STRUCTURAL FURLERS

Photo credit : Carbon 3 - Tuco Marine

Photo credit : Alphena

Structural furlers : the in/out furling systems
The structural furler - unlike the Gennaker furler - supports both mast and sail loads. The Facnor 14-100T systems are fitted with anti-twist fiber forestay from 40 footers. Their reliability widely tested on ocean races has enabled Facnor to enlarge the range from 14 to 100 tons. The different STG 3-4T, must be fitted with a classic wire forestay from 24 to 30 footers.

STRUCTURAL FURLERS 14-100T & STG 3-4T

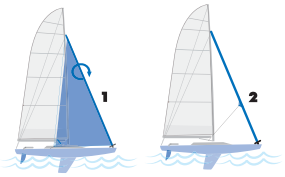
14-100T STRUCTURAL STAYFURLERS P30
TEXTILE FORESTAY (from 40' to +130')

STG 3-4T STRUCTURAL WIRE FURLERS P32
(from 24 to 30')

Photo credit : Latitude 46 - Tofinou

Facnor has adapted the Open 60' Staysail furlers to other ranges of fast racing boats. These structural furlers support mast loads and can entirely furl in and out headsails (such as Solent, Staysail, Genoa). This system particularly dedicated to racing boats, like Class 40' is also supplied on ocean cruising yachts for Staysails.

PERFECT SAIL & LIGHTNESS



The in/out furling system: This in/out system enables a performance sail cut with belly lowered and holds the mast at the front. it holds the mast at the front. The forestay, traditionally in high quality textile fibres, turns. By pulling the continuous line, the drum generates the rotation to the thimble of the textile forestay and the attached tack of the sail. Easy and efficient. This furling gear has been chosen by class 40' and 60' but also cruising sailboats skippers.

14-100 T structural furler features :

- Saving in weight (**up to 3 times lighter** than a conventional furling system)
- Great furling power with large diameter drum
- Maximum luff thanks to the low profile drum
- simple installation fitting various forestay terminals (see against)
- Possibility to tighten the halyard with a 2-to-1 block at the bottom
- Resistant and tested for heavy loads
- Mechanisms fitted with jaws or threaded connection

Two possible assemblies

The structural furlers can be connected onto the textile stay with classic thimbles or threaded cone-shaped terminals (Navtec system)

Tack eye

for the fixation of the swivel at the head of the mast (delivered)

Head swivel

links the stay to the mast, mechanism letting the stay rotating and supporting mast loads.

Anti-twist terminal

The terminal (thimble or threaded connection) transmits the rotation to the textile stay.

Anti-twist structural stay

it supports the mast and also transmits the rotation of the bottom drum to the swivel

Continuous line drum torque

The large diameter of the continuous line drum increases the furling power and reduces efforts. And it also prevents the furling line from overriding.

Made from a single aluminium block

that is CNC machined in order to offer a high resistance

Furling line exit

allows to guide and keeps the furling line around the drum

Bottom terminal

allows to fit the continuous line drum to the foredeck chain plate (Directly integrated to the drum)

Photo credit : © Oliver Dewar/ Global Ocean Race

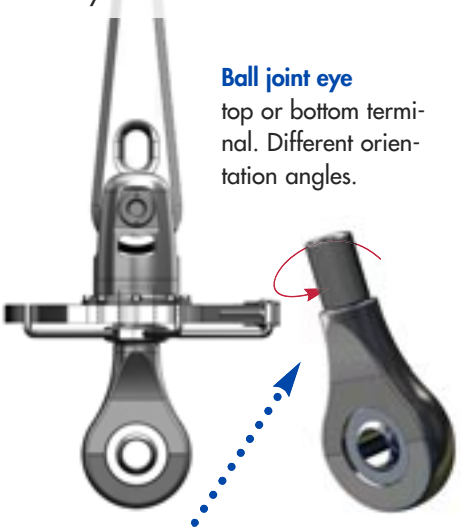
14-100T STRUCTURAL FURLERS RANGE

Parameters / Furler model	14 T	20 T	24 T	31 T	40 T	54 T	75 T	100 T
Boat length (feet)	40′	45′	50′	60	60 /70′	70′	+70′	
Kevlar wire breaking loads*	14 T	20 T	24 T	31 T	40 T	54 T	75 T	100T
ROD equivalence	-17	-22	-30	-40	-48	-60	-76 & -91	-115 & -150
wire 1x19 equivalence (mm)	10	12	14	16	19	22	-	-
Kevlar wire working loads (safety coeffcient x 2)**	5 T	7 T	8 T	11T	14 T	20 T	27 T	35 T

* model name = Kevlar stay breaking loads
** If we replace a metal wire or a rod forestay by a textile wire, this one will be largely over dimensioned, as the essential criteria to choose the model is not the solidity but the resistance against stretching. This is why the safety coefficient is so high.

Different articulating parts such as (at the top and bottom) :

- bottom ball joint eye,
- T-bones,
- double loop anchor,
- top latching eye,
- many other terminals.



Ball joint eye
top or bottom terminal. Different orientation angles.

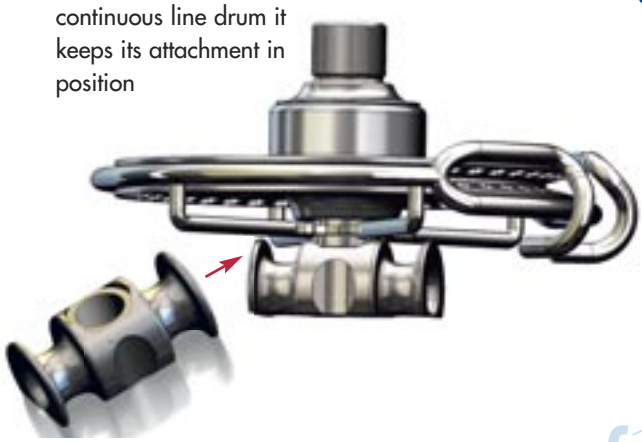
Interchangeable : *the terminals are screwed into mechanisms. These articulating parts can be changed around.*

TOP OR BOTTOM TERMINAL OPTIONS

Eye terminal
for both top and bottom end

Lashing eye terminal
(fitted above the swivel or underneath the drum)
the lashing gives more flexibility to the articulation

"T-Bones" Terminal
fitted underneath the continuous line drum it keeps its attachment in position



Double anchor
(above swivel fitting with lashing)
more flexible articulation – to be screwed or notched up