



Laser

EXTRA



DIMENSION

POWER PACK SYSTEM  
1515

GET THE EDGE WHEN YOU NEED IT

### Vectran V12

- A liquid crystal polymer.
- Used extensively throughout.
- One of the newest top spec ropes available.
- 12 strands are formed to produce a solid plaited rope with a squarer profile and because they are balanced to distribute the loads equally they resist kinking and work well around turning blocks.
- Has a unique pre-stretch system which heat sets the rope to give additional strength and abrasion resistance.
- Ultra low stretch.
- Very high strength.
- Excellent load to load fatigue resistance.
- Low creep.
- Lighter than wire.
- Zero weight gain when wet.
- UV resistant.
- Has clear PU coating.

### Vectran “knobbly” control lines

- Vectran core to give the same performance as above.
- Knobbly polyester outer gives increased grip in the cleats and is hardwearing.
- Knobbles assist in turning around the micro blocks.
- Knobbles give good grip on handling.
- Low water absorption.

### Excel Race Dyneema

- Preferred by Paul Goodison on the kicker control line. Has a plastic handle, so grip on handling not an issue.
- Better around lots of tight radius such as final blocks in the Vang system.

### 7mm Mega Bungy

- Better strength.
- More even stretch characteristics.
- Can support the crew weight on the toestraps for downwind sailing, avoiding continuous adjustment of the adjustable toestraps.

### Liros Majic Light

- Extremely light.
- Zero water absorption.
- Anti twist.
- Dyneema core for low stretch.
- Has a heat treatment system to stop creep in the core.
- Feels good.



## List of Parts

(Due to the continuous improvements, specifications, dimensions & colours may vary to those shown)

- 1 Cleat base with Harken metal micro cleats and extreme fairlead system
- 2 Block plate and two 16mm Harken air blocks
- 3 Vectran/polyester Cunningham control line (blue/yellow fleck)
- 4 Vectran/polyester outhaul control line (red/yellow fleck)
- 5 Dyneema mast retention line (yellow)
- 6 Cunningham part 1: 6mm Vectran 1.2m purple fleck
- 7 Outhaul part 1: 4mm Vectran 1.5m purple fleck
- 8 Outhaul Mega bungy: 1m x 7mm shock cord
- 9 Outhaul clew hook (optional)
- 10 2 x 4mm Vectran block ties for outhaul and Cunningham turning blocks
- 11 2 x 3mm Vectran block ties for clew of sail and turning block on boom
- 12 Clew strap
- 13 4 x NO8 Pozi pan head screws
- 14 4 x 16mm Harken air blocks
- 15 2 x 16mm Harken air blocks with becket



## Installation instructions



**1** Apply silicone/marine sealant to the screw holes in the deck.



**2** Fit the **block plate** and the **cleat base plate** (parts 1 and 2)



**3** Attach the **Harken Air blocks**



**4** Tie on the **16mm air block** to the boom cleat using the **3mm Vectran** (parts 11 & 14).



**5** Take the **4mm Vectran x 1.5m** (purple fleck, part 7)  
Tie an overhand stop knot – single hitch with a figure of eight stop knot, to the outhaul fairlead on the boom.

**6** Tie the **16mm air block** to the clew of the sail using the short piece of **3mm Vectran** (parts 11&14)



**7** Take the **mega bungy** (part 8) and feed it through the loop in the clew strap and tie a simple stop knot.



**8** Put the sail on the mast and put the mast into the boat. Using the short piece of **4mm Vectran x 0.55m**, tie a bowline around the mast above the gooseneck and tie a block onto the tail (the distance from the centre of the gooseneck bolt to the block must not exceed 100mm (By-law 1 rules part 2, 3 (f) v)



**9** Feed the red Vectran/polyester **knobbly control line** (part 4) through the port deck turning block.



**10** Continue to feed the control line through the block tied to the mast at the gooseneck.





**11** Put the **red control line** into the port deck cleat.

**12** Put the boom onto the gooseneck; ensure that the boom does not fall off at this stage by holding it in position.



**13** Take the piece of **4mm Vectran** that you previously tied to the boom end fairlead and put it through the block tied to the clew of the sail feeding it from the starboard side.



**14** Bring the outhaul line back to the boom end feeding it through from the port side.



**15** Tie the air block and becket to the end of the Vectran.

**16** Feed the outhaul control line around the air block.



**17** Continue to feed the line to the block on the boom.



**18** Tie off the control line to the becket.

**19** PULL on the outhaul and cleat off on the deck cleat.



**20** With the outhaul pulled on tight fit the clew strap to the sail and boom.

**21** The clew strap webbing is fed through the sail and then through the ring.



**22** The strap is pulled so that the clew of the sail is tight to the boom. The Velcro is secured down.





**23** Put the excess through the clew eye of the sail.



**24** Secure with the flap.



**25** Tie off the bungy around the cleat with a bowline.



**26** The clew hook can be used as an alternative method of securing the clew of the sail. This may need pliers to open the eye slightly to fit the **micro block** (Part 9).



## Cunningham

**1** Tie the **block and becket** to the **6mm Vectran x 1.2m** (part 6) length and feed it through the Cunningham eye of the sail from the starboard side.



**2** Tie a bowline around the kicker tang with Vang in place.



**3** Tie the **air block** to the mast below the kicker tang with the piece of **4mm Vectran** (part 10).





**4** Tie the **blue Vectran/polyester control line** (part 3) to the becket on the micro block.

**5** Feed the line down to the single block tied to the mast previously.

**6** Feed the line back up to the block and becket and finally down to the turning block at the base of the mast and through the deck cleat.



**7** Finally tie the **mast retention line** (part 5) to the tang and the block plate so that the mast can rotate 180 degrees and the bowline acts as a fairlead for the centreboard elastic below the Vang.



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