist-free lay
Core Form	Continuous endless loop — no joints, splices, or metal hardware in load path
Cover Tube	Seamless woven polyester sleeve — protects core from abrasion and contamination
Cover Colour	Colour-coded to WLL class per EN 1492-2:2000 (see Section 3)
End Fittings	Soft eye (bare) standard · Grade 8 hooks, shackles, and master links on request
Safety Factor	Minimum 7:1 (Breaking Force $\geq 7 \times$ WLL at straight vertical lift)
Core Elongation	$\leq 3\%$ at rated WLL — low stretch for precise load control
Weight	Approximately 0.3 kg per metre per tonne WLL (varies by bore/construction)

3. WLL, Colour Code & Hitch Factors — EN 1492-2:2000

WLL values below are for the straight (vertical) lift configuration. Apply hitch factors as shown — never exceed the WLL for the selected hitch mode.

Code	WLL (Straight)	Colour	Choker Hitch $\times 0.75$	Endless Basket $\times 2.0$	45° Basket $\times 1.4$	60° Basket $\times 1.0$
RS-01	1,000 kg	Violet	750 kg	2,000 kg	1,400 kg	1,000 kg
RS-02	2,000 kg	Green	1,500 kg	4,000 kg	2,800 kg	2,000 kg
RS-03	3,000 kg	Yellow	2,250 kg	6,000 kg	4,200 kg	3,000 kg
RS-04	4,000 kg	Grey	3,000 kg	8,000 kg	5,600 kg	4,000 kg
RS-05	5,000 kg	Red	3,750 kg	10,000 kg	7,000 kg	5,000 kg
RS-06	6,000 kg	Brown	4,500 kg	12,000 kg	8,400 kg	6,000 kg



Code	WLL (Straight)	Colour	Choker Hitch ×0.75	Endless Basket ×2.0	45° Basket ×1.4	60° Basket ×1.0
RS-08	8,000 kg	Blue	6,000 kg	16,000 kg	11,200 kg	8,000 kg
RS-10	10,000 kg	Orange	7,500 kg	20,000 kg	14,000 kg	10,000 kg
RS-12	12,000 kg	Orange	9,000 kg	24,000 kg	16,800 kg	12,000 kg
RS-15	15,000 kg	Orange	11,250 kg	30,000 kg	21,000 kg	15,000 kg
RS-20	20,000 kg	Orange	15,000 kg	40,000 kg	28,000 kg	20,000 kg

(!) WLL values apply only to the straight vertical lift configuration unless a hitch factor is applied. Always determine the actual load, select the correct hitch mode, and confirm the appropriate WLL before use. Never use a round sling on a sharp edge without edge protection — bare edges will cut the cover and core under load.

4. Hitch Configurations

Round slings may be rigged in four standard configurations. The WLL changes with hitch geometry — always refer to the data tag and the table above.

Straight / Vertical	Single leg, sling hangs vertically between hook and load. WLL = rated WLL. Most common for symmetrical loads.
Choker Hitch	Sling passes through its own eye (or around the load). WLL = 0.75 × rated WLL. Provides load control and prevents load roll. Minimum D/d ratio (load diameter / sling diameter) ≥ 1.
Basket Hitch — Vertical	Both eyes on hook, sling passes under the load. WLL = 2.0 × rated WLL. Ideal for wide or unstable loads. Load must be balanced between the two legs.
Basket Hitch — Angled	As basket hitch but legs spread at an angle from vertical. WLL = 1.4 × WLL at 45° leg angle; 1.0 × WLL at 60° leg angle. Never use basket hitch at leg angles beyond 60° from vertical.

5. Temperature & Chemical Resistance

Service Temperature	−40°C to +100°C continuous. Above +60°C, apply de-rating per EN 1492-2 Annex A.
Short-Term Exposure	Up to +150°C for brief periods — verify with manufacturer. Do not use near open flames.
Moisture	Polyester retains full rated WLL when wet — no strength de-rating required. Dry before storage to prevent mildew in the cover sleeve.
Mineral Acids	Resistant to dilute mineral acids. Avoid concentrated H ₂ SO ₄ or HCl. Rinse after contact.
Alkalis	Good resistance to alkalis and bleach solutions at ambient temperature.
Solvents / Oils	Resistant to petroleum oils, greases, and most organic solvents.





UV Radiation	Moderate UV resistance. Prolonged outdoor exposure degrades cover — store shaded.
Hydrocarbons	Unaffected by fuels, hydraulic fluid, and cutting oils in normal use.

Note: Chemical resistance data are indicative. If the lifting environment involves unknown or aggressive chemicals, submit a sample for laboratory resistance testing before deployment. The cover colour may bleach without indicating structural damage — always assess the core condition, not only the cover appearance.

6. Edge Protection — Critical Requirement

Round slings have no inherent resistance to cutting by sharp or rough edges. Edge protection is mandatory whenever the load geometry creates an edge contact angle or radius below the minimum D/d ratio. Failure to use edge protection under load is the leading cause of round sling failure in service.

Sharp Edges	Use leather, rubber, or steel corner protectors at all contact points. Protectors must be secured to the load or sling and must extend beyond the full sling contact width on both faces of the edge.
Minimum Bend Radius	For the load-bearing eye, the minimum pin/shackle diameter (D) must be $\geq 1 \times$ the sling body diameter (d). Smaller radii apply a de-rating factor per EN 1492-2 Annex B — consult manufacturer.
Rough / Abrasive Surfaces	Wrap with textile padding or use protective sleeve before rigging. Abrasion damage to the cover must be assessed before further use.
Heat Sources	Keep round slings clear of welding, grinding sparks, and hot surfaces. Polyester melts at $\sim 260^{\circ}\text{C}$ — damage is not always visible on the cover.

7. Pre-Use Inspection & Retirement Criteria

- Inspect the full length of the cover and both eyes before every lift.
- Check the data tag — confirm WLL, length, and standard reference are legible.
- Feel the core through the cover: lumps, voids, or hard spots indicate internal damage.
- Retire immediately if any cuts, tears, or holes expose the load-bearing core.
- Retire if the cover is heavily abraded, chemically stained, or heat-discoloured.
- Retire if the sling has been subjected to a shock load or overload event.
- Retire if the data tag is missing, illegible, or if the WLL cannot be confirmed.
- Retire if kinks, twists, or permanent deformation are present in the core.
- Record every inspection in the lifting equipment register (LOLER / applicable national law).
- Maximum service life 10 years from manufacture date stamped on data tag — retire regardless of condition.

(!) A round sling with a damaged cover must be retired — the cover protects the core and its integrity is essential to the rated WLL. Do not attempt to repair the cover with tape, glue, or stitching. A repaired sling has no certified WLL.

8. Storage, Handling & Care



Storage Location	Cool, dry, well-ventilated store — away from direct sunlight and heat sources
Hanging Storage	Hang on smooth round pegs or sling trees — never fold over a sharp hook or nail
Cleaning	Wash with clean water and mild detergent — rinse thoroughly — air dry before storage
Chemical Exposure	Rinse thoroughly after any chemical contact — inspect before returning to service
Bundling	Do not store under heavy loads — protect from crushing and sustained compression
Segregation	Store separately from chains, wire ropes, and abrasive equipment
Freezing	Allow frozen slings to thaw fully and inspect before use — ice crystals damage core filaments

9. Standards & Compliance

Primary Standard	EN 1492-2:2000 — Textile slings: round slings, made of man-made fibres
Safety Factor	Minimum 7:1 — Breaking Force $\geq 7 \times$ Working Load Limit
CE Marking	CE marked — compliant with EU Machinery Directive 2006/42/EC
Data Tag	Permanently fixed: WLL · Length · Standard · Batch / Serial no. · Manufacture date
Test Certificates	Proof load test certificate and conformity declaration supplied with each batch
Traceability	Core and cover materials traceable to manufacturing batch on request
Manufacturer	Star Lifting & Securing Pvt Ltd — ISO 9001 certified
Distributor	Gita Marketing Co. — Bangalore · ISO 9001:2015 · ISO 14001:2015 · ISO 45001:2018

10. Multi-Leg Assemblies & Custom Orders

Round slings are available as pre-assembled 2-leg and 4-leg bridle sets with certified master links and hooks. Custom assemblies for dedicated lifting points — including asymmetric legs, adjustable spreader bars, and integrated load cells — are available on request with individual test certification.

2-Leg Assembly	WLL = sum of individual leg WLL \times leg angle factor (per EN 13155). 60° included angle standard; wider angles reduce WLL.
4-Leg Assembly	WLL calculated on 3-leg basis (one leg may not share load equally). Confirm with lift engineer for asymmetric loads.
Adjustable Slings	Ratchet adjusters and load limiters available — supplied with calibration cert.





Colour Coding	Multi-leg sets retain EN 1492-2 colour code of the limiting (lowest WLL) leg.
Documentation	Full assembly test certificate and rigging diagram supplied for custom sets.

11. Ordering Information

Standard Range	RS-01 (1T) to RS-20 (20T) — straight lift WLL
Standard Lengths	1 m · 1.5 m · 2 m · 3 m · 4 m · 6 m · 8 m — custom lengths on request
End Configuration	Soft eye (bare) standard · Hook · Shackle · Master link — specify on order
Assembly Options	Single-leg · 2-leg bridle · 4-leg bridle · Endless loop
Edge Protection	Textile sleeve protectors · Leather corner pads — available separately
Documentation	CE Declaration · Proof-load test cert · Conformity statement
Minimum Order	No minimum for standard range — custom orders subject to MOQ
Lead Time	Standard range ex-stock Bangalore · Custom assemblies 5–10 working days
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