



Gaff Saddles

In the good old days when gaffs lay at an angle of 45 or so degrees to the mast, the prime function of the gaff saddle or jaws was to accommodate the thrust of the gaff on the mast, and stop the thing falling off sideways. If you wanted to improve windward performance, you set a topsail. “Modern” gaffers tend to peak the gaff up higher but as you do so two things happen.

Firstly, there is an increasing twisting force which comes from the gaff falling off to leeward. Imagine a gaff set at right angles to the mast. There would be no twisting moment - it would merely swivel around the mast - but a force along the gaff. At the other extreme is a gunter yard, set parallel to the mast. There is no axial force, but lots of twisting. Wooden jaws tend to work less well on a high-peaked gaff since they can't cope well with the twisting force trying to open the jaws. Also the traditional shape of gaff saddle can try to wind its way off the mast if used for a high-peaked gaff, so causing at least as many problems as it is solving. The second outcome of higher peak angles is that you very quickly run out of space to fit the throat halyard loop or stirrup. Possible solutions are to fit a halyard attachment to the back of the saddle (not ideal), or to use a wire stop to move the lower throat block up the mast until there is room for it.

This is why we have ended up with a family of gaff and gunter saddles based on three shapes of saddle, and various methods of halyard attachment, as shown in the picture opposite. To piece together a gaff saddle assembly, you need 3 components, namely the saddle itself, the gaff end fitting and the pieces which connect them. Follow the steps outlined below.

Step 1. Choose your material - bronze or galvanised steel

Bronze

Step 2. Select the gaff end fitting (page 6) . Is the gaff circular?

No	Contact us to sort out your requirements
Yes	Select from RG-1027 to RG-1033 based on the outside width given.

Step 3. Select the connecting pieces (Table 3 opposite). What is the peak angle?

Less than 30 ⁰	Select from RG-1840 to RG-1845 to match outside width of gaff end fitting
More than 30 ⁰	Select from RG-1850 to RG-1855 to match outside width of gaff end fitting

Step 4. Select the saddle (Table 1 opposite). What is the peak angle?

More than 40 ⁰	Select from RG-1720 to RG-1727 based on the mast diameter
From 40 ⁰ to 10 ⁰	Select from RG-1740 to RG-1747 based on the mast diameter
Less than 10 ⁰	Select from RG-1760 to RG-1763 based on the mast diameter

Galvanised

Step 2. Select the gaff end fitting (page 6) . Is the gaff circular?

No	Select from RG-1800 to RG-1809 based on the inside width given
Yes	Select from RG-1800 to RG-1809 based on the outside width given.

Step 3. Select the connecting pieces (Table 2 opposite). What is the peak angle?

Less than 30 ⁰	Select from RG-1790 to RG-1795 to match outside width of gaff end fitting.
More than 30 ⁰	Select from RG-1790 to RG-1795 to match outside width of gaff end fitting.

Step 4. Select the saddle (Table 1). What is the peak angle?

More than 40 ⁰	Select from RG-1720 to RG-1727 based on the mast diameter
From 40 ⁰ to 10 ⁰	Select from RG-1740 to RG-1747 based on the mast diameter
Less than 10 ⁰	Select from RG-1760 to RG-1763 based on the mast diameter

Step 5. (Any material) Contact us if you get stuck!



Table 1 - Gaff Saddles

Peak Angle	more than 40°	10 to 40°	less than 10°
Mast Dia	“Conventional”	“High Peak”	Gunter
75	RG-1720	RG-1740	RG-1760
90	RG-1721	RG-1741	RG-1761
105	RG-1722	RG-1742	RG-1762
120	RG-1723	RG-1743	RG-1763
140	RG-1724	RG-1744	
160	RG-1725	RG-1745	
180	RG-1726	RG-1746	
200	RG-1727	RG-1747	

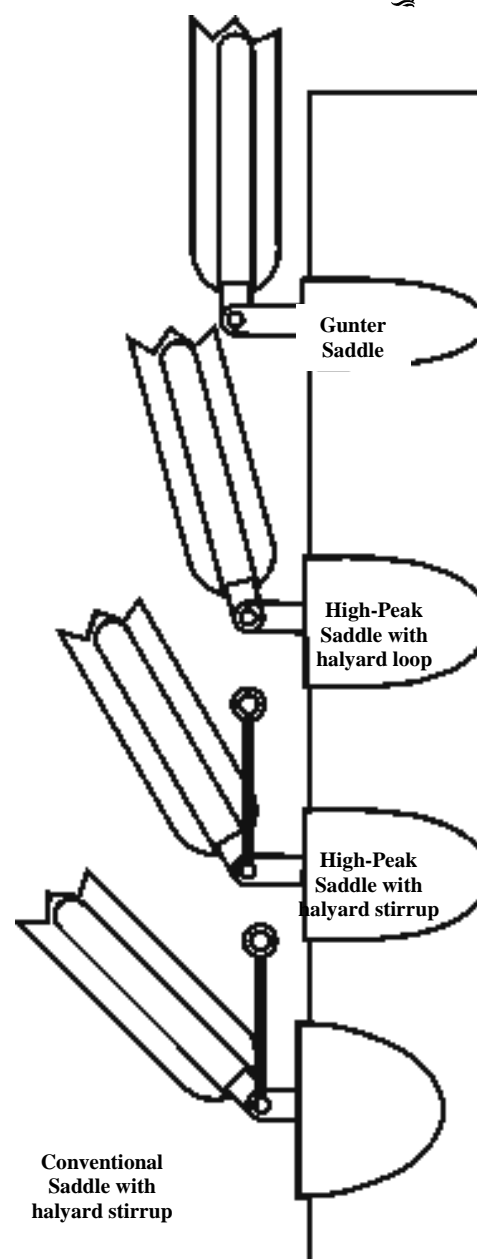
Saddles are made from galvanised steel; the price includes leathering. Saddles can also be made in bronze, and/or modified to fit existing fittings.

Table 2 - Halyard/Sail Attachments - galvanised

Peak Angle	more than 30°	less than 30°
Gaff Dia		
45	RG-1780	RG-1790
55	RG-1781	RG-1791
65	RG-1782	RG-1792
75	RG-1783	RG-1793
85	RG-1784	RG-1794
100	RG-1785	RG-1795

Table 3 - Halyard/Sail Attachments - bronze

Peak Angle	more than 30°	less than 30°
Gaff Dia		
1¾”	RG-1850	RG-1840
2”	RG-1851	RG-1841
2½”	RG-1852	RG-1842
3”	RG-1853	RG-1843
3½”	RG-1854	RG-1844
4”	RG-1855	RG-1845





Spar End Fittings

As well as those illustrated in the diagrams below, we can also make up special castings or fabrications here to suit your requirements.

Spar End Fittings

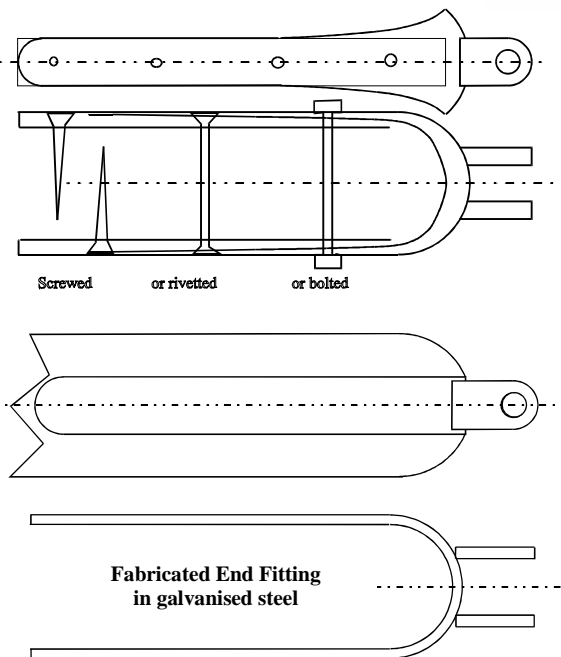
Spar End Fittings - bronze



Cast Bronze End Fitting

Width - outside		Width - inside		Length		Part No
inch	mm	mm	inch	mm	inch	
1 ³ / ₄	44	30	1 ³ / ₈	156	6	RG-1027
2	52	37	1 ¹ / ₂	222	8 ³ / ₄	RG-1028
2 ¹ / ₂	62	47	1 ³ / ₄	250	10	RG-1029
3	75	61	2 ¹ / ₂	240	9 ¹ / ₂	RG-1030
3 ¹ / ₂	89	73	2 ⁷ / ₈	280	11	RG-1033
4	102	81	3 ¹ / ₄	320	12 ¹ / ₂	RG-1031
5	125	100	4	400	15 ³ / ₄	RG-1032

Spar End Fittings - galvanised



Width - outside		Width - inside		Length		Part No
mm	inch	mm	inch	mm	inch	
45	1 ³ / ₄ "	39	1 ¹ / ₂ "	135	5 ³ / ₈ "	RG-1800
55	2 ¹ / ₈ "	49	1 ⁷ / ₈ "	165	6 ¹ / ₂ "	RG-1801
65	2 ¹ / ₂ "	55	2 ¹ / ₈ "	195	7 ³ / ₄ "	RG-1802
75	3"	65	2 ¹ / ₂ "	225	9"	RG-1803
85	3 ³ / ₈ "	73	2 ⁷ / ₈ "	255	10"	RG-1804
100	4"	88	3 ¹ / ₂ "	300	11 ³ / ₄ "	RG-1805
115	4 ¹ / ₂ "	99	4"	345	13 ⁵ / ₈ "	RG-1806
130	5 ¹ / ₈ "	114	4 ¹ / ₂ "	390	15 ³ / ₈ "	RG-1807
145	5 ³ / ₄ "	125	5"	435	17 ¹ / ₈ "	RG-1808
160	6 ³ / ₈ "	140	5 ⁵ / ₈ "	480	19"	RG-1809

Piecing together a gooseneck assembly

You need at least 2 components, namely the mastband assembly and the boom end fitting. You may also want a reefing hook assembly if you are envisaging slab reefing.

Choose your material

Bronze

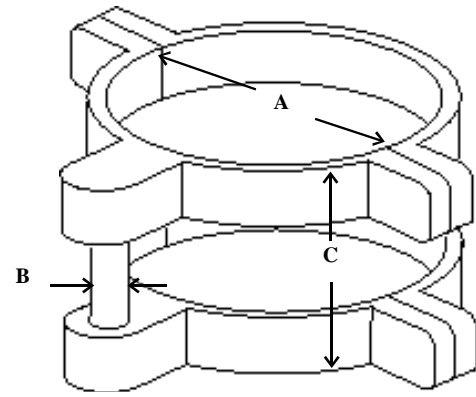
Galvanised

	Mast not circular?	Mast circular?	Mast not circular?	Mast circular?
Mastband assembly. (page 7)	Contact us to sort out your requirements	Select from RG-0026 to RG-0043 based on the mast diameter	Contact us to sort out your requirements	Select from RG-1940 to RG-1948 based on the mast diameter
Boom end fitting. (this page)	Contact us to sort out your requirements	Select from RG-1027 to RG-1033 based on the outside diameter given	Select from RG-1800 to RG-1809 based on the inside dimension given.	Select from RG-1800 to RG-1809 based on the outside dimension given
(Optional) Add a tack & hook fitting (page 8)	Select from RG-1830 to RG-1836 based on the outside dimension of the boom end.		Select from RG-1820 to RG-1829 based on the outside dimension of the boom end.	



Standard mast ring assemblies - bronze

Mast Diameter (A)		Pin Size	Height (C)	Part No
mm	inch	inch	mm	
64	2½	⅜	55	RG-0026
75	3	⅜	55	RG-0027
82	3¼	⅜	60	RG-0028
88	3½	½	60	RG-0029
102	4	½	75	RG-0030
114	4½	½	80	RG-0031
127	5	½	90	RG-0032
140	5½	⅝	92	RG-0033
152	6	⅝	95	RG-0034
165	6½	⅝	100	RG-0035
178	7	¾	110	RG-0036
191	7½	¾	120	RG-0037
204	8	1"	125	RG-0038
254	10	1"	145	RG-0042
270	10⅝	1⅛	150	RG-0043



Standard Assembly

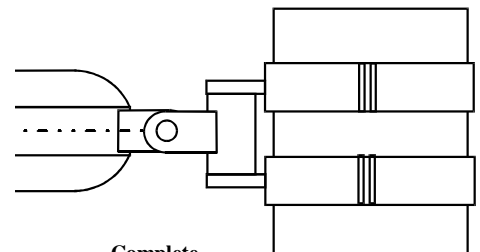


Complete Assembly - Bronze

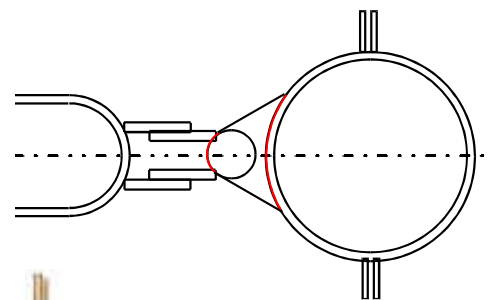
Note that the 2½" assembly is two half bands screwed to the mast .

Standard mast ring assemblies - galvanised

Mast Diameter	Pin Size	Total Height	Part No
mm	mm	mm	
75	10	60	RG-1940
90	12	80	RG-1941
105	12	90	RG-1942
120	16	96	RG-1943
140	16	115	RG-1944
160	20	130	RG-1945
180	20	150	RG-1946
200	24	165	RG-1947
220	24	175	RG-1948



Complete Assembly - Galvanised



It is usually possible to incorporate halyard cleats onto the bands, but we will need to know the outer diameter of the mast hoops - if fitted - so that the lines don't foul the hoops.

Dinghy Goosenecks

We also offer a brass "spike" type gooseneck mounted on a 2½" dia half band, or on a slider and 12" of track, suitable for dinghies of up to about 14 ft (4m). The part numbers are RG-0024 and RG-0025.



Dinghy Goosenecks



Spar Fittings



Tack & Hook Fitting

Tack & Hook fittings are designed to fit into a gooseneck assembly. The cross bolt of the gooseneck passes through the lower holes in the plates. The tack of the sail fits between the upper holes of the plates, and, when reefing, the luff cringle(s) hook over the side hooks. On some craft an alternative is to make one hook into a loop, with short reef pennants made up permanently there. On reefing these are passed through the sail cringle onto the hook on the other side of the fitting.

Tack/Hook fittings

Boom out-side width	Bronze		Galvanised	
	Part No	Part No	Part No	Part No
1 3/4"	RG-1830		45 mm	RG-1820
2"	RG-1831		55 mm	RG-1821
2 1/2"	RG-1832		65 mm	RG-1822
3"	RG-1833		75 mm	RG-1823
3 1/2"	RG-1834		85 mm	RG-1824
4"	RG-1835		100 mm	RG-1825
5"	RG-1836		115 mm	RG-1826
			130 mm	RG-1827
			145 mm	RG-1828
			160 mm	RG-1829

Mastbands - light - bronze and galvanised



Off the shelf mastbands with 2 or 4 eyes. The gunmetal ones are OK up to about 1 ton - roughly 4mm 1x19 stainless wire, and the galvanised ones about 1.5 tons. Be warned that on any craft over about 20 ft, these are unlikely to be strong enough as cranse irons.

I.D.	Gunmetal						
	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	
2 eye	RG-0136	RG-0120	RG-0121	RG-0122	RG-0123	RG-0124	
4 eye	RG-0139	RG-0130	RG-0131	RG-0132	RG-0133	RG-0134	
Galvanised							
2 eye		RG-0115	RG-0116	RG-0117	RG-0119	RG-0118	
4 eye		RG-0125	RG-0126	RG-0127	RG-0128	RG-0129	



Mastbands - heavy - bronze

Heavier duty mastbands in bronze. These incorporate heavier lugs, drilled for shackles, a broader step to fit onto masts and spars better without slipping. Depending on envisaged loading, these may safely be used as cranse irons and rigging attachments on small craft

I.D	1 1/2"	1 3/4"	2"	2 1/2"	3"	3 1/2"
2 eye	RG-1150	RG-1151	RG-1152	RG-1153	RG-1154	RG-1155
4 eye	RG-1160	RG-1161	RG-1162	RG-1163	RG-1164	RG-1165
O.D. (main ring)	1 7/8"	2 1/8"	2 1/2"	3"	3 5/8"	4 1/8"
Depth of ring	1"	1"	1 1/4"	1 1/4"	1 1/2"	1 1/2"
Hole in lug	6.5 mm	6.5 mm	8.5 mm	8.5 mm	10.5 mm	10.5 mm
Break Load (ka)	1800	1800	3400	3400	4100	4100

M_z Cranse Irons - bronze



Inner Diameter	65 mm (2 1/2")	75 mm (3")	90 mm (3 1/2")
Outer Diameter	85 mm (3 3/8")	95 mm (3 3/4")	115 mm (4 1/2")
Length	65 mm (2 1/2")	75 mm (3")	90 mm (3 1/2")
Holes in lugs	8 mm (5/16")	10mm (3/8")	13 mm (1/2")
Break load (kg)	4000	5700	10200
Part number	RG-0002	RG-0004	RG-0006

For different sizes or configurations, please ask for a quote.



Bobstay fittings - bronze

Part Number	RG-0090		RG-0092		RG-0094	
	mm	inch	mm	inch	mm	inch
Length overall	137	5 1/2"	161	6 1/2"	190	7 1/2"
Width of flat	30	1 1/4"	40	1 1/2"	45	1 3/4"
Main body depth	16	5/8"	19	3/4"	22	7/8"
Lug Thickness	8	5/16"	11	7/16"	15	5/8"
Lug Hole	10	3/8"	13	1/2"	16	5/8"
Fasteners	2 x 3/8" or M10		2 x 1/2" or M12		2 x 5/8" or 2 x M16	
Break load (kg)	4800		8800		13200	



The idea is that you thread these in from the back to give a neat strong fitting

Mast hoops

We keep being asked whether these can be supplied without the rivets, so they can be fitted to a mast in situ. It must be said that winding a mast hoop onto a mast is likely to be a triumph of hope over experience, but if that is what you want to do...

The dimension quoted is the inner diameter, so you need 1 or 2 inches clearance.

	Dia.	4"	4 1/2"	5"	6"	7"	8"
Ash				RG-0670	RG-0671	RG-0672	RG-0673
Galv - unleathered	RG-1670	RG-1671	RG-1672	RG-1673	RG-1674	RG-1675	
Galv - leathered	RG-1690	RG-1691	RG-1692	RG-1693	RG-1694	RG-1695	






	Dia.	9"	10"	12"	14"	16"	18"
Ash	RG-0681	RG-0674	RG-0675	RG-0676	RG-0678	RG-0679	
Galv - unleathered		RG-1676	RG-1677	RG-1678	RG-1679	RG-1680	
Galv - leathered		RG-1696	RG-1697	RG-1698	RG-1699	RG-1700	



Galvanised mast hoops are more expensive in the first instance than wooden ones, but they tend to last a lot longer, and you don't need to carry spares. They can be served or covered with leather

Sail track & slides - brass

Useful not only for mainmast track, but also for clew outhauls, and hatch slides (if you use external track sliding in internal track).

Size	Internal		
	Track	Slide - light pattern	Slide - heavy pattern
5/8"	 RG-0018	 RG-0012	 RG-0007
3/4"	RG-0020	RG-0013	RG-0008
1"	RG-0022	-	RG-0009
Size	External		
	Track	Slide	
5/8"	 RG-0019	 RG-0011	
3/4"	RG-0021	RG-0010	



Gunter & Gaff Jaws



As mentioned, I am unimpressed with the “stick two bits of wood on the side of the gaff/gunter yard” approach when it comes to locating it. This is mainly because we see too many of them broken. So here are some bronze ones (please specify the dimensions of the yard when ordering)

Mast Diameter	Gunter Jaws Leathered	Gaff Jaws Leathered
65	RG-2005	RG-2015
75	RG-2006	RG-2016
85	RG-2007	RG-2017

Travellers



Mast traveller

The requirements which mast and bowsprit travellers fulfil are very different. A mast traveller should not jam during hoisting and lowering of the sail. One easy way to achieve this is to make them in one piece, such that when tension is on the halyard, the ring is held in a horizontal plane, or at least at right angles to the line of the halyard. The ring itself does not have to be that strong, since it is the halyard that is taking most of the load when sailing.



Bowsprit traveller with hook

A bowsprit traveller, on the other hand, must allow the attachment for the sail to articulate freely for it to work. Besides that, the ring needs to be much stronger to take the loads of the foresail. Usual options for sail attachment are a hook for the sail tack or plates to attach a furling gear. Bolting the furling gear into plates reduces the tendency for the furling line to snarl up.



Bowsprit traveller with plates

It is best if you contact us for a discussion of your requirements, and/or a quote. We make travellers in bronze or galvanised steel, “standard” offerings being listed below. Please note that in all cases the traveller is dimensioned for a spar diameter - so a “70mm” mast traveller has a ring of 100mm id, for example.

Mast Travellers - Bronze

Mast	Unleathered	Leathered
70	RG-1100	RG-1110
80	RG-1101	RG-1111
90	RG-1102	RG-1112
100	RG-1103	RG-1113
110	RG-1104	RG-1114

Bowsprit Travellers - Galvanised

Bowsprit Diameter (mm)	with plates	with hook
50	RG-1900	RG-1920
60	RG-1901	RG-1921
70	RG-1902	RG-1922
80	RG-1903	RG-1923
95	RG-1904	RG-1924
110	RG-1905	RG-1925
125	RG-1906	RG-1926
140	RG-1907	RG-1927
160	RG-1908	RG-1928
180	RG-1909	RG-1929

The price includes leathering. Bowsprit travellers can also be made in bronze . Price on application



Mast & Spar Fittings

The possibilities here are endless, so all we can do is give a feel for the various pieces we can and/or have made: (you can see examples on the website under “Custom Work” in the products section.)



- mastbands - incorporating spreader roots as appropriate.
- masthead fittings - with aerial sockets, sheave boxes etc as required.
- boom bails - with attachments for topping lifts, reefing lines and sheets as necessary.
- tabernacles
- stemhead fittings
- mainsail clew horses
-and anything else you can think of

On to sheet horses which we do in bronze or galvanised steel. They are all different, so if you could specify the following, we can quote a price:

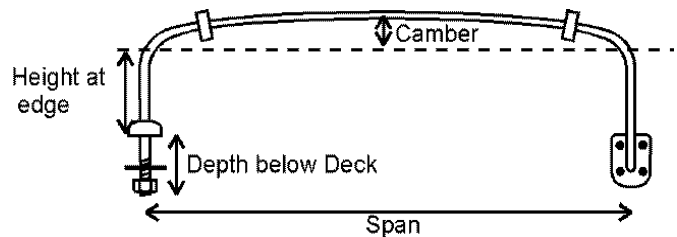
- The span (centre to centre)
- Height at edge from the deck
- Camber
- Depth below deck and amount of thread required, or plate size
- Sail area, so we can size the material required

Finally, a neat way to connect the block is to use a “horse slider”, which is a small saddle running along the horse. It only really works for a bronze horse, galvanised ones can stick.

Horses & Pinrails

Horse Travellers - Bronze

Horse	Part No
1/2"	RG-0155
5/8"	RG-0156
3/4"	RG-0157
7/8"	RG-0158



Fabrications & Specials

In the area of yacht and boat fittings, we can cope with short production runs - minimum one! In order to do so, we have gathered about us a range of skills in working metal and can provide the following services, most of which we do in-house:

- **patternmaking** - we usually work from sketches, but can copy an existing fitting if required. You are welcome to provide your own patterns, but please do discuss the job with us first.
- **casting** - up to about 25kg and 2ft x 2ft x 1ft (60cm x 60cm x 30cm) overall dimensions is easily do-able. We will need to discuss the most suitable material to use, and whether you wish the castings to be supplied “as cast” or polished.
- **fabrication and welding** - we work in bronze, brass (for interior fittings), and, of course, mild steel.
- **machining** - it is only fair to point out that our capability here tends toward “shipwrighting” rather than engineering. For example, our lathe is just about to celebrate its 50th birthday! So we are at the +/- 10 thou limit rather than +/- 1 thou, but that suffices for most fittings.
- **keelbolts** - we can thread up to 1”/24 mm using our capstan lathe.