INTERNAL Halyard locks

High resistance body Halyard locks improve flying sail use (Staysail/Gennaker) saving weight and reducing mast compression loads. This simple and efficient device makes the halyard locking/unlocking easy and safe. The Facnor lock tremendously eases the handling of flying forestays (2-to-1 no longer required). It can be fitted either inside or outside the mast.

**Build into mast front**

- **Without halyard lock**, the halyard load increases the compression on the mast. (C x 2)
- **With the lock**, the halyard does not generate any additional compression (C x 1)

**NEW Design!**

- Pull up the halyard until the sail reaches full hoist for locking.
- Pull up again the halyard for unlocking (and thereby taking down the sail).

**>> Halyard / Mast : 50% reduced load**

With the locking device, the halyard load is transferred to the lock, reducing nearly by half this compression and allowing lighter mast.

**>> Reduction of the boat heel/windage**

widely fitted on raceboats, the lock reduces the boat heel and windage, even in cruising.

**Different possibilities of use :**
- Gennaker or code zero
- Staysail fitted on textile forestay
- Staysail fitted on furler with flying wire forestay

**>> Luff constantly tight**

Constant tension: wind pressure increases are not absorbed by the halyard elasticity.

**>> Large range**

from 2T (new design) up to 50 T

**>> Reliable mechanism**

"Star-shaped" inner part

The rotating ring is fitted with three projecting blocks that adjust themselves in the body of the mast part.

**>> Easy installation and inspection**

Optimum integration of the lock into the mast
- device fitted from outside the mast;
- mast cut following a jig;
- the integrated part that bears sail load is fixed on the mast face only by two screws thanks to a clever design;

**>> Options :**

Fitted-in sensors:
- « upwards stop » and « locked »

Various terminals available (see page 27)
- With toggle directly fitted-in (swivel)

**>> Internal halyard HL locks technical features**

<table>
<thead>
<tr>
<th>Parameters / Lock model* (= working load)</th>
<th>HL 2 T</th>
<th>HL 3 T</th>
<th>HL 5 T</th>
<th>HL 7 T</th>
<th>HL 10 T</th>
<th>HL 12 T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kevlar equivalent wire</td>
<td>7 T</td>
<td>10 T</td>
<td>14 T</td>
<td>20 T</td>
<td>30 T</td>
<td>40 T</td>
</tr>
<tr>
<td>ROD equivalent</td>
<td>#8</td>
<td>#12</td>
<td>#17</td>
<td>#22</td>
<td>#40</td>
<td>#48</td>
</tr>
<tr>
<td>Wire equivalent 1x19 (mm/inch)</td>
<td>7/9/32</td>
<td>8/5/16</td>
<td>10/3/8</td>
<td>12/1/2</td>
<td>16/5/8</td>
<td>19/3/4</td>
</tr>
<tr>
<td>Dyform equivalent (mm)</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>10</td>
<td>14</td>
<td>16</td>
</tr>
</tbody>
</table>

* model name = Kevlar stay breaking loads (see structural furler mention)

See the video on YouTube: https://youtu.be/2V9NX95gFvA
Alternatively, the halyard locking device can be fitted on a mast chain plate. Among those external locks we distinguish two types: the two-in-one locking swivels and the locks attached by a loop.

**Polyvalent interface with the forestay**

The benefits of the lock:

"Thanks to the lock, we can lower the furled staysail in order to tack or jibe easily, or even to reduce windage. Moreover, the locked staysail presents various advantages in comparison with a fixed forestay: sail furling, tight luff, easy handling. With the lock, hoisting and lowering the staysail is quick and so easy".

Halvard Mabire, skipper of the Class 40’ Campagne 2 France and facnor technical partner

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**Fixed locking device and mobile pin:**

- Easy & simply fitted: it can be fixed onto the head attachment with an articulated device (toggle, latching, Unibal ball or others).
- The halyard (small ø) can then run down inside or outside the mast.

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**Swivel & lock technical features**

<table>
<thead>
<tr>
<th>Parameters / Lock model* (= working load)</th>
<th>HE 3 T</th>
<th>HE 5 T</th>
<th>HE 7 T</th>
<th>HE 10 T</th>
<th>HE 12 T</th>
<th>HE 16 T</th>
<th>HE 24 T</th>
<th>HE 30 T+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kevlar Equivalent wire</td>
<td>10 T</td>
<td>14 T</td>
<td>20 T</td>
<td>30 T</td>
<td>40 T</td>
<td>54 T</td>
<td>75 T</td>
<td>100 T</td>
</tr>
<tr>
<td>ROD Equivalent</td>
<td>#12</td>
<td>#17</td>
<td>#22</td>
<td>#40</td>
<td>#48</td>
<td>#76</td>
<td>#90</td>
<td>#115</td>
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</tbody>
</table>

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**Swivel & lock technical features**

<table>
<thead>
<tr>
<th>Parameters / Lock model* (= working load)</th>
<th>2 T</th>
<th>7 T</th>
<th>9 T</th>
<th>9 T+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kevlar Equivalent wire</td>
<td>8 T</td>
<td>20 T</td>
<td>27 T</td>
<td>Please contact us</td>
</tr>
<tr>
<td>ROD Equivalent</td>
<td>#10</td>
<td>#30</td>
<td>#40</td>
<td></td>
</tr>
</tbody>
</table>

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**Swivel & lock technical features**

A Dogbone blocks the halyard in the swivel.