

PROCTOR 'Basic' masts

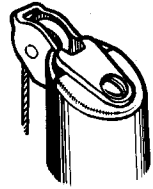
Many years of design experience and intensive research, coupled with advanced production facilities has enabled us to produce a range of masts to the highest standards of performance, finish and reliability, for virtually every class of sailing boat throughout the world. The standards we accept are those imposed by the toughest competition at Olympic, World Championship and National Championship level, in which our record of success has for ten years been unrivalled.

Every dinghy mast we produce, apart from a few necessary experimental, starts life as a 'Basic', produced to the same high standard. A 'Basic' consists of an extruded tube tapered, gold anodised and fitted with the essential items required for the type of boat in which it will be used. The accompanying illustration shows a typical 'Basic' mast, but each class has its own 'Basic' and there are, of course, variations. In some classes, for example, spinnakers are prohibited and spinnaker equipment is therefore omitted; some classes prohibit tapered masts; spreaders may be unnecessary and undesirable and may therefore not be fitted.

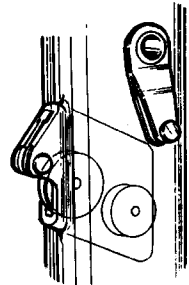
These 'Basics' are obtainable from our carefully chosen stockists throughout Britain and in most countries abroad. Each stockist is equipped to convert 'Basics' into highly personalised masts fitted to individual requirements from a selection of modern, sophisticated and race-proven items, described on pages 6 and 7 as Additional Fittings. Your 'Basic' mast may be made very special by adding such refinements as the new halyard lock, internal shroud attachment and spinnaker crane.

It must be emphasised that 'Basic' in this case does not mean utility. Absolutely the reverse. This system permits us to form the tapers in a 100-ton press with far greater accuracy and consistency than other mast manufacturers—or ourselves for that matter, can produce by hand, reducing the width of the section web to provide a very slender top-mast designed to have the all-important combined characteristics of low wind interference, lightness and controlled flexibility.

Lightness is of prime importance in any racing mast, especially at the masthead. All our dinghy masts are now tapered to the smallest practical size and this ultra-light main halyard sheave cage is fitted. Made of aluminium alloy, with stainless steel spindle, this fitting weighs a mere $\frac{1}{2}$ oz. (14 gms), but is strong and reliable.



SHROUDS are attached to lightweight, low windage tangs in stainless steel. Double tangs are fitted where a trapeze is to be used. Forestay attachment is integral with the jib halyard sheave cage which is welded into the mast. This sheave cage is unique in that it passes through the mast angled down in the fore and aft vertical plane. This facili-



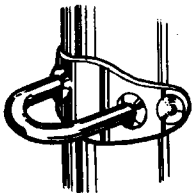
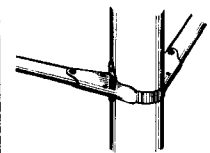
tates the use of larger sheaves than would otherwise be possible; hence the risk of halyard failure is greatly reduced.

Altogether this area of the mast is very clean, producing the very minimum of windage and turbulence, and very light whilst retaining adequate strength.

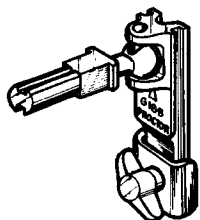
Spreader section.

Spreaders, being the connecting link between the main or diamond shrouds and the lower mast, are a major influence on mast bend. Fore and aft bend is limited by restricting spreader swing, whereas athwartships bend is effected by spreader length. Our spreaders are exceptionally efficient because they have—

- (i) Aerofoil shape of tapered light alloy tube, axially tilted for minimum wind resistance when heeled.
- (ii) Upwards angle in frontal elevation, directing compressive forces through spreader axis.
- (iii) Stainless steel brackets for fixed or swing spreaders, with screw stops for easy spreader angle control.

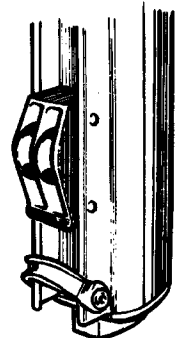


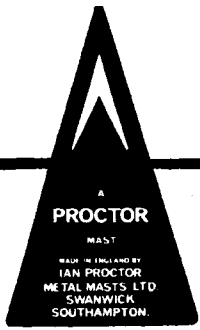
A large stainless-steel eye is mounted on the front of the mast for spinnaker pole attachment. The spinnaker pole can be quickly located 'first time every time'. This item is essential for use with PROCTOR spinnaker poles.



Produced in collaboration with M. S. Gibb Ltd. (Warsash) this lightweight stainless steel gooseneck provides universal articulation by means of a pin-jointed spherical link. The gooseneck slides in the mast track and is easily adjusted to the correct height, a new type of clamping plate ensuring positive locking in position with less force applied to the thumb screw. The squared pin permits hand-rolled reefing for small mainsails.

Shown here is a typical 'bottom-end' assembly. Halyards exit through aluminium-alloy cages which are black anodised and therefore completely corrosion resistant. Kicking straps are now attached to a 'U'-shaped stainless steel strap. Heel plugs are of the tenon type and are die-cast in aluminium-alloy. Cleats are not supplied as standard on Basic masts, but two sizes are available if required. They are the 4in (34P4) for halyards, and the 3in (34P2) for flag halyard.





Section Data

MAST SECTIONS

The main requirements for any type of dinghy mast are minimum weight, minimum windage or wind interference, and minimum height of centre of gravity. All of these must, of course, be coupled to the essentials of reliability under a wide range of conditions and the correct bending characteristics, both athwartships and fore and aft.

Our very wide choice of sections goes far towards making the ideal section available for every type of mast. We frequently review this range of sections to ensure that it represents the best that can be offered and that it meets the exacting demands of competitive sailing.

Details of the sections below show weights and dimensions. The moments of inertia indicate the stiffness of different sections.

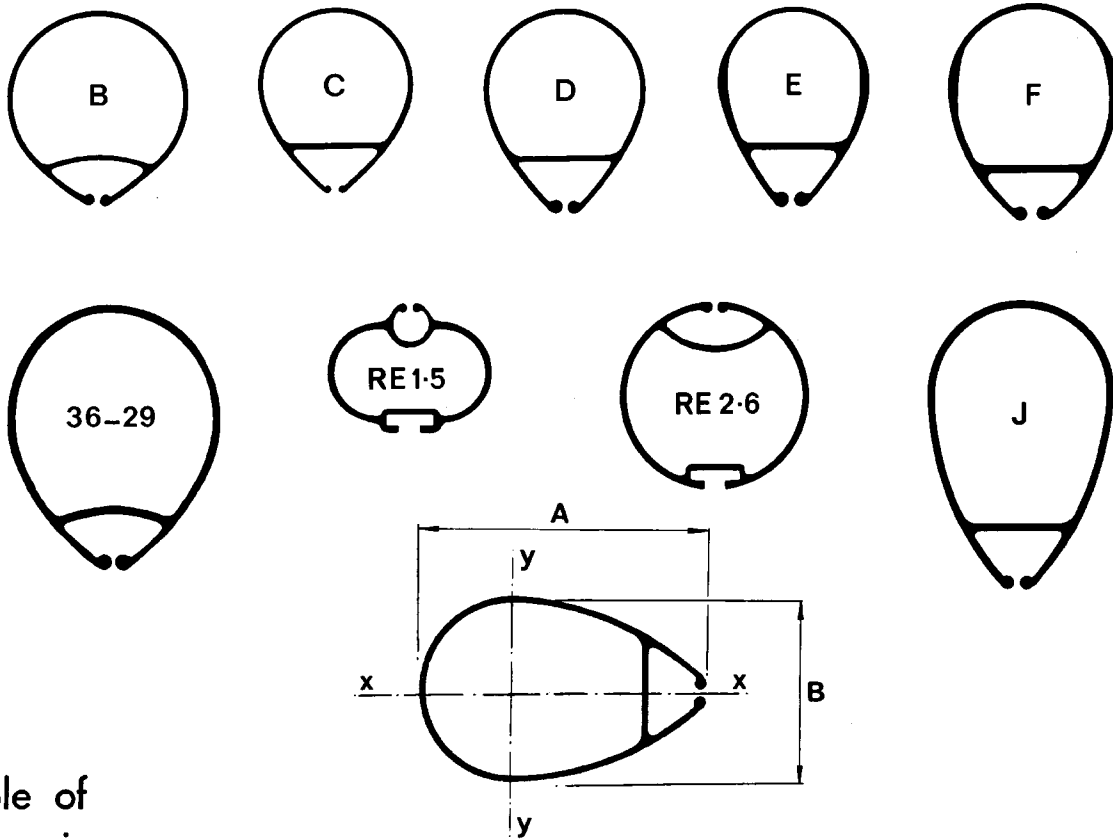
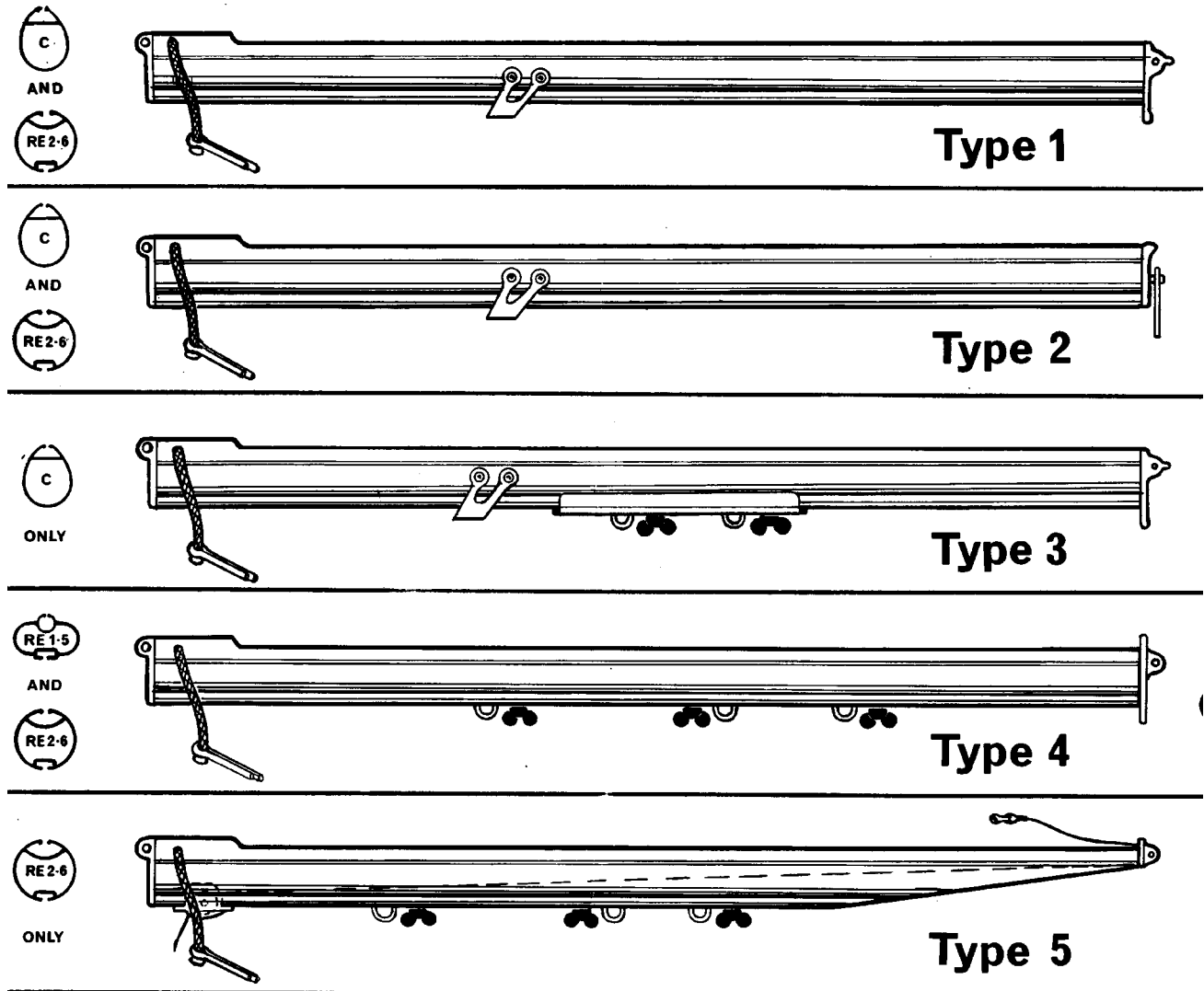


Table of Dimensions

Section	Dimension A		Dimension B		Weight		Nominal Wall Thickness		I ab't x-x		I ab't y-y	
	ins.	mm.	ins.	mm.	lb/ft	Kg/m						
B	2.7	69	2.5	63	.73	1.09	.063	1.60	.39	16.2	.48	20.0
C	2.56	65	2.12	54	.70	1.04	.060	1.52	.27	11.2	.34	14.2
D	2.87	73	2.25	57	.74	1.10	.060	1.52	.35	14.6	.52	21.7
E	2.75	70	2.12	54	.86	1.29	.080	2.03	.37	15.4	.50	20.8
F	3.08	78	2.37	60	.91	1.36	.080	2.03	.52	21.6	.70	29.2
J	4.0	102	2.60	66	1.30	1.93	.085	2.16	.78	32.50	1.85	77.0
36-29	3.60	91.5	2.90	74	1.08	1.62	.080	2.03	.80	33.40	1.29	53.6
R.E. 1-5	1.80	46	2.25	57	.68	1.01	.060	1.52	.33	13.75	.23	9.57
R.E. 2-6	2.60	66	2.60	66	.82	1.22	.063	1.60	.42	17.50	.53	22.1



Dinghy Booms



Type 1 A non roller reefing boom made from section 'C' or 'RE2.6' and suitable for aft mainsheet systems only. The end fittings are lightweight alloy castings, and the kicking strap or boom vang plate is supplied with key to suit. In the case of the 'RE2.6', which is the stiffer of the two, the kicker or boom vang plate takes the form of a stainless steel sliding eye with locking screw to which the wire is shackled. These booms can be fitted with the Proctor internal outhaul system which gives a 3:1 purchase to tension the foot of the sail, and the inboard end fittings slide onto $\frac{3}{8}$ in square shouldered gooseneck pins.

Type 2 A roller reefing boom for cruising and racing dinghies incorporating an outboard end fitting with stainless steel swivel tang. Once again available in 'C' section or the new stiffer 'RE2.6', this type of boom makes roller reefing extremely simple. The boom locks on a $\frac{1}{2}$ in square shouldered gooseneck pin that is rounded to $\frac{1}{8}$ in diameter at the outer end. To reef, the boom is merely pulled back on the gooseneck pin and rotated on the round part before re-engaging in the locked position. A kicking strap plate and key is provided and in the case of the 'RE2.6' this attachment takes the form of a stainless steel sliding eye with locking screw. Internal outhauls cannot be fitted as they will interfere with the mainsail when reefing.

Type 3 Designed for centre mainsheet systems only, this boom is manufactured from section 'C', and although not completely rigid, is to be regarded as a semi-stiff type of boom giving a deflection of about $1\frac{1}{2}$ in (38.1mm) on a 9ft 6in (2896mm) length. Lightweight alloy end castings are fitted, and also an 18in (457mm) length of centre mainsheet take-off track with stops and two sliding eyes. When ordering, the position of this track must be given or it will be supplied loose with self-tapping screws. A kicking strap or boom vang plate with key is provided, and an internal outhaul can also be fitted as an extra.

Type 4 These centre-mainsheet booms are in two sections both incorporating integral tracks on the underside with two sliding eyes for mainsheet attachment and one for boom vang or kicking strap. The 'RE1.5' is the bendy section designed to give a deflection of up to $5\frac{1}{2}$ in (139.7mm). Mainsails do not have to be cut specially for this section, as its most efficient function is to ease the leech of the sail when sailing to windward in strong winds. The 'RE2.6' boom is a new very stiff section designed to hold the mainsail leech tight, and make more use of mast bend to flatten the sail. Ideally suited to light winds and also heavy crew weights, it was the forerunner of this spar that Rodney Pattison used with such devastating effect in the Olympic Games. Internal outhauls are available as an extra.

Type 5 Available in section 'RE2.6' only, this boom is a development of Type 4. The outboard end is cut away over a length of 18in which reduces weight and windage and increases flexibility at this point. An alternative internal outhaul is incorporated which simply passes through a sheave cage at the inboard end, for systems involving adjustment in the boat.

Spinnaker Poles

PROCTOR

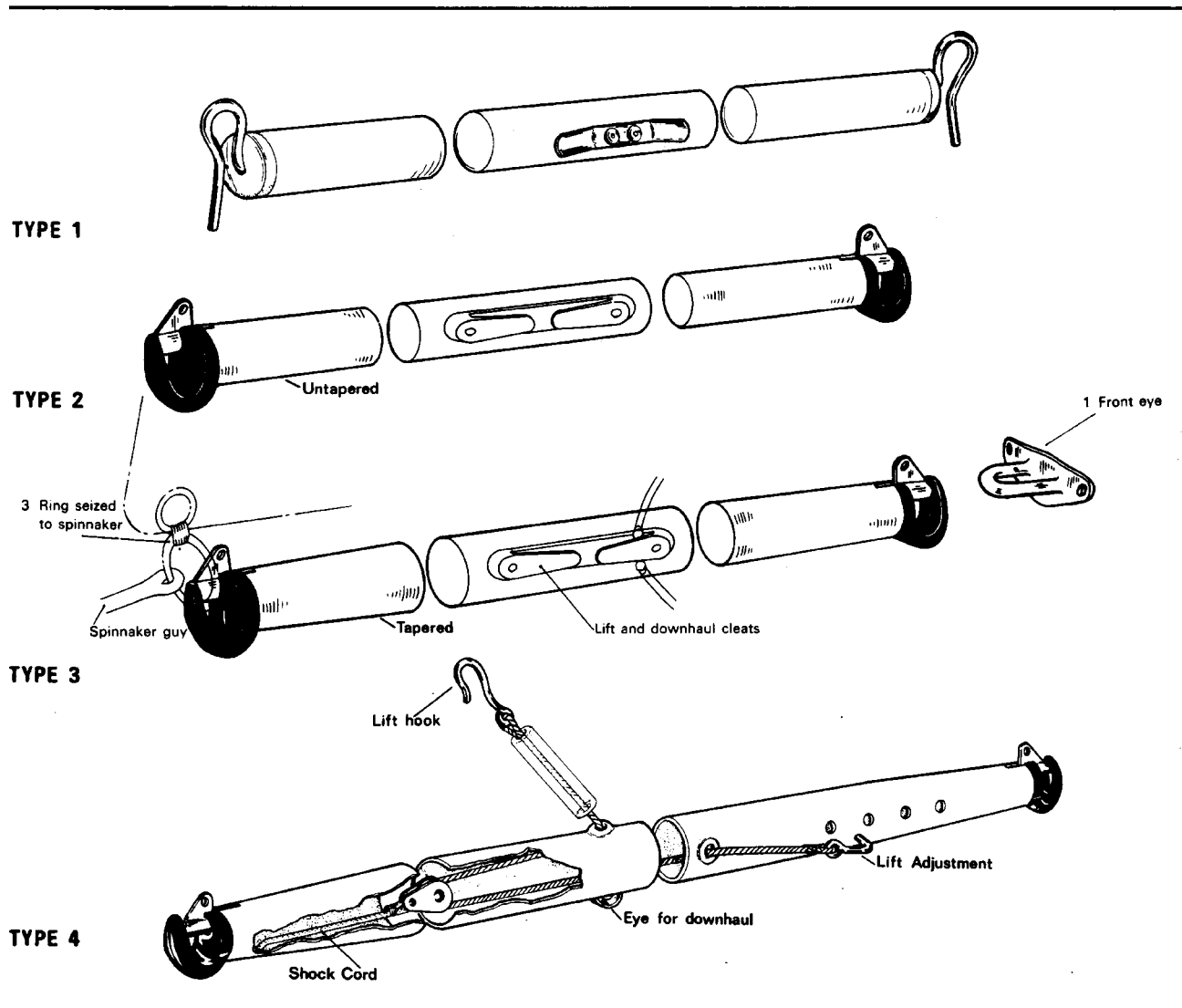
Many people tend to under estimate the importance of a spinnaker pole that will work efficiently. A good spinnaker pole will be light, stiff, strong and simple in operation.

Our range of poles was designed bearing these essentials in mind, from the least sophisticated type 1, to the most sophisticated type 4. For serious racing it is recommended that a pole with I.P. end fittings be used. (That is either type 2, 3 or 4).

I.P. end fittings are moulded in black delrin and incorporate quick-release spring-loaded pistons. They are most suitable for systems involving a spinnaker chute, where the delrin moulding acts as a fairlead for the spinnaker guy. I.P. ends can only be used in conjunction with the Front Eye (30A16).

All PROCTOR spinnaker poles are gold-anodised for long life and can be obtained at very short notice from your nearest OFFICIAL STOCKIST.

- Type 1** A simple general purpose spinnaker pole most suitable for use on cruising dinghies, with stainless steel hook type end fittings, and stainless steel centre-cleat for lift downhaul.
- Type 2** A very popular pole for use on small racing dinghies (under 16ft 0in) made in 1in (25.4 mm) Dia. tube, and fitted with I.P. ends. The centre cleat is of new PROCTOR design in black delrin.
- Type 3** Designed for use on larger dinghies this pole is tapered at both ends, and is made in 1½in (38mm) diameter tube. Specification otherwise, as Type 2.
- Type 4** A development of Type 3 this pole carries an adjustable internal topping-lift which is automatically self-stowing. This topping-lift is adjustable for length and is fitted with stainless steel hooks. A polythene tube hand-grip is fitted for comfort. This system eliminates the need for untidy cordage on the front of the mast.



PROCTOR

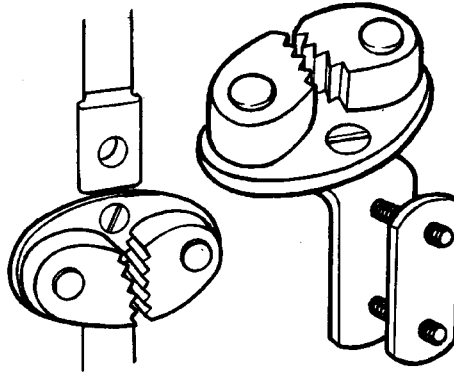
ADDITIONAL



CUNNINGHAM EYE FITTING 35A1

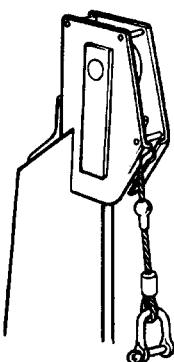
When using a Cunningham hole arrangement to control the tension on the luff of the mainsail, a fitting consisting of a sheave and clamp cleat may be clamped into the mast at any convenient position. The eye at the end of the Cunningham hole tackle is held by the gooseneck thumb screw, the tackle then passing through the Cunningham hole, down to the sheave,

up through the Cunningham hole again and finally to the cleat, giving a 4:1 purchase. The fitting can easily be applied to any of our masts.



SPINNAKER HALYARD JAMMING CLEATS 35A2 & 3

Two types are available, one for horizontal mounting and one for vertical mounting. Both types incorporate a Tufnol cam cleat mounted on stainless steel plates, which can be located positively in the luff groove of the mast by means of the screws. Halyard cleating is virtually automatic with either of these fittings, which contributes to the vital factor of speed in spinnaker setting. The spinnaker halyard on our masts emerges through a low-friction Tufnol eye and the jamming cleat should be positioned directly below it as shown.



HALYARD LOCK 38A2

This ingenious fitting is very simple to use and trouble free. It is manufactured in stainless steel with a light alloy sheave. The halyard has a small stainless steel ball swaged on to it and this engages positively in the halyard lock as the mainsail headboard reaches

its correct position. The lock is disengaged by hoisting the halyard slightly, which releases it and allows the sail to be lowered freely.

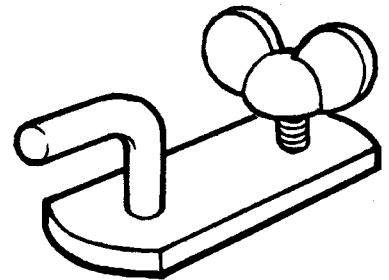


JIB HALYARD TENSION LEVERS

Based on the Highfield lever principle, these robust and highly efficient stainless steel fittings can be set to provide whatever tension is required in the jib luff. That tension is maintained throughout the most rigorous conditions. An important advantage is that the jib can be set up to exactly the same luff tension time after time, yet this tension can be easily altered if required. There are three different models available: 54A1 (small)—with a throw of 3½ in (89mm). 54A2 (medium)—with a throw of 4½ in (107mm).

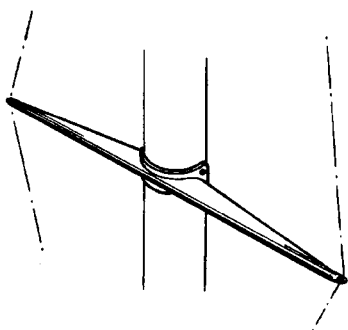
54A5 (adjustable)—with a range of throw from 3½ in (89mm) to 6 in (152mm).

The small lever should be used only in light dinghies, but the medium lever is suitable for larger dinghies and small racing keelboats. The adjustable lever may be used in any of these applications.



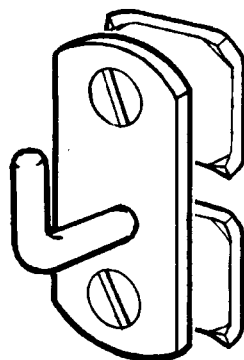
SLIDING SPINNAKER SHEET HOOK 39A8

A neat stainless steel hook designed for use with R.E. 1.5 and R.E. 2.6 booms, this item is invaluable in light weather for supporting the spinnaker sheet and improving the sheeting angle of the spinnaker. It also has the advantage of stabilizing the spinnaker in heavy weather.



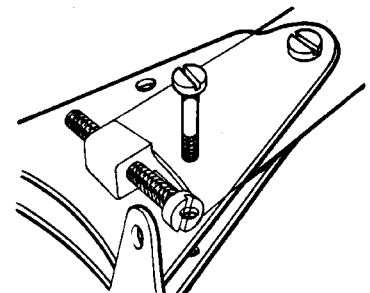
AEROFOIL DIAMOND STRUT 26A169

Our new diamond strut is a tapered aerofoil section aluminium alloy extrusion designed to reduce windage and turbulence. Diamond shrouds are adjusted by extending the end-fittings of the strut.



SINGLE HALYARD HOOK 39A4

A simple stainless steel hook, this fitting represents the simplest and lightest means of belaying a halyard with an eye splice at the lower end. It can be damped at any desired position in the lower section of any dinghy mast luff groove.

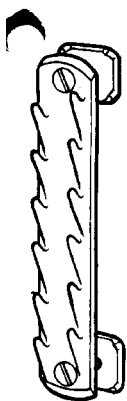


SPREADER ANGLE ADJUSTER 27A58

Bearing in mind the fact that bearing characteristics can be effectively altered by adjusting the angle-aft of spreaders, we have devised a means of altering this angle and locking in place using a screw-adjuster. This whole assembly is completely contained in the new standard spreader bracket. Limited swing movement is made possible by the omission of the vertical stop screw.

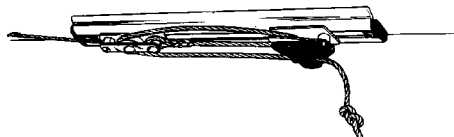
FITTINGS

PROCTOR



MULTIPLE HOOK RACK 39A10

Intended for use as the terminal point for either main or jib halyard, this die-cast aluminium fitting is easily clamped in the mast track in any desired position. Used in conjunction with a wire halyard with a soft eye at the end, it provides fine adjustment of halyard tension to a number of pre-set positions.



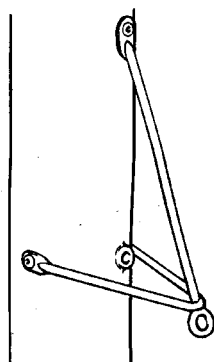
INTERNAL OUTHAUL SYSTEM 52A3 & 4

Developed from the very successful Cunningham hole fitting, this system can be applied to any of our dinghy booms. On 'C' section booms the slide and tackle assembly operates in a length of internal track as shown. On sections RE 2.6 and RE 1.5, however, the system operates in the integral track at the bottom of the section.

The clew outhaul wire emerges from the underside of the boom and is clamped tightly by the retaining screw on the slide component. The clam cleat is fixed in position. Fine adjustment of the mainsail foot tension to suit all wind conditions is made possible by the 3:1 purchase.

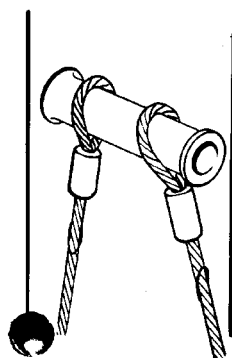
SPINNAKER HALYARD CRANE 32A1

Races can be won or lost by spinnaker handling and it is essential that spinnaker halyards should be free running. This spinnaker halyard crane is very light and has minimum wind resistance, but is made in stainless steel and is strong enough for use in any dinghy class. It holds the head of the sail away from the mast in clearer air. It is supplied complete with fastenings.

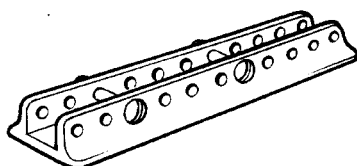


INTERNAL SHROUDS

Where reduction in windage is an important consideration, the shrouds may be attached internally to the mast, if the class rules permit this. This results in an extremely



clean rig by eliminating all the tangs and clevis pins normally connecting shrouds to mast. Replacement of damaged shrouds involves the removal and replacement of the hounds tube. This work can easily be carried out by any official PROCTOR stockist.

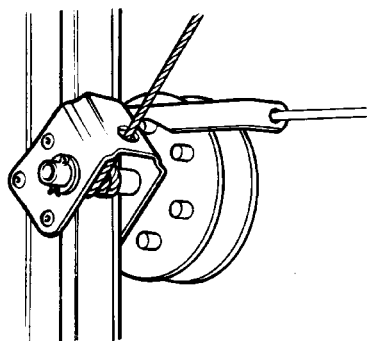
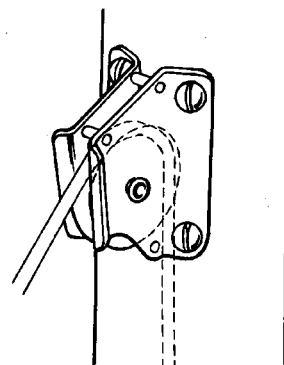


MAST STEP 13A5

Positive and firm location at the heel is a first consideration in tuning any racing mast, but it must also be possible to make accurate adjustments easily. Our extruded anodised aluminium alloy mast step is easily fitted to any dinghy and represents ideal mast heel location.

SHEAVE CAGE FOR INTERNAL SPINNAKER HALYARD 22A277

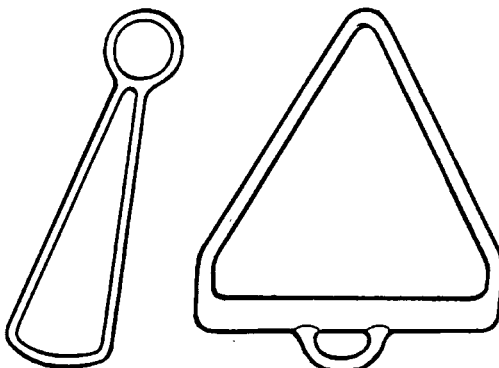
Originally designed to comply with the 5-0-5 class rules, this fitting has been developed for use with an internal spinnaker halyard running down the centre of the mast. This system is generally recognised as being ideally suited to dinghies using a spinnaker chute. All its components are of anodised aluminium alloy with the exception of the stainless steel fastenings.



KICKING STRAP WINCH 36A6

Operated by a simple ratchet mechanism, this winch provides remote control over kicking strap or boom vang tension, which is both positive and infinitely variable. The 4in (101mm) drum is of aluminium alloy and provides 6:1 power gain; all the other components are of stainless steel.

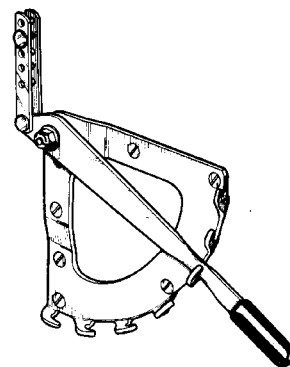
Also available is a more simple kicking strap winch without the ratchet mechanism. This type requires a cleat for the lanyard.



TRAPEZE RINGS AND HANDLES 45A1 & 45A2

Simple but very efficient, our stainless steel trapezing equipment is light and strong and reduces windage to the minimum possible. The trapeze ring has two alternative attachment points, having the effect of alternative trapeze wire lengths, one 6in (152mm) longer than the other.

Our trapeze handles are comfortable for wet hands to grip and this type of handle keeps fingers clear of the trapeze wire.



SHROUD LEVER 44A1 & 2

It has long been recognised that all-round performance can be improved by adjusting shroud tension to suit windward and leeward sailing conditions. Proctor shroud levers make this possible. The quadrant backplates provide seven different positions for adjustment in shroud tension. These levers are manufactured almost entirely in silver anodised aluminium alloy and are extremely neat, weighing only 6½ oz. (117 gms).