

HARKEN®

INSTRUCTIONS

29 mm Carbo AirBlock® All blocks except 351 Ti-Lite

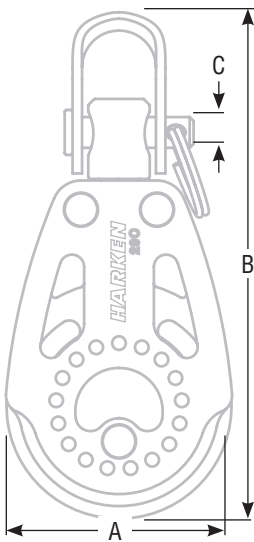
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Strictly follow all instructions to avoid an accident, damage to your vessel, personal injury or death. See www.harken.com for additional safety information.

IMPORTANT: See Inspection and Maintenance at end of manual.

Features



Glass-filled nylon sideplates: load-carrying curved bearing races.

Single fixed: Integral becket allows 2:1 or 3:1 purchase.

Doubles/triples: U-Locks holds the swivel in front/side position, or lets block spin freely.

Triple w/cam: Compact cam arm supports high-load purchases of 5:1 or 6:1.

Cheek: Line-shedding, small mounting footprint and drain holes.

Common uses: Outhauls, Cunninghams, Vangs, Traveler controls, Barberhaulers, Flag halyards

Max Line Size: Blocks w/o Cams 5/16" (8 mm); Blocks w/Cams 1/4" (6 mm)

Do not apply a load greater than the Maximum working load (MWL) of the Carbo AirBlock listed below.

Part No.	Description	A		B		C		Maximum working load		Breaking load		Harken Shackle Part No.
		in	mm	in	mm	in	mm	lb	kg	lb	kg	
340	Single/swivel	1 ¹ / ₈	29	2 ⁵ / ₈	66	5 ¹ / ₂	4	330	150	1000	454	246
341	Single/swivel/becket	1 ¹ / ₈	29	3 ¹ / ₁₆	78	5 ¹ / ₂	4	330	150	1000	454	246
342	Double/swivel	1 ¹ / ₈	29	2 ¹ / ₈	73	3 ³ / ₁₆	5	660	299	1625	737	072
343	Double/swivel/becket	1 ¹ / ₈	29	3 ³ / ₈	85	3 ³ / ₁₆	5	660	299	1625	737	072
344	Triple/swivel	1 ¹ / ₈	29	2 ¹ / ₈	73	3 ³ / ₁₆	5	990	449	2000	907	072
345	Triple/swivel/becket	1 ¹ / ₈	29	3 ³ / ₈	85	3 ³ / ₁₆	5	990	449	2000	907	072
346	Triple/423 Carbo-Cam®**	1 ¹ / ₈	29	2 ¹ / ₈	73	3 ³ / ₁₆	5	750	340	1500	680	072
347	Triple/423 Carbo-Cam®/becket**	1 ¹ / ₈	29	3 ³ / ₈	85	3 ³ / ₁₆	5	900	408	1800	816	072
348	Single/fixe*	1 ¹ / ₈	29	1 ¹⁵ / ₁₆	49	—	—	330	150	1000	454	—
349	Stand-up/fixe*	1 ¹ / ₈	29	2 ¹ / ₁₆	56	—	—	330	150	1000	454	—
350	Cheek	1 ¹ / ₈	29	2 ¹ / ₈	53	—	—	330	150	1000	454	—
351	Ti-Lite*	Important: Consult instruction sheet at: http://www.harken.com/pdf/4927.pdf										
352	90° Fixed head*	1 ¹ / ₈	29	2 ¹ / ₁₆	52	—	—	330	150	1000	454	—
353	Traveler	1 ¹ / ₈	29	3 ³ / ₈	92	—	—	330	150	1000	454	—
371	Clew block assembly	1 ¹ / ₈	29	4 ¹ / ₈	124	—	—	330	150	1000	454	—
381	Double/fixe	1 ¹ / ₈	29	2 ¹ / ₈	54	—	—	660	299	1625	737	—

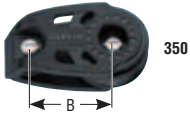
*Can be used as becket block

**Maximum working loads and breaking loads for blocks based on cam strengths

350 Cheek Block



Using block as template, mark holes using a centerpunch. Remove block and drill holes using a $1\frac{1}{64}$ " (4.2 mm) drill. Bevel top of deck holes using a small knife to allow sealant to mass. Through-bolt block using recommended stainless steel fasteners, washers and locknuts.



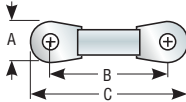
Part No.	Fasteners	A		B		C	
		in	mm	in	mm	in	mm
350	M4 or #8 PH/RH*	—	—	$1\frac{3}{16}$	30	—	—

*Fastener length: Add deck thickness and overhang for nut and washer.

349 Stand-Up



Using eyestrap as template, mark holes using a centerpunch. Remove block and drill holes using a $1\frac{1}{64}$ " (4.2 mm) drill. Bevel top of holes using a small knife to allow sealant to mass. Through-bolt using recommended stainless steel fasteners, washers and locknuts.

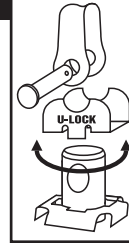


Part No.	Fasteners	A		B		C	
		in	mm	in	mm	in	mm
349	M5 or #10 PH/RH	$\frac{7}{16}$	11	$1\frac{1}{4}$	32	$1\frac{11}{16}$	43

*Fastener length: Add deck thickness and overhang for nut and washer.

3-Way U-Lock—342 / 343 / 344 / 345 / 346 / 347 / 381

The 3-Way U-Lock allows a change of headpost direction from front to side or allows the block to swivel. To change headpost direction, remove shackle, turn post, install shackle. Remove U-Lock to allow block to swivel.

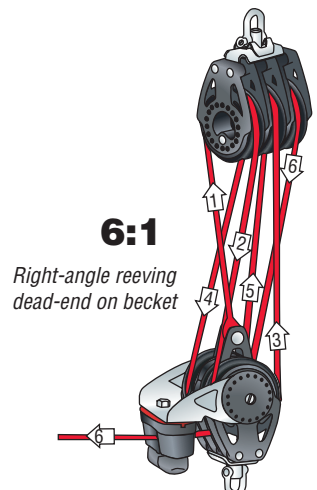
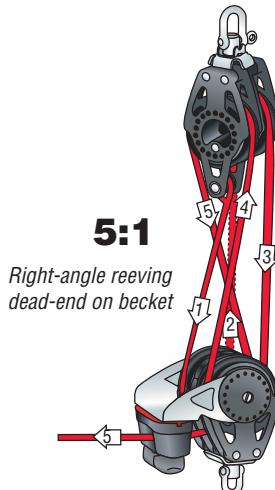
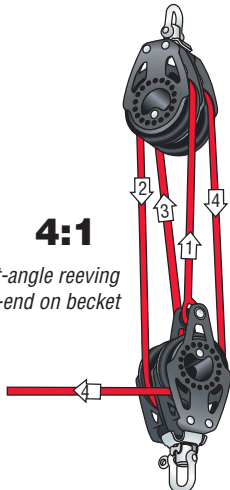


Integral Becket—348 / 352

Deadend line at mouth to construct a 2:1 or 3:1 system.

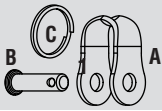


Reeving Multi-Purchase Systems



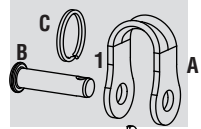
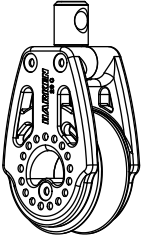
For larger, printable diagrams, please see: www.harken.com.

Parts — 29 mm Carbo



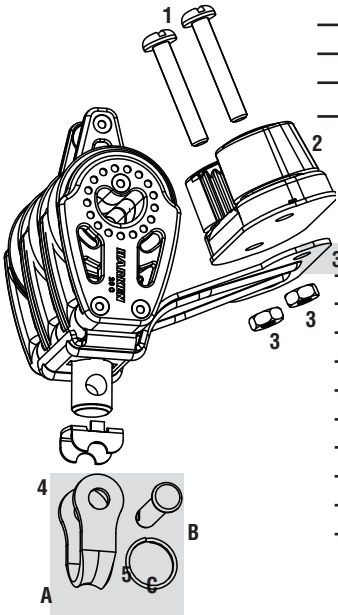
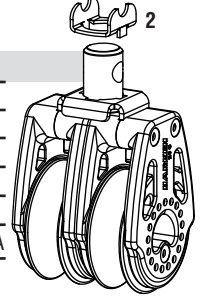
340, 341 Single

No.	Description	Qty	Part No.
1	Shackle Assembly Micro $5/32"$	246	
	A Shackle Strap	1	HSB104
	B Shackle Clevis Pin $5/32$ X .488	1	HSB105
	C Split Ring	1	HSB24



342,343,344,345,Doubles and Triples

No.	Description	Qty	Part No.
1	Shackle Assembly $3/16"$	1	072
	A Shackle Strap $3/16"$	1	HSB18
	B Shackle Clevis Pin $3/16"$	1	HSB21
	C Split Ring	1	HSB24
2	U-Lock-29mm Carbo Dbl/Trpl	1	H-27808A

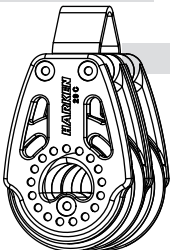
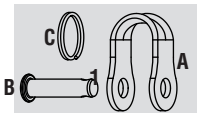
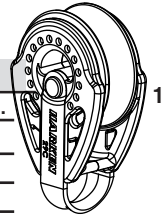


346/347 Triple

No.	Description	Qty	Part No.
1	Panhead Screws M4X.7X25mm	2	HFS134
2	Cam Cleat-Micro Carbo II	1	471
3	Nut M4	2	HFS890
4	U-Lock	1	H-27808A
5	Shackle Assembly $3/16"$	1	072
	A Shackle Strap $3/16"$	1	HSB18
	B Shackle Clevis Pin $3/16"$	1	HSB21
	C Split Ring	1	HSB24

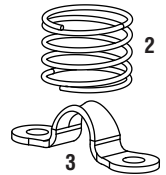
349 Standup Fixed

No.	Description	Qty	Part No.
1	Single/fixed	1	348
2	Spring	1	097
3	Eyestrapp	1	073



381 Double

No.	Description	Qty	Part No.
1	Shackle Assembly $3/16"$	1	072
	A Shackle Strap $3/16"$	1	HSB18
	B Shackle Clevis Pin $3/16"$	1	HSB21
	C Split Ring-SB (MS-002)	1	HSB24



Inspect Block and Shackle Before You Sail



WARNING! Failure to inspect and replace damaged metal parts and/or worn or frayed line can cause block or system to break suddenly causing an accident, damage to your vessel, personal injury or death. See www.harken.com for additional safety information.

Frequently inspect shackles and shackle posts for signs of corrosion, cracks, or elongation. When replacing shackles, use the correct Harken parts to maintain the proper strength. Replace line as necessary, taking into consideration the maximum size recommendation.

Maintenance

Harken® equipment is designed for minimal maintenance. However, some upkeep is required to give the best service and comply with the Harken® limited warranty.

Keep your equipment clean and free-running by frequently flushing with fresh water. Periodically clean with mild detergent and water solution. Spin sheaves to distribute soap solution evenly. Flush with fresh water.

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

Warranty

For additional safety, maintenance and warranty information see www.harken.com or the Harken® catalog.