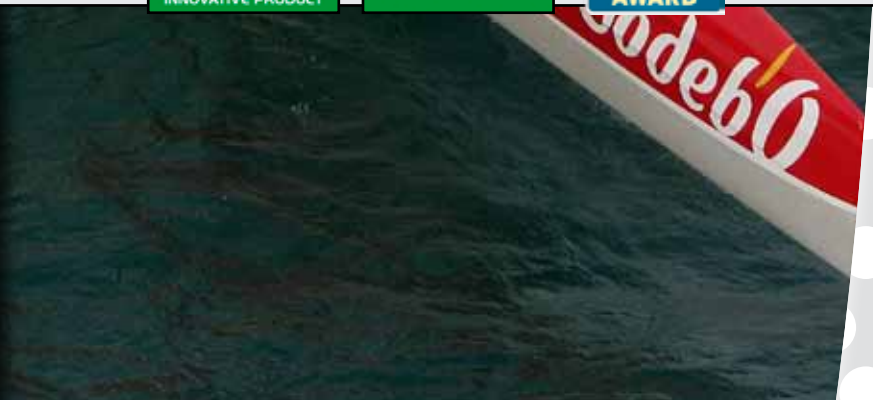
2011 DAME DESIGN AWARD METS
MOST INNOVATIVE PRODUCT

2011 DAME DESIGN AWARD METS
CATEGORY WINNER

SAIL 2012
PITTMAN INNOVATION AWARD

CONSTRICTOR® 2013

TEXTILE CLUTCHES / THE NEW GENERATION



COUSIN TRESTEC

» COUSIN TRESTEC

GROUPE COUSIN

Established in 1848
250 employees
12 Hectares site
3 subsidiaries:
Cousin Trestec
Cousin Composites
Majour Sport - Tecnifibres

Renowned for technical and professional competence in lines, ropes and fibre cables, COUSIN Trestec brings together all the strength and knowledge of a great industrial group for the service of its customers.
The secret of our success? Unrivalled know-how, coupled with a wide and diversified range of high spec products supplied through a worldwide network of agents and distributors.

Thanks to our support and sponsorship of the world's leading sailors and the top racing teams, COUSIN Trestec has built an enviable reputation as a knowledgeable manufacturer throughout the yachting world.

» OUR ACTIVITIES

Throughout its proud history, COUSIN Trestec has been continuously involved in the industrial textile sector. Over the years the company has diversified its activities, developing a range that now includes lifting slings, braided cables, cords, webbing and safety ropes. COUSIN Trestec works in close partnership with its industrial customers, assisting at each step of their development process with recommendations on materials, specifications, prototypes, revisions etc.

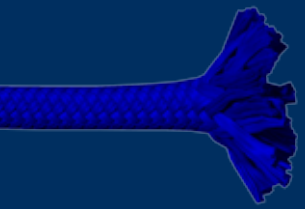
With broad expertise in many fields and an ability to respond quickly to new trends, COUSIN Trestec was one of the first to market cords and ropes specifically for the sport and leisure industry.

The COUSIN brand soon became the first choice for applications such as climbing and caving ropes, and braided lines for paragliding, parachute or kitesurfing, yachting sheets and halyards. COUSIN Trestec brings to its customers the best performance on the market, encouraging innovation and pushing forward research and development to introduce award winning products like the Constrictor®, and our new Zylight® standing rigging system.

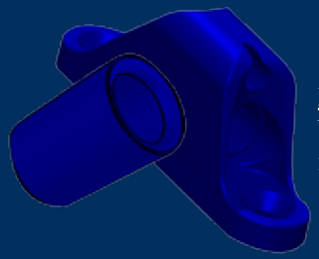
TECHNOLOGY

Unlike all conventional clutches the Constrictor® system does not crush the rope between two metal surfaces. Instead, the loaded rope is held securely in a textile sock, itself attached to an anchor base. The rope runs freely through the sock in one direction, but is gripped instantly within the sock when running out in the opposite direction. This constrictor effect, patented by COUSIN Trestec, provides increasing holding power as the load increases.

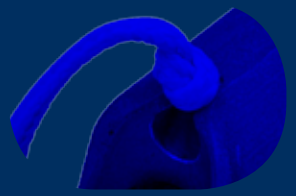
Holding sock :



- Specific braid orientation: Thanks to our rope manufacturing expertise we have defined the optimal braiding angle to maximise grip and minimise slippage.
- Fibre assembly: Our knowledge of fibres combined with extensive testing has allowed us to achieve the best fibre balance and density for unmatched strength.
- Treatment: Our surface treatments play a critical role in extending the product life, boosting grip and reducing abrasion in stress areas.



Biconical titanium base : Patented by Cousin, the textile sock element is locked in place between a titanium ring and the anchoring base. The unique conical geometry allows easy insertion of the rope, and ensures that the sock is perfectly integrated with the anchor base in supporting the applied load.



Opening system : Pulling on the SK75 Dyneema® lanyard retracts the sock, relaxing the grip on the rope and allowing it to run freely in either direction. The lanyard can be fixed in the open position using the V-notch in the anchor base.

Stronger : Our standard Constrictor® range provides twice the holding power of conventional rope clutches. Our design team can propose custom solutions offering holding power up to the breaking load of the rope if required – contact us for further information.

Lighter : Saving weight and increasing performance, our system is at least three times lighter than conventional rope clutches.

No abrasion or rupture : Our textile sock is particularly well balanced and closes like an octopus on the line. The extraordinary grip is the result of a fibre-to-fibre contact that is far less aggressive than a traditional metal cam, but much more effective.

Release under load : The line can quickly and easily be released under load without the use of a winch, simply by pulling the lanyard. This can be an important safety consideration in a situation where immediate release is required.

Remote release system : The Dyneema® lanyard can be extended to offer a remote release. For example, the textile clutch can be installed at the masthead to reduce compression on the spar and minimise the effects of halyard creep, with the lanyard leading to a convenient point on the deck.

New Constrictor® with the beta version

Release system

The release lanyard can be fixed in the open position using the V-notch on the anchor base.

Aluminium Anchor base

Made of aircraft aluminium alloy, and less than one third of the weight of a conventional rope clutch.

Dyneema® Lanyard

This SK75 Dyneema® lanyard allows the rope to be released instantly. It can be extended for remote release applications.

Slotted fixing hole

The hole and slot system allows installation using existing holes when replacing your conventional clutch. See table for fastener size recommendations.

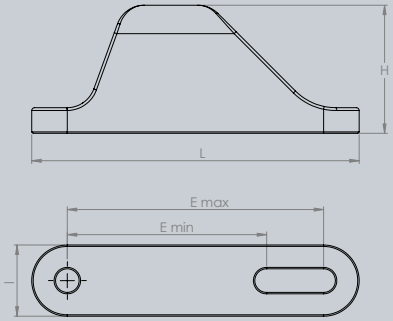
Elastic restraint

The elastic has been specially selected and measured in order to provide the correct sock tension for minimum friction and smooth engagement.

Aramid holding sock

The hollow braid 24 plait Technora® TW220 achieves twice the holding power of conventional rope clutches.

» ANATOMY



Clutch Size	Breaking load (Ørope)		Weight		Width		Length		Height		Emin		Emax		Sock		Ø Screw	
	daN	lb	g	oz	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
Constrictor 6 (1/4")	1150(Ø6) 450(Ø5)	2600(Ø1/4") 1010(Ø3/16")	150	5.3	25	1"	115	4.53	45	41/2"	70	2 3/4"	90	3 1/2"	450	17.7	8	5/16"
Constrictor 8 (5/16")	1800(Ø8) 600(Ø6)	4050(Ø5/16") 1350(Ø1/4")	155	5.4	25	1"	115	4.53	45	41/2"	70	2 3/4"	90	3 1/2"	500	19.7	8	5/16"
Constrictor 10 (3/8")	2100(Ø10) 1400(Ø8)	4720(Ø3/8") 3150(Ø5/16")	160	5.6	25	1"	115	4.53	45	41/2"	70	2 3/4"	90	3 1/2"	500	19.7	8	5/16"
Constrictor 12 (1/2")	3500(Ø12) 1500(Ø10)	7870(Ø1/2") 3370(Ø3/8")	330	11.6	36	13/8"	126	4.96	58	5"	70	2 3/4"	90	3 1/2"	650	25.6	12	1/2"
Constrictor 14 (9/16")	4350(Ø14) 1800(Ø12)	9780(Ø9/16") 4050(Ø1/2")	340	12	36	13/8"	126	4.96	58	5"	70	2 3/4"	90	3 1/2"	650	25.6	12	1/2"

» CUSTOM RACING CONSTRICTOR®

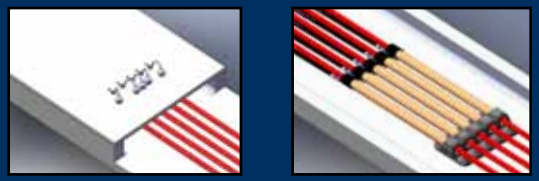
In developing the technology behind the Constrictor®, we carried out extensive testing with some of the most demanding professional racing teams in the world, Maxi, Mini, Multi, Imoca and AC72 are among the many types of boats for which we develop customised solutions to meet specific requirements for breaking loads, dimensions, weight, structural integration and mounting fixtures. Most recently we have developed a laminating solution to install the Constrictor® without any bolts, for seamless transfer of rigging loads to the boat structure. Titanium, PBO, aircraft-grade aluminium – we use the best materials available for the custom solution that best suits your needs.

Using our advanced in-house testing facilities, our team will deliver a product that you can rely on with total confidence. If you have a special project, contact us for a solution!

» CUSTOM SOLUTIONS

» INTEGRATED CONSTRICTOR®

Our Constrictor® solution gives you the opportunity to completely redefine your deck plan. Integration of the Constrictor® rope clutch solution offers a clean and aesthetically pleasing solution, free from the clutter and obstruction of conventional rope clutches.
Why have your clutches visible when you can hide them under a low profile hood or partition!



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» REFERENCES

Used by the best

You will already find the Constrictor® solution in use on the top Maxi, Mini, Multi, IMOCA and AC72 teams. Based on the enthusiastic feedback we have had from some of the most beautiful boats in the world, we have developed a trouble-free and ergonomic product that will please anyone looking for the new Generation in rope holding technology.

COUSIN GROUPE

- 12 hectares manufacturing site
- 250 employees
- 3 subsidiaries : Biotech, Composites, Trestec
- 60 years of know-how

COUSIN TRESTEC

- 47 000 Km of rope produced each year
- Diameter from 0,5 mm to 80 mm
- Test bench of 100 tons
- 80 employees

AFAQ ISO 9001 VERSION 2000

COUSIN TRESTEC

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