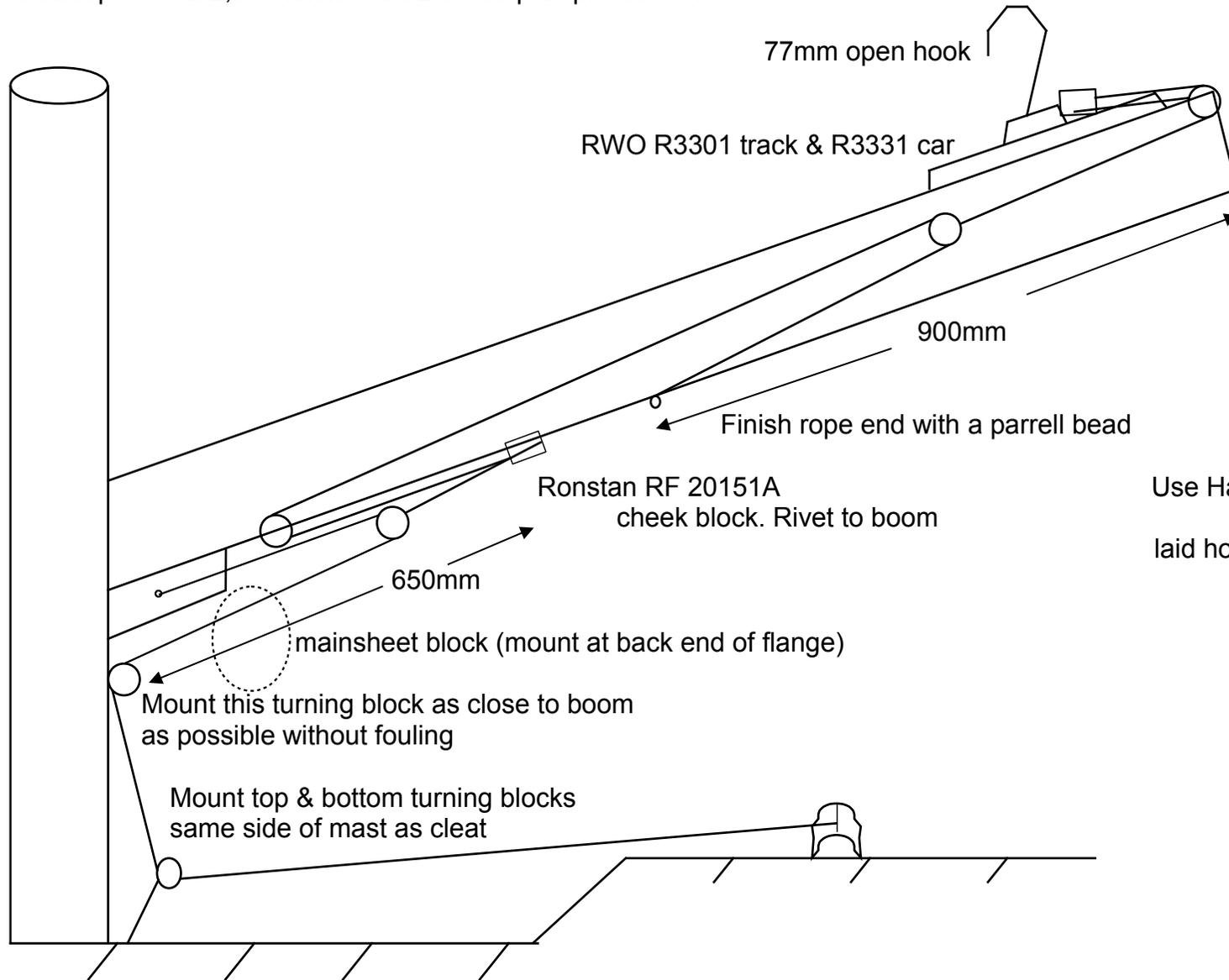
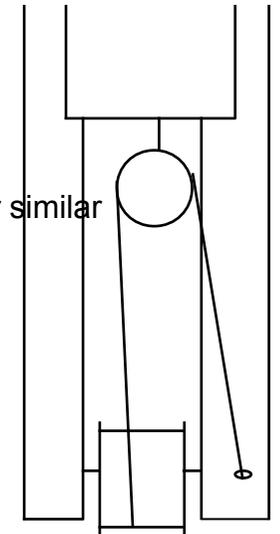


# CHALLENGER BOOM OUTHAUL DIAGRAM

- All blocks - Ronstan RF20101 20mm
- Internal rope - total 5,350 mm x 3mm 12 strand Dyneema D12
- External rope - total 2,800mm x 4mm Blue 16-plait pre-stretch



Use Harken 16mm micro block or similar laid horizontally



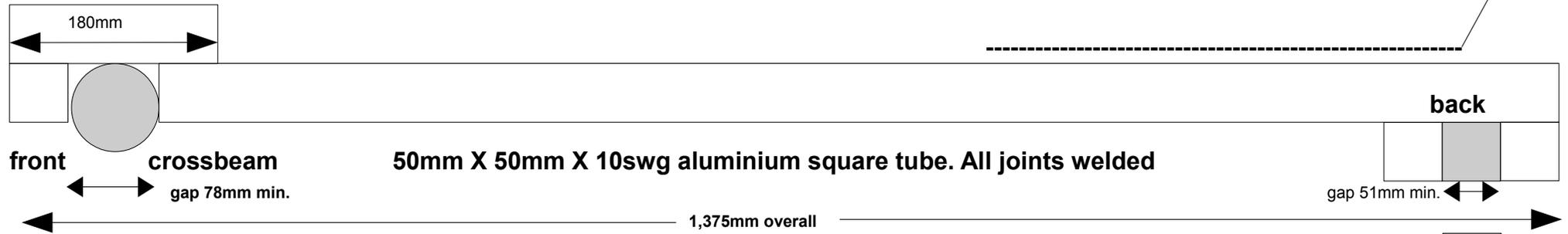
End of line goes through hole in boom. Tied with stopper knot or use a parrell bead

# CHALLENGER BUDDY SEAT

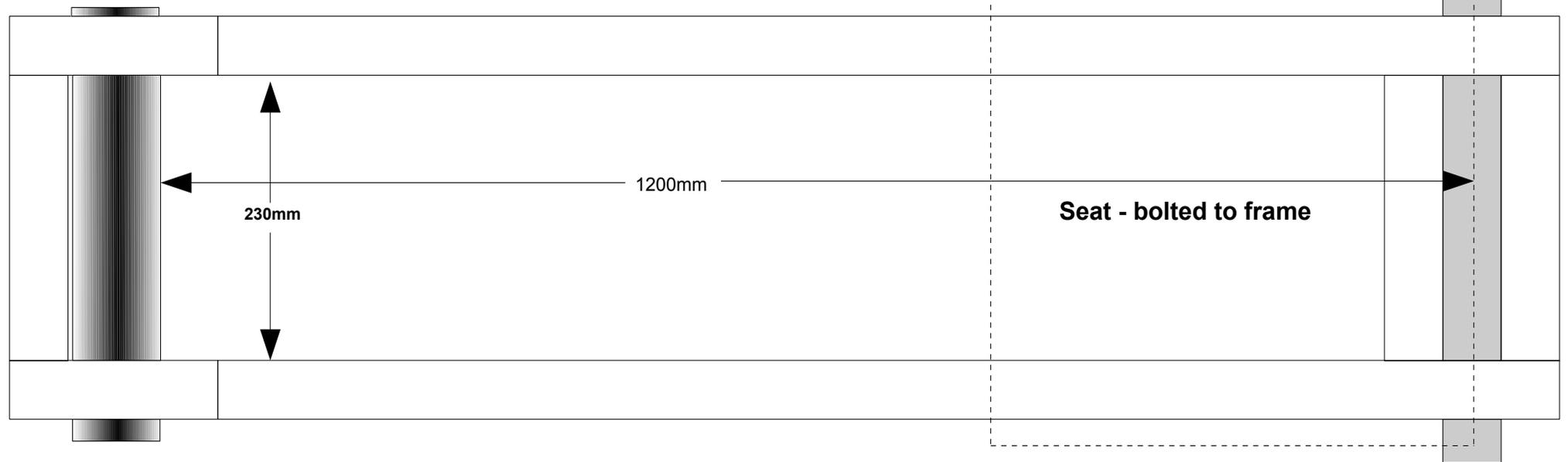
NOT TO SCALE

No warranty is given or implied through these drawings for the safety or adequacy of this equipment. Anyone building or using it does so at their own risk

## Frame - Elevation

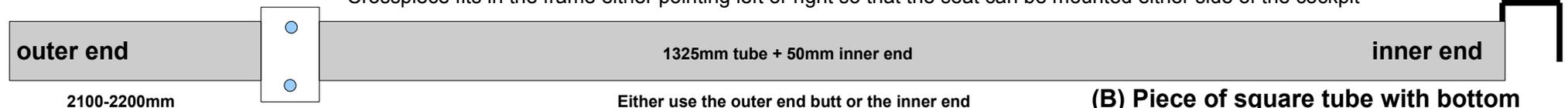


## Frame - Plan View



## Crosspiece - Elevation

Crosspiece fits in the frame either pointing left or right so that the seat can be mounted either side of the cockpit



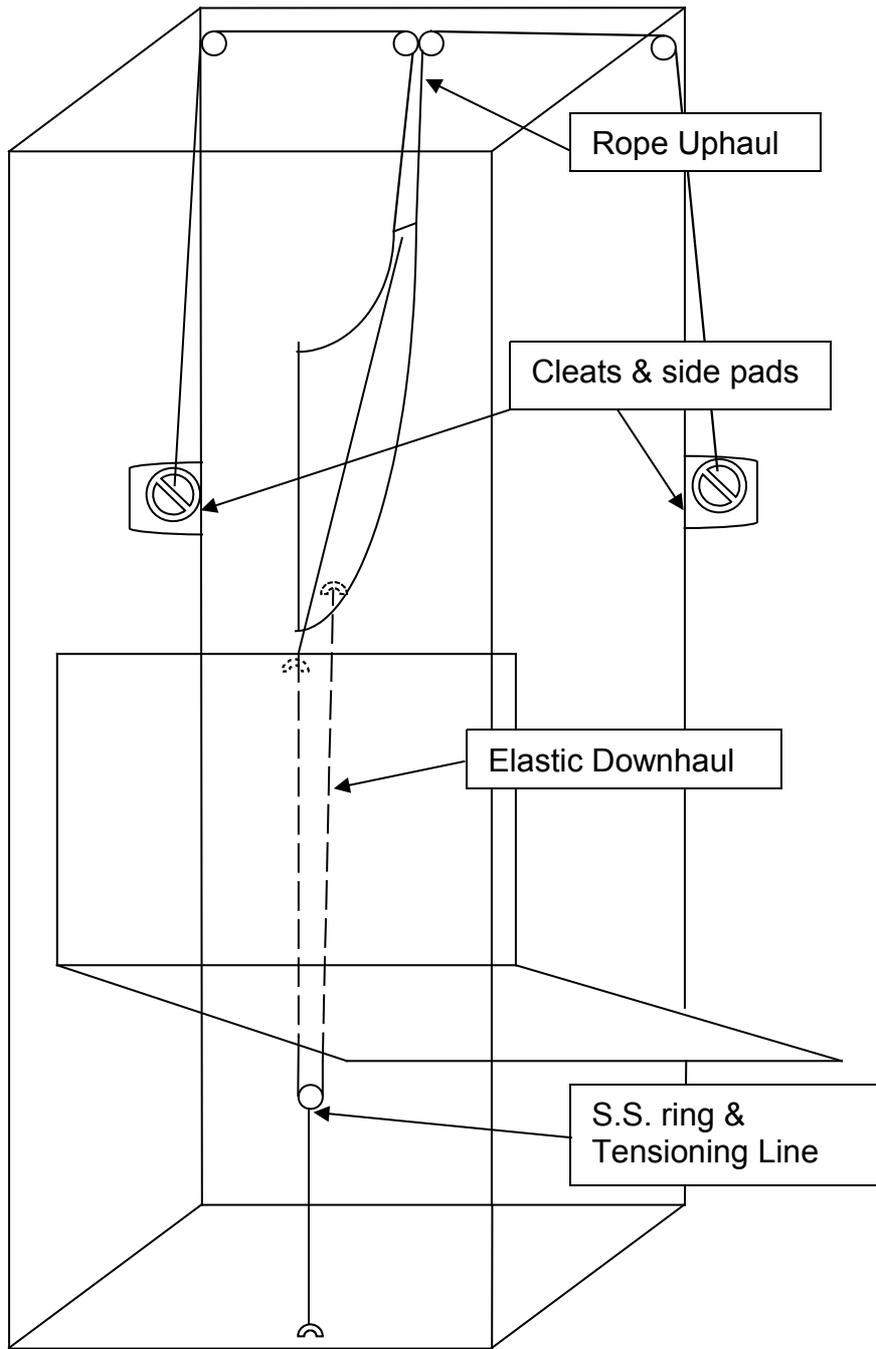
(A) 50mm square x 100mm long adjustable stopper. Butts against sponson hull, held by square U-bolt. Outer end rests on sponson

Either use the outer end butt or the inner end hook device but not both. Using the butt avoids trapping steering ropes etc. Cover the ends & stopper with plastic end caps / large PVC tube to avoid damage

(B) Piece of square tube with bottom wall removed, welded to inner end fits over cockpit side

# CHALLENGER CENTREBOARD ELASTIC DOWNHAUL SYSTEM

N.B. On standard boats the uphaul is led to both sides unless otherwise specified



Rope Uphaul  
4mm 16-plait  
**white - 3mtrs**

Turning blocks  
Ronstan  
RF20101 20mm

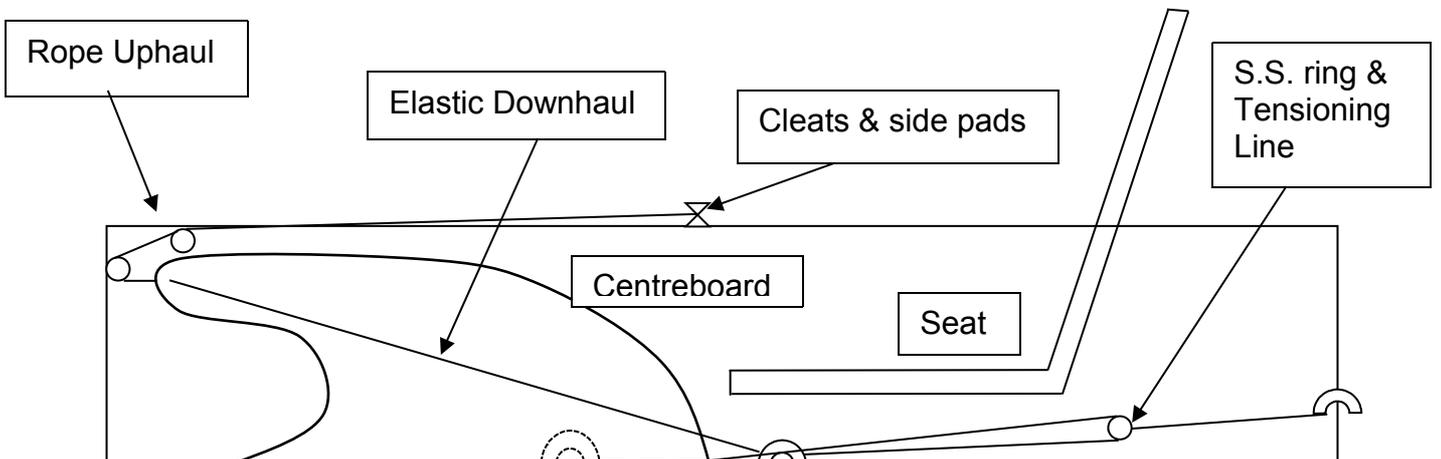
Elastic Downhaul  
5mm shockcord  
**blue - 4.5 mtrs**

Tensioning line  
4mm 16-plait  
**white - 1mtr**

45mm dia.  
stainless steel  
ring

or:

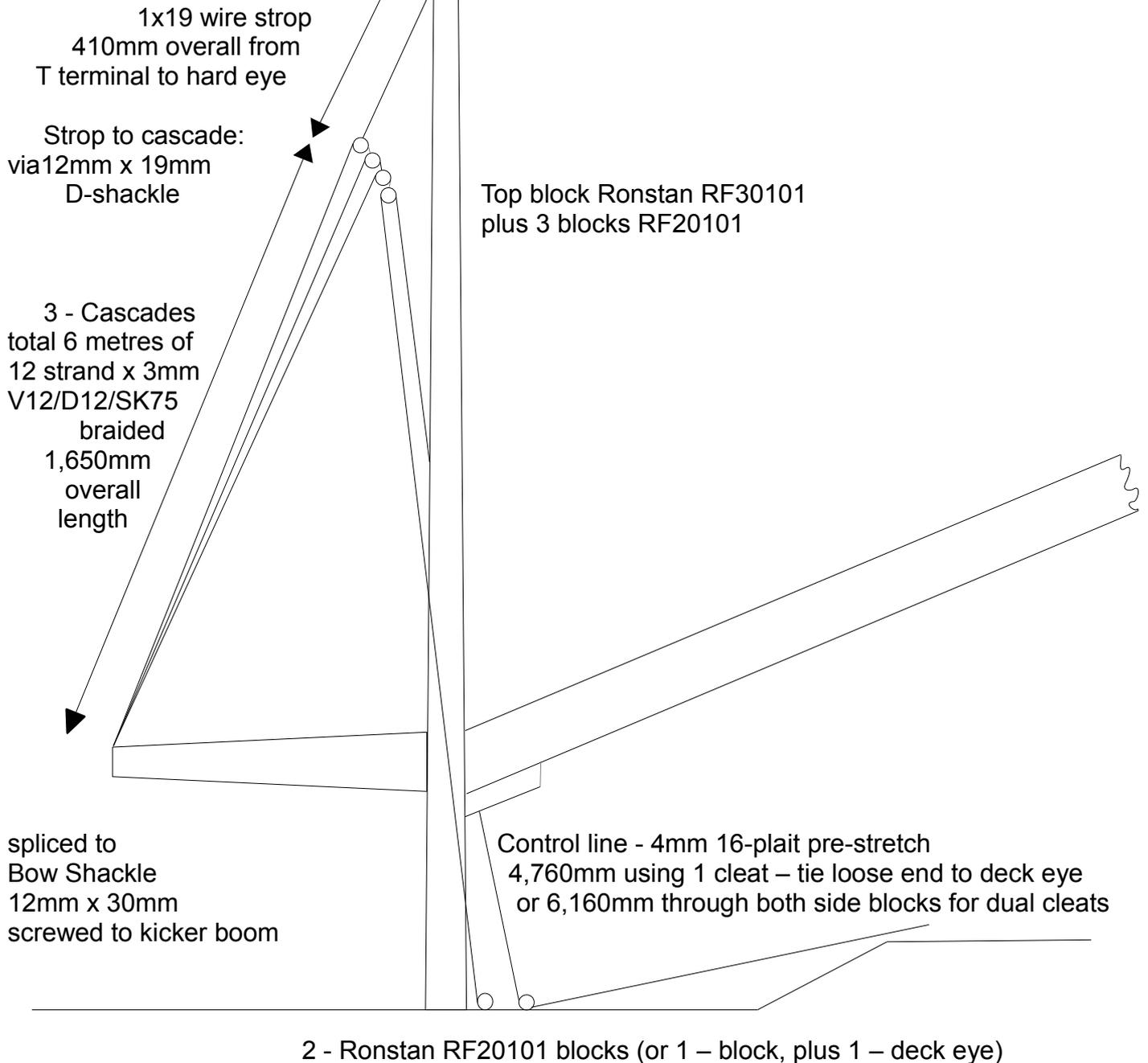
Block  
Ronstan  
RF20101 20mm



# CHALLENGER KICKER / VANG

When kicker is slack there should be approx. 100mm (4 inches) of sideways play in the cascades  
This is the sail setting for medium wind running conditions

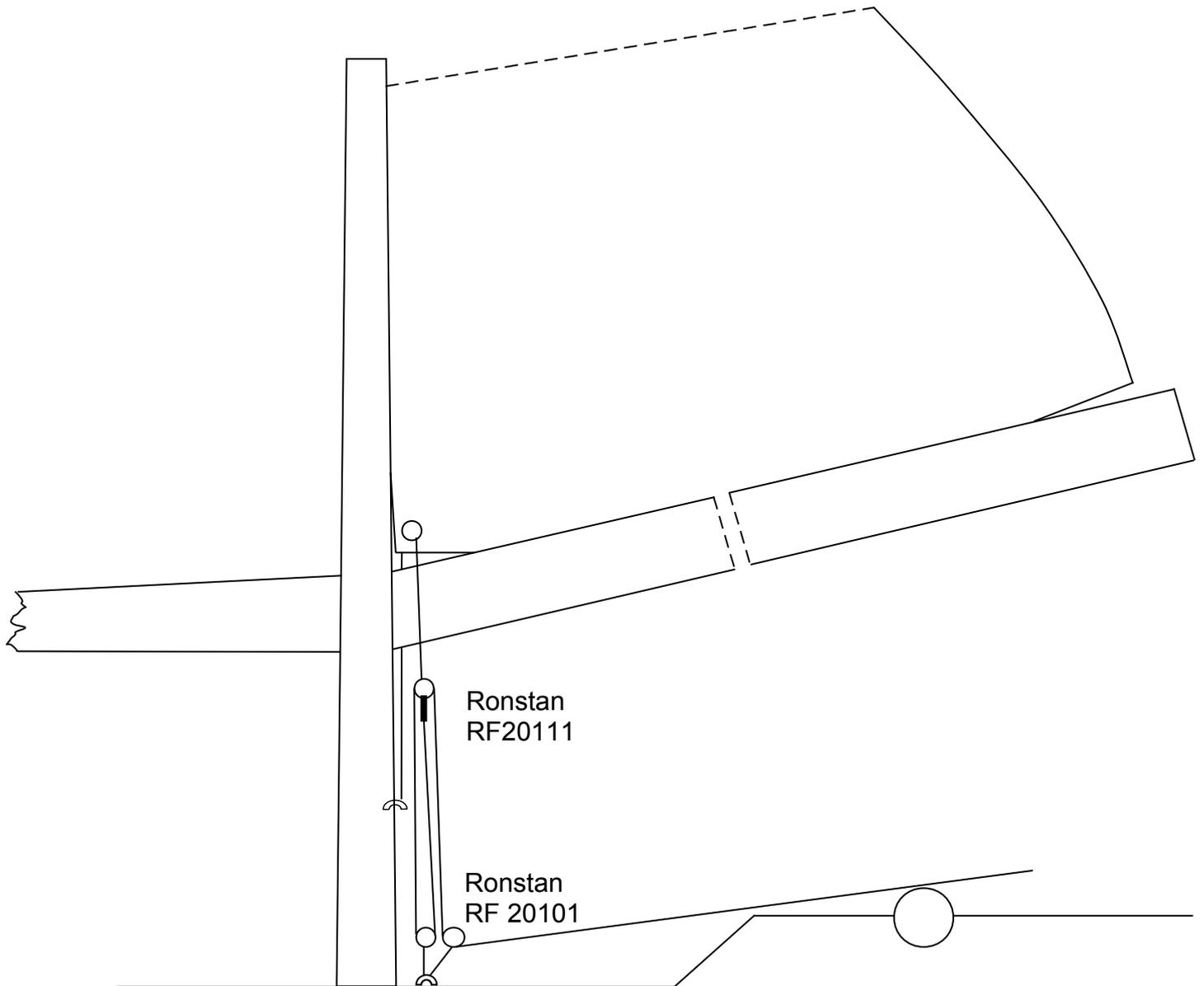
Total overall length of assembly from top of T-terminal to top of kicker boom = 2,060mm



# CHALLENGER TACK DOWNHAUL (CUNNINGHAM)

Control Lines – Yellow 4mm x 16-plait (Excel Racing) total 3.5 metres required

- Blocks
- Ronstan RF 20101 20mm
  - RF20111 with becket for floating block



## **Challenger Rope Replacement**

**All ropes and lines are colour coded so that the use of each one can be instantly identified in any Challenger. (Rope specifications - Marlow Ropes)**

### **Halyard - White / Blue / Grey**

**13 metres-** 5mm 16-plait Excel Racing. Dyneema core, Polyester cover. Preferred sail attachment uses plastic balls on each end. Make a loop in the end of the halyard, push it through the sail eye (cringle) and push the ball through the loop. Pull tight to jam the ball and fasten.

### **Kicker (2060mm mast to Kicker boom) - Red**

**410mm overall-** wire strop 3mm dia. 1x19 s.s. wire with T-terminal & hard eye

**6 metres-** Cascade rope – 3mm Excel V12 Natural or D12 Red cut into 3 sections

4- Ronstan RF20101 20mm ball bearing blocks

1 - Bow shackle 12mm wide x 30mm long (for lower end)

1 - D shackle 12mm wide x 19mm long (for upper end)

**4760mm** Control line - 4mm Excel Pro pre-stretch (deck to cleat) (for dual-sided control, cleat to cleat = **6160mm**)

### **Outhaul ( 5350mm in-boom + 2800mm from underboom block to cleat) - Blue**

1 - **77mm long** Open Stainless S Hook

**5350mm-** In-boom rope - blue 3mm Excel D12

**2800mm-** Control line - blue 4mm (or 5mm) Excel Pro 16-plait pre-stretch

### **Tack Downhaul (700mm mast-block + 2300mm block-cleat) - Yellow**

**3500mm-** Yellow 4mm Excel Pro 16-plait pre-stretch

### **Centreboard up/downhaul (c/board nose to back of cockpit = 1540mm) - White**

**4.0 metres** 5mm shockcord (**Blue**)

2 - Bullseye fairleads, 9mm opening + 4 - 8x1" csk. self tapping screws

1 - Ronstan RF20101 block **or** 1 - 45mm dia. S.S. ring for tensioner device

1 - 13mm heavy guage deck clip & 2 self tapping screws

**1.0 metre** blue 4mm Excel Pro 16-plait(tensioner rope)  
**3 metres** 4mm Excel Pro 16-plait pre-stretch - WHITE (uphaul)  
3- Ronstan RF20101 20mm ball bearing blocks(c/board-bulkhead-cockpit side-cleat)  
2 - Cam cleats & 4 self tapping screws, attach to cockpit side pads (if not fitted)

### **Gybing Lines - White**

**8 metres**, 4mm 8-plait burgee or similar soft line attached each side to the front of the kicker boom and led back as a continuous line to the cockpit

### **Steering lines – Black Vectran or Grey Dyneema**

**2 x 2400mm-** , 4mm Excel V12 Natural  
2 - Small plastic balls (1 red, 1 green) Loop of line goes through eye on tiller, ball end goes through loop then pull tight to fasten. Spliced loop on back end, fastened to T-bar by D shackle

### **Rudder up/downhaul – Red port, Green starboard**

**3700mm-** *uphaul-* Red Excel Pro 4mm 16-plait pre stretch  
**4500mm-** *downhaul-*(2:1 purchase using block) Green Excel Pro 4mm 16-plait pre stretch  
1 - Ronstan RF20101 20mm block

### **Mainsheet**

**14.5 metres** 7mm Rooster Polilite **or** Excel Marstron

### **Sponson Grab-lines**

**2 x 1100mm -** 6mm Excel Marstron or similar  
4 - 13mm dia. heavy gauge deck clips & 8-rivets  
2 - 24mm long D-shackles  
(Eyes in each end of lines. Back eye goes through deck clip, front through D-shackle)

### **Painter**

4 metres 6mm Excel Marstron or similar

**Fitting diagrams for some of the more complex setups are available on the next page (To download, click on "Layout Diagrams" above).**