HARKEN®

2021

NEW PRODUCT SUPPLEMENT: USE WITH 2020 CATALOG

Welcome to the 2021 Harken Marine Catalog Supplement

You will find only the newest Harken products here — the most recent advances, released since our last catalog went to press. For a comprehensive view of Harken products, attach this supplement to your 2020 Harken catalog. Remember, you can always find our most up-to-date lineup at www.harken.com. And you can download an always-updated pdf version of the catalog at www.harken.com/catalog.

Catalog Guide

Fly Blocks

Fly Blocks

Harken soft-attach Fly blocks are designed to provide strength without mass, providing sailors with big power in a low-aero package. Designed specifically for high-tech line, these efficient blocks have an incredible working load for their small size. Fly blocks are perfect for use on foiling dinghies and sportboats and for vang cascades and backstay systems on Grand-Prix racers.

18 mm

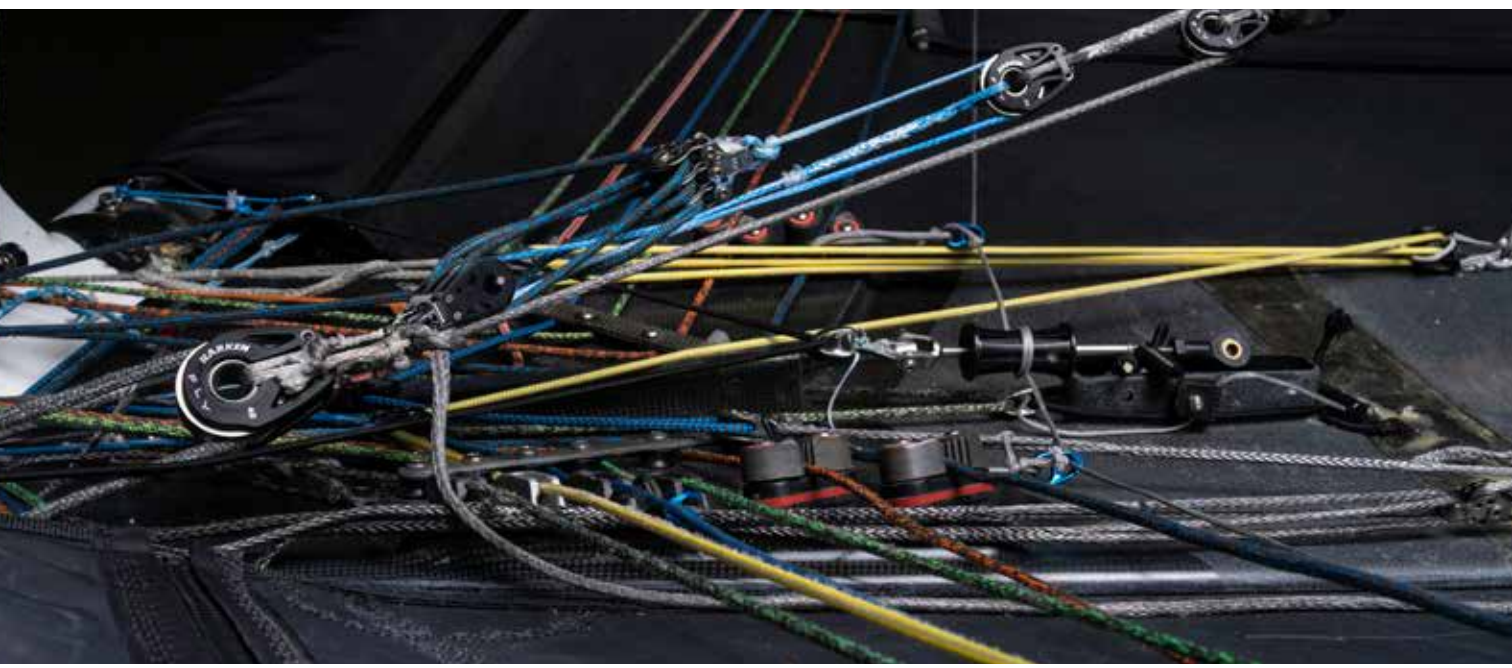
18 mm blocks feature an integrated stainless steel inner race and rivet, stainless steel ball bearings, and composite fiber-reinforced sideplates.

29 & 40 mm

29 and 40 mm blocks feature a one-piece titanium outer race/sheave, stainless steel ball bearings and inner race, and composite fiber-reinforced sideplates.

Use the 2161 "tight cinching" 18 mm in applications where the block needs to be secured extremely close to the deck.

2161 2698 2158 2180 2171 2173



Part No.	Description	Sheave Ø in	Sheave Ø mm	Length in	Length mm	Weight oz	Weight g	Max line Ø in	Max line Ø mm	Maximum working load lb	Maximum working load kg	Breaking load lb	Breaking load kg
2158	18 mm double	23/32	18	1 3/32	28	.6	17	3/16	5	450	204	1500	680
2161	18 mm single/narrow	23/32	18	1 3/32	28	.25	7.2	3/16	5	275	125	992	450
2171	29 mm single*	1 1/8	29	1 3/4	44	.92	26	9/32	7	770	350	1540	700
2173	40 mm single*	1 9/16	40	2 5/16	58	2.2	62.2	11/32	9	1435	650	2870	1300
2180	18 mm triple	23/32	18	1 3/32	28	1	28.4	3/16	5	600	272	1100	499
2698	18 mm single	23/32	18	1 3/32	28	.25	7.2	3/16	5	275	125	992	450

*Lashing line not included.

Single, double, triple, fiddle?
Becket or not?
Switchable or Ratchamatic?
Soft-attach or shackled?
40 or 57 or 75 mm?
Standard or high threshold engage point?

Harken Carbo Ratchets give you lots of choices. Now, multiply all those by three.

Now, you can have any Carbo Ratchet with any Power3 sheave you choose.
Any configuration. Any holding power. Anybody can decide. Any Harken rep can help…any time.

AT THE FRONT HARKEN®

Ratchamatic Blocks

The Carbo Ratchamatic is a load-sensing ratchet block that rolls freely in both directions under low loads and automatically engages the ratchet as loads increase. Shifting between ratchet and light-air modes is seamless. Unloaded main and jib sheets run out freely during mark roundings and asymmetrical spinnakers free instantly during jibes.

Ratchet engagement may be adjusted to a higher or lower load according to strength and sailing style. The Ratchamatic cheek block mounts on either port or starboard. The holding power of the 57 mm is as high as 10:1. The 75 mm is up to 15:1.

For the ultimate system, mount a Ratchamatic block on the boom above a cockpit-mounted switchable ratchet to allow the mainsheet to run freely in light air and to double holding power in heavy air.

Use the 2634 with a 402 or 403 swivel arm for a versatile two-speed mainsheet system.

About Carbo Air blocks: see feature page at beginning of this section.

2625.RED

2625
2680

2628
2684

2626.RED

2626
2681

2627
2683

2633
2682

DN iceboat © Marcella Grunert

Ratchet or Ratchamatic? TECH TEAM

Adjustable ratchet engagement adapts block to a variety of applications.

Eight-faceted, Hard Lube-anodized aluminum sheave holds line securely.

All 57 mm and 75 mm Ratchamatic blocks are also available with Power3 sheaves which offer holding power options suitable for a variety of wind conditions. In addition, all 57 mm Ratchamatic blocks can be made with HTE (high threshold engage) sheaves to delay ratchet engagement, allowing them to run freely more of the time. Contact Harken for more information.

Part No.	Description	Sheave Ø in	Sheave Ø mm	Length in	Length mm	Weight oz	Weight g	Shackle pin Ø in	Shackle pin Ø mm	Max line Ø in	Max line Ø mm	Maximum working load lb	Maximum working load kg	Breaking load lb	Breaking load kg	Holding power w/180° wrap 50 lb (23 kg)
57 mm																
2625 / .RED	Single	2 1/4	57	4 1/16	103	3.7	104	3/16	5	3/8	10	500	227	2000	907	10:1
2626 / .RED	Single/becket	2 1/4	57	4 15/16	125	4	113	3/16	5	3/8	10	500	227	2000	907	10:1
2627	Single/150 Cam-Matic**	2 1/4	57	4 1/16	103	9.4	266	3/16	5	3/8	10	300	136	750	340	10:1
2628	Single/150 Cam-Matic/becket**	2 1/4	57	4 15/16	125	9.7	275	3/16	5	3/8	10	600	272	1500	680	10:1
2633	Cheek*	2 1/4	57	3 1/4	83	3.1	89			3/8	10	500	227	2000	907	10:1
75 mm																
2680	Single	2 15/16	75	5 3/8	137	8.4	238	1/4	6	7/16	12	750	341	3000	1361	15:1
2681	Single/becket	2 15/16	75	6 1/2	165	9	255	1/4	6	7/16	12	750	341	3000	1361	15:1
2682	Cheek*	2 15/16	75	4 1/16	103	6.5	184			7/16	12	750	341	3000	1361	15:1
2683	Single/150 Cam-Matic**	2 15/16	75	5 7/16	138	15.5	440	1/4	6	7/16	12	300	136	750	340	15:1
2684	Single/150 Cam-Matic/becket**	2 15/16	75	6 1/2	165	15.5	440	1/4	6	7/16	12	600	272	1500	680	15:1

*Includes RH fasteners and mounting pad. **Maximum working loads and breaking loads for blocks based on cam strengths.

Protexit™ Blocks

When you race HARD, and you rip through as many hoists and douses as we do sailing W-L legs all the time, you should expect to start wearing through the sideplates of your halyard exit block right? Wrong! Thanks to Harken Protexit™ blocks, wear from side angle loading is not inevitable. Protexit's all-aluminum, wear-resistant housing carefully ushers line in and out no matter the angle. There's more: Protexit blocks offer higher working loads than any small boat exit blocks we've ever made. Protexit aluminum sheaves rotate on sleeve bearings with Delrin® sideload balls so they don't deform in extreme conditions, while reducing wear on the halyard, too.

Strong. Durable. Gentle. Protexit blocks protect the race results you work hard to achieve.

Blocks are clearly labeled with part number, line diameter, maximum working load, and directional arrows for line direction.

Melges 24 © Petey Crawford


1200

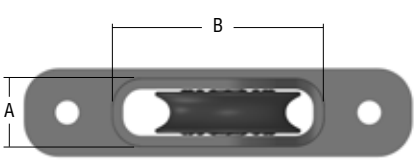

1201


1202


1205


1203


1204

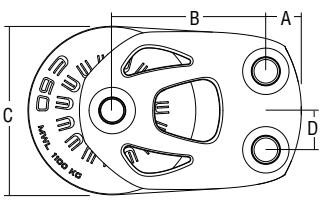


Part No.	Description	Sheave Ø in	Sheave Ø mm	Length in	Length mm	Weight oz	Weight g	Max line Ø in	Max line Ø mm	Fasteners (FH) in	Fasteners (FH) mm	Fastener spacing mm	A mm	B mm	Maximum working load lb	Maximum working load kg	Breaking load lb	Breaking load kg
1200	30 mm single	1 3/16	30	2 15/16	75	1.3	37	5/16	8	#10	5	57	18.2	45.7	550	250	1103	500
1201	30 mm double	1 3/16	30	3 13/16	97	2	57	5/16	8	#10	5	79	18.2	70.1	550	250	1103	500
1202	40 mm single	1 9/16	40	4 3/16	107	2.6	74	5/16	8	1/4	6	75	19.7	59.2	880	400	1764	800
1203	50 mm single	1 15/16	50	4 5/8	117	4.5	128	1/2	12	1/4	6	90	23.3	71.5	1760	800	3528	1600
1204	60 mm single	2 3/8	60	5 1/16	129	6.3	179	1/2	12	1/4	6	105	24.3	84	2640	1200	5292	2400
1205	40 mm single/wide sheave	1 9/16	40	4 3/16	107	4.5	127	5/16	8	1/4	6	75	30.6	59.2	880	400	1764	800

60 mm Blocks

About Element blocks: see feature page at beginning of this section.

Aluminum sideplates direct line to better align with sheaves.



Part No.	Description	Sheave Ø in	Sheave Ø mm	Length in	Length mm	Weight oz	Weight g	Shackle pin Ø in	Shackle pin Ø mm	Max line Ø in	Max line Ø mm	Maximum working load lb	Maximum working load kg	Breaking load lb	Breaking load kg
6220	Mastbase/single/swivel	2 3/8	60	4 1/8	105	5.5	155		8	9/16	14	2425	1100	4850	2200
6222	Mastbase/single/swivel/becket	2 3/8	60	5 1/32	128	6.1	175	5/16	8	9/16	14	2425	1100	4850	2200
6260	Single/swivel	2 3/8	60	4 3/4	121	6.1	175	1/4	6	9/16	14	2425	1100	4850	2200
6261	Single/swivel/becket	2 3/8	60	5 3/4	146	7	200	1/4	6	9/16	14	2425	1100	4850	2200
6262	Fiddle/swivel	2 3/8	60	6 1/2	165	8.4	240	1/4	6	3/8	10	2425	1100	4850	2200
6263	Fiddle/swivel/becket	2 3/8	60	7 1/8	181	8.75	250	1/4	6	3/8	10	2425	1100	4850	2200
6264	Fiddle/150 Cam-Matic/swivel/becket	2 3/8	60	7 1/8	181	13.0	370	1/4	6	3/8	10	1213	550	2426	1100
6265	Fiddle/150 Cam-Matic/swivel	2 3/8	60	6 1/2	165	12.6	360	1/4	6	3/8	10	900	408	1800	816
6266	Single/150 Cam-Matic/swivel/becket	2 3/8	60	5 3/4	146	11.2	320	1/4	6	1/2	12	600	272	1200	544
6269	Double/swivel	2 3/8	60	5 3/4	146	12.4	355	5/16	8	9/16	14	3032	1375	6064	2750
6270	Double/swivel/becket	2 3/8	60	6 3/4	171	14.7	420	5/16	8	9/16	14	3032	1375	6064	2750
6272	Triple/swivel	2 3/8	60	5 3/4	146	18.2	520	5/16	8	9/16	14	3638	1650	7276	3300
6273	Triple/swivel/becket	2 3/8	60	6 1/2	165	18.9	540	5/16	8	9/16	14	3638	1650	7276	3300
6274	Triple/150 Cam-Matic/swivel	2 3/8	60	5 3/4	146	24.2	690	5/16	8	1/2	12	1499	680	2998	1360
6275	Triple/150 Cam-Matic/swivel/becket	2 3/8	60	6 1/2	165	24.9	710	5/16	8	1/2	12	1799	816	3598	1632
6277	Stand-up	2 3/8	60	5 1/4	133	13.8	391			9/16	14	2425	1100	4850	2200
6278	Stand-up/becket	2 3/8	60	6 1/8	155	14.8	419			9/16	14	2425	1100	4850	2200

Footblock Dimensions

Part No.	A in	A mm	B in	B mm	C in	C mm	D in	D mm
6267/6268/6271/6276	1/2	12.5	2 5/32	54.5	2 3/8	60	9/16	14

Footblocks

Part No.	Description	Sheave Ø in	Sheave Ø mm	Length in	Length mm	Height in	Height mm	Weight oz	Weight g	Max line Ø in	Max line Ø mm	Maximum working load lb	Maximum working load kg	Breaking load lb	Breaking load kg	Fasteners (FH) mm
6267	Single footblock	2 3/8	60	4	102	1 3/16	30	5.6	160	9/16	14	2425	1100	4850	2200	8
6268	Single footblock/lockoff	2 3/8	60	4	102	1 3/16	30	7.4	210	9/16	14	2425	1100	4850	2200	8
6271	Double footblock	2 3/8	60	4	102	2 3/16	55	9.3	265	9/16	14	1600	725	3200	1450	8
6276	Single footblock/lockoff/left	2 3/8	60	4	102	1 3/16	30	7.4	210	9/16	14	2425	1100	4850	2200	8

57 mm Blocks

About Black Magic Air blocks: see feature pages at beginning of this section.

Low-load blocks have red isolators. They use Torlon® rollers and 316 stainless steel shackles. Standard blocks have 17-4 PH stainless headposts.

KM32fc, 9.82 m (32.2'), VPLP design, Magma Composites © Skymy

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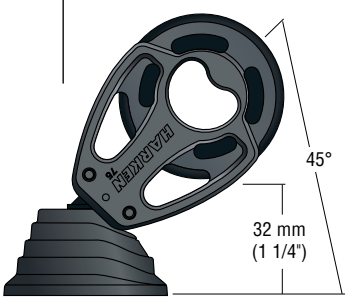


3227

Torlon is a registered trademark of Solvay Advanced Polymers, L.L.C.

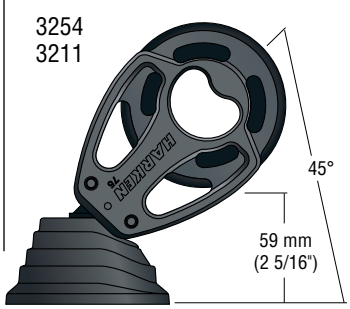
Part No.	Description	Sheave Ø in	Sheave Ø mm	Length in	Length mm	Weight oz	Weight g	Shackle pin Ø in	Shackle pin Ø mm	Max line Ø in	Max line Ø mm	Maximum working load lb	Maximum working load kg	Breaking load lb	Breaking load kg
3214	Single loop**	2 1/4	57	3	76	3.23	92			7/16	12	2500	1134	5000	2268
3215	Single/swivel	2 1/4	57	4 11/16	119	5.36	152	1/4	6	7/16	12	2500	1134	5000	2268
3216	Single/swivel/becket	2 1/4	57	5 1/2	140	5.86	166	1/4	6	7/16	12	2500	1134	5000	2268
3217	Double/swivel	2 1/4	57	5 3/16	132	11.86	336	5/16	8	7/16	12	3600	1633	7200	3267
3218	Double/swivel/becket	2 1/4	57	6	152	12.43	352	5/16	8	7/16	12	3600	1633	7200	3267
3219	Triple/swivel	2 1/4	57	5 3/16	132	13.34	378	5/16	8	7/16	12	4850	2200	9700	4400
3226	Single/swivel/low-load	2 1/4	57	4 11/16	119	5.44	154	1/4	6	7/16	12	1655	750	3300	1500
3227	Stand-up*	2 1/4	57	4 1/2	114	7.04	200	1/4	6	7/16	12	2500	1134	5000	2268
3228	Double/swivel/low-load	2 1/4	57	5 3/16	132	12.05	342	5/16	8	7/16	12	2755	1250	5510	2500
3229	Single/swivel/low-load/becket	2 1/4	57	5 1/2	140	5.95	169	1/4	6	7/16	12	1655	750	3300	1500
3386	Double loop**	2 1/4	57	3	76	5.93	168			7/16	12	2500	1134	5000	2268

*Includes padeye. 6 mm (1/4") fastener circle: 37 mm (1 15/32"). **Loop not included. See page 85.

100 mm Blocks

About Black Magic Air blocks: see feature pages at beginning of this section.

Deadend post for attachment to a closed bail. Loop not included, see page 85.



Anka[4], *Solaris 64 RS, 19.5 m (64'), naval architect: Javier Soto Acebal © Solaris Yachts*

Part No.	Description	Sheave Ø in	Sheave Ø mm	Length in	Length mm	Weight oz	Weight g	Shackle pin Ø in	Shackle pin Ø mm	Max line Ø in	Max line Ø mm	Maximum working load lb	Maximum working load kg	Breaking load lb	Breaking load kg
3211	Standup/becket**	3 15/16	100	9 1/4	235	32.49	921			5/8	16	7500	3402	15000	6804
3245	Single loop*	3 15/16	100	5 1/16	128	13.09	371			5/8	16	7500	3402	15000	6804
3246	Single/swivel	3 15/16	100	8	203	21.98	623	3/8	10	5/8	16	7500	3402	15000	6804
3247	Single/swivel/becket	3 15/16	100	9 1/2	241	23.82	675	3/8	10	5/8	16	7500	3402	15000	6804
3248	Double/swivel	3 15/16	100	8 15/16	227	45.28	1284	1/2	12	5/8	16	11000	4990	22000	9979
3254	Stand-up**	3 15/16	100	7 11/16	195	31.18	884			5/8	16	7500	3402	15000	6804

*Loop not included. See page 85. **Includes padeye. Uses hole spacing and base dimensions of 648 padeye, refer to page 89.

FlatWinder Powered Block

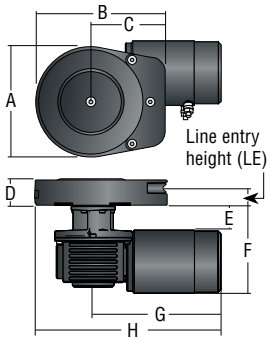
The Harken FlatWinder powered block is a self-contained, low-profile powered system developed for mainsheet traveler adjustment. This powerful block is easy to use and offers sailors huge benefits in mainsail control, giving them the means to quickly depower the rig, and delay reefing when the wind picks up. Like a compact captive winch for the traveler, the FlatWinder is completely self-contained. It operates in both directions allowing the car to move anywhere on the track while also keeping the traveler line off the cockpit floor. FlatWinders can be also used for other applications, like stern platform lifting or foil trimming. Contact Harken Tech Service for more details.

Harken recommends installing two space-saving, dual-function Digital System Switches, one button to port, the other to starboard, for activation from both sides of the boat. The block's wide-diameter drive sheave mounts on a sloped base, forming an angle with the sheave top to contain the line so it doesn't push against the block walls. This progressive grip exerts just the right amount of friction to keep wear on the line and components minimal. Plus, the FlatWinder eliminates the need for winches, making the deck cleaner and easier to navigate.

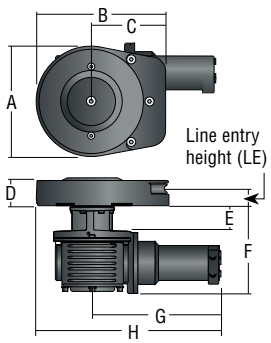
The Flatwinder is available with an electric or hydraulic motor. The compact horizontal motor is housed neatly belowdeck and has a maximum working load of 250/500 kg (550/1100 lb). When used with 10 mm line and a 4:1 purchase, this translates into around 1000 kg (2205 lb) of pull with the FlatWinder 250; 2000 kg (4410 lb) with the FlatWinder 500. The FlatWinder 250 fits monohulls 15 - 18 m (50 - 60') and catamarans 14 - 15 m (45 - 50'); the FlatWinder 500 fits monohulls 18 – 24 m (60 – 80') and catamarans 15 - 20 m (50 - 70').

The FlatWinder is available in 12V or 24V electric or hydraulic depending on the boat's system. A Harken Dual-Function Control Box is included with the electric FlatWinders. This integrated load controller and control box conserves space, and with half as many wires as separate systems, is easier to install. Switches and circuit breakers are not included.

Electric



Hydraulic



Grand Soleil 58, 17.68 m (58'), Cantiere del Pardo © Fabio Taccola / Grand Soleil

FW250EA12H
FW250EA24H
FW250HA
FW500EA12H
FW500EA24H
FW500HA

Part No.	Description	Weight lb	Weight kg	Line entry height (LE) in	Line entry height (LE) mm	Line Ø in	Line Ø mm	Fastener circle in	Fastener circle mm	Fasteners (SH or HH) mm	Maximum working load lb	Maximum working load kg	Line speed (no load) ft/min	Line speed (no load) m/min
FW250EA12H	FlatWinder powered block/12-volt	27.5	12.5	1 1/8	29	3/8	10	4 15/16	125	6 x M6	550	250	115	35
FW250EA24H	FlatWinder powered block/24-volt	27.5	12.5	1 1/8	29	3/8	10	4 15/16	125	6 x M6	550	250	115	35
FW250HA	FlatWinder powered block/hydraulic	24.2	11	1 1/8	29	3/8	10	4 15/16	125	6 x M6	550	250	63	19.2
FW500EA12H	FlatWinder powered block/12-volt	49.6	22.5	1 1/8	29	3/8	10	6 5/16	160	6 x M6	1100	500	85	26
FW500EA24H	FlatWinder powered block/24-volt	49.6	22.5	1 1/8	29	3/8	10	6 5/16	160	6 x M6	1100	500	105	32
FW500HA	FlatWinder powered block/hydraulic	38.5	17.5	1 1/8	29	3/8	10	6 5/16	160	6 x M6	1100	500	41	12.5

Dimensions

Part No.	A in	A mm	B in	B mm	C in	C mm	D in	D mm	E in	E mm	F in	F mm	G in	G mm	H in	H mm
FW250EA12H	7 9/16	192	8 7/8	226	5 1/8	130	1 13/16	45	1 3/4	43	6 1/8	155	8 15/16	227	12 11/16	322
FW250EA24H	7 9/16	192	8 7/8	226	5 1/8	130	1 13/16	45	1 3/4	43	6 1/8	155	8 15/16	227	12 11/16	322
FW250HA	7 9/16	192	8 7/8	226	5 1/8	130	1 13/16	45	1 13/16	46.5	5 31/32	151.5	8 23/32	221	12 15/32	316.7
FW500EA12H	9 1/2	242	10 3/4	273	6	152	2 1/16	53	2 13/16	71	9 1/8	231	14 5/16	363	19 1/16	484
FW500EA24H	9 1/2	242	10 3/4	273	6	152	2 1/16	53	2 13/16	71	9 1/8	231	14 5/16	363	19 1/16	484
FW500HA	9 1/2	242	10 3/4	273	6	152	2 1/16	53	2 13/16	71	9 1/8	231	11 3/8	289.3	16 5/32	410.2

Cam Bases

Use cam swivel bases when leads must rotate to face the trimmer.

Ball bearing swivel bases feature dual rows of Delrin® ball bearings that swivel freely even under high loads. Bases include stand-up springs and a U-Adaptor to accept a variety of appropriate blocks.

The 144 is the standard configuration with a tall arm. It is ideal for mounting in the cockpit or for use on larger keelboats and small offshore boats that use 76 mm (3") plastic blocks. The low-profile 205 is used when installation is at deck level and when smaller blocks are used. The 1574 accepts Midrange blocks.

The 216 features a second cleat for lines led vertically through the base of the swivel. It is frequently used to combine vang or backstay controls in the same swivel base that handles the mainsheet.

The 240, 241 and 639 are simple swivel bases for main and jib sheets on very small boats or for control lines on boats of all sizes.

The 402 and 403 are fitted with a double Cam-Matic cleat for use in 2-speed mainsheet systems.

The 9051 adjustable cam swivel base with 468 Micro Cam-Matic cleat provides precise cleating. The cleating angle adjusts infinitely in a 5-17 degree range up and down for optimal line lead. The 16 mm sheaves feature low-friction stainless steel ball bearings to handle high loads, ideal for controls where cleating angles change dramatically.

205
144
1574

402
403

216

9051

639

241
240

379
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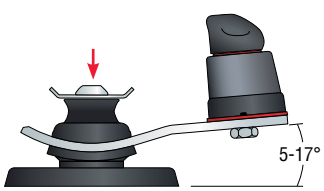
239

Cam-Matic ball bearing cam cleats.

Swivels freely under load.

Stops on base prevent swivel from over-rotating and fouling line.

144 includes adapter for 57 mm and 75 mm Carbo blocks.



Loosen screws to adjust 9051 cam angle.

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Part No.	Description	Height in	Height mm	Weight oz	Weight g	Line Ø Min in	Line Ø Min mm	Line Ø Max in	Line Ø Max mm	Fastener spacing in	Fastener spacing mm	Maximum working load lb	Maximum working load kg	Use with
144	Swivel base/150 Cam-Matic*	5 3/4	146	13	369	1/8	3	1/2	12	3/4	19			57 mm/75 mm/2.25"/3.00"/ratchets
205	Small swivel base/150 Cam-Matic*	4 1/2	114	12	340	1/8	3	1/2	12	3/4	19			57 mm/Big Bullet/Dinghy/2.25"/ small ratchets
216	Duocam swivel base/365, 471 Carbo-Cam*	5 3/4	146	16	454					3/4	19			57 mm/2.25"/3.00"/ratchets
238	150 Cam-Matic on plate/bullseye‡	1 5/16	33	4	113	1/8	3	1/2	12	1 1/2, 1	38, 25	300	136	
239	365 Carbo-Cam on plate/bullseye‡	1 5/16	33	3	85	1/8	3	3/8	10	1 1/2, 1	38, 25	200	91	
240	Bullseye swivel base/150 Cam-Matic*	2 7/16	62	7.5	213	1/8	3	1/2	12	1 1/32	26	300	136	
241	Bullseye swivel base/365 Carbo-Cam*	2 7/16	62	6.5	184	1/8	3	3/8	10	1 1/32	26	150	68	
379	471 Micro Carbo-Cam on plate/bullseye‡‡	7/8	22	1.75	50	1/8	3	1/4	6	1 1/16	27	150	68	
402	Small swivel base/412 Cam-Matic*	4 3/8	111	12.75	362	5/16	8	3/8	10	3/4	19			57 mm/2.25" double ratchets
403	Swivel base/412 Cam-Matic*	5 3/4	146	14	398	5/16	8	3/8	10	3/4	19			57 mm/2.25"/3.00" double ratchets
639	Bullseye swivel base/150 Cam-Matic*	1 15/16	75	9.14	259	1/8	3	1/2	12	1 1/32	26	300	136	
1574	Midrange swivel base/280 Cam-Matic**	5 15/16	151	23	652	1/4	6	5/8	16	1 1/16	27			Midrange
9051	Swivel base/468 Micro Cam-Matic/16 mm sheaves	2 3/8	60	6.1	173	1/8	3	1/4	6	1 1/32	26	200	91	

*#10 (5 mm) FH fastener. **6 mm (1/4") FH fastener. ‡#10 (5 mm) RH fastener. ‡‡#8 (4 mm) RH fastener.

Harken Gizmos

Harken introduces Gizmos, a growing line of engineered soft-attach terminations and through-deck pieces. Gizmos acknowledge riggers' desires to minimize weight and eliminate as many heavy metal fasteners as possible.

Harken's reputation for precision manufacturing assures the Gizmos are precision-sized and fit together perfectly when assembled. Perhaps most importantly, our distribution network guarantees Gizmos are available in the quantities you need—when you need them.

Through-Deck Bushings

Single-sided through-deck bushings are designed to protect decks and lines from chafing using any through-deck application. Double-sided through-deck bushings are perfect for installing soft-attach loops to protect line from wear and also to separate line.

Padeye Kits

Padeye kits include a cross pin, waterproof cap and O-ring and convert a double-sided bushing into a through-deck, watertight padeye. The cross pin attaches the rope/loop and the cap snaps over the top to keep water out.

Loops

Soft-attachments are available to fit the Gizmo through-deck bushings and padeye kits.

Stay tuned, Harken will soon be offering more Gizmo rigging solutions!

GIZMOS

SINGLE THROUGH-DECK BUSHINGS

DOUBLE THROUGH-DECK BUSHINGS

PADEYE KITS

LOOPS

NEW

Harken Gizmos

Through-Deck Bushings

Part No.	Description	Center hole Ø in	Center hole Ø mm	Outside Ø in	Outside Ø mm	Shaft Ø in	Shaft Ø mm	Drill size in	Drill size mm	Deck thickness Min in	Deck thickness Min mm	Deck thickness Max in	Deck thickness Max mm	Weight oz	Weight g	Maximum working load lb	Maximum working load kg
9060	6 mm/single	0.236	6	0.728	18.5	0.354	9	13/32	10			.787	20	0.1	2.8		
9061	8 mm/single	0.313	8	0.984	25	0.472	12	1/2	13			1.181	30	0.25	7.2		
9062	10 mm/single	0.394	10	1.102	28	0.591	15	5/8	16			1.181	30	0.38	10.8		
9063	12 mm/single	0.472	12	1.228	31.2	0.669	17	23/32	18			1.181	30	0.47	13.2		
9064	14 mm/single	0.551	14	1.606	40.8	0.827	21	7/8	22			1.181	30	0.8	22.7		
9070.0608	6 mm/double/6-8 mm deck	0.236	6	0.98	24.9	0.512	13	9/16	14	0.236	6	0.315	8	0.23	6.5		
9070.0810	6 mm/double/8-10 mm deck	0.236	6	0.98	24.9	0.512	13	9/16	14	0.315	8	0.394	10	0.25	7.1		
9070.1013	6 mm/double/10-13 mm deck	0.236	6	0.98	24.9	0.512	13	9/16	14	0.394	10	0.512	13	0.27	7.6		
9071.0810	8 mm/double/8-10 mm deck	0.313	8	1.106	28.1	0.591	15	5/8	16	0.315	8	0.394	10	0.34	9.7		
9071.1013	8 mm/double/10-13 mm deck	0.313	8	1.106	28.1	0.591	15	5/8	16	0.394	10	0.512	13	0.37	10.4		
9071.1318	8 mm/double/13-18 mm deck	0.313	8	1.106	28.1	0.591	15	5/8	16	0.512	13	0.709	18	0.41	11.5		
9071.1828	8 mm/double/18-28 mm deck	0.313	8	1.106	28.1	0.591	15	5/8	16	0.709	18	1.102	28	0.47	13.4		
9072.1013	10 mm/double/10-13 mm deck	0.394	10	1.228	31.2	0.669	17	23/32	18	0.394	10	0.512	13	0.49	13.9	1540	700
9072.1318	10 mm/double/13-18 mm deck	0.394	10	1.228	31.2	0.669	17	23/32	18	0.512	13	0.709	18	0.54	15.2	1540	700
9072.1828	10 mm/double/18-28 mm deck	0.394	10	1.228	31.2	0.669	17	23/32	18	0.709	18	1.102	28	0.61	17.4	1540	700
9072.2848	10 mm/double/28-48 mm deck	0.394	10	1.228	31.2	0.669	17	23/32	18	1.102	28	1.890	48	0.77	21.8	1540	700
9073.1013	12 mm/double/10-13 mm deck	0.472	12	1.606	40.8	0.827	21	7/8	22	0.394	10	0.512	13	0.91	25.7	3300	1500
9073.1318	12 mm/double/13-18 mm deck	0.472	12	1.606	40.8	0.827	21	7/8	22	0.512	13	0.709	18	0.98	27.7	3300	1500
9073.1828	12 mm/double/18-28 mm deck	0.472	12	1.606	40.8	0.827	21	7/8	22	0.709	18	1.102	28	1.1	31.1	3300	1500
9073.2848	12 mm/double/28-48 mm deck	0.472	12	1.606	40.8	0.827	21	7/8	22	1.102	28	1.890	48	1.34	38	3300	1500
9074.1013	14 mm/double/10-13 mm deck	0.551	14	1.874	47.6	0.945	24	31/32	25	0.394	10	0.512	13	1.38	39	5060	2300
9074.1318	14 mm/double/13-18 mm deck	0.551	14	1.874	47.6	0.945	24	31/32	25	0.512	13	0.709	18	1.46	41.5	5060	2300
9074.1828	14 mm/double/18-28 mm deck	0.551	14	1.874	47.6	0.945	24	31/32	25	0.709	18	1.102	28	1.61	45.7	5060	2300
9074.2848	14 mm/double/28-48 mm deck	0.551	14	1.874	47.6	0.945	24	31/32	25	1.102	28	1.890	48	1.91	54.2	5060	2300
9075.1013	16 mm/double/10-13 mm deck	0.625	16	1.98	50.3	1.024	26	1 1/32	27	0.394	10	0.512	13	1.61	45.6	7480	3400
9075.1318	16 mm/double/13-18 mm deck	0.625	16	1.98	50.3	1.024	26	1 1/32	27	0.512	13	0.709	18	1.71	48.4	7480	3400
9075.1828	16 mm/double/18-28 mm deck	0.625	16	1.98	50.3	1.024	26	1 1/32	27	0.709	18	1.102	28	1.88	53.2	7480	3400
9075.2848	16 mm/double/28-48 mm deck	0.625	16	1.98	50.3	1.024	26	1 1/32	27	1.102	28	1.890	48	2.22	62.8	7480	3400

Padeye Kits

Part No.	Description	Weight oz	Weight g	Maximum working load lb	Maximum working load kg	Use with
9072.PADEYE	10 mm padeye kit	0.19	5.3	1540	700	2173
9073.PADEYE	12 mm padeye kit	0.41	11.6	3300	1500	3214, 3294AL, 3366AL
9074.PADEYE	14 mm padeye kit	0.63	17.9	5060	2300	3230, 3299
9075.PADEYE	16 mm padeye kit	0.84	23.9	7480	3400	3245, 3295AL, 3367AL

Loops

Part No.	Ø mm	Length in	Length mm	Maximum working load lb	Maximum working load kg	Breaking load lb	Breaking load kg	Orientation	Use with blocks	Use with padeye
9072.LOOP	4	9 1/16	230	1540	700	3080	1400	Straight	2173	10 mm
9073.LOOP	5	10 1/4	260	3300	1500	6600	3000	Straight	3214, 3294	12 mm
9074.LOOP	6	12	305	5060	2300	10120	4600	Straight	3230, 3299	14 mm
9075.LOOP	7	12 13/16	325	7480	3400	14960	6800	Straight	3245, 3295	16 mm

Loops are sized to work with blocks referenced in padeyes with up to 28 mm deck thickness. Deck thickness over 28 mm require longer loops. Contact Harken.

NEW

Harken Vang-Master

Harken is now collaborating with Marine Products Engineering to offer Vang-Master rigid pneumatic boom vangs. Vang-Master boom vangs use air pressure to provide extension force to hold the boom up, without the need for metal springs. This reduces parts and weight while keeping operation squeak free, providing an infinitely adjustable, turnkey solution for maintaining optimal mainsail shape. Construction is hardcoat-anodized 6061-T6 aluminum, making them light and strong. Tubing and end fittings are threaded together eliminating fasteners and dissimilar metals to reduce corrosion.

Harken Vang-Masters are designed to be easy to install. Options available are external purchase systems which feature Harken hardware exclusively. They come pre-measured, spliced and finished with line specifically-selected for the application.

Harken distribution makes the vangs easy to obtain, while offering fast turnaround on spare parts and technical service.

Vang-Masters are available in eight standard sizes for boats 5-17 m (18-56 ft). Stainless steel mast and boom fitting and custom lengths are also available. Contact Harken for a price and lead time.

Purchase systems are available for each Vang-Master size with 4:1 or 6:1 mechanical advantage in single- or double-ended configurations.

Melges IC37, 11.30 m (37.06'), Mills Design © Melges Performance Sailboats

Part No.	Description	Pin center length (closed) in	Pin center length (closed) mm	Pin center length (open) in	Pin center length (open) mm	Stroke in	Stroke mm	Weight lb	Weight kg	Pin Ø in	Pin Ø mm	Jaw width in	Jaw width mm	Maximum return force lb	Maximum return force kg
VM12836	Vang-Master 1	28	711	36	914	8	203	2.5	5.51	3/8	10	1/4	6	350	159
VM24050	Vang-Master 2	40	1016	50	1270	10	254	2.75	6.06	3/8	10	1/4	6	350	159
VM33242	Vang-Master 3	32	813	42	1067	10	254	5	11.03	1/2	12.7	1/4	6	500	227
VM44858	Vang-Master 4	48	1219	58	1473	10	254	5.5	12.13	1/2	12.7	1/2	12	500	227
VM54860	Vang-Master 5	48	1219	60	1524	12	305	9	19.85	1/2	12.7	1/2	12	800	363
VM66072	Vang-Master 6	60	1524	72	1829	12	305	10	22.05	5/8	15.9	5/8	16	800	363
VM76072	Vang-Master 7	60	1524	72	1829	12	305	15	33.08	5/8	15.9	5/8	16	1500	680
VM87284	Vang-Master 8	72	1829	84	2134	12	305	17	37.46	5/8	15.9	5/8	16	1500	680

Ordering Vang-Master

Standard Vang-Master rigid vangs are available for boats with vang fittings on the boom and mastbase. If your boat is not equipped with vang fittings, or if fitting width or pin diameter will not fit jaw and pin sizes listed in the chart on previous page, contact Harken for information on a custom vang.

1. Determine Vang Size

Vang-Master sizes are based on boat size and PCLC (pin center length closed).

Measure the distance between vang pins with boom pulled down to find PCLC.

Push boom up to the maximum desired height and measure the distance between vang pins to find PCLO (pin center length open).

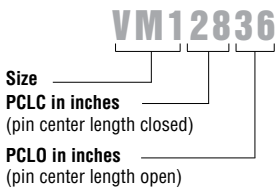
Select size that fits your range from chart on previous page.

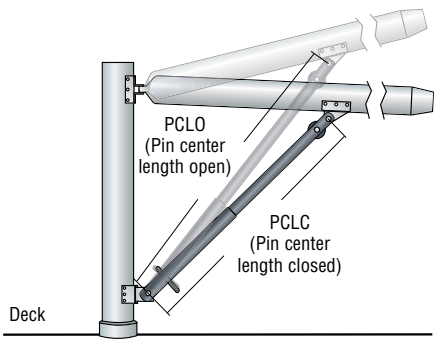
2. Select Purchase System

Standard purchase systems are available for each Vang-Master size with 4:1 or 6:1 mechanical advantage in single- or double-ended configurations.

Typical Boat Lengths:
VM1 & VM2: 5.5 - 7.9 m (18' - 26')
VM3 & VM4: 7.6 - 11 m (25' - 36')
VM5 & VM6: 10.7 - 14 m (35' - 46')
VM7 & VM8: 13.7 - 17.1 m (45' - 56')

Part Numbers





Stock Applications

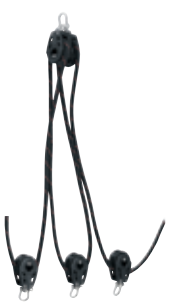
Vang-Masters sized for production models are detailed below. Please note, there may be rigging variation due to Class rule changes or equipment replacement.

VM-1	VM-2	VM-3	VM-4	VM-5	VM-6	VM-7	VM-8
Moore 24	J/80	Cal 29	Catalina 34	Erickson 35	Catalina 400	Catalina 47	Jeanneau 57
Hot Foot 2	Cal 25	Catalina 27	Cal 28	Santana 35	Catalina 42	Santa Cruz 50	Santa Cruz 52
Ultimate 20	Ultimate 24	Erickson 27	Cal 27	Hunter 34	Cal 40	Lidgard 45	Santa Cruz 70
Santana 20	B-25	Catalina 30	Islander Bahama 30	Hans Christian 33	Cal 39	Morris 46	Andrews 70
	Capri- 25	J/27	J/29	C & C 38	J/122	Tp- 52	
	J/24	Olson 30	J/30	Catalina 38	J/46	X- Yacht 512	
	Merit 25	Santana 3030	Evelyn 32	Catalina 36	X- Yacht 45	Swan 48	
	M-24		J/105	J/35	J/120	Swan 46	
			J/100	J/111	X- Yacht 38	Passport 54	
			J/133	J/40	Swan 44	Columbia 50	
			J/33	J/37	Swan 43	Dufour 520	
			Pearson 30	J/109	Cabr Rico 42	Hylas 54	
			Hunter 28	Express 37	Passport 42	Andrews 56	
			Tartan 10	Tartan 35	Moody 46		
			Cal 31	Valiant 42	Dufour 45		
			Ranger 33	Peterson 44	Hylas 42		
			Pearson 34	Benetau First 38	Cheoy Lee Offshore 48		
			Sabre 30	Bristol 35	Bristol 47		
			Hobbie 33	Grand Soleil 39	Wauquiex 46		
			Isladner 36	Island Packet 35	J/125		
			Antrim 27	Hinckley Bremuda 40	Dk 46		
			Soverel 33	Hallberg Rassy 42	Sydney 40		
			Flying Tiger F-10	Cabo Rico 38	Benetau First 40.7		
			J/99	Passport 40			
			Henderson 30	Sabere 42			
			Farr Mumm 30	Antrim 40			
			M-32	Cf 40			
				Farr 40			
				Farr 400			
				Kirby 25			
				Summit King 40			
				Farr Mumm 36			
				Summit 35			
				Soto 40			
				Benetau First 36.7			

NEW

Vang-Master Purchase Systems

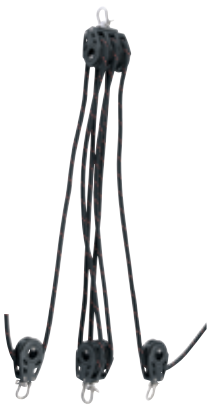
Systems are pre-measured, spliced and supplied with line specifically selected for the application.



7501

7502

7500



7503

7504

7505

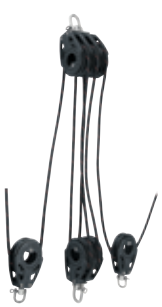
7506

7507

7508

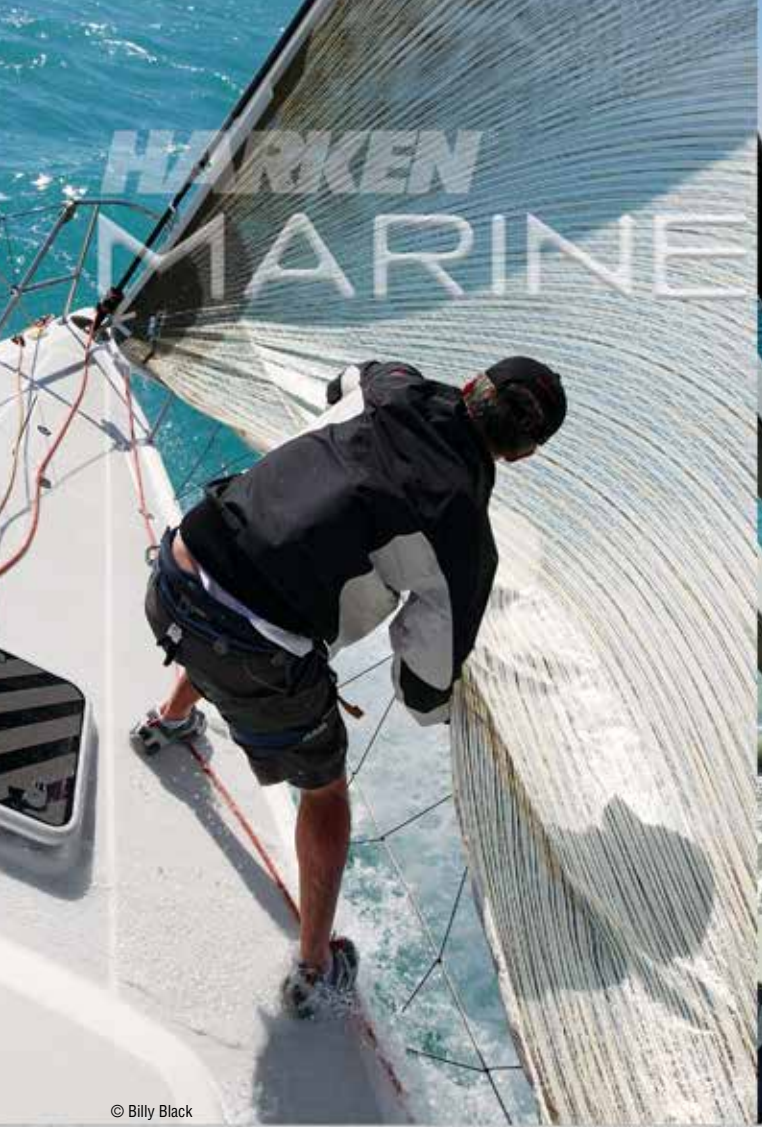
7509

7510



7511

Part No.	Description	Purchase	Includes	Use with
7500	4:1 Single-ended 40 mm Carbo	4:1	(1) 2655 fiddle, (1) 2658 fiddle, 8 mm line	VM1, VM2, VM3
7501	4:1 Double-ended 40 mm Carbo	4:1	(1) 2638 double, (3) 2636 single, 8 mm line	VM1, VM2, VM3
7502	6:1 Single-ended 40 mm Carbo	6:1	(1) 2640 triple, (1) 2613 triple, 8 mm line	VM1, VM2, VM3
7503	6:1 Double-ended 40 mm Carbo	6:1	(1) 2640 triple, (1) 2638 double, (2) 2636 single, 8 mm line	VM1, VM2, VM3
7504	4:1 Single-ended 57 mm Carbo	4:1	(1) 2621 fiddle, (1) 2676 fiddle, 10 mm line	VM4, VM5, VM6, VM7
7505	4:1 Double-ended 57 mm Carbo	4:1	(1) 2602 double, (3) 2600 single, 10 mm line	VM4, VM5, VM6, VM7
7506	6:1 Single-ended 57 mm Carbo	6:1	(1) 2604 triple, (1) 2630 triple, 10 mm line	VM4, VM5, VM6, VM7
7507	6:1 Double-ended 57 mm Carbo	6:1	(1) 2604 triple, (1) 2602 double, (2) 2600 single, 10 mm line	VM4, VM5, VM6, VM7
7508	4:1 Single-ended 75 mm Carbo	4:1	(1) 2690 fiddle, (1) 2697 fiddle, 10 mm line	VM7, VM8
7509	4:1 Double-ended 75 mm Carbo	4:1	(1) 2662 double, (3) 2660 single, 10 mm line	VM7, VM8
7510	6:1 Single-ended 75 mm Carbo	6:1	(1) 2664 triple, (1) 2686 triple, 10 mm line	VM7, VM8
7511	6:1 Double-ended 75 mm Carbo	6:1	(1) 2664 triple, (1) 2662 double, (2) 2660 single, 10 mm line	VM7, VM8

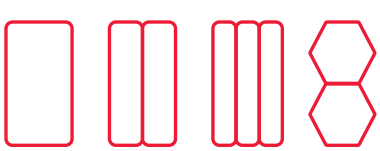


© Billy Black

IF YOU TRY MARINE GRIP, WE BELIEVE YOU'LL STICK WITH IT.

On the boat or on the dock. You'll like Harken Marine Grip for what it does.

You'll like it even more for what it doesn't do.



This product does what a lot of competitive products claim to do—keep you from slipping. Testing proves Marine Grip does this at least 40% more effectively than competitive products or wax.

But please note, it doesn't do everything. It doesn't rip up your hands and knees, your swimsuit or your foul weather gear. It doesn't hold onto dirt, change color or get slippery after exposure to UVs and sea. Plus, it doesn't take all day to remove it.

AT THE FRONT HARKEN®

WATCH VIDEO

22 mm Small Boat: CB Cars

Small Boat CB traveler cars fit dinghies, keelboats, beachcats, and offshore boats to 8 m (27').

About CB traveler cars: see feature pages at beginning of this section.

Loop cars matched with 29 or 40 mm Carbo T2 blocks attached with high-tech line provide the ultimate lightweight, low-profile system.

The 382 radial traveler car has a curved ball race to fit curved track—perfect for radial vangs on boats like the Star.

Blocks attach directly to the toggle for a low-profile, compact system.

Pivoting shackle and toggle cars have low pivot points to handle nonvertical loads.

Delrin is a registered trademark of E. I. du Pont de Nemours and Company or its affiliates.

Part No.	Description	Length in	Length mm	Width in	Width mm	Car body Height in	Car body Height mm	Weight oz	Weight g	Mainsheet block pin Ø in	Mainsheet block pin Ø mm	Control block pin Ø in	Control block pin Ø mm	Maximum working load lb	Maximum working load kg	Breaking load lb	Breaking load kg
382	High-load/radial/shackle‡	4 1/8	105	2 1/4	57	15/16	24	6.24	177					1250	567	2500	1134
2726*	Low-load/pivoting shackle**	2 7/8	73	2 1/4	57	15/16	24	4.64	132					500	227	2500	1134
2727*	Pivoting shackle	2 7/8	73	2 1/4	57	15/16	24	4.64	132					850	386	2500	1134
2728*	Low-load/fixed sheaves/eyestrap**	2 7/8	73	2 1/4	57	15/16	24	5.6	159					500	227	2500	1134
2729	Fixed sheaves/eyestrap	2 7/8	73	2 1/4	57	15/16	24	5.6	159					850	386	2500	1134
2730	Low-load/stand-up toggle**	2 7/8	73	2 1/4	57	15/16	24	5.12	145	3/16	5	5/32	4	500	227	2500	1134
2731	Stand-up toggle	2 7/8	73	2 1/4	57	15/16	24	5.12	145	3/16	5	5/32	4	850	386	2500	1134
2732	Low-load/loop**	2 7/8	73	2 1/4	57	15/16	24	4	113					500	227	2500	1134
2733	Loop	2 7/8	73	2 1/4	57	15/16	24	4	113					850	386	2500	1134
2734	Fixed sheaves/adjustable arms/365 Carbo-Cam	6 3/4	171	3 1/8	80	15/16	24	14.88	422					850	386	2500	1134
2734HL	High-load/fixed sheaves/adjustable arms/365 Carbo-Cam	6 3/4	171	3 1/8	80	15/16	24	23.41	664					1250	567	2500	1134
2735*	High-load/pivoting toggle	4 1/8	105	2 1/4	57	15/16	24	6.72	191	1/4	6	5/32	4	1250	567	2500	1134
2736*	High-load/fixed sheaves/eyestrap	4 1/8	105	2 1/4	57	15/16	24	7.04	200					1250	567	2500	1134
2753	Low-load/pivoting shackle/control tangs**	2 7/8	73	2 1/4	57	15/16	24	5.28	150			3/16	5	500	227	2500	1134
2754*	Pivoting shackle/control tangs	2 7/8	73	2 1/4	57	15/16	24	5.28	150			3/16	5	850	386	2500	1134
2756	Pivoting sheaves/471 Carbo-Cam	2 7/8	73	2 1/4	57	15/16	24	9.84	279					850	386	2500	1134
2757*	High-load/pivoting sheaves/365 Carbo-Cam/eyestrap	4 1/8	105	2 1/4	57	15/16	24	14.18	401					1250	567	2500	1134
2765	High-load/pivoting sheaves/eyestrap	4 1/8	105	2 1/4	57	15/16	24	9.6	272					1250	567	2500	1134
2766	High-load/pivoting sheaves/swivel/150 Cam-Matic	4 1/8	105	6 1/8	156	15/16	24	22.22	630					1250	567	2500	1134

*Available as a non-CB car on a car loader to run on a non-CB style track supplied before 2002. Add .NW to end of part number.

**Small Boat low-load cars with a 227 kg (500 lb) maximum working load use Delrin® balls. See page 275 for replacement balls.

‡For horizontal curved track only—600–800 mm (24"–40") radius. This car cannot be modified to run on old-style track made before 2003.

22 mm Small Boat: Genoa Lead Cars

CB adjustable genoa lead cars feature recirculating Torlon® ball bearings for easy adjustment under full sheet loads.

Stainless steel sheave carriers pivot 60 degrees to accommodate changing lead angles. Wide sheave holds two sheets during sail changes.

Cars feature car-mounted, sleeve-bearing control blocks for strength and durability. All CB genoa lead cars are compatible with Harken end controls. Kits are available for purchase upgrades up to 4:1.

CB Adjustable Cars

Sheave carriers feature high-performance sheaves with ball bearings to handle radial loads, while sideload balls handle thrust loads for easy trimming and fore-and-aft adjustment.

ESP CB Adjustable & Pinstop Cars

Sheave carriers feature ESP sleeve bearing sheaves.

Use pinstop cars in applications where lead positions change infrequently.

Pinstop and ball bearing genoa lead cars both run on ball bearing track, allowing system upgrades without changing track.

G2227B

G2247B

CB ADJUSTABLE

G222B

G224B

ESP CB ADJUSTABLE

2750

2750/2151/369

G226S

ESP PINSTOP

Flexible, lightweight, lashing attachment allows block to articulate freely on 2750 jib car.

GENOA LEADS Q&A

WHY DO I NEED ADJUSTABLE GENOA LEAD CARS?

If you are a cruiser, ball bearing genoa lead cars with multipart purchases allow you to quickly adjust loaded headsail leads from the cockpit. If you race, ball bearing lead cars let you quickly change your sheeting angle, adjusting the twist to optimize sail shape.

For sheet-loading formulas see page 279

End control selection guide

Purchase	Car	End Control
2:1	G2227B/G222B	2740
4:1	G2247B/G224B	2742

Part No.	Description	Sheave Ø in	Sheave Ø mm	Length in	Length mm	Width in	Width mm	Weight oz	Weight g	Maximum working load lb	Maximum working load kg	Breaking load lb	Breaking load kg	Track
CB Adjustable														
G2227B*	Small Boat/sheave	1 3/4	45	4 1/8	105	2 1/4	57	13.71	389	1250	567	2500	1134	22 mm
G2247B	Small Boat/2 sheaves	1 3/4	45	4 1/8	105	2 1/4	57	14.3	405	1250	567	2500	1134	22 mm
ESP CB Adjustable														
G222B	Small Boat/sheave	1 1/2	38	4 1/8	105	2 1/4	57	12.87	365	1250	567	2500	1134	22 mm
G224B	Small Boat/2 sheaves	1 1/2	38	4 1/8	105	2 1/4	57	13.33	378	1250	567	2500	1134	22 mm
ESP Pinstop														
2750	Small Boat jib lead/pinstop			3 7/16	88	1 5/16	33	4.6	130	1100	500	2200	1000	2751
2750/2151/369	Small Boat/pinstop/loop block/stand-up	2 1/4	57	3 3/8	84	1 5/16	33	6.9	195	792	359	2200	1000	2751
G226S	Small Boat/pinstop	1 1/2	38	3 3/4	95	1 3/8	35	9.59	272	1250	567	2500	1134	2751

*Available as a non-CB car on a car loader to run on a non-CB style track supplied before 2002. Add .NW to end of part number. See page 276 for replacement balls.

32 mm Big Boat: Genoa Lead Cars

CB adjustable genoa lead cars feature recirculating Torlon® ball bearings for easy adjustment under full sheet loads.

Stainless steel sheave carriers pivot 60 degrees to accommodate changing lead angles. Wide sheave holds two sheets during sail changes.

Cars feature car-mounted, sleeve-bearing control blocks for strength and durability. All CB genoa lead cars are compatible with Harken end controls. Kits are available for purchase upgrades up to 4:1.

CB Adjustable Cars

Sheave carriers feature high-performance sheaves with roller bearings to handle radial loads, while sideload balls handle thrust loads for easy trimming and fore-and-aft adjustment.

ESP CB Adjustable & Pinstop Cars

Sheave carriers feature ESP sleeve bearing sheaves.

Use pinstop cars in applications where lead positions change infrequently.

Pinstop and ball bearing genoa lead cars both run on ball bearing track, allowing system upgrades without changing track.

Torlon is a registered trademark of Solvay Advanced Polymers L.L.C.

CB ADJUSTABLE

ESP CB ADJUSTABLE

PINSTOP

CUSTOM

For sheet-loading formulas see page 279.

End control selection guide

Purchase	Car	End control
2:1	HC4928	E3230.HL
3:1	G323B/G3237B	E3250.HL/3174
4:1	G324B/G3247B	E3250.HL/3174

Part No.	Description	Sheave Ø in	Sheave Ø mm	Length in	Length mm	Width in	Width mm	Weight oz	Weight g	Maximum working load lb	Maximum working load kg	Breaking load lb	Breaking load kg	Track
CB Adjustable														
G321B.HL	Big Boat/puller	3	76	10 5/8	270	3 3/8	85	83.95	2380	7716	3500	15432	7000	R32
G3237B	Big Boat/sheave/deadend	3	76	9 1/16	231	3 3/8	85	63.27	1794	5000	2268	10000	4536	R32
G3247B*	Big Boat/2 sheave	3	76	9 1/16	231	3 3/8	85	65.12	1846	5000	2268	10000	4536	R32
ESP CB Adjustable														
G322B.HL	Big Boat/sheave	3	76	10 5/8	270	3 3/8	85	85.43	2422	7716	3500	15432	7000	R32
G323B	Big Boat/sheave/deadend	3	76	9 1/16	231	3 3/8	85	59.54	1688	5000	2268	10000	4536	R32
G324B	Big Boat/2 sheaves	3	76	9 1/16	231	3 3/8	85	62.14	1761	5000	2268	10000	4536	R32
ESP Pinstop														
G326S	Big Boat/pinstop	3	76	9 1/8	232	2 1/2	64	53.26	1510	5000	2268	10000	4536	R32
G326S.HL	Big Boat HL/pinstop	3	76	9 1/8	232	2 1/2	64	62	1758	6000	2722	12000	5443	R32
Custom														
C6795	Big Boat/pinstop‡	3	76	10	254	2 1/4	57	61.83	1753	7716	3500	15432	7000	R32
C9815	Big Boat genoa lead**‡	2 15/16	75	10	254	2 3/8	60	56.44	1600	13228	6000	26448	12000	R32
C10232	Big Boat/pinstop**‡	2 15/16	75	10	254	2 3/8	60	61	1738	13228	6000	26448	12000	R32

*Available as a non-CB car on a car loader to run on a non-CB style track supplied before 2004. Add .NW to end of part number. See page 276 for replacement balls.

**50 mm hole spacing required. ‡Contact Harken to request quote and lead time.

System A Battcars


Tofinou 12, 12 m (39.37'), Chantier Naval Latitude 46, naval architect: Joubert / Nivelt © Chantier Naval Latitude 46

Typical boat size:
Monohulls: length 11.3 - 15.2 m (37 - 50');
mainsail area under 56 m² (600 ft²)

Multihulls: length 9.1 - 12.2 m (30 - 40');
mainsail area under 46 m² (500 ft²)

About CB and slider Battcar systems:
see feature pages at beginning of this section.


3889


3811


3883


3882


3881


3830


3829


3831


3812

CB BALL BEARING CARS


3827


3803


3802


3828


C14840


1777

SLIDER CARS

Part No.	Description	Length in	Length mm	Width in	Width mm	Weight oz	Weight g	Max headboard thickness in	Max headboard thickness mm	Max batten Width in	Max batten Width mm	Max batten Ø in	Max batten Ø mm	Batten	Maximum working load lb	Maximum working load kg
CB Cars: Typical Boat Length: Monohulls 11.3 - 15.2 m (37 - 50'); Multihulls 9.1 - 12.2 m (30 - 40')																
3811*	Headboard car assembly	8 3/8	213	2 1/4	57	18	518	9/16	14						1600	725
3889	Headboard car assembly/quick-release	9 1/2	240	2 1/4	57	21.5	610	9/16	14						1600	725
3812*	Intermediate car	2 1/4	57	2 1/4	57	4	109								465	211
3829*	Battcar/10 mm stud**	2 7/8	73	2 1/4	57	6	157								600	272
3830*	Battcar/40 mm receptacle	2 7/8	73	2 1/4	57	9	253			1 5/8	41	5/8	16	Flat/Round	600	272
3881	Battcar/12 mm stud**	2 7/8	73	2 1/4	57	6.4	182								600	272
3831	Universal Battcar**	2 7/8	73	2 1/4	57	4.3	122								600	272
3882	Long batten car/12 mm stud**	4 1/8	105	2 1/4	57	8.2	232								875	397
3883	Reef car	4 1/8	105	2 1/4	57	6.1	174								875	397
Slider Cars: Typical Boat Length: Monohulls 11.3 - 15.2 m (37 - 50'); Multihulls 9.1 - 12.2 m (30 - 40')																
3827	Headboard car assembly	6	153	1 3/8	35	10	269	9/16	14						1600	725
1777	Low-load intermediate car‡	2	51	1 1/4	32	1.1	32								200	91
3828	Intermediate car	1 3/4	44	1 3/8	35	1.6	45								350	159
3802	Battcar/10 mm stud**	1 3/4	44	1 3/8	35	2.8	80								350	159
3803	Battcar/40 mm receptacle	1 3/4	44	1 3/8	35	6.38	181			1 5/8	41	5/8	16	Flat/Round	350	159
C14840	Intermediate car/quick-release pin	1 3/4	45	1 3/8	35	1.2	37								91	200

See page 277 for replacement balls. *Available as a non-CB car on a car loader to run on a non-CB style track supplied before 2003. Add .NW to end of part number.
‡ Max. sail area: Monohull 33 m² (350 ft²), Multihull 28 m² (300 ft²). **Batten receptacle not included.

40 mm Switch T-Track Battcar Systems

Patented Battcar switch systems cut sail stack height in half by automatically splitting cars onto two tracks.

Typical boat size:
Monohulls: over 43 m (140');
Multihulls: over 27 m (90')

About Switch T-Track Battcar systems: see feature pages at beginning of this section.

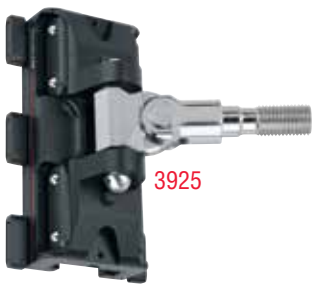
SW-RP90 CUSTOM, Courtesy of Southern Wind Shipyard

3929
3930

REPLACEMENT STUDS

3920

HEADBOARD PLATE



3925

3932
3931

3926

BATTEN CARS

3921

HEADBOARD CAR

3924

INTERMEDIATE CAR

3923

REEF CAR

3922

TACK CAR

Replacement Studs

Part No.	Description	Ø in	Ø mm	Fits
3929	18 mm toggle/stud	23/32	18	3926, 3931, 3932
3930	16 mm toggle/stud	5/8	16	3926, 3931, 3932

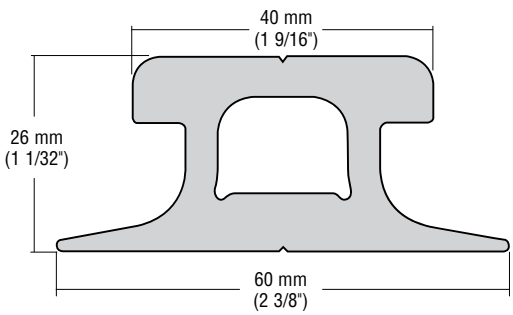
Cars

Part No.	Description	Length in	Length mm	Width in	Width mm	Weight oz	Weight g	Maximum sail area Monohull ft²	Monohull m²	Multihull ft²	Multihull m²	Maximum working load lb	Maximum working load kg
3921	Non-locking headboard car assembly	13 3/4	349	3 1/2	89	151	4280	3780 +	350 +	2400 +	275 +		
3924	Intermediate car	3 21/32	93	3 1/2	89	14	392	3780 +	350 +	2400 +	275 +	3549	1613
3932	Batten car/16 mm stud	5 1/32	128	3 1/2	89	34.5	979	3780 +	350 +	2400 +	275 +	5940	2700
3931	Batten car/18 mm stud	5 1/32	128	3 1/2	89	35.3	1000	3780 +	350 +	2400 +	275 +	5940	2700
3925	CRX roller batten car	6 1/16	153	3 1/2	89	37	1045	3780 +	350 +	2400 +	275 +	5940	2700
3926	Universal batten car	5 1/32	128	3 1/2	89	22	617	3780 +	350 +	2400 +	275 +	5940	2700
3923	Reef car	6 1/16	153	3 1/2	89	30	843	3780 +	350 +	2400 +	275 +	8998	4090
3922	Tack car	6 1/16	153	7 1/4	184	81	2303	3780 +	350 +	2400 +	275 +	13200	6000
Headboard Plate													
3920	Web-on headboard plate	13 11/16	348	5/8	16	70.2	1990						

Contact Harken to request lead time. If your boat or sail area is larger than the lengths and sail areas listed, please contact Harken.

Switch T-Track Battcar Systems: 40 mm

Claude, *Baltic 68, 19.5 m (64'), naval architect: Reichel Pugh Yacht Design © Baltic Yachts*



Track & Accessories

Part No.	Description	Length in	Length mm	Width in	Width mm	Weight oz	Weight g	Fasteners mm	Fastener spacing mm
3936	Switch*	36 1/2	927	6 1/4	159	63	1798	10	
3937	Endstop*	5 13/16	148	1 5/16	33	9	267	10	48
3938	Splice link	1	25	11/16	18	2	44		
3939	3 m Flange track/bond*	118 1/16	2999	2 3/8	60	203	5768	10	2925
3940	3 m Flange track/bolt-down*	118 1/16	2999	2 3/8	60	196	5565	10	75
3941	2 m T-Track/high-load*	78 11/16	1999	2 3/8	60	128	3638	10	50
3942	Gate track*	29 1/2	749	2 3/8	60	49	1390	10	75
3943	Top endstop*	1 1/2	38	2 3/8	60	5.64	160	10	33
3944	Double storage track*	19 11/16	500	5 15/32	139	91	2590	10	50

Contact Harken to request lead time. *Available in black or clear anodized.

Polar Bear, 8.36 m (27.43'), Chantier des Ileaux, naval architect: Paolo Bua © Valerie Lanata

REFLEX FURLING

In a quickly-evolving environment, the Harken Reflex furling system is pushing free-flying sail furling forward. The patented Reflex system provides sailors confidence that their free-flying asymmetrical spinnakers, gennakers, and code sails will furl completely with speed and control. Pull the furling line and the compact drive unit reacts reflexively to rotate the torsion cable, immediately transferring torque to the head. The head swivel reacts instantly, spinning from top to bottom where perfect furls must start. Reflex furling requires much less luff tension to transfer torque than earlier technology, making it the perfect solution for today's budding cable-less code sail technology which requires about half the luff loads previously required. And whether the Reflex torsion cable is specified, or in applications where the head swivel and a tack plate are sewn directly to the sail, Reflex furling's quick release geometry allows crews to use multiple sails with the same bottom unit.

Three sizes:

Unit 1 is rated at 1.5T MWL for boats to 11 m (36').
Unit 2 is rated at 2.5T MWL for boats up to 14 m (45').
Unit 3 is rated at 4.5T MWL for boats up to 17.4 m (58').

Unit 1: 7351.10
Unit 2: 7352.10
Unit 3: 7353.10

Complete even roll-up, tight wrap

- Low-friction ball bearing tack swivel allows the upper part of the sail to furl first.

Strong, lightweight

- Large diameter hardcoat-anodized 6061-T6 aluminum drive sheave.
- Torlon® ball bearings reduce friction, simplify maintenance.

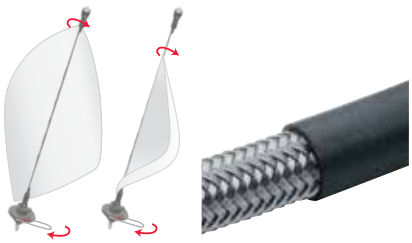
Holds line securely

- Flexible polycarbonate alloy cowling allows rope to be easily fed into drive sheave without tools; keeps rope captive.
- Offset holes in drive sheave grip rope securely when furling.
- Stripper and feeder work together to prevent furling line from jamming.

Torlon is a registered trademark of Solvay Advanced Polymers L.L.C.

Code Zero sails

- The quick-release T-fitting allows the bottom unit to handle both code zero and asymmetric sails.
- The fixed tack terminal option is used when the torsion cable is inside the luff. A 2:1 soft attach is recommended for increased purchase and luff tension.



Immediate, smooth, controlled furling

- Reflex cable is more torsionally resistant to corkscrewing than the current breed of textile cable.
- All Reflex furlers use braided stainless steel wire filaments over braided textile core to transmit torque to the head swivel for faster furling. Unit 3 furlers use a Dyneema® core, which twists less and handles increased halyard loads without stretching, making them well suited for code zero applications by eliminating need for additional luff cable.
- Smooth polymer cable jacket protects sails against abrasion.

Easily change furled spinnakers

- Quick-release modular T-fitting allows single drive unit to handle multiple sails.
- Each sail has its own torsion cable. Head and tack swivels are permanently fitted to each sail.
- Rolled sail easily disconnects with the pull of one spring-loaded pin; new furled sail slides and locks into T-slot.

Lightweight, low-profile head swivel

- Integral thimble/terminal for torsion cable saves weight; no fork, eye, or pin connections.
- Compact design reduces weight aloft, maximizes luff length.
- Padded cover prevents damage to spars.

Reflex for retrofit

- Both head and tack swivels are available with fork and pin interfaces to allow sails with existing torsion cables finished with eyes to be easily adapted to Reflex furling. Contact Harken for details.

Reflex for cable-less Code sails

- Reflex head swivels and tack plates with integral T-fittings can be sewn directly to today's cable-less sails. The compact solution allows for longer luff lengths. Plus the same drive unit can service the whole inventory. Contact Harken for details.

DO NOT use Harken equipment for human suspension unless product is specifically certified and labeled for such use.
Dyneema is a registered trademark of DSM IP Assets B.V. L.L.C.

Ordering Asymmetric Reflex Furling

Use for asymmetric free-flying spinnakers, cruising spinnakers, and gennakers that have a loose positive luff that is longer than the leech.

Boat Requirements

1. Spinnaker halyard
2. Attachment bail or adjustable tack fitting on a bowsprit or bow extension that allows the furler to clear the forestay and bow pulpit.

1. Determine System Size

Refer to “Typical Boat Length” and “Maximum Sail Area” on unit pages to select the correct size. Note: if you plan to use the system for code zero sails, the loads will be higher so the maximum boat length and sail area are smaller.

2. System Components

The Reflex furling system for asymmetric spinnakers includes all components necessary for one asymmetric spinnaker: one drive unit with snap shackle attachment, tack swivel, head swivel, torsion cable, set of cable clamps.

For each additional sail, order these components separately so you can easily switch furled sails using the quick-release T-slot: one tack swivel, head swivel, Reflex torsion cable, and set of cable clamps.

3. Determine Reflex Torsion Cable Length

Each system includes a length of torsion cable. To purchase the correct system including the right length of cable, determine your Full Hoist Dimension (FH). To do so, measure the distance between the sail attachment points at the top of the rig and the bow fitting or fully-extended bowsprit. Make sure the kit you select includes more cable than your FH measurement.

4. Attachment to Boat

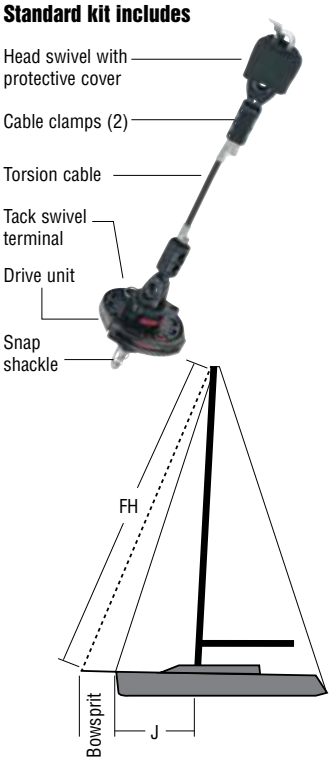
The standard Reflex furling system for asymmetric spinnakers includes a threaded snap shackle adapter. To change to D shackle or soft-attach 2:1 adjuster see chart at right.

5. Ordering Furling Line

The Reflex furling system requires continuous furling line. Talk to your rigger about furling line construction using a structural cover over a nonstructural core. Note: have the rigger capture the aft block in the loop before splicing. The furling line loop can load into stanchion leads and drive unit after it is spliced.

Refer to chart below for line size and length. Double the loop length and add enough length for the overlap in the end-for-end splice.

Standard kit includes

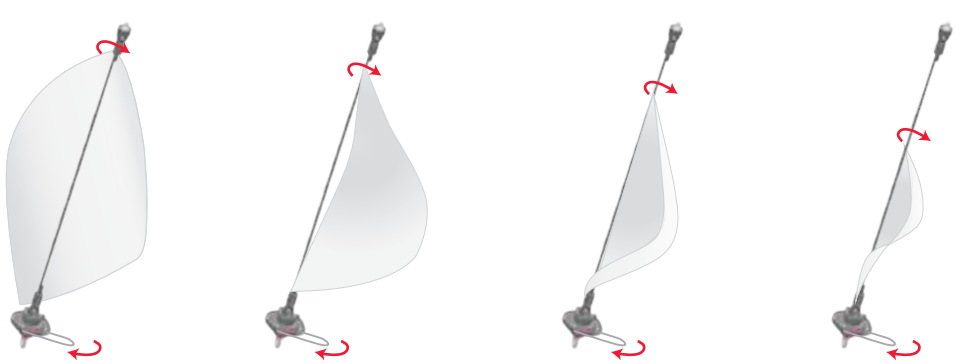


Alternative Attachments to Boat

Unit	 High-resistance D shackle	 Soft-attach 2:1 adapter
1	7351.21	7351.22
2	7352.21	7352.22
3	7353.21	7353.55

Furling Line

Unit	Line Ø in	Line Ø mm	Length of loop (cruisers)	Length of loop (racers)
1	1/4	6	Measure from furler to aft lead block in cockpit	Use J dimension plus length of bowsprit minus 60 cm (2')
2	5/16	8		
3	3/8	10		



Reflex Furling System Unit 1

For Asymmetric Spinnakers

Typical Boat Length 7.5 - 11 m (25' - 36')

Maximum Sail Area 112 m² (1200 ft²)

Part No.	Description
7351.10.16M	Furling system with 16.15 m (53') cable*
7351.10.18M	Furling system with 18.29 m (60') cable*
7351.10.20M	Furling system with 20.12 m (66') cable*
Optional Parts	
7351.21	D-shackle threaded adapter
7351.22	2:1/soft attachment threaded adapter
7351.26	Reflex tack swivel terminal for extra sails
7351.28	Head swivel for extra sails
7351.37	Forked head swivel for retrofit torsion cable
7351.39	Reflex forked tack swivel terminal for retrofit torsion cable
7371.SPOOL	Reflex torsion cable (spool) 8 mm x 305 m (5/16" x 1000')
7371	Reflex torsion cable (ordered by the foot) for extra sails
7357	Cable clamp (set of 2) for extra sails
7356	Lead block kit**
7355	Outboard fairlead

*Includes: drive unit, head swivel, Reflex tack swivel terminal, snap shackle threaded adapter, Reflex torsion cable, and clamps. **Fairlead kit includes 2 fairleads, fairlead with cleat, and aft block.

Reflex Furling System Unit 2

For Asymmetric Spinnakers

Typical Boat Length 10 - 14 m (34' - 45')

Maximum Sail Area 168 m² (1800 ft²)

Part No.	Description
7352.10.20M	Furling system with 20.12 m (66') cable*
7352.10.23M	Furling system with 22.87 m (75') cable*
7352.10.25M	Furling system with 25 m (82') cable*
Optional Parts	
7352.21	D-shackle threaded adapter
7352.22	2:1/soft attachment threaded adapter
7352.26	Reflex tack swivel terminal for extra sails
7352.28	Head swivel for extra sails
7352.37	Forked head swivel for retrofit torsion cable
7352.39	Reflex forked tack swivel terminal for retrofit torsion cable
7372.SPOOL	Reflex torsion cable (spool) 10 mm x 305 m (3/8" x 1000')
7372	Reflex torsion cable (ordered by the foot) for extra sails
7358	Cable clamp (set of 2) for extra sails
7356	Lead block kit**
7355	Outboard fairlead

*Includes: drive unit, head swivel, Reflex tack swivel terminal, snap shackle threaded adapter, Reflex torsion cable, and clamps. **Fairlead kit includes 2 fairleads, fairlead with cleat, and aft block.

7351.10
7352.10

Optional Parts

7351.28
7352.28

7351.37
7352.37

7351.26
7352.26

7351.39
7352.39

7351.21
7352.21

7351.22
7352.22

7357
7358

7371
7372

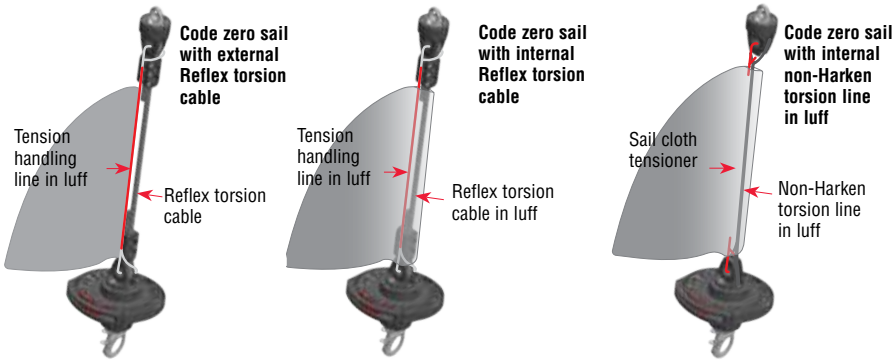
7371.SPOOL
7372.SPOOL

7355

7356

Ordering Code Zero Reflex Furling

The Reflex torsion cable is not designed to accept luff loads associated with earlier code sail technology. It does, however, transfer the necessary torque to the head swivel for complete furling twice as effectively as any system we have tested—at far lower loads. If high luff loads will be encountered, combine a tension handling line with the Reflex torsion cable.



To furl a code zero sail that has a non-Harken torsion cable sewn into the luff, use either the thimbles or the eyes to secure to the head swivel and fixed tack terminal.

Reflex Furling System Unit 1

For Code Zero Sails

Typical Boat Length 6.7 - 10 m (22' - 32')

Maximum Sail Area 60 m² (650 ft²)

Part No.	Description
7361.10	Code zero furling system*
Optional Parts	
7351.20	Snap shackle threaded adapter
7351.21	D-shackle threaded adapter
7351.27	Reflex fixed tack terminal for extra sails
7351.28	Head swivel for extra sails
7351.37	Forked head swivel for retrofit torsion cable
7351.38	Reflex forked tack terminal for retrofit torsion cable
7371.SPOOL**	Reflex torsion cable (spool) 8 mm x 305 m (5/16" x 1000')
7371**	Reflex torsion cable (ordered by the foot) for extra sails
7357**	Cable clamp (set of 2) for extra sails

*Includes: drive unit, head swivel, Reflex fixed tack terminal, 2:1 threaded adapter.
**Order Reflex torsion cable and clamp set for 7361.10 to improve furling.

Reflex Furling System Unit 2

For Code Zero Sails

Typical Boat Length 9 - 12 m (30' - 40')

Maximum Sail Area 84 m² (900 ft²)

Part No.	Description
7362.10	Code zero furling system*
Optional Parts	
7352.20	Snap shackle threaded adapter
7352.21	D-shackle threaded adapter
7352.27	Reflex fixed tack terminal for extra sails
7352.28	Head swivel for extra sails
7352.37	Forked head swivel for retrofit torsion cable
7352.38	Reflex forked tack terminal for retrofit torsion cable
7372.SPOOL**	Reflex torsion cable (spool) 10 mm x 305 m (3/8" x 1000')
7372**	Reflex torsion cable (ordered by the foot) for extra sails
7358**	Cable clamp (set of 2) for extra sails

*Includes: drive unit, head swivel, Reflex fixed tack terminal, 2:1 threaded adapter.
**Order Reflex torsion cable and clamp set for 7362.10 to improve furling.

7361.10
7362.10

Includes 2:1 threaded adapter for attachment to bowsprit.

Optional Parts

7351.28
7352.28

7351.37
7352.37

7351.27
7352.27

7351.38
7352.38

7351.20
7352.20

7358

7351.21
7352.21

7371
7372

7371.SPOOL
7372.SPOOL

Reflex Furling System Unit 3

For Asymmetric Spinnakers

Typical Monohull Length 13 - 17.7 m (44' - 58')
Typical Multihull Length 12 - 16.7 m (39' - 55')
Maximum Sail Area 223 m² (2400 ft²)

Part No.	Description
7353.10.22M	Furling system with 21.95 m (72') cable*
7353.10.26M	Furling system with 25.91 m (85') cable*
Optional Parts	
7353.21	D-shackle threaded adapter
7353.22	3:1/soft attachment threaded adapter
7353.26	Reflex tack swivel terminal for extra sails
7353.28	Head swivel for extra sails
7353.37	Forked head swivel for retrofit torsion cable
7353.39	Reflex forked tack swivel terminal for retrofit torsion cable
7373.SPOOL	Reflex torsion cable (spool) 13 mm x 305 m (33/64" x 1000')
7373	Reflex torsion cable (ordered by the foot) for extra sails
7367	Cable clamp (set of 2) for extra sails

*Includes: drive unit, head swivel, Reflex tack swivel terminal, snap shackle threaded adapter, Reflex torsion cable, and clamps.

Reflex Furling System Unit 3

For Code Zero Sails

Typical Monohull Length 12 - 16.5 m (39' - 54')
Typical Multihull Length 11 - 15 m (36' - 50')
Maximum Sail Area: Monohull 158 m² (1700 ft²); Multihull 139 m² (1500 ft²)

Part No.	Description
7363.10	Code zero furling system*
Optional Parts	
7353.20	Snap shackle threaded adapter
7353.21	D-shackle threaded adapter
7353.27	Reflex fixed tack terminal for extra sails
7353.28	Head swivel for extra sails
7353.37	Forked head swivel for retrofit torsion cable
7353.38	Reflex forked tack terminal for retrofit torsion cable
7373.SPOOL**	Reflex torsion cable (spool) 13 mm x 305 m (33/64" x 1000')
7373**	Reflex torsion cable (ordered by the foot) for extra sails
7367**	Cable clamp (set of 2) for extra sails

*Includes: drive unit, head swivel, Reflex fixed tack terminal, 3:1 threaded adapter.
**Order Reflex torsion cable and clamp set for 7363.10 to improve furling.

7353.10

7363.10

Includes 3:1 threaded adapter for attachment to bowsprit.

Optional Parts

7353.28

7353.37

7353.26

7353.27

7353.39

7353.38

7353.20

7353.21

7353.22

7367

7373

7373.SPOOL

Reflex Furling System Unit 1

For Cable-less Code Zero Sails

Typical Boat Length 6.7 - 10 m (22' - 32')

Maximum Sail Area 60 m² (650 ft²)

Part No.	Description
7351.10BASE	Drive unit
7351.22	2:1/soft attachment threaded adapter
7351.23	Reflex web-on tack terminal for cable-less code zero
7351.24	Web-on head swivel for cable-less code zero

Reflex Furling System Unit 2

For Cable-less Code Zero Sails

Typical Boat Length 9 - 12 m (30' - 40')

Maximum Sail Area 84 m² (900 ft²)

Part No.	Description
7352.10BASE	Drive unit
7352.22	2:1/soft attachment threaded adapter
7352.23	Reflex web-on tack terminal for cable-less code zero
7352.24	Web-on head swivel for cable-less code zero

Reflex Furling System Unit 3

For Cable-less Code Zero Sails

Typical Boat Length 12 - 16.5 m (39' - 54')

Typical Multihull Length 11 - 15 m (36' - 50')

Maximum Sail Area: Monohull 158 m² (1700 ft²); Multihull 139 m² (1500 ft²)

Part No.	Description
7353.10BASE	Drive unit
7353.22	3:1/soft attachment threaded adapter
7353.23	Reflex web-on tack terminal for cable-less code zero
7353.24	Web-on head swivel for cable-less code zero

Reflex cable-less code zero

7351.24
7352.24
7353.24

7351.23
7352.23
7353.23

7351.22
7352.22
7353.22

7351.10BASE
7352.10BASE
7353.10BASE

Jib Reefing and Furling Dimensions

MKIV & MKIV Ocean Using Toggle*

System	Unit	Part No.	A in	A mm	B in	B mm	C in	C mm	D in	D mm	E in	E mm
MKIV	0	7410.10	3 3/4	96	5 7/8	150	1 7/8	47	5 1/2	140	2 5/8	66
	1	7411.10	4 3/4	120	7	178	2	51	6 5/8	167	3 1/16	78
	2	7412.10	5 5/8	143	9 1/8	231	2 9/16	66	8 3/16	208	3 13/16	97
	3	7413.10	7 5/16	186	11 5/8	296	3 3/8	86	9 3/4	247	4 3/4	121
	4	7414.10	8 15/16	227	**		**		11 1/16	280	5 1/8	130
MKIV Ocean	0	7510.10	3 3/4	96	5 7/8	150	1 7/8	47	5 1/2	140	2 5/8	66
	1	7511.10	4 3/4	120	7	178	2	51	6 5/8	167	3 1/16	78
	2	7512.10	5 5/8	143	9 1/8	231	2 9/16	66	8 3/16	208	3 13/16	97
	3	7513.10	7 5/16	186	11 5/8	296	3 3/8	86	9 3/4	247	4 3/4	121

System	Unit	Part No.	F Max‡ in	F Max‡ mm	F Min in	F Min mm	G Max‡ in	G Max‡ mm	G Min in	G Min mm	H Max‡ in	H Max‡ mm	H Min in	H Min mm	I Max‡ in	I Max‡ mm	I Min in	I Min 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
	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
	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		
MKIV Ocean	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
	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

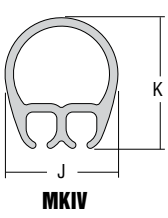
*Note: If a long link plate is used, add the following dimensions to F, G, H, and I (based on whether plate is used full-length or shortened to one of five hole positions).

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")

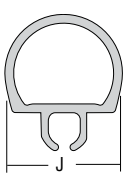
Foil Dimensions

System	Unit	Part No.	J in	J mm	K in	K mm	Foil length ft/in	Foil length m	Luff tape* in	Luff tape* mm
MKIV	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
	2	7412.30	1 1/4	32	1 3/8	36	7'	2.13	#6 (6/32)	5
	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
MKIV Ocean	0	7510.30	1 1/8	28			7'	2.13	#6 (6/32)	5
	1	7511.30	1 3/8	35			7'	2.13	#6 (6/32)	5
	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

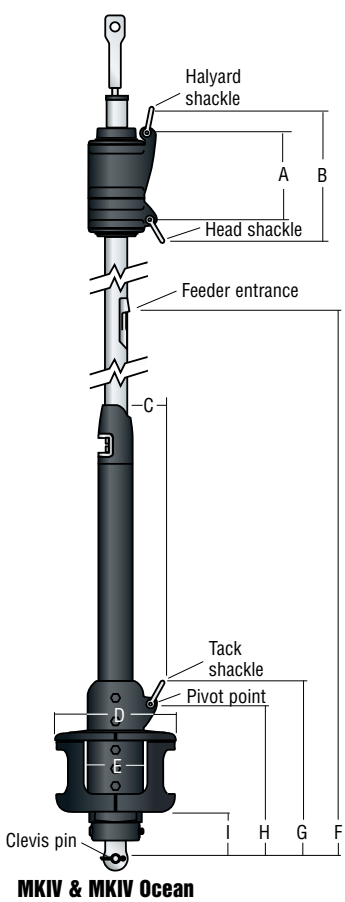
*Nominal dimensions only, actual luff tape dimensions are larger.



MKIV



MKIV Ocean



MKIV & MKIV Ocean

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

X5, Pheonix Catamarans © Pheonix Catamarans

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.

MKIV

MKIV Ocean

Foil joints

Low-friction efficiency for easy furling and reefing

- 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.

	MKIV	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

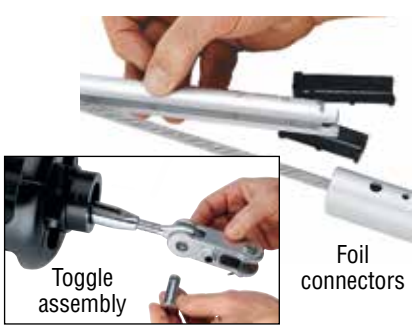
- Independent halyard and tack swivels furl sail center before head and tack for improved sail shape when reefed (MKIV).
- Both MKIV and MKIV Ocean have a lightweight aluminum halyard swivel saving weight aloft to reduce pitching and heeling.

Split drum removes easily for racing (MKIV)

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

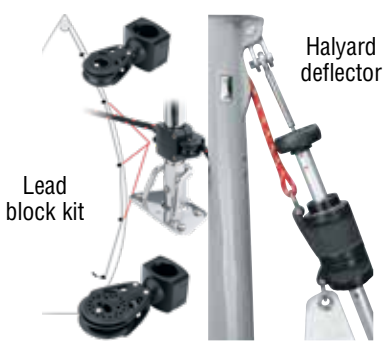
Double and single-groove foils offer smooth sail handling

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

MKIV Ocean Unit 0

Typical Boat Length 6.5 - 9.1 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 (38'7"); max 13.9 m (45'7")
Part No.	**Description**
7510.10	Furling system
Toggle Assembly 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
Optional Parts	
7510.30	Extra 2.13 m (7') luff foil extrusion
7510.31	Extra 153 mm (6") connector with bushings
7420 -4	-4 rod adaptor stud (thread Ø UNF 7/16")*
7421 -6	-6 rod adaptor stud (thread Ø UNF 7/16")*

*Use with conventional turnbuckle.

MKIV Ocean Unit 1

Typical Boat Length 8.3 - 11 m (28' - 36')

Wire Ø (1 x 19 SS)	Rod Ø	Clevis pin Ø
6, 7, 8 mm (1/4", 9/32", 5/16")	-8, -10, -12 (5.72, 6.35, 7.14 mm)	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
7311.20 1/2	Jaw/jaw toggle assembly with 12.7 mm (1/2") clevis pin
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	
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.

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

7510.30
7511.30

7510.31
7511.31

7420 -4
7421 -6
7422 -8
7423 -10
7424 -12

7410.20 5/16
7410.20 3/8
7410.20 7/16
7411.20 1/2

7311.20 1/2

7311.20 5/8

7510.10
7511.10

7311.21 1/2
7311.21 5/8

MKIV Ocean Unit 2

Typical Boat Length 10.6 - 14.2 m (35' - 46')

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 20.51 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 (thread Ø UNF 3/4" LH)
7312.21 5/8	Long link plate with toggle with 15.9 mm (5/8") clevis pin
7312.21 3/4	Long link plate with toggle with 19.1 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 with 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")*

*Use with conventional turnbuckle.

MKIV Ocean Unit 3

Typical Boat Length 13.7 - 24.4 m (45' - 80')

Wire Ø (1 x 19 SS)	Rod Ø	Clevis pin Ø
11, 12, 14, 16 mm (7/16", 1/2", 9/16", 5/8")	-22, -30, -40, -48 (9.53, 11.1, 12.7, 14.3 mm)	19.1, 22.2, 25.4, 28.6 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 short link plate with 19.1 mm (3/4") clevis pin
7413.20 7/8	Jaw/jaw with short link plate with 22.2 mm (7/8") clevis pin
7513.20 1	Jaw/Jaw with short link plate with 25.4 mm (1") clevis pin
7513.20 1 1/8	Jaw/Jaw with short link plate with 28.6 mm (1 1/8") clevis pin
7313.21 3/4	Long link plate with toggle with 19.1 mm (3/4") clevis pin
7313.21 7/8	Long link plate with toggle with 22.2 mm (7/8") clevis pin
7513.21 1	Long link plate with toggle assembly with 25.4 mm (1") clevis pin
7513.21 1 1/8	Long link plate with toggle assembly with 28.6 mm (1 1/8") clevis pin
Optional Parts	
7513.30	Extra 2.13 m (7') luff foil extrusion
7513.31	Extra 254 mm (10") 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")**
7428 -40	-40 rod adaptor stud (thread Ø UNF 1")**
7429 -48	-48 rod adaptor stud (thread Ø UNF 1 1/8")**

*Line not included. **Use with conventional turnbuckle.

© Mike Kern

7510.30
7511.30

7510.31
7511.31

7424 -12
7425 -17
7426 -22
7427 -30
7428 -40
7429 -48

7412.20 5/8 7312.20 5/8

7413.20 3/4
7413.20 7/8
7513.20 1

7312.20 3/4

7510.10
7511.10

7513.21 1
7513.21 1 1/8

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

CLR™ Mooring Winch

DAME
CATEGORY WINNER
2018

The Harken® CLR™ mooring winch is a flush-stowing, deck-mounted powered winch for both sail and power yachts featuring geometry and mechanical characteristics never before seen.

No other retracting, flush-mounted winch has offered the power-for-size ratio offered by the CLR. It stows completely belowdeck and occupies less horizontal and vertical space than required by the competition. The CLR is also lighter than the competition while delivering comparable mechanical advantage.

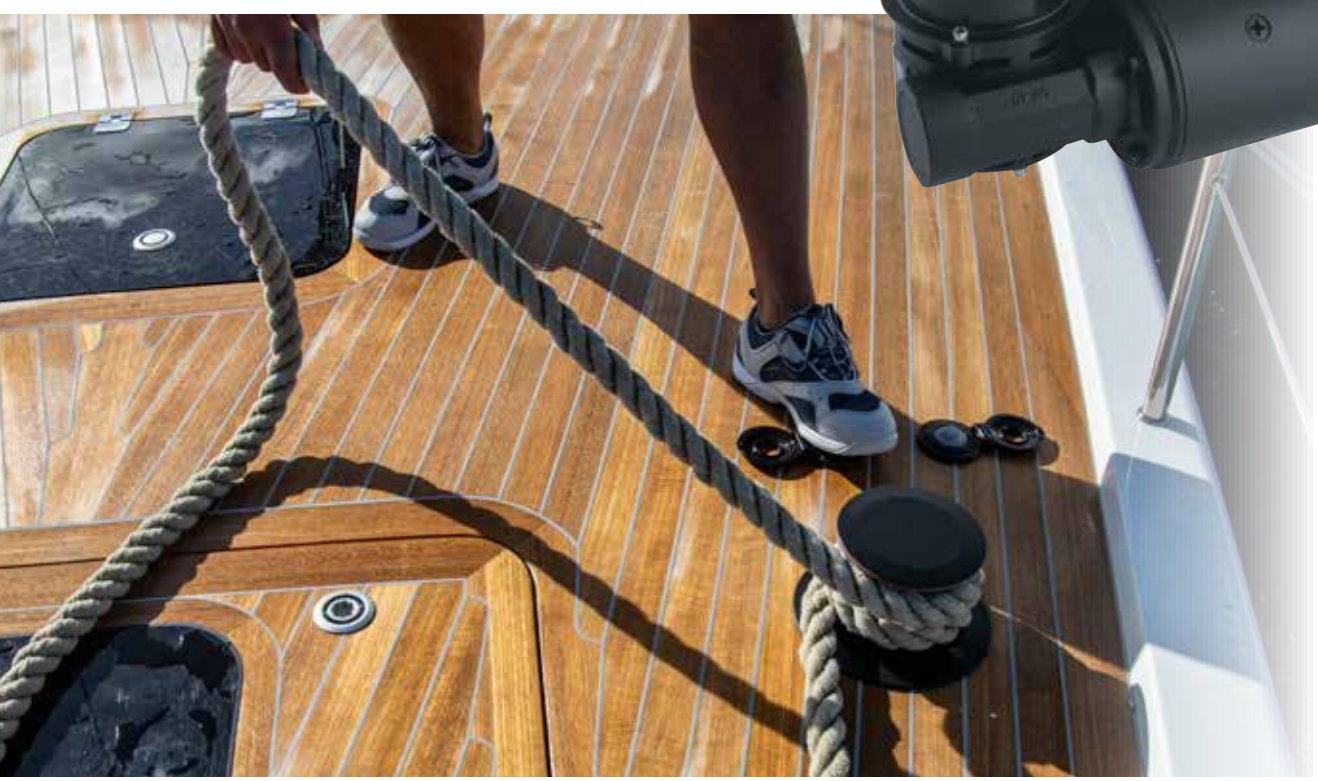
This compact form makes it possible for yachts to mount two CLR winches at the stern quarters and one in the bow. Together, three CLRs can reduce the need for engine and thruster power while helping crews moor stern-to-dock.

The CLR employs unprecedented winch drum geometry. Five aluminum columns rotate together around a center axis. Working together, they create a very light drum that provides substantially more line-holding power and low-speed torque than would be available using a traditional drum.

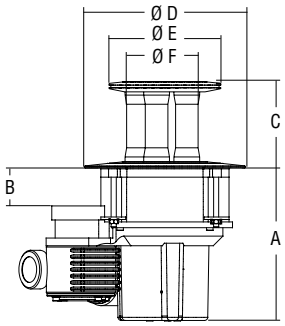
The CLR offers internal LED lights at the bottom of each column for use in low-light mooring situations. Deck plates are available in aluminum, chrome, or wood grain finishes.

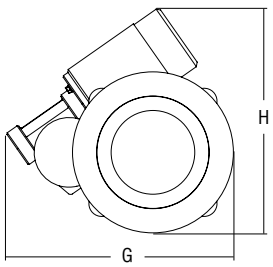
Harken produces six sizes of the CLR available in 12 or 24 V or 400 VAC electric or hydraulic power. With maximum holding load ranges from 600 to 12000 kg, CLR mooring winches can be used on boats from 13.7 to 91.4 m (45' - 300').

LED lights are integrated at the bottom of each column for low-light mooring situations.



CLR™ Mooring Winch





Winch size	Line Ø Min in	Min mm	Max in	Max mm	Max line speed* ft/min	Max line speed* m/min	Maximum holding load lb	Maximum holding load kg	Maximum pulling load lb	Maximum pulling load kg	Boat length** ft	Boat length** m	Deck plate material: Aluminum (A)	Chrome (C)	Stainless steel (SS)	Custom (TC)
Electric																
CLR600E	1/2	12	11/16	18	59	18	1320	600	660	300	45 - 60	13.7 - 18.3	✔	✔	—	✔
CLR1200E	1/2	12	11/16	18	49.2	15	2640	1200	1320	600	60 - 90	18.3 - 27.4	✔	✔	—	✔
CLR2500E24V	1/2	12	15/16	24	55.8	17	5500	2500	2750	1250	90 - 120	27.4 - 36.6	✔	—	✔	✔
CLR2500E400V	1/2	12	15/16	24	65.6	20	5500	2500	2750	1250	90 - 120	27.4 - 36.6	✔	—	✔	✔
CLR4000E24V	5/8	16	1 3/16	30	75.5	23	8800	4000	4400	2000	120 - 190	36.6 - 57.9	✔	—	✔	✔
CLR4000E400V	5/8	16	1 3/16	30	59	18	8800	4000	4400	2000	120 - 190	36.6 - 57.9	✔	—	✔	✔
CLR8000E	7/8	22	1 3/8	35	72.2	22	17600	8000	8800	4000	190 - 250	57.9 - 76.2	✔	—	✔	✔
CLR12000E	7/8	22	1 9/16	40	7.2	22	26400	12000	13200	6000	250 - 300	76.2 - 91.4	✔	—	✔	✔
Hydraulic																
CLR600H	1/2	12	11/16	18	59	18	1320	600	660	300	45 - 60	13.7 - 18.3	✔	✔	—	✔
CLR1200H	1/2	12	11/16	18	49.2	15	2640	1200	1320	600	60 - 90	18.3 - 27.4	✔	✔	—	✔
CLR2500H	1/2	12	15/16	24	55.8	17	5500	2500	2750	1250	90 - 120	27.4 - 36.6	✔	—	✔	✔
CLR4000H	5/8	16	1 3/16	30	72.2	22	8800	4000	4400	2000	120 - 190	36.6 - 57.9	✔	—	✔	✔
CLR8000H	7/8	22	1 3/8	35	72.2	22	17600	8000	8800	4000	190 - 250	57.9 - 76.2	✔	—	✔	✔
CLR12000H	7/8	22	1 9/16	40	7.2	22	26400	12000	13200	6000	250 - 300	76.2 - 91.4	✔	—	✔	✔

*Line speed is measured with no load. **Approximate data.

Dimensions

Winch size	A in	A mm	B Min in	B Min mm	B Max in	B Max mm	C in	C mm	D in	D mm	E in	E mm	F in	F mm	G in	G mm	H in	H mm
Electric																		
CLR600E	9 13/16	250	5/8	15	2 15/16	75	4 5/16	110	7 7/8	200	5 11/16	144	3 11/16	94	12 17/32	318	14	355
CLR1200E	9 5/16	237	5/8	15	2 5/32	55	5 5/16	135	9 27/32	250	6 27/32	174	4 11/16	119	13 5/8	346	13 25/32	350
CLR2500E24V	9 13/16	250	5/8	15	2 5/32	55	5 1/8	130	12 3/16	310	8 7/32	209	5 1/2	140	15 15/16	405	16 9/16	420
CLR2500E400V	12 1/16	307	5/8	15	2 5/32	55	5 1/8	130	12 3/16	310	8 7/32	209	5 1/2	140	22 19/32	574	20 9/32	515
CLR4000E24V	19 3/8	492	25/32	20	4 23/32	120	9 5/8	244	14 3/8	365	9 5/8	244	7 9/32	185	22 1/16	560	23 13/16	605
CLR4000E400V	25 1/32	636	25/32	20	4 23/32	120	9 5/8	244	14 3/8	365	9 5/8	244	7 9/32	185	19 1/32	483	30 3/8	771
CLR8000E	26 1/2	673	31/32	25	4 3/16	106	9 3/4	247	16 3/4	425	12 3/16	309	9 27/32	250	24 13/32	620	43 13/16	1113
CLR12000E	29	736	31/32	25	4 3/16	106	12 3/16	310	16 3/4	425	12 3/16	309	9 27/32	250	24 13/32	620	43 13/16	1113
Hydraulic																		
CLR600H	9 13/16	250	5/8	15	2 15/16	75	4 5/16	110	7 7/8	200	5 11/16	144	3 11/16	94	12 17/32	318	14	355
CLR1200H	9 5/16	237	5/8	15	2 5/32	55	5 5/16	135	9 27/32	250	6 27/32	174	4 11/16	119	13 5/8	346	13 25/32	350
CLR2500H	9 13/16	250	5/8	15	2 5/32	55	5 1/8	130	12 3/16	310	8 7/32	209	5 1/2	140	15 15/16	405	16 9/16	420
CLR4000H	19 3/8	492	25/32	20	4 23/32	120	9 5/8	244	14 3/8	365	9 5/8	244	7 9/32	185	22 1/16	560	19	482
CLR8000H	26 1/2	673	31/32	25	4 3/16	106	9 3/4	247	16 3/4	425	12 3/16	309	9 27/32	250	24 13/32	620	30 7/16	773
CLR12000H	26 1/2	673	31/32	25	4 3/16	106	12 3/16	310	16 3/4	425	12 3/16	309	9 27/32	250	24 13/32	620	30 7/16	773

Air Winches

Air winch 250 aboard a TP52

Harken Air winches feature interchangeable gearing sets that give crews the flexibility to create a perfect blend of speed and power for each day's weather and crew configuration. The winches, which feature a nearly empty middle to reduce weight, are designed to be used on SailGP foiling cats, IMOCA 60s, AC75s, TP52s and other large Grand Prix boats.

The Air winch's hollow middle is a first for sailing winches, as are the changeable gear kits. All Harken Air winch models feature interchangeable first-speed and second-speed options. The wide-diameter drums allow fewer wraps, faster trimming, and faster easing. Standard and counter-rotating versions are available. The winches have a low-profile design. Available in five models: 250, 300, 550, 600 and 900.

The 250 and 300 models are designed for boats up to 17 m (56'). The 550 and 600 models are designed for boats up to 24.4 m (80') and the 900 is made for boats over 24.4 m (80'). The 250 and 550 feature a high-performance ceramic coated white drum. The 300 and 600 versions of the winch feature an anodized aluminum drum, and the 900 drum is made of carbon fiber and anodized aluminum.

The 250 and 550 are designed for new builds and are mounted in a unique way: the base of the winch is molded into the deck by the boatbuilder. The 300, 600 and 900 have a standard winch base that can be mounted on either new builds or retrofits.

The 250 and 550 Air winches are exclusively pedestal or handle driven. The rest of the models may be driven by pedestal, handle, or powered by electric or hydraulic motor.

Air winch 250
Air winch 550

Air winch 300
Air winch 600

Product not stocked. Contact Harken to request quote and lead time.

Air winch 900

TP52 © Max Ranchi

Part No.	Gear ratio 1	2	3	Power ratio 1	2	3
Air winch 250	1.34:1	6.40:1	25.42.1	3.42:1	16.27:1	64.57:1
Air winch 300	1.34:1	6.40:1	25.42.1	3.42:1	16.27:1	64.57:1
Air winch 550	1.30:1	10.58:1	47.98:1	2.21:1	17.92:1	81.25:1
Air winch 600	1.30:1	10.58:1	47.98:1	2.21:1	17.92:1	81.25:1
Air winch 900	3.12:1	13.11:1	67.17:1	4.34:1	18.25:1	93.48:1

Part No.	Ø Drum in	Drum mm	Base in	Base mm	Height in	Height mm	Weight lb	Weight kg	Line Ø Min in	Min mm	Max in	Max mm	Line entry height in	Line entry height mm	Fastener circle in	Fastener circle mm	Fasteners mm
Air winch 250	7 7/8	200	10 21/32	271	5 3/4	146	16.1	7.3	3/16	5	3/8	10	1 15/16	50			
Air winch 300	7 7/8	200	10 21/32	271	6	153	17.0	7.7	3/16	5	3/8	10	2 1/4	57	8 9/32	210	5 x M8
Air winch 550	11 13/16	300	14 15/16	380	6 7/8	174	27.3	12.4	1/4	6	1/2	12	2 7/16	61			
Air winch 600	11 13/16	300	14 15/16	380	7 3/16	182	32.6	14.8	1/4	6	1/2	12	2 3/4	69	12 13/16	325	7 x M10
Air winch 900	14 3/8	365	18 1/8	460	10 1/8	257	70.6	32	3/8	10	7/8	22	3 5/8	92	16 7/16	417	10 x M12

NEW

Single-Acting Integral Backstay Adjusters

Harken's integral hydraulic backstay adjuster provides the power to optimize sail shape quickly for racers and adjust mast tension for smoother furling for cruisers. The cylinder features a built-in, single-acting pump.

Every unit includes a hardcoat-anodized aluminum cylinder and pump, valve, and stainless pump handle with two attachment options: 1) a roll pin, that when installed, locks the handle permanently, 2) the roll pin can be left off and the handle may be inserted when needed, but stored separately. Cylinders include a clevis pin on both ends. A fiberglass position marker attached to the top clevis pin slides down the cylinder as it's retracted for repeatable tension settings. Standard eye-jaw toggles fit all Harken cylinders and are recommended on all installations.

The pressure-release knob turns clockwise to close and pump, counterclockwise to release. When closing the pump, the knob cannot be over-tightened by hand, preventing damage to the valve. Release speed depends on how far open the knob is turned. Pressure relief is factory set to prevent crew from over-tensioning the backstay.

Harken integral backstay adjusters come in four sizes to fit boats with 5 - 10 mm (7/32 - 3/8") wire—approximately 9 - 18 m (30 - 60').

Harken recommends attaching a toggle to the cylinder's bottom clevis to accommodate stay movement. Standard eye-jaw toggles fit all Harken cylinders.

Supplied fiberglass position marker provides easy visual reference to duplicate desired tension settings.

For replacement position marker assembly, order part number H-85275.

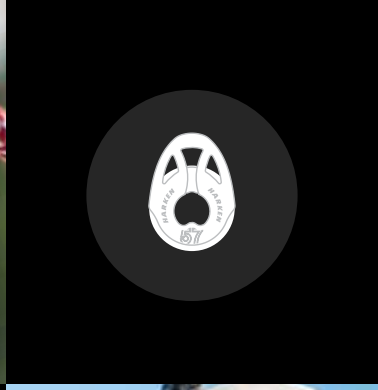
Wine & Spirits, *GS 48, 14.90 m (48.9') © Fabio Taccola / Grand Soleil Yachts*

Part No.	- Size	Max wire Ø in	Max wire Ø mm	Stroke in	Stroke mm	Pin center length (closed)* in	Pin center length (closed)* mm	Weight** lb	Weight** kg	Gap/pin Ø in	Gap/pin Ø mm	Pull force ‡ lb	Pull force ‡ kg
HCI006BCC	-6	7/32	5.5	14.17	360	30	762	8.36	3.79	7/16	11.1	3770	1710
HCI010BCC	-10	9/32	7	14.17	360	30	762	8.36	3.79	1/2	12.7	4710	2130
HCI012BCC	-12	5/16	8	14.17	360	30	762	9.72	4.41	5/8	15.9	6710	3040
HCI017BCC	-17	3/8	9.5	14.17	360	30	762	9.72	4.41	5/8	15.9	8390	3800

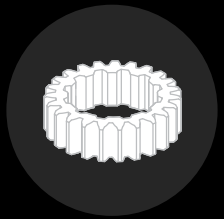
*For pin center length open (PCLO) add stroke length to pin center length closed. **Rod ends (forks) included in weights.

‡ Relief valves are preset to limit max tension (pull force) to recommend rigging loads and cylinder design limits. Each cylinder provides a specific max pull force.

- SMALL BOAT BLOCKS
- BIG BOAT BLOCKS
- COMPLEMENTARY HARDWARE
- TRAVELERS & GENOA LEADS
- MAINSAIL HANDLING SYSTEMS
- HEADSAIL HANDLING SYSTEMS
- WINCHES
- HYDRAULICS



AT THE FRONT



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