

# HARKEN®

USA – Tel: (+1) 262-691-3320 • Web: [www.harken.com](http://www.harken.com) • Email: [harken@harken.com](mailto:harken@harken.com)  
 Italy – Tel: (+39) 031.3523511 • Web: [www.harken.it](http://www.harken.it) • Email: [techservice@harken.it](mailto:techservice@harken.it)

## ONLINE INSTRUCTIONS

### 22 mm Midrange Endstops and End Controls (Sold as a Pair)

E2200, E2230, E2250  
 Fits 374, 2720, 2721, 2725, 2751 CB Track



**WARNING!** Strictly follow all instructions to avoid an accident, damage to your vessel, personal injury, or death. See [www.harken.com/manuals](http://www.harken.com/manuals) for additional safety information.

**IMPORTANT!** See Inspection and Maintenance at end of manual.

### Features

**Modular design:** easy to change configuration.

**Removable deadend bail:** easy to load splice.

**Ball bearing sheaves:** low friction traveler control.

### Fasteners — Not Included

#### Fasteners (One Set for Each Control):

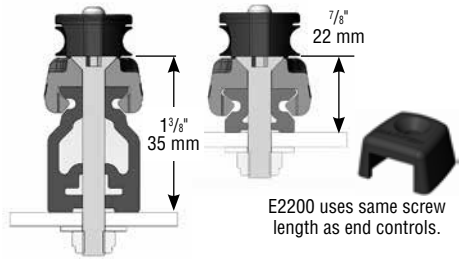
1 (one) #10 (5 mm) flathead A4 (316) or A2 (18-8) stainless steel mounting screw.

End control/track height is shown at right. When purchasing fasteners, add deck thickness and enough threads to extend below washer and nut.

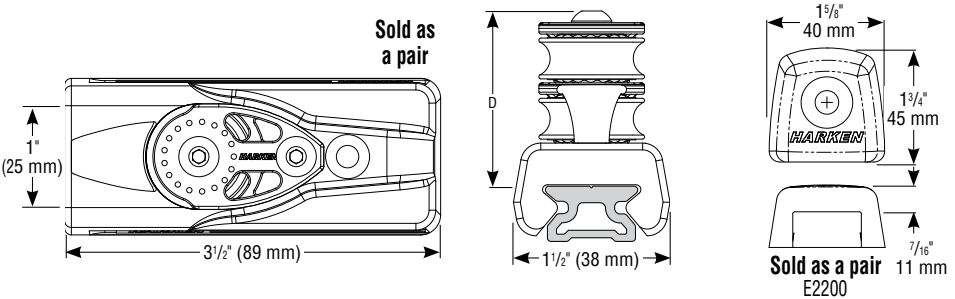
1 (one) washer.

1 (one) locknut for each end control.

**Drill Bit:** 7/32" (5.5 mm)



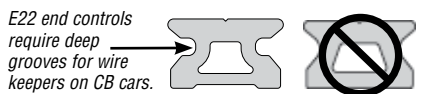
### Dimensions



Part No.	Description	(D) Height above track		Max line Ø		Maximum working load		Breaking load		Purchase
		in	mm	in	mm	lb	kg	lb	kg	
E2200	Endstop (pair)	7/16	11	—	—	—	—	—	—	—
E2230	Single sheave/deadend (pair)	1	25	5/16	8	600	272	1200	544	3:1
E2250	Double sheave/deadend (pair)	1 3/8	41	5/16	8	600	272	1200	544	3:1/4:1

### Mounting to Track

**Note: E22 end controls do not fit older non-CB track.** The E22 end controls' interior ridges that extend into the waist of the track are too deep to fit non-CB track. E22 end controls require deep grooves for wire keepers on CB cars.

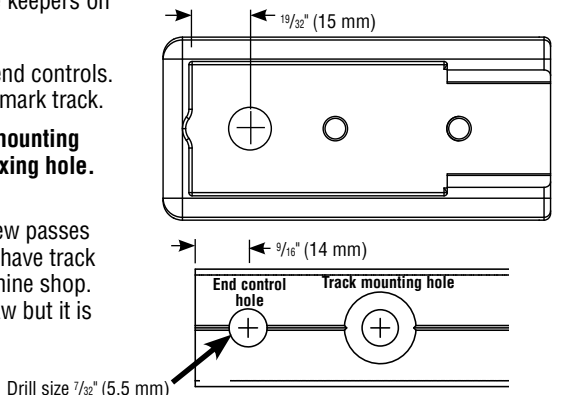


Plan hole in track for securing endstop or end controls. Measure 9/16" (14 mm) from track end and mark track.

**IMPORTANT!** If cutting track, make sure mounting hole does not interfere with end control fixing hole. Cut both ends to shift hole positions.

It may help to make cut so end control screw passes through a track fastening hole. It is best to have track cut with an electric cross cut saw at a machine shop. Low beam track may be cut using a hacksaw but it is difficult to get a straight, even cut.

Start hole using a center punch and drill completely through track.



## Mounting End Controls and Endstops

Make sure deck is reinforced to handle traveler loads. Carefully drill deck holes. Slightly bevel the top of the hole to allow sealant to form a small ring at deck level. Use marine sealant, making sure sealant fills hole and beveled area. Use a #10 (5 mm) flathead screw. Choose fasteners that are made from A4 (316) or A2 (18-8) stainless steel.

Run screw through end control and track then secure under the deck using a large washer or backing plate and washer and locknut.

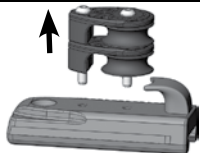
Use large washers or backing plates and lock washers or locknuts. It is installer's responsibility to choose correct screws, nuts, washers, and threaded plates, taking account materials and loads they will have to bear. Harken assumes no responsibility for incorrect installation of end controls or for an incorrect choice of mounting fasteners.



**WARNING!** Use correct number and type of fasteners in A4 (316) or A2 (18-8) stainless steel. Fasteners made of other materials may not have sufficient strength or may corrode which can result in end controls pulling off track suddenly and unexpectedly during high loads.

## Attaching Splice to Deadend on Controls

### CORRECT



### INCORRECT



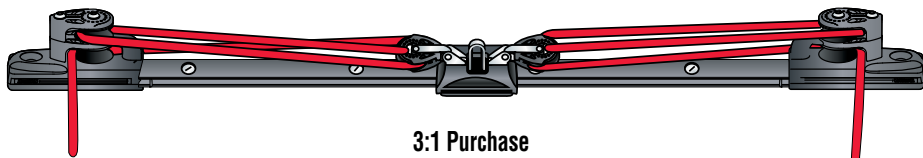
Use hex wrench to remove two screws holding sheave assembly. **Do not remove deadend horn.** Capture splice on horn and assemble sheave using threadlocking solution such as blue Loctite® adhesive on screws. When using smaller control line pass eye inside horn and run tail through to make a hitch without removing sheave assembly.

Loctite is a registered trademark of Henkel AG & Company KGaA.

## Reeving Cars and End Control Blocks



2:1 Purchase



3:1 Purchase



4:1 Purchase

## Inspect

Frequently inspect shackles and control block fittings for signs of fatigue. Replace as necessary. Make sure every installation includes Harken track endstops. Arrange control tackle so cars do not hit endstops under load.



**WARNING!** Failure to inspect tracks and stops can result in track pulling off deck suddenly and unexpectedly during high load.

## Maintenance

**Traveler cars:** Clean by frequently flushing with fresh water. Periodically clean car by squirting a detergent/water solution into center openings. Roll car back and forth to distribute evenly. Flush bearings with fresh water.

Do not use spray lubricants because ball bearings can skid, not roll. Apply one (1) to two (2) drops of McLube® OneDrop™ ball bearing conditioner to ball contact surfaces of track. Roll car back and forth through OneDrop conditioner several times to distribute onto bearings. Wipe remaining OneDrop off track. OneDrop conditioner is preferred, but you can also use one (1) to two (2) drops of a light machine oil. Too much oil attracts dirt.

**Track:** Clean with detergent and 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/manuals](http://www.harken.com/manuals) or the Harken catalog.