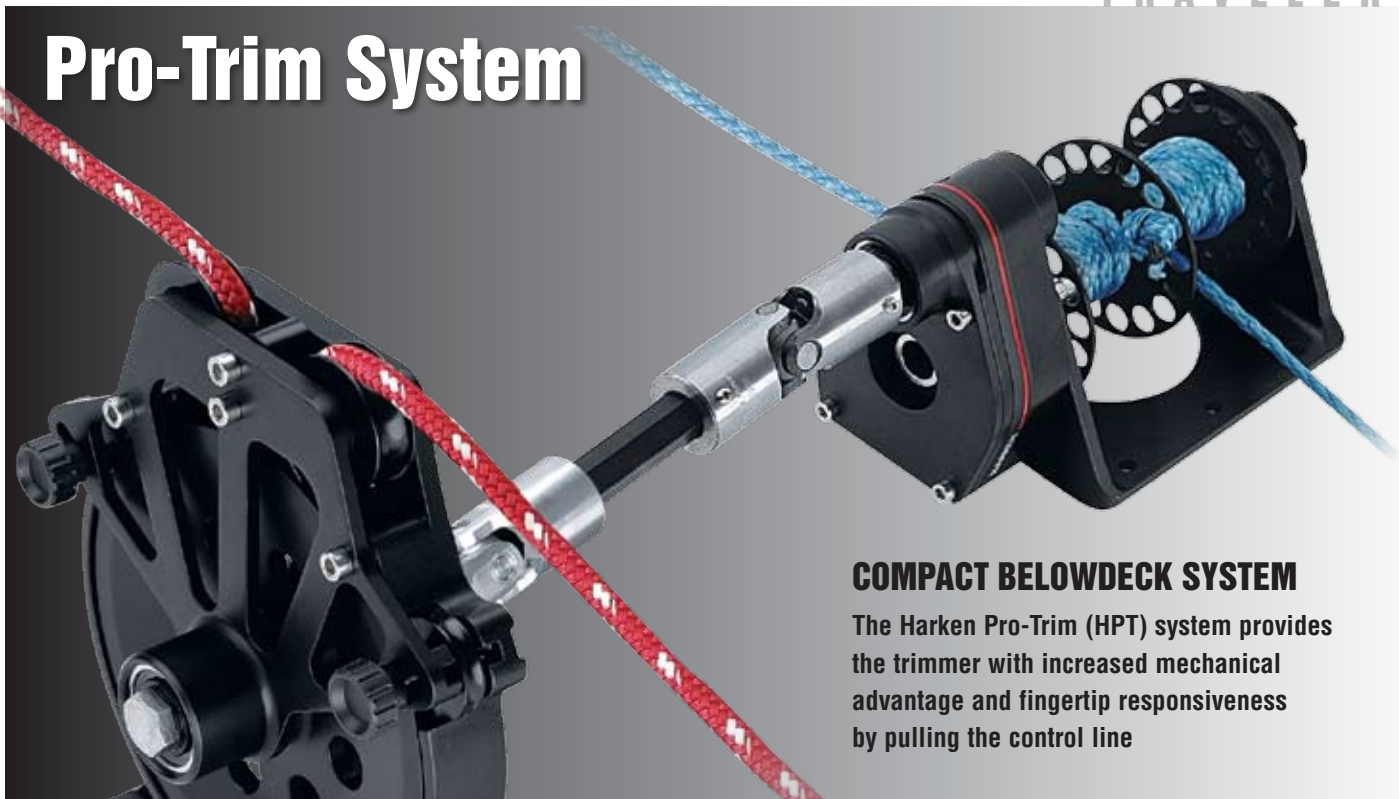


Pro-Trim System



COMPACT BELOWDECK SYSTEM

The Harken Pro-Trim (HPT) system provides the trimmer with increased mechanical advantage and fingertip responsiveness by pulling the control line

HIGH POWER RATIO

A drive shaft connects a large diameter drive sheave to the take-up spools via a gear set. This set increases mechanical advantage and gives the trimmer an increased power ratio, making traveler control easier and smoother.

SLACK-FREE SYSTEM

Constant pressure on both the loaded and unloaded sides of the system eliminates slack line at the traveler car. The continuous loop on the control line rids the trimmer of extra line in the cockpit. This system allows for cleaner, more precise tacks, eliminating the need for the trimmer to take up slack through the tack.

MECHANICAL ADVANTAGE

The HPT creates mechanical advantage using a 3:1 gear and a 4:1 drive sheave that equate to an overall 12:1 purchase. This allows for increased mechanical advantage without the use of a multi-purchase block system, winches, or hydraulics.

LIGHT/SMOOTH OPERATING

The HPT is lighter than winches or hydraulics and runs more smoothly. It eliminates the need for grinding and tailing by allowing for quick, fingertip control all through one line.

SMALL FOOTPRINT

The system's small footprint takes up far less space than belowdeck purchase systems and eliminates the need for heavy winches on deck. Universal joints on both ends of the drive shaft allow for custom placement of the HPT belowdeck.

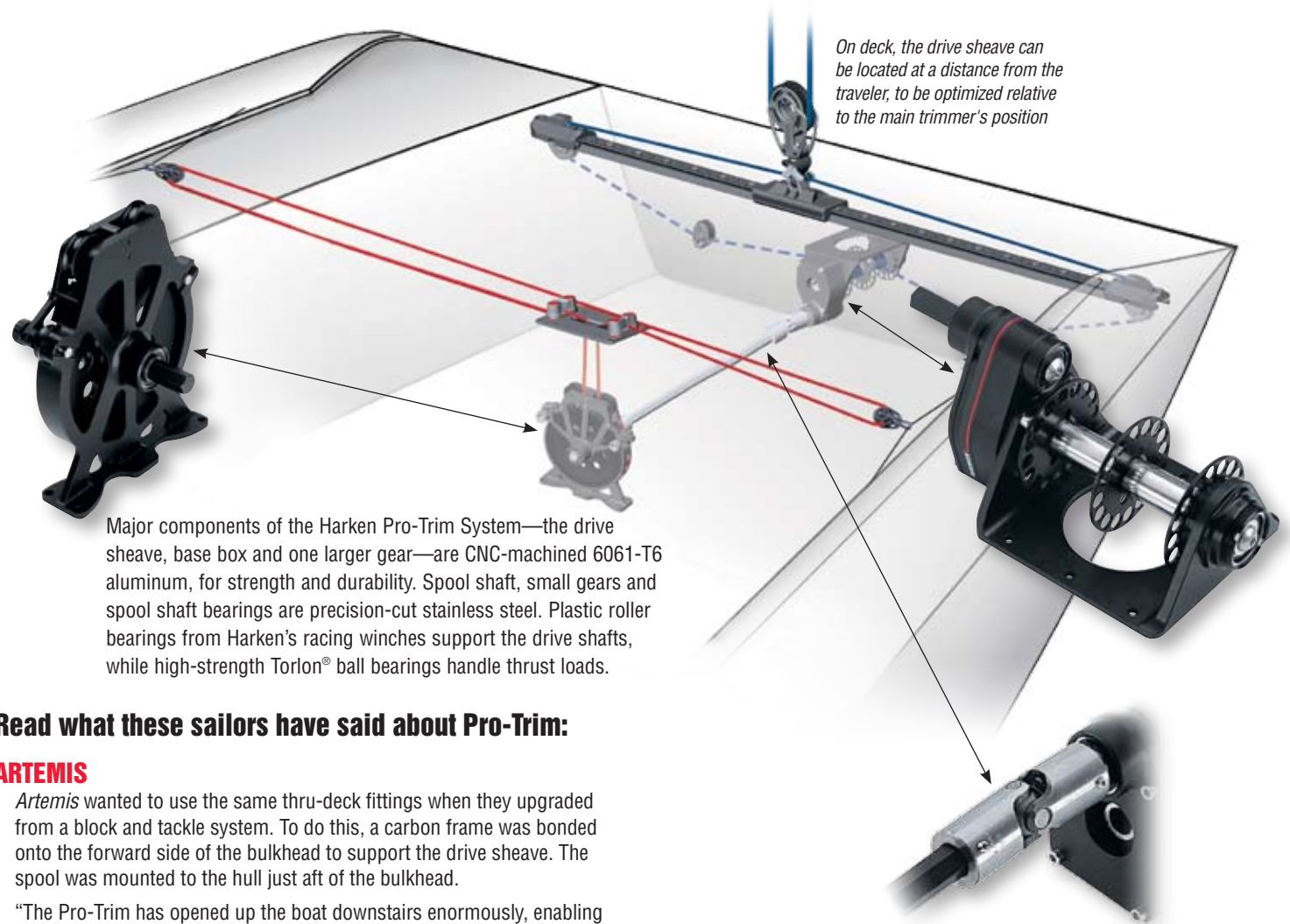
NOT JUST FOR TRAVELERS

The HPT is now being applied to athwartship jib controls and other application possibilities include backstays as well as fore and aft genoa car controls. Expect to see further innovation of the HPT.

CUSTOM INSTALLATION

The HPT is flexibly designed with the customer in mind. The components of the HPT allow for numerous configurations depending upon the application of the system. Given the wide options available, custom installation is required.





Major components of the Harken Pro-Trim System—the drive sheave, base box and one larger gear—are CNC-machined 6061-T6 aluminum, for strength and durability. Spool shaft, small gears and spool shaft bearings are precision-cut stainless steel. Plastic roller bearings from Harken's racing winches support the drive shafts, while high-strength Torlon® ball bearings handle thrust loads.

Read what these sailors have said about Pro-Trim:

ARTEMIS

Artemis wanted to use the same thru-deck fittings when they upgraded from a block and tackle system. To do this, a carbon frame was bonded onto the forward side of the bulkhead to support the drive sheave. The spool was mounted to the hull just aft of the bulkhead.

"The Pro-Trim has opened up the boat downstairs enormously, enabling us to drag sails around without getting caught up in all the block and tackle of a traditional system. I could also imagine this thing being a huge hit in the cruising market where you don't have the space/travel required for normal block and tackle." **Chris Hosking, Artemis**

MAGIC GLOVE

This cruiser/racer also upgraded from a block and tackle system. The ProTrim system mounts to an aluminum frame installed on the centerline of the bulkhead between the cabins.

"The Pro-Trim was the ideal solution for *Magic Glove* where we had struggled to get an adequate purchase with the necessary length of travel into the fully fitted cruiser racer interior.

Working with Lou Varney we fitted Protrim to *Magic Glove*. The system gave us more purchase and the required travel which has in turn allowed us to change gears and trim more efficiently. The system is fabricated/machined really well and has performed without fault since its installation. Its compact design allowed us to hide it away in the aft cabins and lead the control lines through our existing foot chocks.

So, in summary....asthetically nothing has changed on deck, but a real efficient and compact purchase system has made our main trimmer's life alot easier.

Smiles all round.....well done Harken!" **James Hynes, Magic Glove**

PATCHES

The drive sheave and spool mount underdeck, with the spool located adjacent to the rudder post. This allows highly-loaded traveler control lines to take only 1 or 2 turns around the sheaves for much less friction in the system. A carbon drive shaft connects to the drive sheave mounted forward and close to the mainsheet trimmer.

"I have found the Pro-Trim system is a fantastic upgrade. With the extra power I can move the traveller with ease under all conditions. No more 'bun fights' on the cockpit floor trying to find the right end of the string to pull. No problem using the full-length of the track either as sometimes happens with a block system. It's also much easier to stow the sails aft inside the boat as you don't have to worry about strings and blocks for sails to get tangled in." **Lou Varney, Patches**

Part No.	Description	Sheave/spool		Dimensions (L x W x H)		Weight		Safe working load		Breaking strength	
		in	mm	in	mm	oz	g	lb	kg	lb	kg
C8986	Drive sheave	6	150	3.232 x 6.84 x 8.559	82 x 174 x 217	39.47	1119	500	227	1500	680
C8440	Dual spool assembly	1.000	25.4	9.203 x 5.5 x 4.799	234 x 140 x 122	70.864	2009	1500	680	3000	1361