

Checking and quality control



1.5m Navigation buoys

## Norfloat - the professional's choice

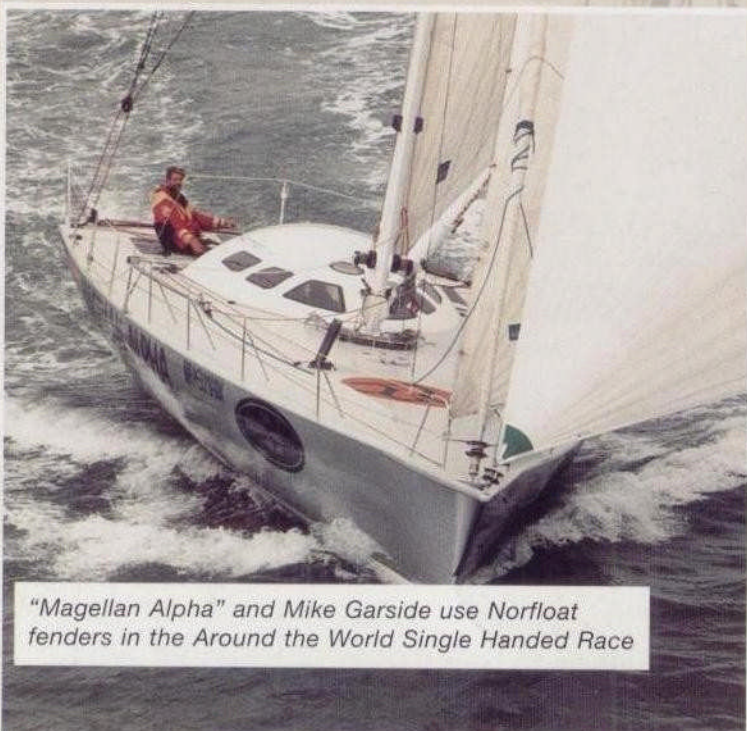
Norfloat UK is a wholly owned British Company with its origins in Norway. It is one of the original manufacturers of inflatable buoys and fenders, and the name has been known world-wide for nearly forty years.

Today the company has the largest range of buoys and fenders of any manufacturer world-wide and has been awarded ISO 9001 certification by BVQI.

Recent significant expansion has included new machinery that enables us to produce one piece mouldings up to 1.8m diameter. Derwent Marine, an important UK buoy and fender manufacturer is now part of Norfloat, and their production has been transferred to Norfloat's large modern factory in the South West of England.

Norfloat maintains a total commitment to quality and customer service, with an ongoing development programme for new products. The company recognises the need to back up its abilities with knowledgeable staff, who are continually undergoing training and personal development programmes. The company recognises its international role with over 70% of production being exported, and the sales staff can correspond and converse in over 10 major languages.

Norfloat also has a prominent position within the world's manufacturers of aids to navigation, the range of products including buoys, towers and lanterns are described in a separate brochure which is available on request. The Company is a member of IALA.

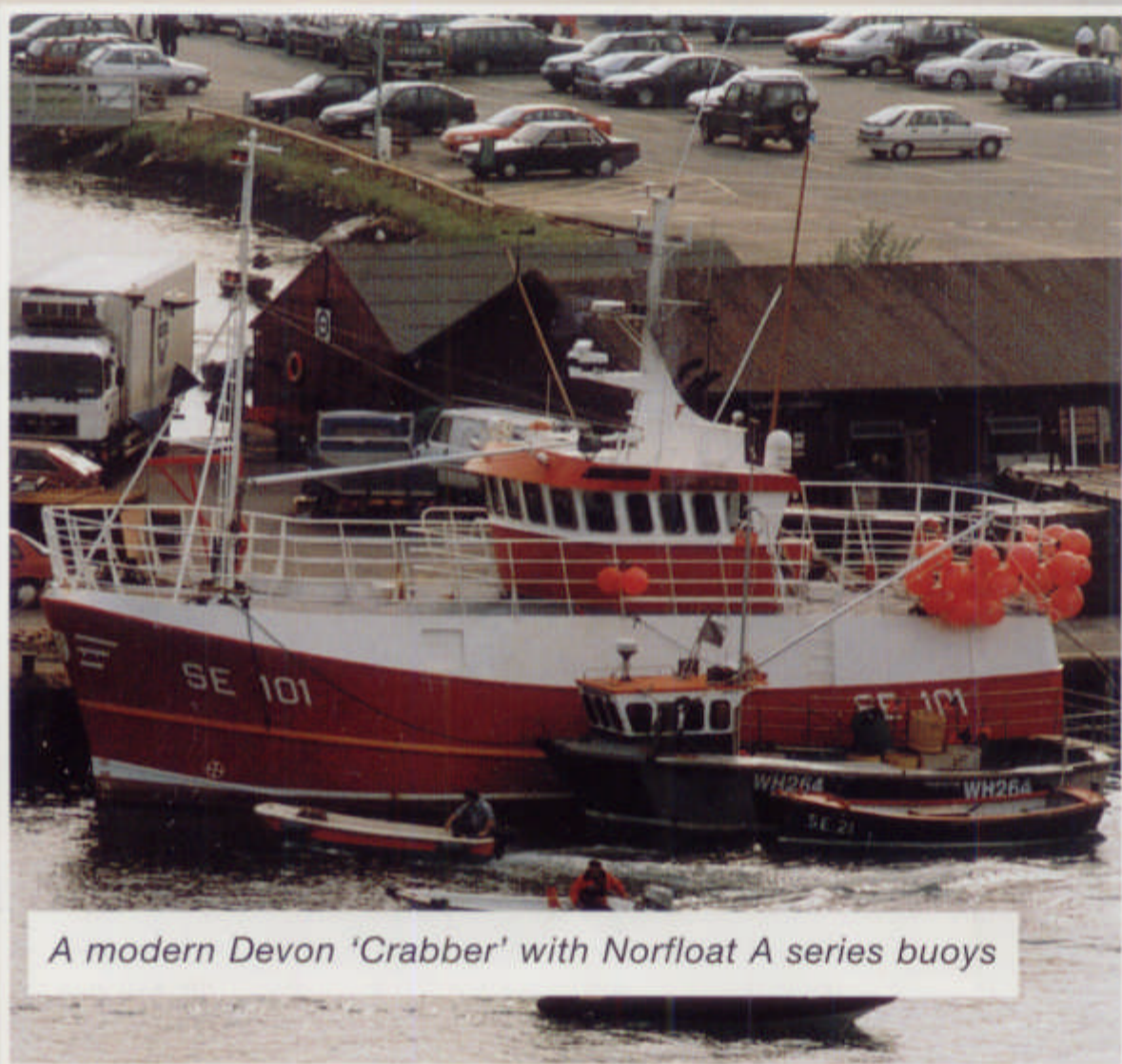


"Magellan Alpha" and Mike Garside use Norfloat fenders in the Around the World Single Handed Race

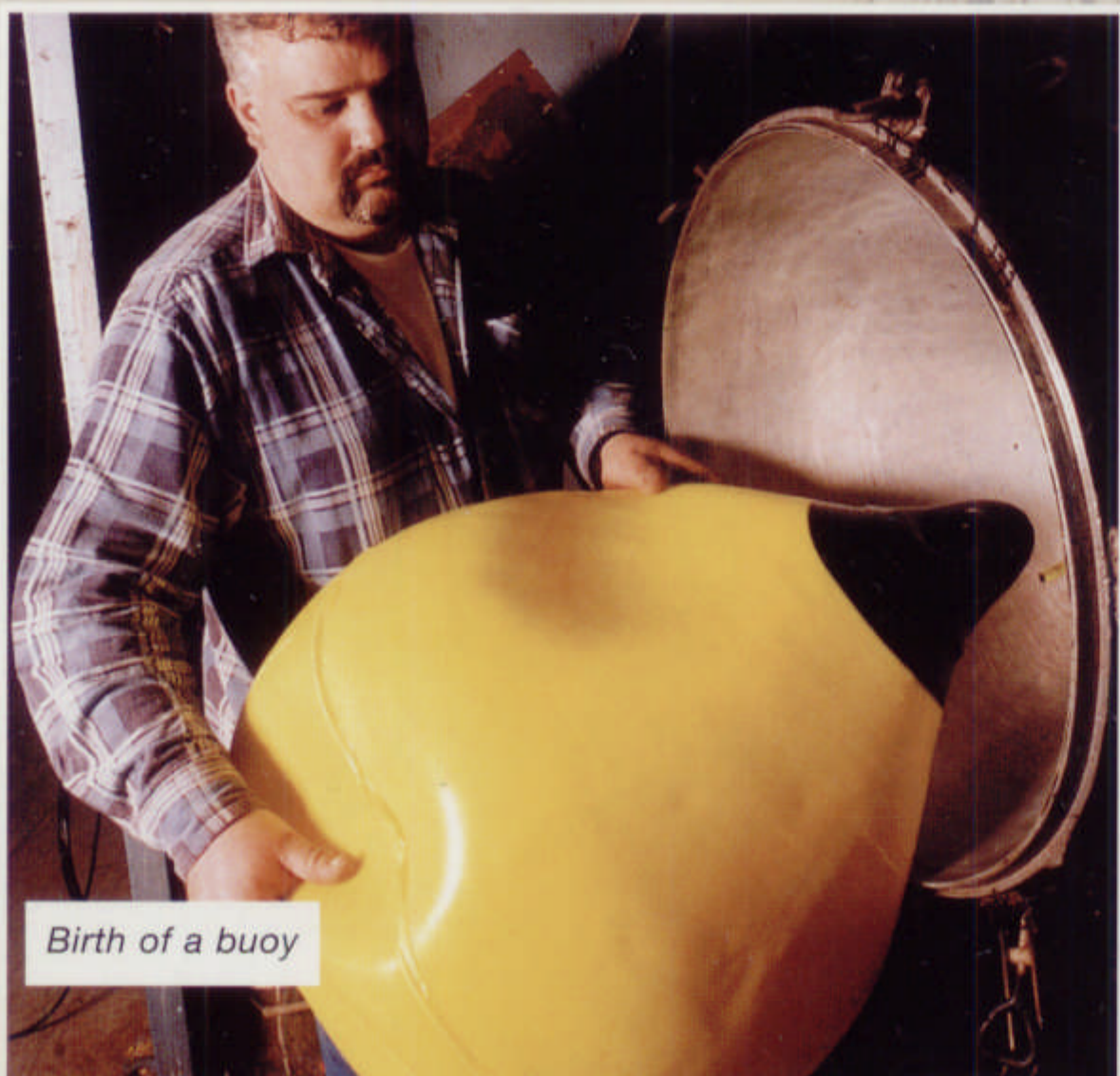




Norfloat A1 Buoys ready for work



A modern Devon 'Crabber' with Norfloat A series buoys



Birth of a buoy

## inflatable marker buoys/ fenders

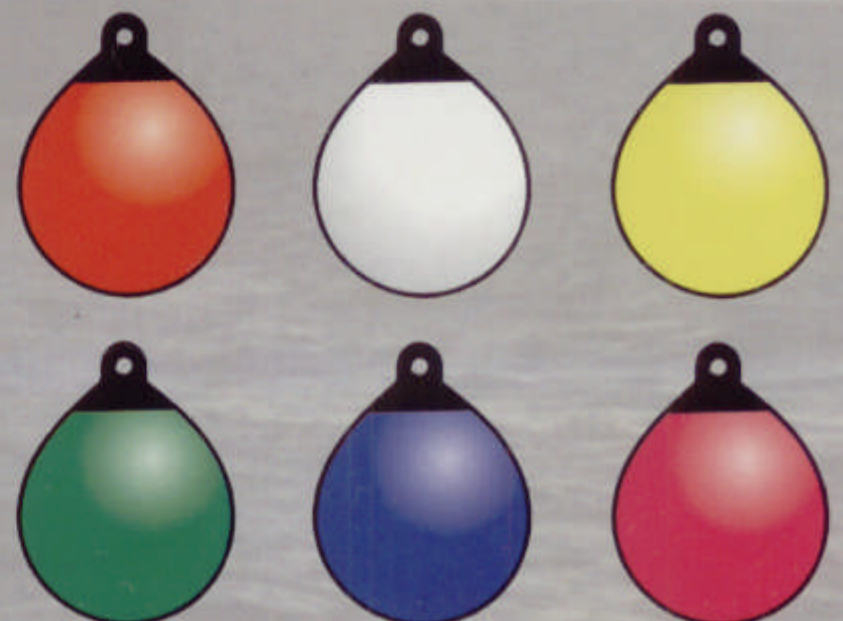
Norfloat's NB and A series of inflatable buoys are available in six standard colours and 13 sizes. They are widely used as fenders for yachts and work boats throughout the world. The A series has been specifically developed for the fishing industry. The main feature of the buoy is its heavy duty rope eye which is designed not to chafe ropes, and is of a size to suite shackles without modification. The Norfloat valve is simple and effective and allows easy inflation and deflation. The valve is sealed with a plastic screw, which has a coarse thread that is impossible to cross thread or over-tighten.

A series of 'super low drag' buoys are currently under test and development. Early indications are that the performance of these buoys is superior to any buoy now available and will be in production from early 2000.

Type	Circ.		Diameter		Buoyancy kg
	in	cm	in	cm	
NBD00*	18	47	7	18	1.5
NBD0*	28	72	9	23	7
NB1	35	89	11.1	28	10
A1	40	102	12.7	32	16
NB2	45	114	14.3	36	23
A2	50	127	15.9	40	33
NB3	55	140	17.5	44	45
A3	60	152	19.1	49	63
NB4	65	165	20.7	53	75
A4	75	190	23.9	61	117
NB5	85	216	27.0	68	160
NB6	100	254	31.8	81	260
NB7	120	305	38.2	97	465

\* These buoys do not have the heavy duty rope eye.

Standard colours:



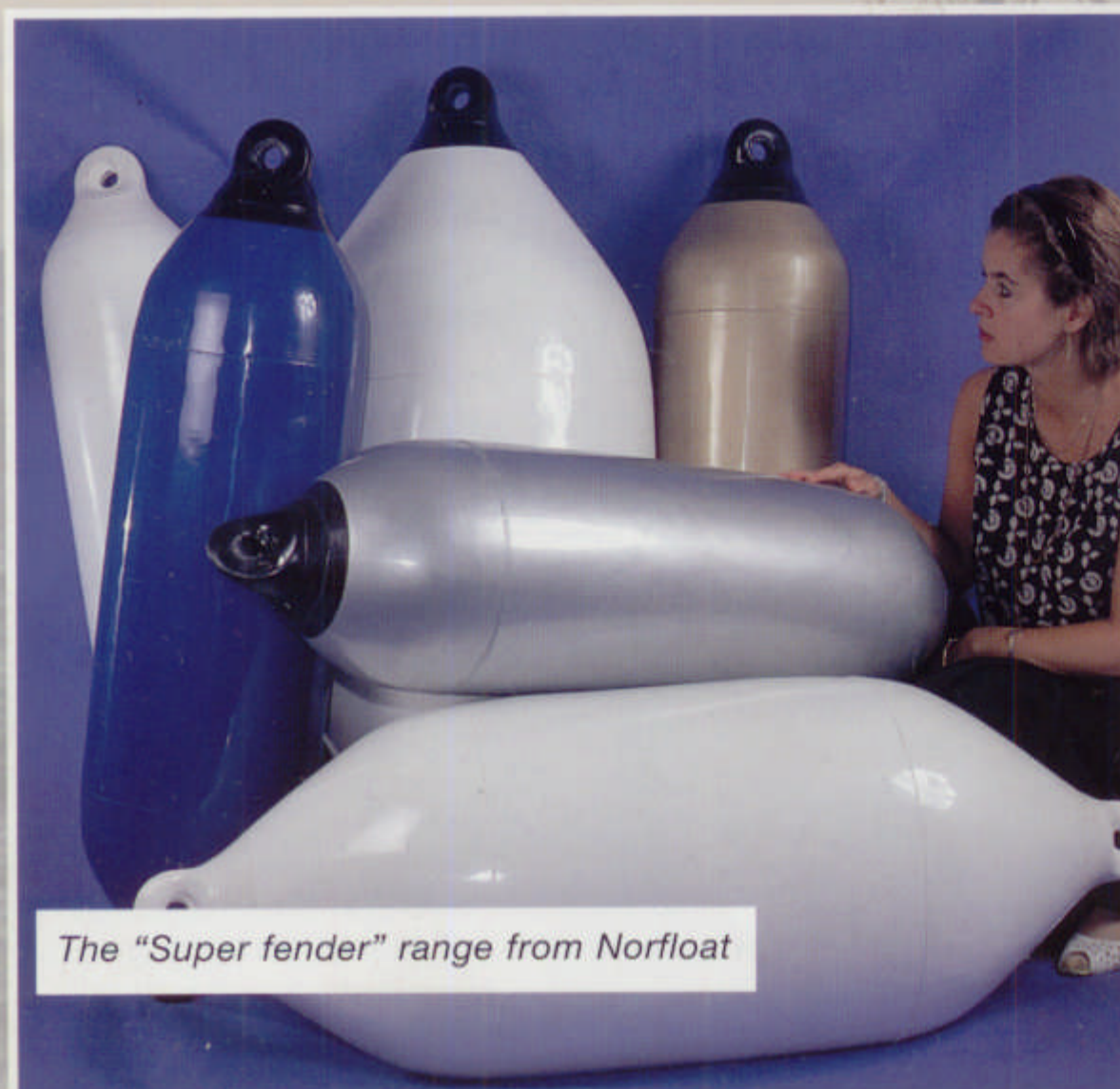




Norfloat fenders in use with the R.N.L.I.



Unloading fenders from our largest machine



The "Super fender" range from Norfloat

## inflatable fenders

The Norfloat 'professional' fender is one of the toughest fenders available on the world market. Moulded in U.V. resistant PVC it is used by Pilot boats, Luxury Yachts, Hire Fleets, Navies and Life Boats internationally. All fenders use the Norfloat heavy duty rope eye and easy to use valve.

Rope eyes will take either rope or shackles and are subject to the Norfloat warranty attached to each fender. Rope eyes are available in black or white.

All fenders should be inflated until they are just a bit harder than 'squashy' to give maximum absorption to impact.

For detailed description of correct usage see 'The Norfloat User's Guide' available on request.

Boat names, logos etc., can be moulded in, giving corporate identity, easy identification and the 'finishing touch' for the proud owner. Details on request.

Type	Length		Diameter		Eye Dia.	
	in	cm	in	cm	in	cm
IF20x5	22	56	5.5	14	0.8	2.0
IF23x6	25	63	6.5	16	0.8	2.0
IF22x8	24	61	8.5	21	1.1	2.8
IFS22x8*	22	55	8.5	21	1.1	2.8
IF27x8	30	76	8.5	21	1.1	2.8
IFS27x8*	28	70	8.5	21	1.1	2.8
IF27x10	29	73	10.5	27	1.1	2.8
IF35x9	37	94	9.5	25	1.1	2.8
IF35x12	36	91	12.5	32	1.1	2.8
IF45x9	45	115	9	23	1.1	2.8
IF45x12	45	116	12	31	1.1	2.8
IF50x15**	50	126	15.5	39	1.1	2.8
IF50x18	50	126	18	46	1.1	2.8
IF50x24	50	127	24	61	1.1	2.8

\* These fenders have one rope eye.

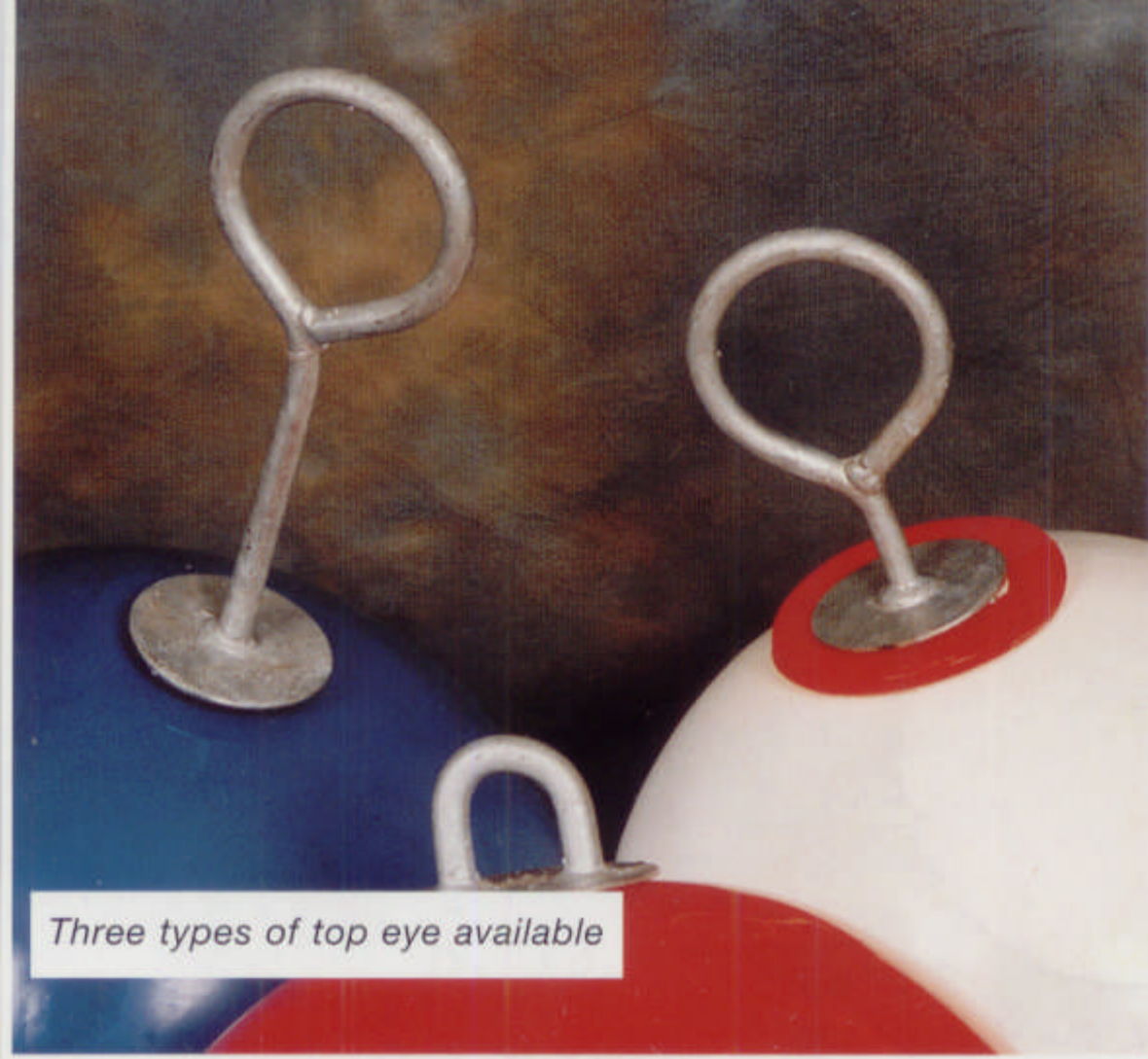
\*\* Available Spring 2000

Standard Colours:





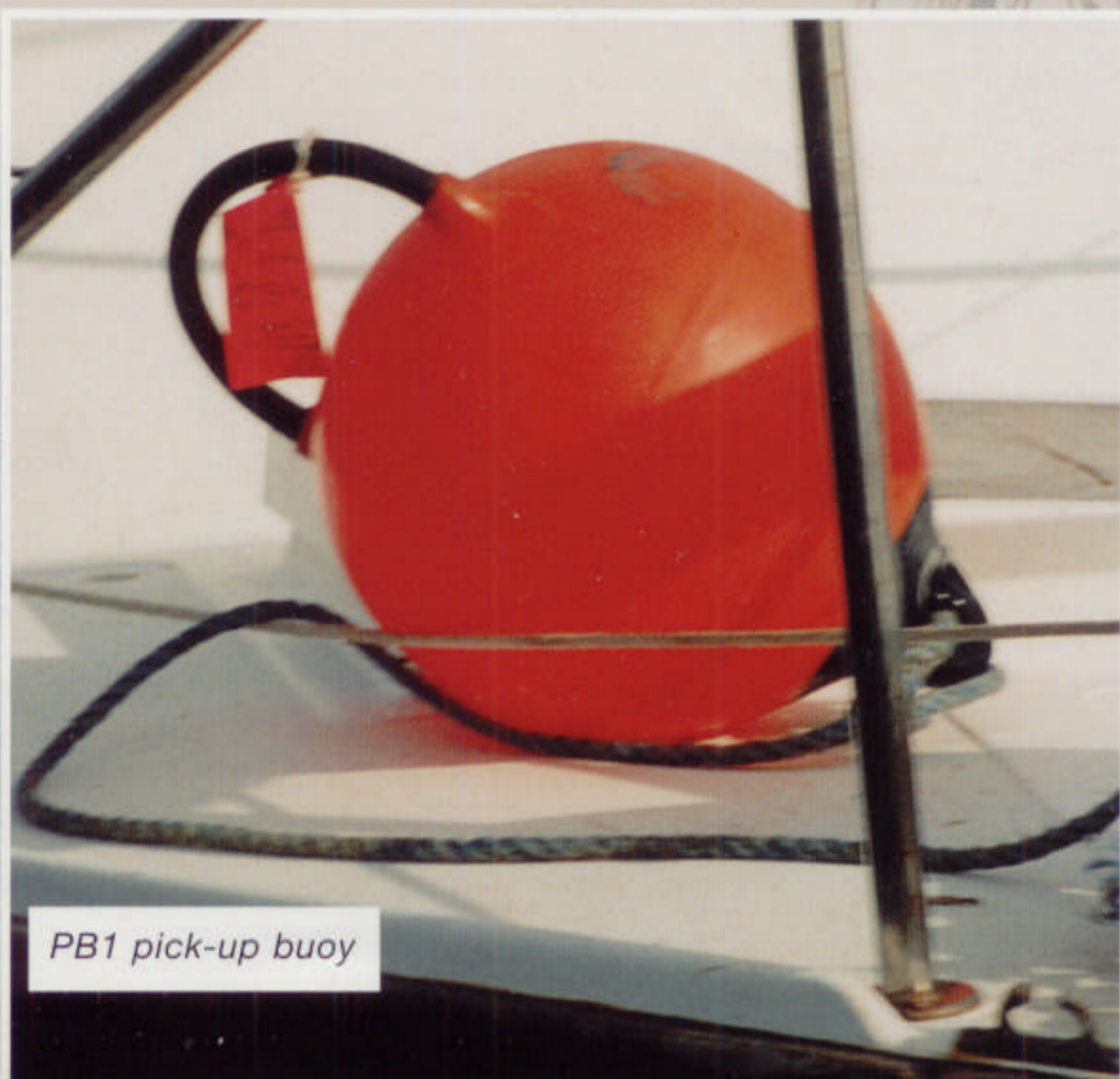
# inflatable rod mooring & pick-up buoys



Three types of top eye available



Heavy duty swivel, with special bushes to prevent wear



PB1 pick-up buoy

**Inflatable Mooring Buoys:** The RB series are rotationally moulded from U.V. resistant PVC, with a reinforced centre tube, which takes our heavy duty galvanised steelwork. The bottom swivel is fitted with plastic bushes to reduce wear, and secured by lock nuts. Larger sizes are also fitted with a thick PVC washer under the top plate to spread the load and prevent the top plate from damaging the buoy under extreme conditions.

Three standard top eyes are available, as shown in the photograph. The extended rod system is favoured in Scandinavian countries, the short eye is for use in areas where wind over tide conditions can cause contact with the boat hull.

Permanent lettering and numbering is available. This is moulded in during the production, to identify the mooring. Details on request.

**Pick-up Buoys:** The PB1, see illustration, has a reinforced handle, with the heavy duty Norfloat rope eye. The system is designed for easy use with the boat hook. Other types of pick-up buoys are available in the Derwent range.

**Note:** It is considered best practice to secure the pick-up buoy and riding chain to the swivel and not to the top ring of the mooring buoy or handle of a pick-up buoy.

Type	Circ.		Diameter		Buoyancy kg
	in	cm	in	cm	
PB1	35	89	11.1	28	10
RB30	30	76	10	25	8
RB40	40	102	12.7	32	12
RB50	50	127	15.9	40	28
RB60	60	152	19.1	48	52
RB75	75	190	23.9	61	105
RB100	105	266	33.4	85	305





Swinging moorings, Isles of Scilly

# foam filled mooring buoys

Norfloat's range of foam filled mooring buoys are moulded from medium density Polyethylene with U.V. stabilisers to give extended service. Two part polyurathene foam is injected into the buoy during production, which gives a considerable increase in strength, and the capacity to stay afloat even after sustaining severe damage. These buoys are normally supplied with a central galvanised tube for the riser chain to pass through. On sizes above MB700 solid swivels are fitted to take the riser and mooring chain.

Norfloat's foam filled buoys are used by the Ministry of Defence, and many Harbour Authorities in the UK and overseas.

An important feature of Norfloats foam filled range, is the option to 'build' these modular buoys to give increased buoyancy in situations where water depth and chain size are of vital consideration. Special mooring requirements will often need a 'design for the job', these buoys are an ideal basis for such applications.



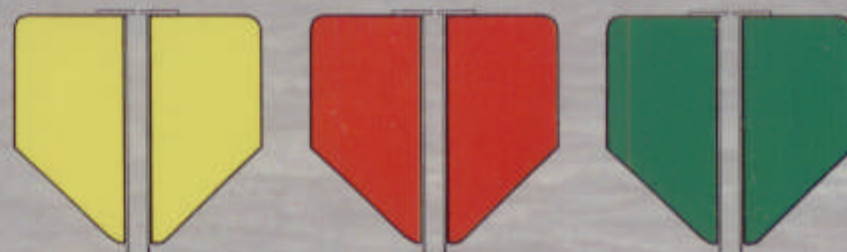
MB350 in a rip tide

Type	Buoyancy kg	Diameter cm	Weight kg	Chain size mm
MB60	60	60	10	13-19
MB120	120	60	17	13-19
MB180	180	60	27	13-19
MB240	240	60	36	13-19
MB350	350	100	45	16-28
MB700	700	100	100	16-28
MB800	800	125	160*	19-32
MB1200	1200	150	200*	19-32
MB1800	1800	180	250*	28-38
MB2700	2700	200	500*	28-38

\*Approx. weight depending on build spec.

Buoys of 2.5m dia. In steel or MDPE with buoyancy up to 10 tonnes are also available to special order.

Standard Colours:



Grey, Black and White to order

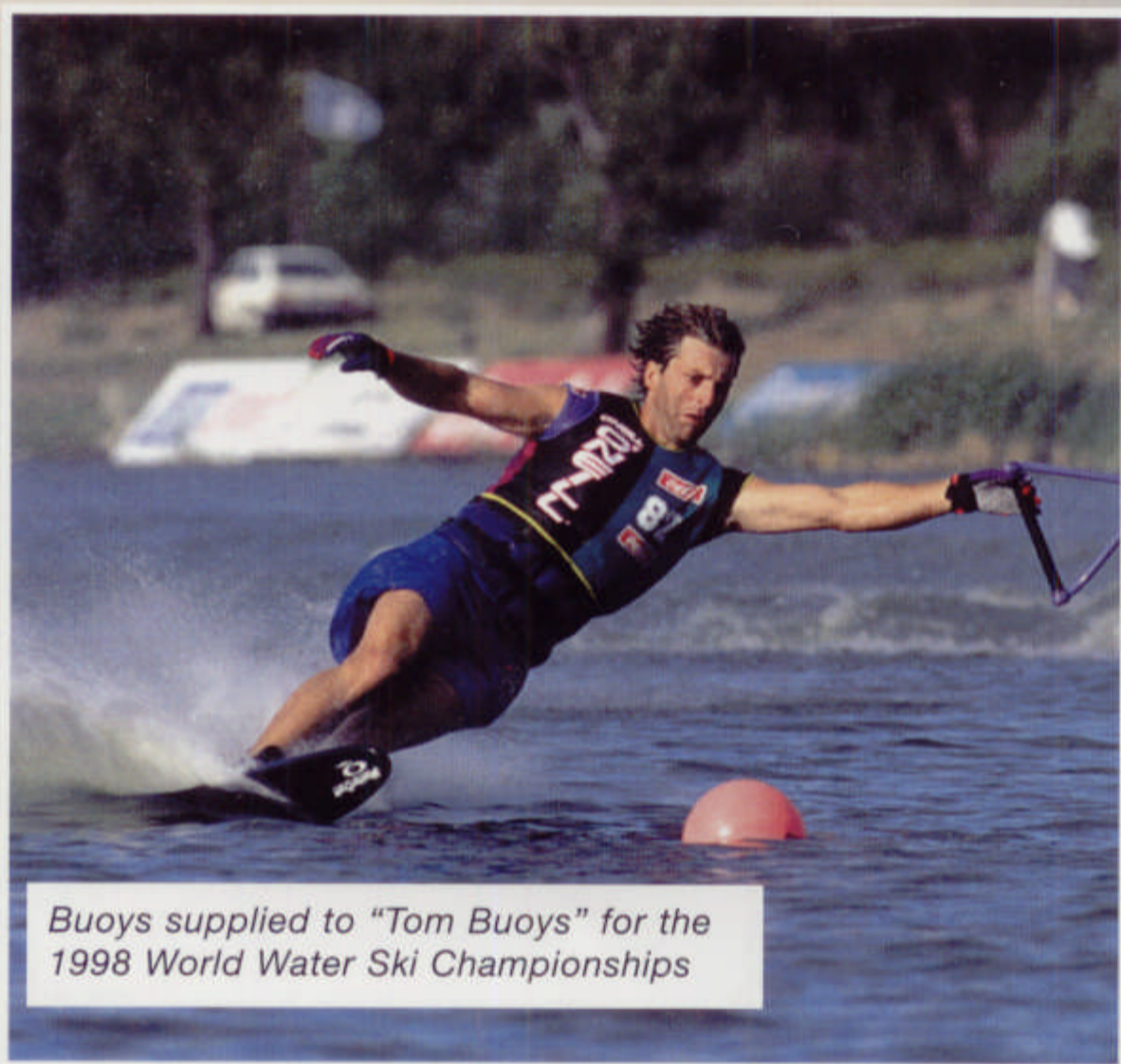


High density harbour moorings in Spain using MB120 buoys

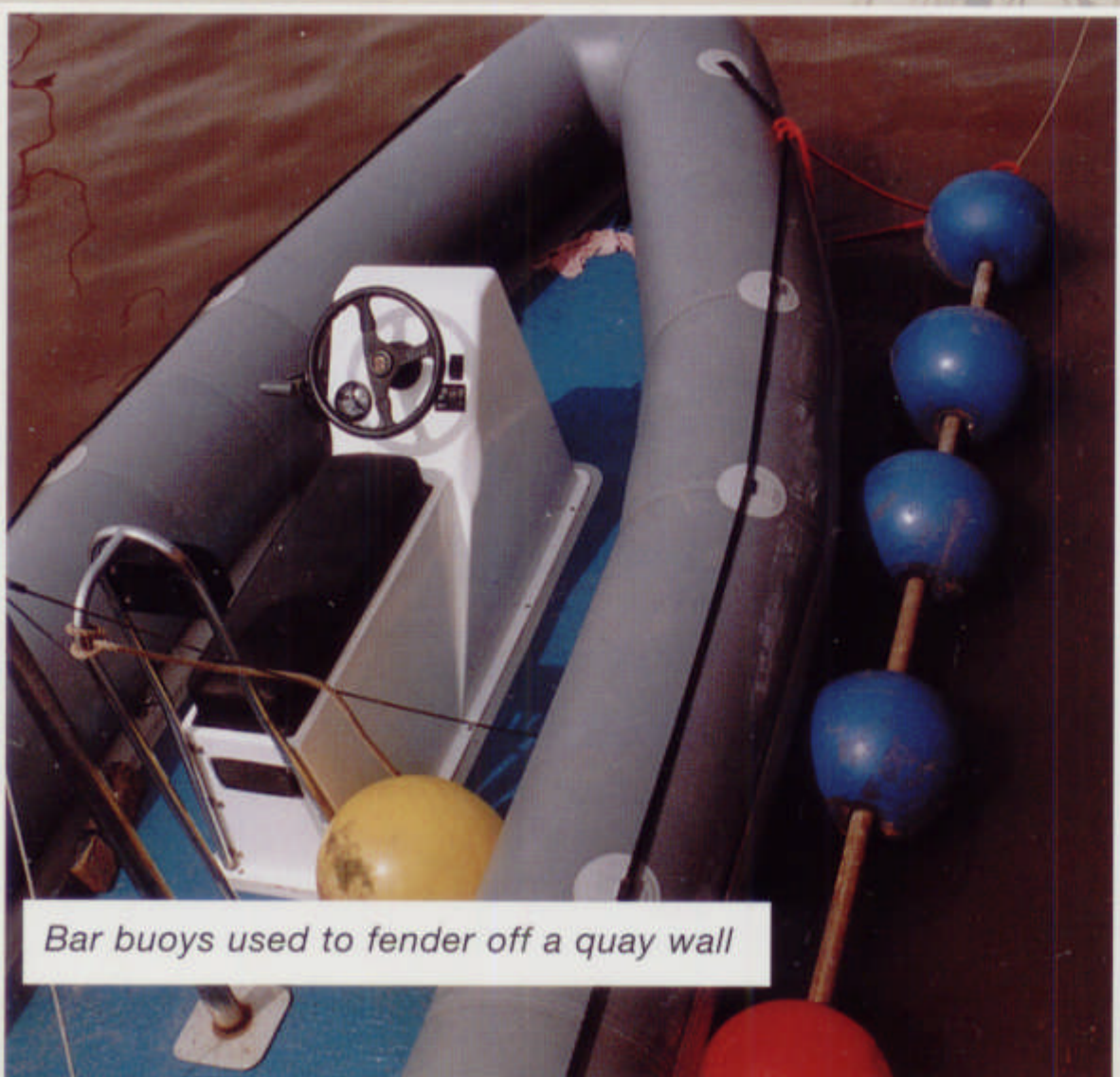




European championships, Mons 1998



Buoys supplied to "Tom Buoys" for the 1998 World Water Ski Championships



Bar buoys used to fender off a quay wall

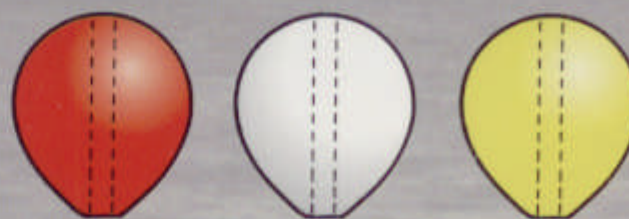
## racing marks & bar buoys

**Racing Marks:** The RM150 Yacht Racing Mark is the best value temporary mark of its size, and is highly visible even in poor weather conditions. These buoys are tough enough to leave on station all season - only deflated and stored during the winter. These buoys are very popular with sailing clubs and are used in many Jet-Ski championships. They are fitted with a modified valve and can be easily deflated. Letters, numbers or logos can be moulded into the buoys during manufacture. Smaller buoys are used extensively as lane markers and in slalom courses. The RM150 is also available complete with mooring rope, chain and anchor - ready to deploy, full details on request.

**Bar Buoys:** These versatile buoys are moulded with a tough but flexible 50mm tube through the centre of the buoy. A pole or tube passed through the buoy will be firmly gripped when the buoy is inflated. When used as a mooring buoy the centre tube will effectively grip a riser chain passed through the buoy, but users should check the design with Norfloat to avoid invalidating warranties.

Type	Circ.		Diameter		Buoyancy kg
	in	cm	in	cm	
RM150	150	381	48	121	n/a
NBD00	18	47	7	18	1.5
NBD0	28	72	9	23	7
BB40	40	102	12.5	32	15
BB50	50	127	15.9	40	31
BB60	60	152	19.1	48	55
BB75	75	190	24	61	110
BB90	90	228	28.5	73	204

Standard colours:



Other colours to special order





Speed limit buoys awaiting delivery

## speed limit & beach marking buoys

In recent years there has been an increasing demand for small, tough buoys to indicate speed limits on rivers and estuaries. Norfloat have developed a wide range of buoys for this purpose, and in the majority of cases they are custom made to the clients requirements. Most of these buoys will be moulded from polyethylene and foam filled to protect them from damage.

Speed limit and beach marking buoys are closely connected, and some of the buoys use a common design. Special buoys to cope with local conditions or bye-laws are possible and do not usually cost more than the standard product.

Responsibility for the control of jet skis and the safety of other water users is being laid on Harbour and local Authorities where they have a 'duty of care'. Norfloat's range of buoys for beach marking are usually foam filled to help withstand abuse from the elements and the public. The steelwork when fitted is galvanised and the 'sign' has a powder coated polyester finish. The lettering is either applied to the steelwork, or moulded into the buoy.

Speed limit and beach marking buoys are usually considered to be 'special marks' and are supplied in yellow as standard.



Special buoy based on the MB350 mooring buoy

Type	Message	Circ.		Diameter	
		in	cm	in	cm
NBF3	'Ski Lane'	55	140	17	44
NBF5	'8 Knots'	85	216	27	68
CBF40	'Swim Area'	40	102	12	32
ZM120	'5 knots'	75	190	24	61



Beach safety scheme, Arabian Gulf







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