

HARKEN®

INSTALLATION SHEET

15:1 Power Dinghy Vang 447 (System) or 455 (Lower Assembly)

N15W24983 Bluemound Road • Pewaukee, WI 53072 U.S.A.

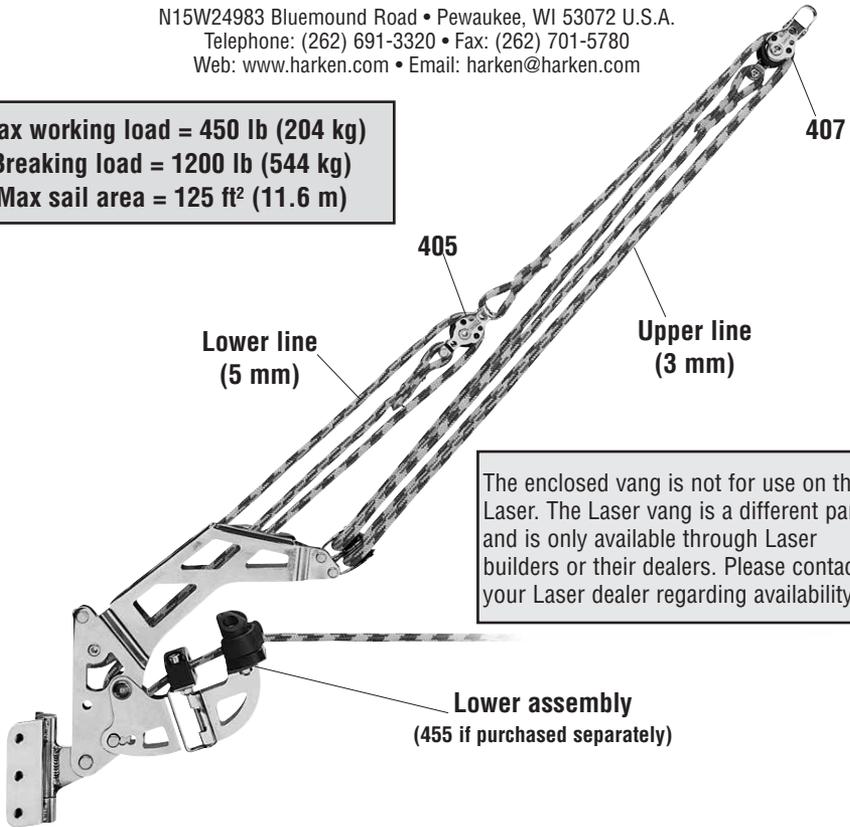
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Max working load = 450 lb (204 kg)

Breaking load = 1200 lb (544 kg)

Max sail area = 125 ft² (11.6 m)



Parts included (447 only)

- Lower assembly
- 16mm AirBlock® 405
- Upper block 16 mm AirBlock® w/becket #407
- Upper Line: 10' of 3mm polyester line
- Lower Line: 10' of 5mm polyester line

Tools you must supply

- Drill motor
- 5/32" (4 mm) drill bit (for screws)
- 10-32 (5 x .80 mm) tap (for screws)
- Screw driver (for screws)
- 3/16" (5mm) drill bit (if pop rivets are used)
- Pop rivet gun (optional)
- Centerpunch
- Pencil or fine-point marker

Parts you must supply

- 10-32 (5x .80 mm) stainless steel screws (optional)
- or –
- 3/16" (5 mm) stainless steel pop rivets
- Use shackle (246) if there is a bail or strap to attach upper block to boom.
- Use eyestay (073) if there is no bail on boom.

Part 1 – Reeving Line

Note: The following section is for replacing line on the 447 system, or assembling if you purchased the 455 separately. If you purchased the Dinghy Vang system 447, line is pre-reeved. Skip to Part 2: Mounting Instructions.

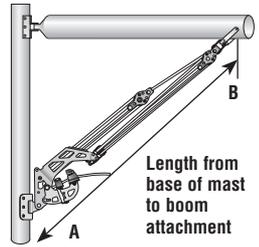
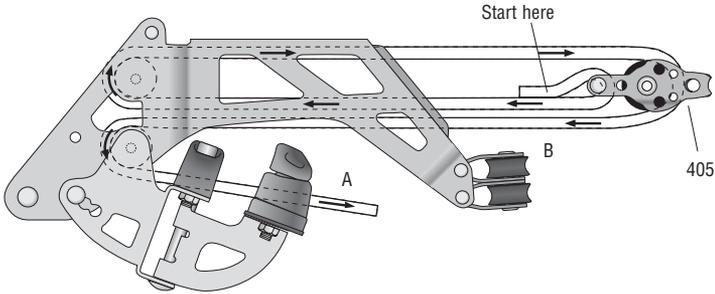
Line replacement chart

Length AB	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	34"	36"
3:1	28"	32"	36"	40"	44"	48"	52"	56"	60"	64"	68"	72"
5:1	28"	37"	46"	54"	63"	72"	80"	89"	98"	106"	115"	124"

Typically 3:1 is the heavier line that exits from cam. 5:1 is the lighter, gross trim line. Line Lengths are close, but add extra for adjustments on individual boat. Be sure to add extra line to the 3:1 to accommodate the distance from vang fitting to helm.

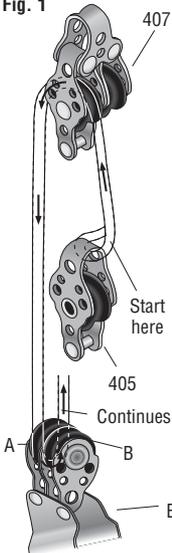
Lower assembly

Tie off one end of 5 mm line on becket of 405 block. Pull line through front of lower assembly, around top sheave from the bottom. Pull line back out of lower assembly, around sheave of 405 block from the top, and back into lower assembly. Then wrap around lower sheave from the top, and pull line out through bullseye and cam.



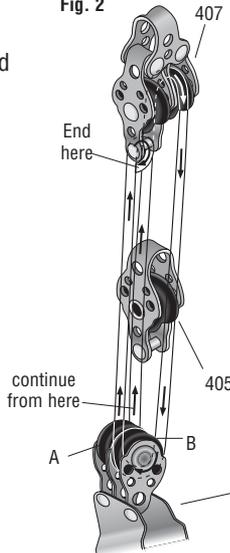
Upper block

Fig. 1



1. Tie off one end of 3 mm line around head of 405 block. Pull line up around becket side sheave of 407 block, and down around sheave A on end of lower assembly as shown.

Fig. 2



2. Pull line back up from back side of sheave A on end of lower assembly, around top of the back sheave of 407 block. Then pull line down around sheave B on end of lower assembly. Then bring line back up to becket of 407 block and tie off.

Part 2 – Mounting Instructions

Mounting options

Mount the Dinghy Vang with either stainless steel pop rivets or with screws into a threaded hole. Pop riveting is easier and quicker, but it is essential to use stainless steel pop rivets. Other types of pop rivets are not strong enough. When using screws it is important to have properly drilled holes with correctly tapped threads.

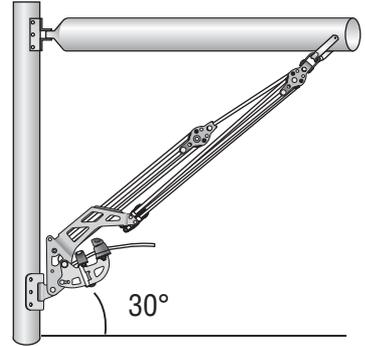
Boom Attachment: Some boats may already have a bail or other attachment point on the boom. In this case attach the 405 block to the boom with a shackle. If there are no attachment points, attach the 405 block with an eyestrapped or bail.

General Instructions: Locating & Mounting

1. Locating the vang attachment points:

Lower Assembly: The vang is the most efficient when the lower assembly is mounted as low as possible without interference from deck or other hardware. Attaching it to the mastbase is best.

Upper 16mm Block: Mount the upper block about 1/3 of the way back from the mast. The ideal vang angle is about 30° from the deck.

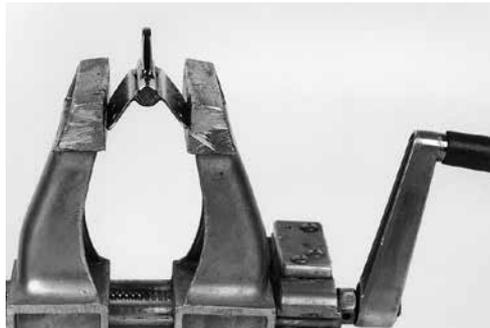
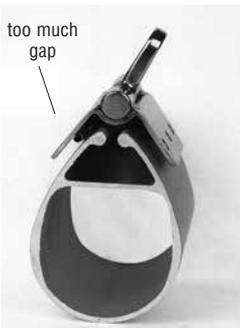


2. Mounting the Lower Assembly:

Position lower stainless steel bracket and mark the 6 holes on the mast.

Use the center punch to make a dimple at the marked hole position.

Drill holes accordingly for either #10-32 stainless screws or 3/16" stainless pop rivets.



Note: If bracket does not fit mast, put it in a vice and squeeze slightly to fit.

Mount the bracket to the mast using:

- #10 Screws: Stainless
- Recommended 10-32 (5 x .80 mm) screws
- Drill 5/32(4 mm) for tapping
- Tap with a 10-32 (5 x .80 mm) tap
- or
- Pop Rivet: Stainless
- Recommended 3/16" (5 mm)
- 3/16" (5 mm) drill bit

3. Mount the upper double block:

Bail Option:

Attach double 16 mm block to the bail with a 246 shackle.

Eyestrapp Option:

Locate eyestrapp about 1/3rd of the way down boom. Mark eyestrapp hole location. Before mounting, slip #407 block over eyestrapp.

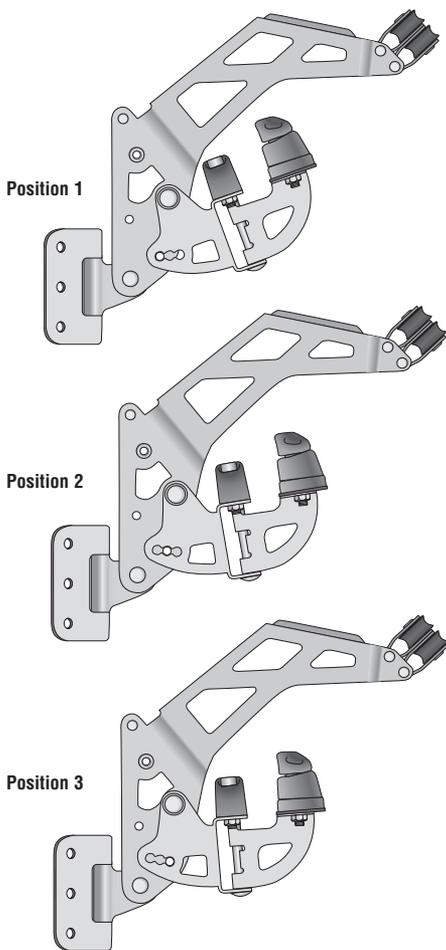
Mount using lower assembly instructions.

Adjust the length to fit your boat by untying knot at the upper block (407) on boom at the becket and pulling extra line to desired length. Retie knot in new position.

Cam Arm Adjustment

The cam arm angle can be adjusted to 3 positions to suit sailor's preferred line lead.

1. Remove keeper ring and clevis pin from lower part of cam arm on lower assembly.
2. Raise or lower arm as desired.
3. Replace clevis pin and ring.



Maintenance

Harken equipment requires minimal maintenance, but some is required to give the best service and to comply with Harken's limited warranty.

It is important to keep equipment clean by frequently flushing with fresh water. In corrosive atmospheres, stainless parts may show discoloration around holes, rivets and screws. This is not serious and may be removed with a fine abrasive.

With the exception of winches, do not use grease unless specifically recommended in the instruction sheets.

IMPORTANT! Exposure to some teak cleaners and other caustic solutions can result in discoloration of part and is not covered under the Harken warranty.

Warranty

See the Harken catalog or www.harken.com/manuals for additional maintenance and warranty information.