

# MKIV Hydraulic Jib Reefing & Furling

Harken MKIV Hydraulic Jib Reefing and Furling systems allow you to reef, furl, or set sails with the touch of a button. The unit's compact size allows the tack of the sail to be closer to the deck, increasing the sail's efficiency. The tack and head have double swivels to improve sail shape when partially reefed.

## USES

Cruisers and high-performance yachts with headstays up to -260 rod or equivalent fiber stay.

## FEATURES

MKIV hydraulic furlers are more compact, easier to service, and are up to 45% lighter weight than before.

MKIV features a standard transmission rather than a diverter valve to engage and disengage the motor and manual gear socket. This reduces mechanical friction and hydraulic pressure losses for efficient manual and power operation.

Worm gear drive unloads hydraulic system to prevent sail from unwinding when reefed.

Hardened steel gears are permanently lubricated in an oil bath for minimal maintenance.

The motor has no case drain line, reducing the number of hoses plumbed on the boat from three to two.

Aerodynamic, aluminum Air Foils<sup>®</sup> handle extreme reefing loads. Tough triple-interlock foil joints withstand years of torque loading.

Lower toggle assembly fixes at 90-degree intervals to accept any chainplate direction.

Over-the-turnbuckle system allows easy headstay adjustment.

## MATERIALS

Large-diameter Torlon<sup>®</sup> ball bearings in halyard and tack swivel minimize friction; require no lubrication or isolating seals.



Manual operation switch and gear socket

Torque tube, motor, and gear housing are Hardkote-anodized aluminum for long-term wear. UV stabilized to withstand the effects of saltwater and sun.

Unit 3 uses a hard shackle; halyard and tack swivels on Units 4 and larger are lashed on with Spectra<sup>®</sup> line.

## OPTIONS

An optional hydraulic cylinder installed below the unit adjusts the headstay so luff tension remains constant. This prevents halyard and tack attachments from overloading and breaking when the luff is changing length.



## INSTALLATION & MAINTENANCE

Fewer parts allow easier assembly and service.

Harken recommends professional installation.

All service and repair should be done by a certified hydraulic technician.

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7413.31  
7414.31

7413.30  
7414.30

7413.25 3/4  
7413.25 7/8  
7414.25 7/8  
7414.25 1  
7414.25 1 1/8

7413.26 3/4  
7413.26 7/8  
7414.26 7/8  
7414.26 1  
7414.26 1 1/8

7426 -22  
7427 -30  
7428 -40  
7429 -48

<b>Unit 3</b>	Wire Ø (1 x 19 SS)	Rod Ø	Clevis Pin Ø
	7/16", 1/2" (11, 12 mm)	-22, -30 (9.53, 11.10 mm)	3/4", 7/8" (19, 22.2 mm)
	<b>Headstay Length*</b> Alum foil: standard 74'9" (22.77 m), max 81'9" (24.91 m)		
	Part No.	Description	
	7413.15	Unit 3 with aluminum foils	
	<b>Toggle Assembly Required - sold separately</b>		
	7413.25 3/4	Toggle for 3/4" (19 mm) clevis pin	
	7413.25 7/8	Toggle for 7/8" (22.2 mm) clevis pin	
	7413.26 3/4	Toggle and hydraulic cylinder for 3/4" (19 mm) clevis pin	
	7413.26 7/8	Toggle and hydraulic cylinder for 7/8" (22.2 mm) clevis pin	
<b>Optional Parts</b>			
7413.30	Extra 7' (2.13 m) aluminum foil extrusion		
7413.31	Extra 9 3/4" (248 mm) connector with bushings		
7426 -22	-22 Rod adaptor stud (thread Ø UNF 3/4")**		
7427 -30	-30 Rod adaptor stud (thread Ø UNF 7/8")**		

\*Hydraulic cylinder increases standard and max lengths \*\*Use with conventional turnbuckle  
Contact Harken to request quote and lead time

<b>Unit 4</b>	Wire Ø (1 x 19 SS)	Rod Ø	Clevis Pin Ø
	1/2", 9/16", 5/8" (12, 14, 16 mm)	-30, -40, -48 (9.53, 12.7, 14.3 mm)	7/8", 1", 1 1/8" (22.2, 25.4, 28.6 mm)
	<b>Headstay Length*</b> Alum foil: standard 75'3" (22.93 m), max 96'3" (29.33 m)		
	Part No.	Description	
	7414.15	Unit 4 with aluminum foils	
	<b>Toggle Assembly Required - sold separately</b>		
	7414.25 7/8	Toggle for 7/8" (22.2 mm) clevis pin	
	7414.25 1	Toggle for 1" (25.4 mm) clevis pin	
	7414.25 1 1/8	Toggle for 1 1/8" (28.6 mm) clevis pin	
	7414.26 7/8	Toggle and hydraulic cylinder for 7/8" (22.2 mm) clevis pin	
7414.26 1	Toggle and hydraulic cylinder for 1" (25.4 mm) clevis pin		
7414.26 1 1/8	Toggle and hydraulic cylinder for 1 1/8" (28.6 mm) clevis pin		
<b>Optional Parts</b>			
7414.30	Extra 7' (2.13 m) aluminum foil extrusion		
7414.31	Extra 10 3/4" (270 mm) connector with bushings		
7427 -30	-30 Rod adaptor stud (thread Ø UNF 7/8")**		
7428 -40	-40 Rod adaptor stud (thread Ø UNF 1")**		
7429 -48	-48 Rod adaptor stud (thread Ø UNF 1 1/8")**		

\*Hydraulic cylinder increases standard and max lengths \*\*Use with conventional turnbuckle  
Contact Harken to request quote and lead time



Unit 3

# MKIV Hydraulic Jib Reefing & Furling



7415.31S  
7415.31L  
7416.31S  
7416.31L



7415.30  
7416.30



7415.25 1 1/8  
7415.25 1 1/4  
7415.25 X X/X  
7416.25 1 1/4  
7416.25 1 3/8  
7416.25 1 9/16  
7416.25 X X/X



7415.26 1 1/8  
7415.26 1 1/4  
7415.26 X X/X  
7416.26 1 1/4  
7416.26 1 3/8  
7416.26 1 9/16  
7416.26 X X/X



7429 -48



## Unit 5

Wire Ø (1 x 19 SS)	Rod Ø	Clevis Pin Ø
5/8", 3/4", 1/2" (16, 19, 22 mm)	-48, -60, -76‡ (14.3, 16.8, 17.9 mm)	1 1/8", 1 1/4" (28.6, 31.8 mm)
<b>Headstay Length*</b> Alum foil: standard 87' (26.5 m), max 114' (34.7 m)		
<b>Part No.</b>	<b>Description</b>	
7415.15S	Unit 5 with aluminum foils and small bushing; fits -48, -60, -76 rod, 5/8" (16 mm) wire	
7415.15L	Unit 5 with aluminum foils and large bushing; fits 3/4", 7/8" (19, 22 mm) wire	
<b>Toggle Assembly Required - sold separately</b>		
7415.25 1 1/8	Toggle for 1 1/8" (28.6 mm) clevis pin	
7415.25 1 1/4	Toggle for 1 1/4" (31.8 mm) clevis pin	
7415.25 X X/X**	Toggle for all other clevis pin sizes (customer-supplied dimensions)	
7415.26 1 1/8	Toggle and hydraulic cylinder for 1 1/8" (28.6 mm) clevis pin	
7415.26 1 1/4	Toggle and hydraulic cylinder for 1 1/4" (31.8 mm) clevis pin	
7415.26 X X/X**	Toggle and hydraulic cylinder for all other clevis pin sizes (customer-supplied dimensions)	
<b>Optional Parts</b>		
7415.30	Extra 9' (2.74 m) aluminum foil extrusion	
7415.31S	Extra 12" (305 mm) connector with small bushing; fits -48, -60, -76 rod, 5/8" (16 mm) wire	
7415.31L	Extra 12" (305 mm) connector with large bushing; fits 3/4", 7/8" (19, 22 mm) wire	
7429 -48	-48 Rod adaptor stud***	

Contact Harken to request quote and lead time \*Hydraulic cylinder increases standard and max lengths

\*\*Specify rigging dimensions when ordering \*\*\*Use with conventional turnbuckle

‡Continuous rod only. If rod is sectional, order Unit 6

## Unit 6

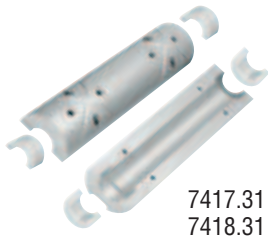
Wire Ø (1 x 19 SS)	Rod Ø	Clevis Pin Ø
7/8", 1" (22, 25 mm)	-76, -91, -115 (17.9, 19.5, 22.2 mm)	1 1/4", 1 3/8", 1 9/16" (31.8, 34.9, 39.7 mm)
<b>Headstay Length*</b> Alum foil: standard 94'6" (28.8 m), max 127'6" (38.8 m)		
<b>Part No.</b>	<b>Description</b>	
7416.15S	Unit 6 with aluminum foils and small bushing; fits -76, -91 rod	
7416.15L	Unit 6 with aluminum foils and large bushing; fits -115 rod, 7/8", 1" (22, 25 mm) wire	
<b>Toggle Assembly Required - sold separately</b>		
7416.25 1 1/4	Toggle for 1 1/4" (31.8 mm) clevis pin	
7416.25 1 3/8	Toggle for 1 3/8" (34.9 mm) clevis pin	
7416.25 1 9/16	Toggle for 1 9/16" (39.7 mm) clevis pin	
7416.25 X X/X**	Toggle for all other clevis pin sizes (customer-supplied dimensions)	
7416.26 1 1/4	Toggle and hydraulic cylinder for 1 1/4" (31.8 mm) clevis pin	
7416.26 1 3/8	Toggle and hydraulic cylinder for 1 3/8" (34.9 mm) clevis pin	
7416.26 1 9/16	Toggle and hydraulic cylinder for 1 9/16" (39.7 mm) clevis pin	
7416.26 X X/X**	Toggle and hydraulic cylinder for all other clevis pin sizes (customer-supplied dimensions)	
<b>Optional Parts</b>		
7416.30	Extra 11' (3.35 m) aluminum foil extrusion	
7416.31S	Extra 13" (330 mm) connector with small bushing; fits -76, -91 rod	
7416.31L	Extra 13" (330 mm) connector with large bushing; fits -115 rod, 7/8", 1" (22, 25 mm) wire	

Contact Harken to request quote and lead time

\*Hydraulic cylinder increases standard and max lengths \*\*Specify rigging dimensions when ordering

Unit 4  
Unit 5  
Unit 6

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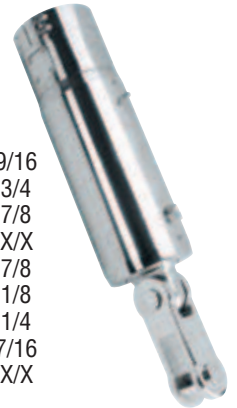
7417.31  
7418.31



7417.30  
7418.30



7417.25 1 9/16  
7417.25 1 3/4  
7417.25 1 7/8  
7417.25 X X/X  
7418.25 1 7/8  
7418.25 2 1/8  
7418.25 2 1/4  
7418.25 2 7/16  
7418.25 X X/X



7417.26 1 9/16  
7417.26 1 3/4  
7417.26 1 7/8  
7417.26 X X/X  
7418.26 1 7/8  
7418.26 2 1/8  
7418.26 2 1/4  
7418.26 2 7/16  
7418.26 X X/X

Unit 7	Fiber Stay	Rod Ø	Clevis Pin Ø
	Customer-supplied dimensions	-115, -150, -170 (22.2, 25.4, 27.1 mm)	1 9/16", 1 3/4", 1 7/8" (39.7, 44.5, 47.6 mm)
	<b>Headstay Length</b>	Alum foil: contact Harken with stay length	
	<b>Part No.</b>	<b>Description</b>	
	7417.15	Unit 7 with aluminum foils	
	7417.15 X.XXX*	Unit 7 with aluminum foils for all other rigging (customer-supplied dimensions)	
	<b>Toggle Assembly Required - sold separately</b>		
	7417.25 1 9/16	Toggle for 1 9/16" (39.7 mm) clevis pin	
	7417.25 1 3/4	Toggle for 1 3/4" (44.5 mm) clevis pin	
	7417.25 1 7/8	Toggle for 1 7/8" (47.6 mm) clevis pin	
7417.25 X X/X*	Toggle for all other clevis pin sizes (customer-supplied dimensions)		
7417.26 1 9/16	Toggle and hydraulic cylinder for 1 9/16" (39.7 mm) clevis pin		
7417.26 1 3/4	Toggle and hydraulic cylinder for 1 3/4" (44.5 mm) clevis pin		
7417.26 1 7/8	Toggle and hydraulic cylinder for 1 7/8" (47.6 mm) clevis pin		
7417.26 X X/X*	Toggle and hydraulic cylinder for all other clevis pin sizes (customer-supplied dimensions)		
<b>Optional Parts</b>			
7417.30	Extra 13' (3.96 m) aluminum foil extrusion		
7417.31	Extra connector with bushings		

Contact Harken to request quote and lead time. \*Specify rigging dimensions when ordering

Unit 8	Fiber Stay	Rod Ø	Clevis Pin Ø
	Customer-supplied dimensions	-170, -195, -220, -260 (27.1, 28.6, 30.3, 33.4 mm)	1 7/8", 2 1/8", 2 1/4", 2 1/2" (47.6, 54.0, 57.2, 61.9 mm)
	<b>Headstay Length</b>	Alum foil: contact Harken with stay length	
	<b>Part No.</b>	<b>Description</b>	
	7418.15	Unit 8 with aluminum foils	
	7418.15 X.XXX*	Unit 8 with aluminum foils for all other rigging (customer-supplied dimensions)	
	<b>Toggle Assembly Required - sold separately</b>		
	7418.25 1 7/8	Toggle for 1 7/8" (47.6 mm) clevis pin	
	7418.25 2 1/8	Toggle for 2 1/8" (54.0 mm) clevis pin	
	7418.25 2 1/4	Toggle for 2 1/4" (57.2 mm) clevis pin	
7418.25 2 1/2	Toggle for 2 1/2" (61.9 mm) clevis pin		
7418.25 X X/X*	Toggle for all other clevis pin sizes (customer-supplied dimensions)		
7418.26 1 7/8	Toggle and hydraulic cylinder for 1 7/8" (47.6 mm) clevis pin		
7418.26 2 1/8	Toggle and hydraulic cylinder for 2 1/8" (54.0 mm) clevis pin		
7418.26 2 1/4	Toggle and hydraulic cylinder for 2 1/4" (57.2 mm) clevis pin		
7418.26 2 1/2	Toggle and hydraulic cylinder for 2 1/2" (61.9 mm) clevis pin		
7418.26 X X/X*	Toggle and hydraulic cylinder for all other clevis pin sizes (customer-supplied dimensions)		
<b>Optional Parts</b>			
7418.30	Extra 13' (3.96 m) aluminum foil extrusion		
7418.31	Extra connector with bushings		

Contact Harken to request quote and lead time. \*Specify rigging dimensions when ordering



Unit 7  
Unit 8