

595-966-E
2007-02-07

Running cables

Conventional and furling masts from 2003

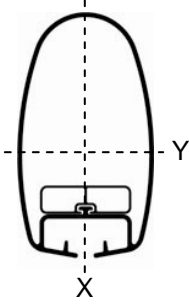
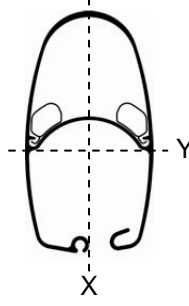


RETRO-FITTING CABLES

This instruction describes how to fit new cables to conventional and furling mast sections from 2003. For sections before 2003 please refer to instruction 595-557-E “K 13”.

Identify mast section and cable conduit(s)

Identify type and size of your mast by measuring section length and/or section width and use the tables below (tables 1 and 2) for information on type, size and number of conduits.

C-sections				F-sections			
							
Conventional section				Furling section			
Mast Section	Length (mm)	Width (mm)	Cable conduit(s)	Mast Section	Length (mm)	Width (mm)	Cable conduit(s)
C156	156	87	535-762 (x1) ↓	-	-	-	-
C175	175	93		F176	176	93	535-763 (x1-2) ^{*)}
C193	193	102		F194	194	101	
C211	211	110	535-760 (x1) ↓	F212	212	109	535-761 (x1-2) ^{*)} ↓
C227	227	119		F228	228	118	
C245	245	127		F246	246	126	
C264	264	136		F265	265	135	
C285	285	147		F286	286	146	
C304	304	157		F305	305	156	
E321	321	171	535-673 (x1)	F324	324	169	535-709 (x2)
E365	365	194		R370	370	192	

^{*)} One or two conduits depending on type of yacht.

Table 1

Cable conduits – available space

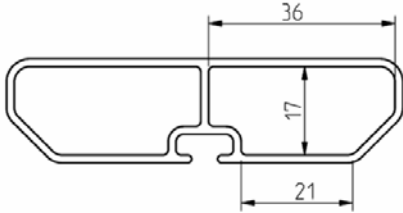
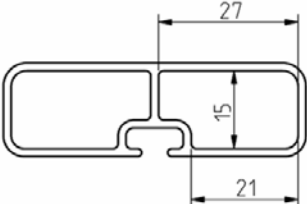
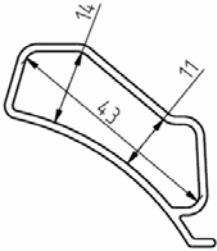
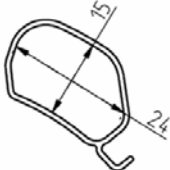
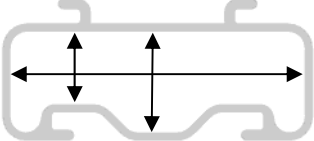
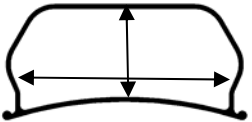
<p>535-760</p>	
<p>535-762</p>	
<p>535-761</p>	
<p>535-763</p>	
<p>535-673</p>	<p>53x14/18</p> 
<p>535-709</p>	<p>45 x 19</p> 

Table 2

Fitting instruction

Note! On some deck stepped masts the cables do not exit the mast at deck level, but are led into the boat via a cable hose arrangement in the centre of the mast base. If your mast has this arrangement, then go to section “*Retro-fitting cables running through cable hose*” for detailed instructions.

Equipment needed

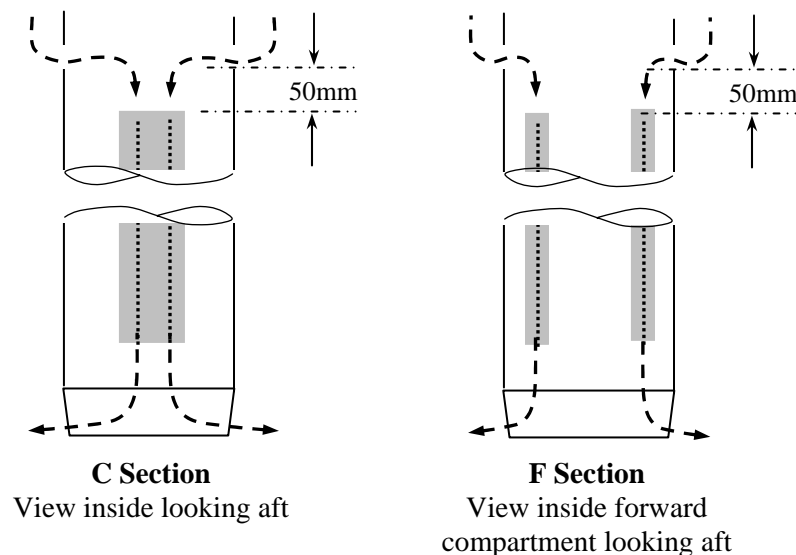
- Cable
- Messenger line (Ø3-4mm, length = mast length)
- Tape
- (Silicone or Teflon spray)
- (Nut)

Fitting procedure

The cables are fed through the conduit(s) with help of the existing messenger line(s).

If messenger lines are missing the easiest way to fit them is with the aid of a conduit feeder (a long strip of steel used by electricians)

Alternatively, if the mast is already stepped, messenger lines can be fitted using gravity. Try to stabilise the boat to minimize rolling. Attach a small weight such as a nut to the end of the new messenger line. Pass it into the mast through the side access hole, and into the open conduit. Lower down from the mast head to the heel, where it can be taken out.



Attach the new cable to the messenger line as follows:

1. Taper the cable or cut off a piece of the cover.
2. Tie multiple clove hitch knots around the tapered cable end.
3. Cover with tape to achieve a conical shaped transition from cable to messenger.

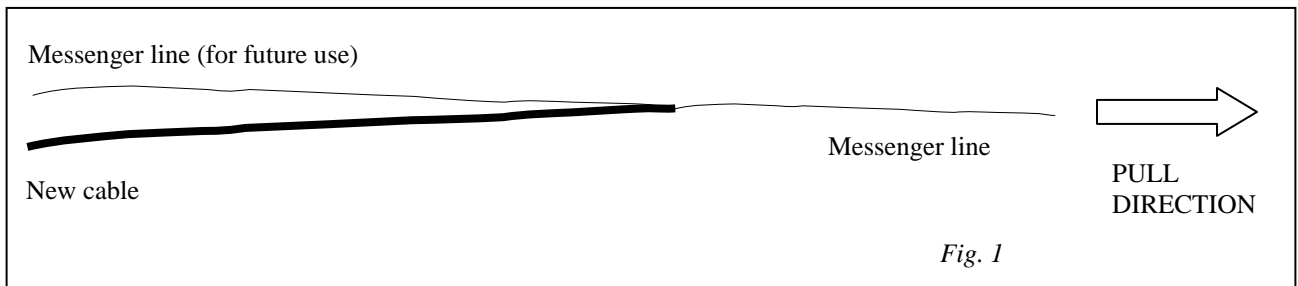
Also tie a new messenger line to the cable, see pic 1. This messenger line is to be left in the mast for future use.

Stretch the the existing cables.

Pull the new cable through the conduit. It helps to lubricate the cable using Silicone or Teflon spray.

Existing cables can hinder the running of the new cable even after they have been stretched. In that case they must first be removed – not forgetting to tie new messenger lines to each before withdrawal. Then all cables (existing + new) are fed back in turn – complete with their new individual messenger lines, so that the next cable can be installed in turn. Also remember to stretch the previously fitted cable(s) before feeding the next one.

On keel stepped masts the conduit passes through the internal seal.



Retro-fitting cables running through cable hose

(Deck stepped masts only)

Some masts feature a separate access hole (on the port side, approx. 350 mm from the base). If this access hole is present, new cables can be run without un-stepping the mast. Otherwise the mast must be un-stepped to allow fitting new cables.

Retro-fitting new cables on un-stepped mast

Fitting procedure

1. Fit cables as described above (section “Fitting instructions”).
2. When the new cable(s) have been installed all cables and messenger lines should be tied in a loop and secured by a cable tie at a distance “A” from the mast heel as shown in diagram 1 below.
3. Step the mast, see below.

Stepping the mast:

- Before stepping, feed the cable loop into the mast. A piece of tape can be used to secure the cables to the heel to prevent the loop from falling out while the mast is raised. See diagram 1.
- Gently feed the cables through the cable hose and into the boat while lowering the mast. Check that the cable hose goes through the heel into the mast without jamming. One person is needed below deck to pull the cables. Make sure the cables do not jam.

Retro-fitting new cables on stepped mast

Retro-fitting cables running through the cable hose assembly on a stepped mast can only be done if the mast features a separate access hole (usually located on the port side of the mast, approx. 350 mm from the base). Otherwise the mast must be un-stepped to allow fitting new cables.

Fitting procedure

1. Attach the new cable to the messenger line in the top of the mast. See “Fitting instructions” above for details on how to tie the new cable to the messenger line. Also tie a new messenger line to the cable for future use.

The messenger line should run all the way from top of mast, through cable hose at deck level and down into the boat. If that is not the case, then a separate line must be run from deck level, through the cable hose and down into the boat. This separate line must be tied to the messenger line running from top of mast to mast base.

2. Make sure that the lower part of the messenger line is fixed below deck. Then pull out a loop of ~300 mm of the messenger line through the separate cable exit hole in the mast.
3. Pull down the new cable from top down. One person has to stay in the top to feed the cable. It helps to lubricate the cable using Silicone or Teflon spray.

4. Through the separate access hole, pull out the amount of cable that is to be fed down below deck.
5. Form the cable into a loop and fit a cable tie at an approximate distance from end of mast as shown in first picture in diagram 1. This is to prevent water from dripping along the cable and into the cable hose.
6. Go below deck and pull the cable down. One person must stay on deck to help feeding the cable into the cable hose (through the separate access hole). Stop pulling when all the cable is inside the mast and the cable tie / loop hangs on the cable hose edge (see final picture in diagram 1.)

Mast section		A	HL
C156 C175 C193	F176 F194	250-300 mm	300 mm
C211 C227 C245	F212 F228 F246	300-350 mm	350 mm
C264 C285 C304	F265 F286 F305	300-350 mm	350 mm

Note! Cable hose assembly on in-mast furling masts:

On mast sections F176 and F194 the cable hose goes into the (aft) sail compartment. On all other furling masts the cable hose goes into the forward compartment.

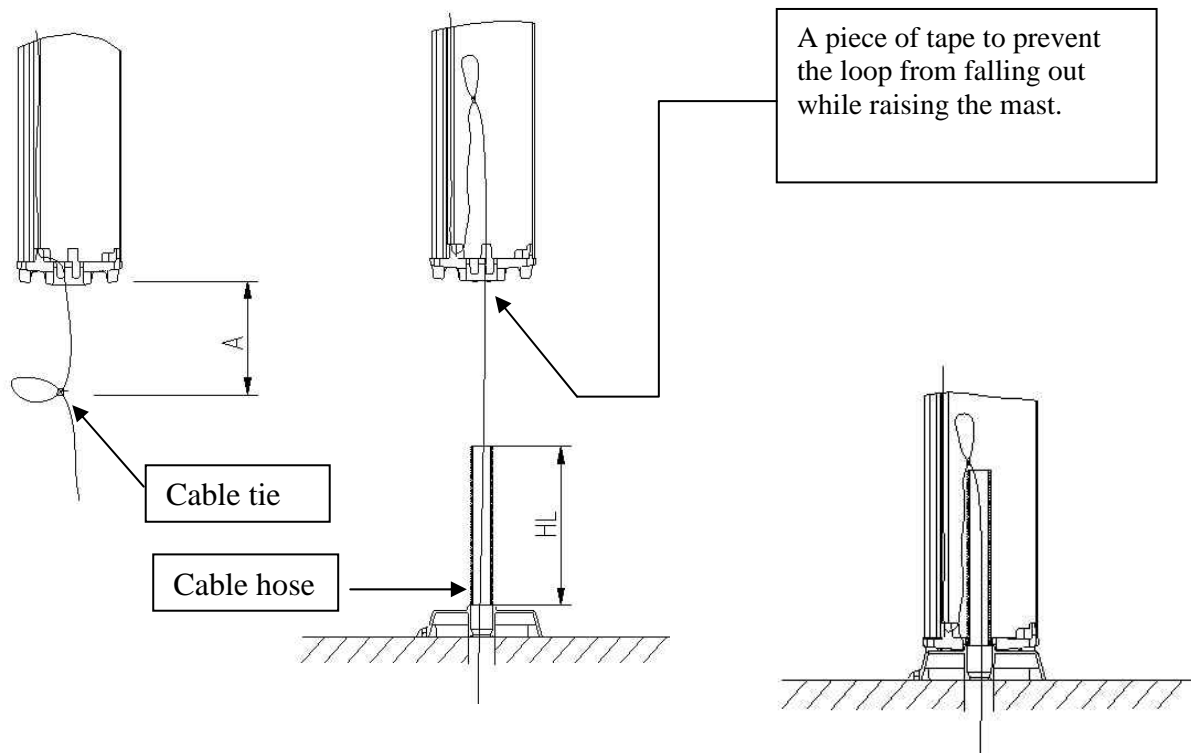


Diagram 1

DINGHIESKEELBOATSYACHTS

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