USER INSTRUCTIONS
SERIES 40 ORBIT BLOCKS™

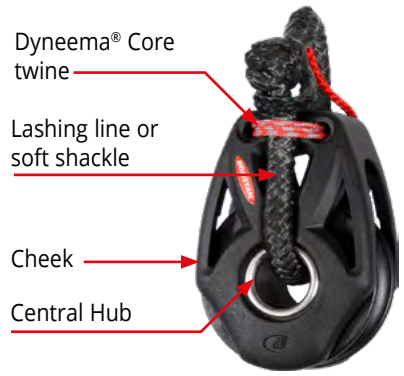
Contents:

1. Lashing Instructions

RF48109	Single block, lashing hub and becket option
RF48209	Double block, lashing hub and becket option
RF48109HL	Single block HHL, lashing hub and becket option

IMPORTANT: To meet the stated breaking loads these blocks must be lashed with lashing, strop or link, passing through the central hub. The breaking load is dependent on the strength of the lashing.

- The breaking load of the assembly (block + lashing) is generally limited by the strength of the rope and the joining method. Knots, splices, stitching, etc. will generally have a lower breaking load than the rope itself.
- It is possible to use up to 10mm line for lashing the Series 40 lashing blocks running in a single pass through the hub, but a neater result with more secure knotting may be achieved by using a smaller line size with multiple passes.
- Series 40 lashing blocks are supplied with 200mm (8") of 1.0mm (1/16") diam. Dyneema® core twine to secure the lashing line tight to the head of the block.
- For the single RF48109 & RF48109HL, you may lash the block in the closed position using the supplied 1.0mm (1/16") diam. Dyneema® core twine or you can lash each cheek separately so that the block can twist open for a snatch block application.
- For best results, the lashing must be attached to a mounting point with a smooth, well-rounded profile to avoid excessive chafe.
- Avoid attaching directly to fittings with sharp edges or rough surfaces that may damage the lashing through abrasion or point loading. For this situation use a shackle with a smooth surface between the lashing and the fitting. Regularly inspect the lashing for damage and replace if necessary.
- Lashings will eventually suffer degradation from fatigue, wear, and UV exposure. Like all running and standing rigging, lashings should be inspected as a part of your regular boat maintenance program and replaced if they show significant wear or fibre damage.



RF48109 shown using black DSH-4GRY Soft Shackle

RF48109 with soft shackle DSH-4GRY. Snatch block application.

RF48109HL lashed using becket option.

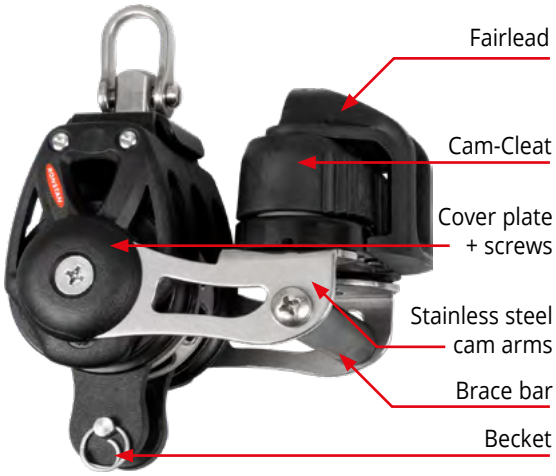
2. Universal swivel shackle head

To allow the block to swivel freely:

- Remove the shackle, then remove the blackened stainless steel collar from the headpost.
- Reattach the shackle to the headpost without the collar.

To fix the block in a 0º or 90º plane:

- Remove the shackle, then remove the blackened stainless steel collar from the headpost.
- Rotate the headpost so that the cross-drilled hole for the shackle pin is in the desired position. Then place the collar on the headpost to lock it into place, and reattach the shackle.



3. Adjusting angle of cam arm

RF46330	Triple block, becket, adjustable cleat, swivel shackle head
RF46530	Quin block, becket, adjustable cleat, swivel shackle head
RF48120	Single block, adjustable cleat, swivel shackle head
RF48330	Triple block, becket, adjustable cleat, swivel shackle head

First remove the cam arms by following the steps below for the type of block you have.

- **RF46330, RF48120, RF48330** – Remove the cam arm screws and cover plates, then back off the screws on both sides of the brace bar by one turn (anti-clockwise). This will enable you to flex the stainless steel cam arms and remove them from the block.
- **RF46530** - Remove the cam arm screws and cover plates. This will enable you to flex the stainless steel cam arms and remove them from the block.

Now reposition the cam arm so that the desired cleat angle is achieved. Replace the cover plates and tighten the screws, then tighten the brace bar screws.

4. Replacing the ratchet sheave

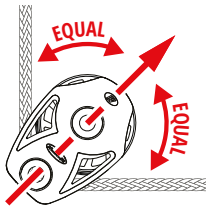
RF46330	Triple block, becket, adjustable cleat, swivel shackle head
RF46530	Quin block, becket, adjustable cleat, swivel shackle head

First remove the cam arms by following the steps in Section 3 above for the type of block you have. After removing the cleat arms:

- Remove the split ring and the becket pin, and slide the central ratchet sheave out from the back of the block.
- Slide in the new RF46000 ratchet sheave. It will key into the slots on the inside of the cheeks and slide into position.
- As supplied from the factory, the ratchet mechanism of the sheave is engaged. Check to be sure that the sheave is installed in the correct sense of rotation, turning to allow the rope to be pulled smoothly through the cleat, but restrained by the ratchet mechanism when releasing.
- If desired the ratchet can be manually turned on or off by turning the switch on the side of the sheave with a flat screwdriver before reassembling the block.
- Replace the becket pin and split ring, then reposition the cam arms in the desired position and complete the assembly as described in Section 3 above.

Switch to turn ratchet on/off.

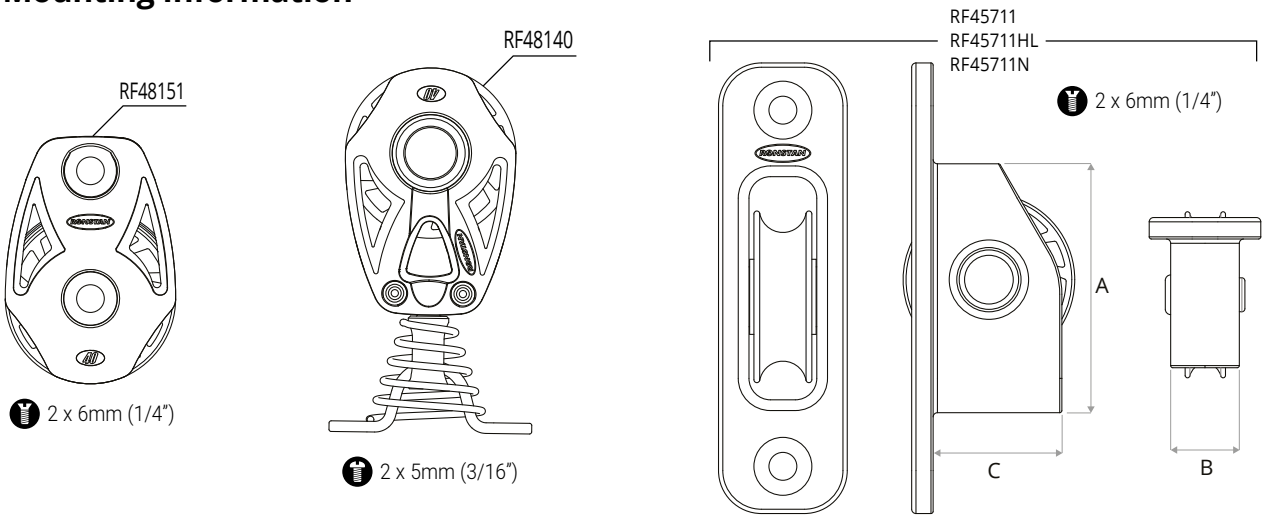
5. Cheek block alignment



Cheek blocks must be properly aligned so that the axis of the block bisects the angle between line entry and exit, which must be approximately in the same plane.

Misalignment or improper installation will reduce the load capacity of the block.

6. Mounting Information



Refer to 1:1 shadow/line printable templates on page 4.

PRODUCT No.	FASTENING mm	CENTRES mm	OUTSIDE mm	A mm	B mm	C mm	FASTENING mm	CENTRES mm	OUTSIDE mm	A mm	B mm	C mm
RF48140	2 x 5mm	37	-	-	-	-	2 x 3/16	1 7/16	-	-	-	-
RF48151	2 x 6mm	30	-	-	-	-	2 x 1/4	1 3/16	-	-	-	-
RF45711	2 x 6mm	83	30 x 105	58	23	33	2 x 1/4	3 1/4	1 3/16 x 4 1/8	2 1/4	15/16	1 5/16
RF45711HL	2 x 6mm	83	30 x 105	58	23	33	2 x 1/4	3 1/4	1 3/16 x 4 1/8	2 1/4	15/16	1 5/16
RF45711N	2 x 6mm	75	26 x 95	58	19	33	2 x 1/4	2 15/16	1 x 3 3/4	2 1/4	3/4	1 5/16

7. Care and maintenance

- Grit and sand will damage bearing systems. Ronstan Orbit Blocks™ have a precisely engineered bearing system that should be kept clean and free of sand and grit to ensure optimum performance and service life. Blocks, in particular the bearing areas, should be flushed with fresh water regularly and periodically cleaned with a mild detergent and water.
- Dry lubricants such as Ronstan Sailfast™ silicon spray may be used to lubricate the bearing system and ratchet controls. Oil/petrochemical based lubricants must not be used.
- Ronstan Orbit Blocks™ are designed and manufactured for applications on sailboats. See the Info section of the Ronstan web site and our catalogue for important customer considerations and warranty information.

Lashing attachments

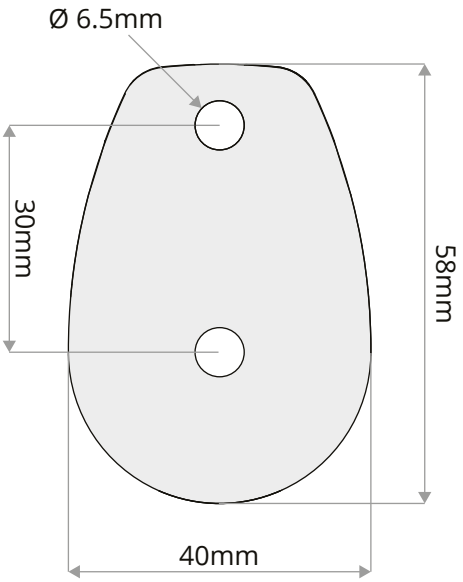
- To receive the maximum performance benefit from lashing or soft attachments, they must be correctly installed, inspected regularly, and replaced when necessary.
- Lashings must be attached to a mounting point with a smooth, well rounded profile without sharp edges or burrs. If in doubt, use a shackle with a smooth surface between the lashing and the mounting point.
- Lashings will eventually suffer degradation from fatigue, wear, and UV exposure. Like all running and standing rigging, lashing or soft attachments should be inspected as a part of your regular maintenance program and replaced if they show significant wear or fibre damage.

Mounting / Drilling / Cutting Templates

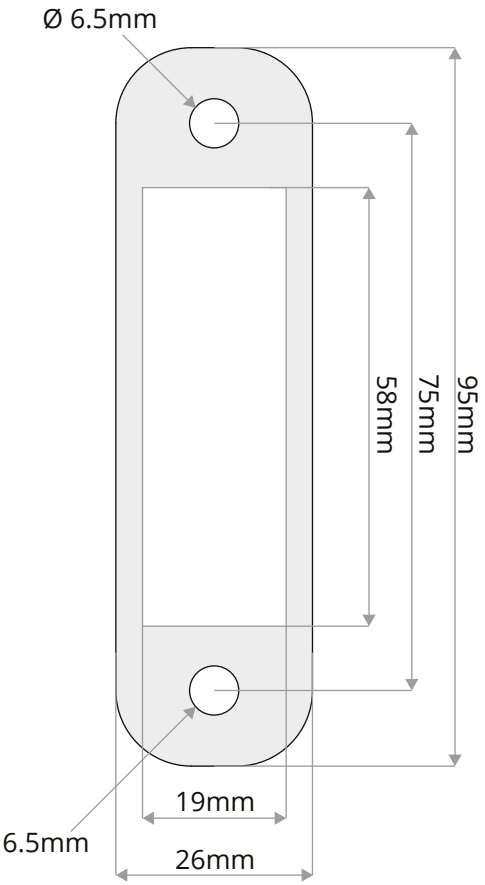
Scale	1:1
Page size	A4

IMPORTANT	**This template document has been created at 1:1 scale. It is critical that it is printed at 1:1 scale. Check any printed/reproduced copies match the dimensions indicated at 1:1 scale prior to use.**

RF48151



RF45711N



RF45711
RF45711HL