

MKIV JIB REEFING & FURLING

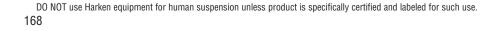
Nothing beats the MKIV Jib Reefing & Furling line for effortless headsail control and great sail shape for optimal speed. With its ability to reef, simply furl and unfurl instead of changing sails to suit conditions, reduce speed, or gain visibility off the bow. Split drum removes for racing. Five sizes fit boats from 6.5 - 24.4 m (22' - 80').



- Multiple rows of Torlon[®] ball bearings in high-load areas minimize friction.
- Stacked bearing races evenly distribute radial and thrust loads; drum and halyard swivel turn freely under load.
- Foils rotate around headstay so headstay load is isolated from the furling unit for easy furling.
- Large inner spool diameter increases mechanical advantage for powerful reefing and furling.

Stands up to sun, salt, and time

- Aluminum line guard, torque tube, and swivels deep-saturation hardcoat-anodized, UV-stabilized for durability.
- Line guard polyurethane-coated for wear protection.
- Specially formulated low-stretch black line is abrasion and UV-resistant; standard on units 0, 1, 2.
- Aerodynamic, clear-anodized aluminum Air foils handle extreme reefing loads.
- Triple-interlock foil joints withstand years of torque loading: foil connectors geometric shape interlocks with foil; secures with syringe-injected adhesive; screws provide final lock.



Foil joints

EMMKIV







Improved sail shape and boat control

- Independent halyard and tack swivels furl sail center before head and tack for improved sail shape when reefed.
- Lightweight aluminum halyard swivel saves weight aloft to reduce pitching and heeling.



Split drum removes easily for racing

 Line guard and spool remove easily for use with full-hoist sails.



Fast hoists, douses, reefs, and sail changes

- Precision-extruded, double-groove Air foils for smooth sail handling and fast sail changes.
- Stainless steel feeder allows fast singlehanded hoist and sail changes.



Designed for easy installation

- Small outside drum dimension fits narrow bows or belowdeck.
- C-shaped open connectors with low-friction plastic isolators easily slip onto headstay wire and into foil.
- Drum assembly fits over existing turnbuckle allowing easy length adjustment. Harken toggle assembly accepts standard turnbuckle using swage, rod, Norseman, or STA-LOK[®] terminals.
- Eye-jaw toggle flips for fork or tang chainplate installation.



Accessories

- Lead block kit: Easy-to-mount ball bearing blocks lead line aft; fit 25 mm (1") stanchions.
- Halyard deflector: Install above the foil to prevent halyards from wrapping around the foil when furling.



Easy to maintain

 Bearings require no lubrication or isolating seals.



 Stainless steel link plates raise the drum and fit over existing turnbuckle, resist scratches, and can be easily repolished.

Torlon is a registered trademark of Solvay Advanced Polymers L.L.C. STA-LOK is a registered trademark of STA-LOK Terminals.

MKIV	Unit O Typical Boat Length 6.5 - 9.1 m (22' - 30')	7410.30 7411.30	-
Wire Ø	OTITEL O typical Boat Length 6.5 - 9.1 m (22' - 30') (1 x 19 SS) Rod Ø Clevis pin Ø		
	32", 3/16", 7/32") -4, -6 (4.37, 5.03 mm) 7.9, 9.5, 11.1 mm (5/16", 3/8", 7/16")		
	Standard 11.77 m (38'7"); max 13.9 m (45'7")		
Part No.	Description		
7410.10	Furling system		10
	Required - sold separately		
7410.20 5/16	Eye/jaw reversible toggle assembly with 7.9 mm (5/16") clevis pin		
7410.20 3/8	Eye/jaw reversible toggle assembly with 9.5 mm (3/8") clevis pin		
7410.20 7/16	Eye/jaw reversible toggle assembly with 11.1 mm (7/16") clevis pin		Υ Υ
Optional Parts		7410.31	
7410.30	Extra 2.13 m (7') luff foil extrusion Extra 165 mm (6 1/2") connector with bushings	7411.31	7420 -4
7410.31	-4 rod adaptor stud (thread Ø UNF 7/16")*		7421 -6
7420 -4	-4 rod adaptor stud (thread Ø UNF 7/16")*		7422 -8
*Use with convention			7423 -10
			7424 -12
	Unit 1 Typical Boat Length 8.3 - 11 m (28' - 36')	-	7410.20 5/16
	(1 x 19 SS) Rod Ø Clevis pin Ø		7410.20 3/8
· · · · · · · · · · · · · · · · · · ·	/4", 9/32", 5/16") -8, -10, -12 (5.72, 6.35, 7.14 mm) 12.7, 15.9 mm (1/2", 5/8")	2 - 2	7410.20 7/16
	Standard 13.99 m (45'11"); max 16.12 m (52'11")		7411.20 1/2
Part No. 7411.10	Description Furling system	0	A
	Required - sold separately		9
7411.20 1/2	Eye/jaw reversible toggle assembly with 12.7 mm (1/2") clevis pin		
7311.20 1/2	Jaw/jaw toggle assembly with 12.7 mm (1/2") clevis pin	a to	
7311.20 5/8	Stud/jaw toggle assembly with 15.9 mm (5/8") clevis pin (thread Ø UNF 5/8" LH)		
7311.21 1/2	Long link plate with toggle assembly with 12.7 mm (1/2") clevis pin		
7311.21 5/8	Long link plate with toggle assembly with 15.9 mm (5/8") clevis pin		
Optional Parts	V	7011 00 1/0	
7411.30	Extra 2.13 m (7') luff foil extrusion	7311.20 1/2	
7411.31	Extra 178 mm (7") connector with bushings	10	500
7422 -8	-8 rod adaptor stud (thread Ø UNF 1/2")*	67	
7423 -10	-10 rod adaptor stud (thread Ø UNF 1/2")*	14	115
7424 -12	-12 rod adaptor stud (thread Ø UNF 5/8")*		
*Use with convention	กลา เนาเมนแหเช.		10
			3
	XOU		
the second se			
			7311.20 5/8
In Et			7311.20 5/8
			7311.20 5/8
			7311.20 5/8
			7311.20 5/8
			7311.20 5/8
			7311.20 5/8
			7311.20 5/8
			7311.20 5/8
			7311.20 5/8
			7311.20 5/8
			7311.20 5/8
			7311.20 5/8
			7311.20 5/8
			7311.20 5/8
			7311.20 5/8
			7311.20 5/8
			7311.20 5/8
			7311.20 5/8
			7311.20 5/8
			7311.20 5/8
			7311.20 5/8
			7311.20 5/8

Pilgrim, WallyNano MKII, 11.35 m (37.2'), Wally / Hoek Design Naval Architects, Doomernik Yachts BV © Nico Martinez



1

		7412.30	-
MKIV	Unit 2 Typical Boat Length 10.6 - 14.2 m (35' - 46')	7413.30	•
Wire C.	Complexity <thcomplexity< th=""> Complexity Complexi</thcomplexity<>	_ 7414.30	
	Rod Ø Clevis pin Ø (5/16", 3/8") -12, -17, -22 (7.14, 8.38, 9.53 mm) 15.9, 19.1 mm (5/8", 3/4")	-	1
- ,	Standard 18.38 m (60'4"); max 20.51 m (67'4")	-	
Part No.	Description		
7412.10	Furling system	/ >	
7412.20 5/8	Required - sold separately Eve/jaw reversible toggle assembly with 15.9 mm (5/8") clevis pin	-	🏊
7312.20 5/8	Jaw/jaw toggle assembly with 15.9 mm (5/8") clevis pin (thread Ø UNF 5/8" LH)	-	
7312.20 3/4	Stud/jaw toggle assembly with 19.1 mm (3/4") clevis pin (thread Ø UNF 3/4" LH)	7412.31	
7312.21 5/8	Long link plate with toggle with 15.9 mm (5/8") clevis pin	- 7413.31	W.
7312.21 3/4	Long link plate with toggle with 19.1 mm (3/4") clevis pin	— 7414.31 74	424 -12
Optional Parts	Future 0.10 ms (71) huff fail automation		425 -17
7412.30	Extra 2.13 m (7') luff foil extrusion Extra 229 mm (9") connector with bushings		426 -22 427 -30
7424 -12	-12 rod adaptor stud (thread Ø UNF 5/8")*		428 -40
7425 -17	-17 rod adaptor stud (thread Ø UNF 5/8")*		429 -48
7426 -22	-22 rod adaptor stud (thread Ø UNF 3/4")*		
*Use with conventio	nal turnbuckle.	2 2	
		7412.20 5/8	
			1
		0	
MKIV	Unit 3 Typical Boat Length 13.7 - 18.3 m (45' - 60')	5 m	
IVIRIV	UIIIL J Typical Boat Length 13.7 - 18.3 m (45' - 60')	_	
	(1 x 19 SS) Rod Ø Clevis pin Ø	_	
	n (7/16", 1/2") -22, -30 (9.53, 11.1 mm) 19.1, 22.2 mm (3/4", 7/8")		
Part No.	Standard 22.76 m (74'8"); max 24.89 m (81'8") Description	7312.20 5/8	
7413.10	Furling system*		
Toggle Assembly	Required - sold separately		To
7413.20 3/4	Jaw/jaw with short link plate with 19.1 mm (3/4") clevis pin		All C
7413.20 7/8	Jaw/jaw with short link plate with 22.2 mm (7/8") clevis pin		-
7313.21 3/4	Long link plate with toggle with 19.1 mm (3/4") clevis pin		
7313.21 7/8 Optional Parts	Long link plate with toggle with 22.2 mm (7/8") clevis pin	-	3
7413.30	Extra 2.13 m (7') luff foil extrusion	-	
7413.31	Extra 248 mm (9 3/4") connector with bushings	-	7312.20 3/4
7426 -22	-22 rod adaptor stud (thread Ø UNF 3/4")**	7413.20 3/4	
7427 -30	-30 rod adaptor stud (thread Ø UNF 7/8")**	7413.20 7/8	
*Line not included.	**Use with conventional turnbuckle.	7414.20 7/8	
		7414.20 1	
		7414.20 1 1/8	
МĽW	llnit <i>L</i>		
WRIV	Unit 4 Typical Boat Length 19.8 - 24.4 m (65' - 80')		
Wire Ø ((1 x 19 SS) Rod Ø Clevis pin Ø		
	(1/2", 9/16", 5/8") -30, -40, -48 (11.1, 12.7, 14.3 mm) 22.2, 25.4, 28.6 mm (7/8", 1", 1 1/8")		
	Standard 22.88 m (75'1"); max 27.15 m (89'1")	- 11.	
Part No. 7414.10	Description		1 2
	Required - sold separately		0
7414.20 7/8	Jaw/jaw with short link plate with 22.2 mm (7/8") clevis pin		8
7414.20 1	Jaw/jaw with short link plate with 25.4 mm (1") clevis pin		20 70
7414.20 1 1/8	Jaw/jaw with short link plate with 28.57 mm (1 1/8") clevis pin		
Optional Parts		Contraction 1	3.00
7414.30	Extra 2.13 m (7') luff foil extrusion		
7414.31	Extra 270 mm (10 3/4") connector with bushings		312.21 5/8
7427 -30 7428 -40	-30 rod adaptor stud (thread Ø UNF 7/8")** -40 rod adaptor stud (thread Ø UNF 1")**		312.21 3/4
7428 -40	-48 rod adaptor stud (thread Ø UNF 1)/**		313.21 3/4
*Line not included.	**Use with conventional turnbuckle.		313.21 7/8
			1 - 1

171



MKIV UNDERDECK JIB REEFING & FURLING

Harken's MKIV Underdeck Jib Reefing & Furling line is the perfect solution for sailors who want an aerodynamic system with a minimal amount of equipment above deck. The underdeck furler provides a low-friction, clean layout solution that minimizes windage, while uncluttering the bow for easy anchor access. Offered in four sizes for boats from 6.7 - 18.3 m (22' - 60').



- Ball bearings between center hub and deck bearing, and main shaft reduce friction; drum and halyard swivel turn freely under load.
- Foils rotate around headstay so headstay load is isolated from the unit for easy furling.

Stand up to sun, salt, and time

- Units 1, 2, 3: Aluminum line guard, torque tube, and swivels hardcoat-anodized, UV-stabilized for durability. Line guard is polyurethane-coated for additional corrosion protection. Threaded height adjuster uses dissimilar metals (stainless steel and bronze) to prevent galling.
- Unit 0: One-piece integrated aluminum deck bearing and line guard hardcoat-anodized for durability and corrosion resistance.
- Aerodynamic, clear-anodized aluminum Air foils handle extreme reefing loads.
- Triple-interlock foil joints withstand years of torque loading: foil connector's geometric shape interlocks with foil; secures with syringe-injected adhesive; screws provide final lock.













Unit 1

Improved sail shape and boat control

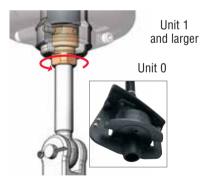
- Independent halyard and tack swivels furl sail center before head and tack for improved sail shape when reefed.
- Lightweight aluminum halyard swivel saves weight aloft to reduce pitching and heeling.
- Tack sits at deck level, lowering the tack height for maximized sail area.
- The torque tube houses a full-length turnbuckle for optimal mast rake and tension adjustment.
- Units 1, 2, 3: High-strength universal joints articulate, allowing ample headstay sag when sailing downwind.
- Unit 0: Articulating ball joint eliminates universal joint to reduce weight, simplify maintenance.



Fast hoists, douses, reefs, and sail changes

- Precision-extruded, double-groove Air foils for smooth sail handling and fast sail changes.
- Stainless steel feeder allows fast singlehanded hoist and sail changes.





Designed for easy installation

- Units 1, 2, 3: Self-locking threaded height adjuster for correct fit between chainplate and deck.
- Unit 0: Does not require height adjuster; furler and headstay independent of each other allowing flexible installation options.
- Torque tube fits over existing turnbuckle allowing easy length adjustment. Hub assembly toggle accepts standard turnbuckle using swage, rod, Norseman, or STA-LOK[®] terminals.



Belowdeck drum fits narrow bows

Small outside drum diameter.



 C-shaped open connectors with low-friction plastic isolators easily slip onto headstay wire and into foil.



Easy to maintain

- Bearings require no lubrication or isolating seals.
- Through-deck bearing into underdeck compartment provides a low profile, nearly watertight system.

MKIV Underdeck Unit O Typical Boat Length 6.7 - 9.1 m (22' - 30')

Wire Ø ((1 x 19 SS)	Rod Ø	Clevis pin Ø
5, 6 mm (3/16", 7/32")	-4, -6 (4.37, 5.03 mm)	—
Headstay Length	Standard 11.7 n	n (38'4"); max 13.8 m (45'4")	
Part No.	Description		
7410.11	Furling system		
Optional Parts			
7410.30	Extra 2.13 m (7) luff foil extrusion	
7410.31	Extra 165 mm (6 1/2") connector with bushings	

MKIV Underdeck Unit 1 Typical Boat Length 8.3 - 11 m (28' - 36')

Typiour Dout E	undan oro i i		
Wire Ø ((1 x 19 SS)	Rod Ø	Clevis pin Ø
6, 7, 8 mm (1	/4", 9/32", 5/16")	-8, -10 (5.72, 6.35 mm)	12.7 mm (1/2")
Headstay Length	Standard 13.99 m (45'11"); max 16.12 m (52'11")	
Part No.	Description		
7411.11 1/2	Furling system with	12.7 mm (1/2") clevis pin	
Optional Parts			
7411.30	Extra 2.13 m (7') lu	ff foil extrusion	
7411.31	Extra 178 mm (7") o	connector with bushings	

Dimensions

	Α								C		
	Part	Μ	in	Ма	ax	E	3	М	in	M	ax
Unit	No.	in	mm	in	mm	in	mm	in	mm	in	mm
0	7410.11	6 7/8	175			5	30.4				
1	7411.11 1/2	10 5/8	270	15 5/8	397	5 1/2	140	4 5/8	117	9 5/8	244

J/122 © J/Boats



MKIV Underdeck Unit 2 Typical Boat Length 10.6 - 14.2 m (35' - 46')

Typical Dual L	.ciiyiii 10.0 - I	4.2 III (JJ - 40)	
Wire Ø (1 x 19 SS)		Rod Ø	Clevis pin Ø
8, 10 mm	(5/16", 3/8")	-12, -17 (7.14, 8.38 mm)	15.9 mm (5/8")
Headstay Length	Standard 18.38 m	(60'4"); max 20.51 m (67'4")	
Part No.	Description		
7412.11 5/8	Furling system with	15.9 mm (5/8") clevis pin	
Optional Parts			
7412.30	Extra 2.13 m (7') lu	ff foil extrusion	
7412.31	Extra 229 mm (9")	connector with bushings	

MKIV Underdeck Unit 3 Typical Boat Length 13.7 - 18.3 m (45' - 60')

Typical Dual L	gui 10.7 -					
Wire Ø (1 x 19 SS)		Rod Ø	Clevis pin Ø			
11, 12 mn	n (7/16", 1/2")	-22, -30 (9.53, 11.10 mm)	19.1, 22.2 mm (3/4", 7/8")			
Headstay Length	Standard 22.88 m	(75'1"); max 25.02 m (82'1")				
Part No.	Description					
7413.11 3/4	Furling system wit	h 19.1 mm (3/4") clevis pin				
7413.11 7/8	Furling system wit	h 22.2 mm (7/8") clevis pin				
Optional Parts						
7413.30	Extra 2.13 m (7') l	uff foil extrusion				
7413.31	Extra 248 mm (9 3	3/4") connector with bushings				

Dimensions

	A								C		
	Part	Mi	n	Ма	X	B	}	Mi	n	Ма	X
Unit	No.	in	mm	in	mm	in	mm	in	mm	in	mm
2	7412.11 5/8	12 11/16	322	18 9/16	471	6 5/8	167	5 3/8	137	11 5/16	287
3	7413.11 3/4	16 1/8	410	23 5/8	600	8 3/16	208	6 7/8	175	14 3/8	365
3	7413.11 7/8	16 9/16	421	24 1/4	616	8 3/16	208	7 5/16	186	15	381

Francis Lee, 18.9 m (62'), Perry Sliver, Robert H. Perry design, Northwest School of Boatbuilding © Boomer Depp





Toggle & Rigging Options

Use these rigger-supplied options to fit Harken toggles and leg kits shown below. Harken toggle and leg kit assemblies sold separately. See unit pages.

	Toggle		Clevis I	Pin Ø	Fits	Furler						
Model	Part No.	Description	in	mm	Unit	Part No.			0			
	7311.20 1/2	Jaw/jaw	1/2	12.7				1				
	7311.21 1/2	Long link plate w/toggle	1/2	12.7	1	7411.10		10				
	7311.21 5/8	Long link plate w/toggle	5/8	15.9				- T	U.			
	7312.20 5/8	Jaw/jaw	5/8	15.9				4	Ш			
	7312.21 5/8	Long link plate w/toggle	5/8	15.9	2	7412.10		n				
>	7312.21 3/4	Long link plate w/toggle	3/4	19.1					41			
MKIV	7413.20 3/4	Jaw/jaw w/short link plate	3/4	19.1				I H				
6	7413.20 7/8	Jaw/jaw w/short link plate	7/8	22.2	3	7413.10			l ini			
	7313.21 3/4	Long link plate w/toggle	3/4	19.1	U	Ū	Ū	0 7410.	7410.10		199	1
	7313.21 7/8	Long link plate w/toggle	7/8	22.2				ΠΨ	·Ψ			
	7414.20 7/8	Jaw/jaw w/short link plate	7/8	22.2				- 月 - 月				
	7414.20 1	Jaw/jaw w/short link plate	1	25.4	4	7414.10		60	6			
	7414.20 1 1/8	Jaw/jaw w/short link plate	1 1/8	28.6				• •	Ŭ			
								8 1				
	7410.20 5/16	Eye/jaw (reversible)	5/16	7.9								
	7410.20 3/8	Eye/jaw (reversible)	3/8	9.5	0	7410.10			a			
	7410.20 7/16	Eye/jaw (reversible)	7/16	11.1				1				
	7411.20 1/2	Eye/jaw (reversible)	1/2	12.7	1	7411.10						
MKIV	7412.20 5/8	Eye/jaw (reversible)	5/8	15.9	2	7412.10						
Σ								4				
	7044 00 515	0.1/	F /0	15.0	4	7444.40		63	6			
	7311.20 5/8	Stud/jaw*	5/8	15.9	1	7411.10						
	7312.20 3/4	Stud/jaw**	3/4	19.1	2	7412.10	03	NOO				
	*Thread Ø: 5/8–18	LH **Thread Ø: 3/4–16 LH				Toggle flips for	(aba @	R/A				
						ernate chainplate	1. 1	B	oats			
						position.	·		use :			
							3.8 -	5				
5	7312.22 5/8	Jaw/jaw w/link plate	5/8	15.9	- 2E	7312.13 12V/24V						
ELECTRIC	7413.22 3/4	Jaw/jaw w/link plate	3/4	19.1	26	1012.10120/240						
ELEC	7413.22 3/4	Jaw/jaw w/link plate	3/4	19.1	- 3E	7413.13 12V/24V			0			
wkiv	7413.22 7/8	Jaw/jaw w/link plate	7/8	22.2				A				
۲ ۲								1				
N Hydraulic	744 05 94	Destaurable familie (C.)	0/4 0 7/10	101 01 0				7				
IQ .	741X.25 X/X	Hydraulic furling toggles	3/4-27/16		- 3H - 8H	741X.15		L.				
	741X.26 X/X	Furling toggles and cylinders	3/4-27/16	19.1-61.9				- m	4			
								W	1			
								1H	-			
	7320.20 5/16	Short leg kit*	5/16	7.9								
	7320.20 3/8	Short leg kit*	3/8	9.5		7000 10						
	7320.21 5/16	Long leg kit	5/16	7.9	0	7320.10		W	4			
	7320.21 3/8	Long leg kit	3/8	9.5				月 月				
	7321.20 7/16	Short leg kit*	7/16	11.1				66	E			
	7321.20 1/2	Short leg kit*	1/2	12.7				00	0			
	7321.22 7/16	Medium leg kit**	7/16	11.1		7001 10						
	7321.22 1/2	Medium leg kit**	1/2	12.7	1	7321.10						
	7321.21 7/16	Long leg kit	7/16	11.1				-				
	7321.21 1/2	Long leg kit	1/2	12.7				<u>(1)</u>				
•	7322.20 5/8	Short leg kit*	5/8	15.9								
ESP	7322.20 3/4	Short leg kit*	3/4	19.1				T				
	7322.22 5/8	Medium leg kit**	5/8	15.9	2			4				
	7322.22 3/4	Medium leg kit**	3/4	19.1		7322.10						
	7322.21 5/8	Long leg kit	5/8	15.9				w w	1			
	7322.21 3/4	Long leg kit	3/4	19.1				1 H	1			
	7323.20 7/8	Short leg kit*	7/8	22.2								
	7323.20 1	Short leg kit*	1	25.4								
	7323.20 7/8	Medium leg kit**	7/8	22.2				Ψ	4			
	7323.22 1/8	Medium leg kit**	1	25.4	3	7323.10		AL				
	7323.22 1	Long leg kit	7/8	22.2				66	6			
	7323.21 1/6	Long leg kit	1	25.4				00	0			
		_LUIIY IEY KIL										

Rigger Supplied Harken Long link plate w/toggle Jaw/jaw toggle assembly Eye/jaw Stud/jaw toggle toggle sembly assembly vith larger clevis pins pecial Harken lower stud fitting. Hydraulic Electric Hydraulic 0 Short leg kit'

*Marine eye only. Does not fit turnbuckle. **Check maximum turnbuckle length for medium leg kit. See unit pages 178-179.

Long

leg kit

ŝ.

Medium leg kit**



MKIV & MKIV OCEAN JIB REEFING & FURLING

MKIV furlers are some of the most preferred products in the Harken product line due to their high performance, reliability and ability to be reconfigured for racing. Now, Harken introduces MKIV Ocean offering MKIV quality, specifically configured for the cruising sailor. It is engineered with strength, longevity, ease of use, at the right price without extra features cruisers might not need.

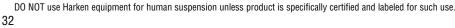
For occasional racers, the MKIV line is engineered with ease, durability, and winning in mind. The split drum can be removed easily for use with racing sails, providing the longest possible luff length. The independent swivel supports optimal sail shape.



- Multiple rows of Torlon® ball bearings in high-load areas minimize friction.
- · Stacked bearing races evenly distribute radial and thrust loads; drum and halyard swivel turn freely under load.
- · Foils rotate around headstay so headstay load is isolated from the furling unit for easy furling.
- · Large inner spool diameter increases mechanical advantage for powerful reefing and furling.

Stands up to sun, salt, and time

- Aluminum line guard, torque tube, and swivels deep-saturation hardcoat-anodized, UV-stabilized for durability.
- Line guard polyurethane-coated for wear protection.
- Specially formulated low-stretch black line is abrasion and UV-resistant; standard on units 0, 1, 2.
- Aerodynamic (MKIV) and round (MKIV Ocean), clear-anodized aluminum foils handle extreme reefing loads.
- Triple-interlock foil joints withstand years of torque loading: foil connectors geometric shape interlocks with foil; secures with syringe-injected adhesive; screws provide final lock.



Foil joints

MKIV Ocean

MKIV



	МКІV	MKIV Ocean
Typical boat size	6.5 - 24.4 m (22' - 80')	6.5 - 18.3 m (22' - 60')
Wire headstay diameter range	4 -16 mm (5/32" - 5/8")	4 - 12 mm (5/32" - ½")
Rod headstay diameter range	-4 to -48 (4.37 - 14.3 mm)	-4 to -30 (4.37 - 14.3 mm)
Sailor	Racer (split drum can be removed)	Non-Racer/Cruising
Shape	Aerodynamic Foil	Round Foil
Swivel	Double at head and tack	Single at head and tack
Sizes	Five models (0 - 4)	Four models (0 - 3)



Improved sail shape and boat control

- Independent halyard and tack swivels furl sail center before head and tack for improved sail shape when reefed (MKIV).
- Both MKIV and MKIV Ocean have a lightweight aluminum halyard swivel saving weight aloft to reduce pitching and heeling.



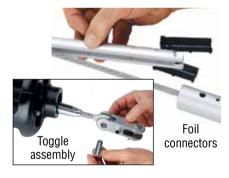
Split drum removes easily for racing (MKIV)

• Line guard and spool remove easily for use with full-hoist sails.



Double and single-groove foils offer smooth sail handling

- Precision-extruded, double-groove (MKIV) and single-groove (MKIV Ocean) foils for smooth sail handling.
- Stainless steel feeder allows fast singlehanded hoist and sail changes (MKIV).



Designed for easy installation

- Small outside drum dimension fits narrow bows or belowdeck.
- C-shaped open connectors with low-friction plastic isolators easily slip onto headstay wire and into foil.
- Drum assembly fits over existing turnbuckle allowing easy length adjustment. Harken toggle assembly accepts standard turnbuckle using swage, rod, Norseman, or STA-LOK[®] terminals.
- Eye-jaw toggle flips for fork or tang chainplate installation.



Accessories

- Lead block kit: Easy-to-mount ball bearing blocks lead line aft; fit 25 mm (1") stanchions.
- Halyard deflector: Install above the foil to prevent halyards from wrapping around the foil when furling.



Easy to maintain

 Bearings require no lubrication or isolating seals.



 Stainless steel link plates raise the drum and fit over existing turnbuckle, resist scratches, and can be easily repolished.

Torlon is a registered trademark of Solvay Advanced Polymers L.L.C. STA-LOK is a registered trademark of STA-LOK Terminals.

NEW

MKIV Ocean Unit O

iypical boat l	.engin d.d - y. i	m (22° - 30°)	
Wire Ø	(1 x 19 SS)	Rod Ø	Clevis pin Ø
4, 5, 6 mm (5/	32", 3/16", 7/32")	-4, -6 (4.37, 5.03 mm)	7.9, 9.5, 11.1 mm (5/16", 3/8", 7/16")
Headstay Length	Standard 11.77 m (3	8'7"); max 13.9 m (45'7")	
Part No.	Description		
7510.10	Furling system		
Toggle Assembly	Required - sold se	parately	
7410.20 5/16	Eye/jaw reversible tog	ggle assembly with 7.9 mm (5/16	o") clevis pin
7410.20 3/8	Eye/jaw reversible tog	ggle assembly with 9.5 mm (3/8") clevis pin
7410.20 7/16	Eye/jaw reversible tog	ggle assembly with 11.1 mm (7/1	6") clevis pin
Optional Parts			
7510.30	Extra 2.13 m (7') luff	foil extrusion	
7510.31	Extra 153 mm (6") co	onnector with bushings	
7420 -4	-4 rod adaptor stud (thread Ø UNF 7/16")*	
7421 -6	-6 rod adaptor stud (thread Ø UNF 7/16")*	
411 111 11			

*Use with conventional turnbuckle.

MKIV Ocean Unit 1 Typical Boat Length 8.3 - 11 m (28' - 36')

Wire Ø (1 x 19 SS) Clevis pin Ø Rod Ø -8, -10, -12 (5.72, 6.35, 7.14 mm) 6, 7, 8 mm (1/4", 9/32", 5/16") 12.7, 15.9 mm (1/2", 5/8") Headstay Length Standard 13.99 m (45'11"); max 16.12 m (52'11") Part No. Description 7511.10 Furling system Toggle Assembly Required - sold separately 7411.20 1/2 Eye/jaw reversible toggle assembly with 12.7 mm (1/2") clevis pin Jaw/jaw toggle assembly with 12.7 mm (1/2") clevis pin 7311.20 1/2 Stud/jaw toggle assembly with 15.9 mm (5/8") clevis pin (thread Ø UNF 5/8" LH) 7311.20 5/8 Long link plate with toggle assembly with 12.7 mm (1/2") clevis pin 7311.21 1/2 7311.21 5/8 Long link plate with toggle assembly with 15.9 mm (5/8") clevis pin **Optional Parts** 7511.30 Extra 2.13 m (7') luff foil extrusion 7511.31 Extra 178 mm (7") connector with bushings 7422 -8 -8 rod adaptor stud (thread Ø UNF 1/2")* 7423 -10 -10 rod adaptor stud (thread Ø UNF 1/2") 7424 -12 -12 rod adaptor stud (thread Ø UNF 5/8")

*Use with conventional turnbuckle.



7510.30

7511.30



7510.10 7511.10

7311.21 1/2 7311.21 5/8

Essence 33, 10.13 m, Hoek Design, Essence Yachts © Michel Hof/Essence Yachts photo

NEW

MKIV Ocean Unit 2 Typical Boat Length 10.6 - 14.2 m (35' - 46') it 2

iypical dual l	enym 10.0 - 14.2 m (35	- 40 j			
Wire Ø	1 x 19 SS)	Rod Ø	Clevis pin Ø		
8, 10 mm	(5/16", 3/8") -12, -17, -22	(7.14, 8.38, 9.53 mm)	15.9, 19.1 mm (5/8", 3/4")		
Headstay Length	Standard 18.38 m (60'4"); max 20.5	51 m (67'4")			
Part No.	Description				
7512.10	Furling system				
Toggle Assembly	Required - sold separately				
7412.20 5/8	Eye/jaw reversible toggle assembly with 15.9 mm (5/8") clevis pin				
7312.20 5/8	Jaw/jaw toggle assembly with 15.9 mm (5/8") clevis pin (thread Ø UNF 5/8" LH)				
7312.20 3/4	Stud/jaw toggle assembly with 19.1	mm (3/4") clevis pin (three	ead Ø UNF 3/4" LH)		
7312.21 5/8	Long link plate with toggle with 15.9	9 mm (5/8") clevis pin			
7312.21 3/4	Long link plate with toggle with 19.1	1 mm (3/4") clevis pin			
Optional Parts					
7512.30	Extra 2.13 m (7') luff foil extrusion				
7512.31	Extra 216 mm (8 1/2") connector wi	th bushings			
7424 -12	-12 rod adaptor stud (thread Ø UNF	5/8")*			
7425 -17	-17 rod adaptor stud (thread Ø UNF	5/8")*			
7426 -22	-22 rod adaptor stud (thread Ø UNF 3/4")*				
*I lee with conventio	nal turnhuckle				

*Use with conventional turnbuckle.

MKIV Ocean Unit 3 Typical Boat Length 13.7 - 24.4 m (45' - 80')

iypical Dual i	<u>.ciiyui 13.7 - A</u>	24.4 III (4J * OV)	
Wire Ø	(1 x 19 SS)	Rod Ø	Clevis pin Ø
11, 12,	14, 16 mm	-22, -30, -40, -48	19.1, 22.2, 25.4, 28.6 mm
(7/16", 1/2	2", 9/16", 5/8")	(9.53, 11.1, 12.7, 14.3 mm)	(3/4", 7/8", 1", 1 1/8")
Headstay Length	Standard 22.76 m	(74'8"); max 27.03 m (88'8")	
Part No.	Description		
7513.10	Furling system*		
Toggle Assembly	Required - sold	separately	
7413.20 3/4	Jaw/jaw with shor	t link plate with 19.1 mm (3/4") clevis p	pin
7413.20 7/8	Jaw/jaw with shor	t link plate with 22.2 mm (7/8") clevis p	pin
7513.20 1	Jaw/Jaw with sho	rt link plate with 25.4 mm (1") clevis pi	n
7513.20 1 1/8	Jaw/Jaw with sho	rt link plate with 28.6 mm (1 1/8") clevi	is pin
7313.21 3/4	Long link plate wit	th toggle with 19.1 mm (3/4") clevis pir	1
7313.21 7/8	Long link plate wit	th toggle with 22.2 mm (7/8") clevis pir	1
7513.21 1	Long link plate wit	th toggle assembly with 25.4 mm (1") o	clevis pin
7513.21 1 1/8	Long link plate wit	th toggle assembly with 28.6 mm (1 1/	8") clevis pin
Optional Parts			
7513.30	Extra 2.13 m (7') I	uff foil extrusion	
7513.31	Extra 254 mm (10	") connector with bushings	
7426 -22	-22 rod adaptor st	ud (thread Ø UNF 3/4")**	
7427 -30	-30 rod adaptor st	ud (thread Ø UNF 7/8")**	
7428 -40	-40 rod adaptor st	ud (thread Ø UNF 1")**	
7429 -48	-48 rod adaptor st	ud (thread Ø UNF 1 1/8")**	
*Line not included.	**Use with conve	entional turnbuckle.	

7510.31 7511.31 7424 -12 7425 -17 7426 -22 7427 - 30 7428 -40 7429 -48 n 7412.20 5/8 7312.20 5/8 7413.20 3/4 7413.20 7/8 7513.20 1 7312.20 3/4

7510.30

7511.30

7513.21 1 7513.21 1 1/8

7510.10 7511.10

7312.21 5/8 7312.21 3/4 7313.21 3/4 7313.21 7/8

© Mike Kern

Jib Reefing and Furling Dimensions

MKIV & MKIV Ocean Using Toggle*

	Part A			В					C			D			E				
1	System	Unit	No.	in		mm	i	in	mm		in	mm		in	n	nm	in		mm
12		0	7410.10	3 3/4	ļ	96	5	7/8	150	1	7/8	47		5 1/2	1	40	2 5/8		66
3.5	>	1	7411.10	4 3/4	ļ	120		7	178		2	51		6 5/8	1	67	3 1/16		78
20	MKIV	2	7412.10	5 5/8	3	143	9	1/8	231	2	9/16	66		8 3/16	2	208	3 13/16		97
	2	3	7413.10	7 5/1	6	186	11	5/8	296	3	3/8	86		9 3/4	2	47	4 3/4		121
		4	7414.10	8 15/1	6	227		**				**		11 1/16	2	80	5 1/8		130
	_	0	7510.10	3 3/4	ļ	96	5	7/8	150	1	7/8	47		5 1/2	1	40	2 5/8		66
	MKIV Ocean	1	7511.10	4 3/4	ł	120		7	178		2	51		6 5/8	1	67	3 1/16		78
		2	7512.10	5 5/8	3	143	9	1/8	231	2	9/16	66		8 3/16	2	.08	3 13/16		97
		3	7513.10	7 5/1	6	186	11	5/8	296	3	3/8	86		9 3/4	2	47	4 3/4		121
						F				G		Н		н			I		
		Part Max‡ Min		in	Max‡		Min M		Max	Max‡ Mir		in Max		ix‡	x‡ Min				
	System	Unit	No.	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
	MKIV	0	7410.10	41	1041	39 1/4	997	8 3/8	213	8	203	7 5/16	186	7	175	2 5/16	59	2	51
787		1	7411.10	46 1/4	1175	42 1/4	1073	12	305	9 3/4	247	11	280	8 3/4	222	5	129	2 7/8	71
		2	7412.10	51 3/4	1314	46 3/4	1187	15 1/8	384	12 1/16	306	13 15/16	348	10 7/8	276	6 7/16	164	3 3/8	85
31		3	7413.10	50 5/8	1286			18 7/16	467			16 5/8	420			7 3/8	188		
		4	7414.10	55 5/16	1405			*:	*	**		20	509			8 5/8	220		
	_	0	7510.10	41	1041	39 1/4	997	8 3/8	213	8	203	7 5/16	186	7	175	2 5/16	59	2	51
		1	7511.10	46 1/4	1175	42 1/4	1073	12	305	9 3/4	247	11	280	8 3/4	222	5	129	2 7/8	71
	MKIV Ocean	2	7512.10	51 3/4	1314	46 3/4	1187	15 1/8	384	12 1/16	306	13 15/16	348	10 7/8	276	6 7/16	164	3 3/8	85
		3	7513.10	50 5/8	1286			18 7/16	467			16 5/8	420			7 3/8	188		

*See MKIV long link plate dimensions below. ** Soft-attachment tack, head, and halyard; distance varies. ‡Max refers to using stud jaw toggle. Use Min when adding long link plate dimensions.

MKIV Long Link Plate

10.00	*Note: If a long link plate is used, add the following dimensions to F, G, H, and I (based on whether plate is used full-length or shortened to one of five hole positions).									
	Unit 1	12.7 mm (1/2") clevis pin	Add 337–168 mm (13 1/4"–6 5/8")							
		15.9 mm (5/8") clevis pin	Add 286–111 mm (11 1/4"–4 3/8")							
	Unit 2	15.9 mm (5/8") clevis pin	Add 410-210 mm (16 1/8"-8 1/4")							
		19.1 mm (3/4") clevis pin	Add 344–144 mm (13 9/16"–5 11/16")							
	Unit 3	19.1 mm (3/4") clevis pin	Add 497–271 mm (19 9/16"–10 11/16")							
		22.2 mm (7/8") clevis pin	Add 505–279 mm (19 7/8"–11")							

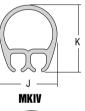
Foil Dimensions

		Part	J		K		Foil l	ength	Luff tape*		
System	Unit	No.	in	mm	in	mm	ft/in	m	in	mm	
	0	7410.30	7/8	23	1 1/32	26	7'	2.13	#6 (6/32)	5	
	1	7411.30	1	25	1 1/8	29	7'	2.13	#6 (6/32)	5	
MKIV	2	7412.30	1 1/4	32	1 3/8	36	7'	2.13	#6 (6/32)	5	
2	3	7413.30	1 1/2	38	1 11/16	43	7'	2.13	#6 (6/32)	5	
	4	7414.30	1 3/4	44	1 27/32	47	7'	2.13	#6 (6/32)	5	
	0	7510.30	1 1/8	28			7'	2.13	#6 (6/32)	5	
ansi	1	7511.30	1 3/8	35			7'	2.13	#6 (6/32)	5	
MKIV Ocean	2	7512.30	1 3/4	44			7'	2.13	#6 (6/32)	5	
	3	7513.30	2	50			7'	2.13	#6 (6/32)	5	

*Nominal dimensions only, actual luff tape dimensions are larger.

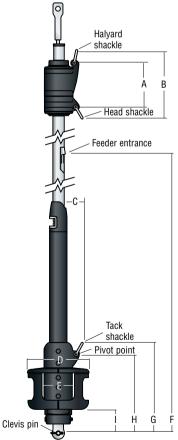


Cuba Libre, Twister 36, 11.2 m (36.75'), Weigel Anita Weigel, naval architect: Robert Roginski © Katarzyna Roginska









MKIV & MKIV Ocean

