



**Come Alive**

**with a**



THE **RYA** APPROVED  
INTERMEDIATE YOUTH  
RACE TRAINING DINGHY



# The 405 Dinghy

## PRINCIPAL DIMENSIONS

Length	4.05 m (13ft 3½in)
Beam	1.38 m (4ft 6in)
Hull Weight	64 kg (141 lbs)

## SAIL AREAS

Mainsail	5.46 sq m (58 sq ft)
Jib	2.52 sq m (27 sq ft)
Spinnaker	7.4 sq m (80 sq ft)
Optional Asymmetric	8.8 sq m (95 sq ft)

Range of Optimum Crew Weight: 98-112 kg (15½-17½ stone or 215-245 lbs)

*Design by Chris Benedict*

Following the RYA Brief, the **405** dinghy has been designed to fill the need for a modern two-person intermediate race-training trapeze dinghy. The boat is intended for children who already have competent sailing skills, but who are not yet large or strong enough to sail existing trapeze dinghies.

In the design of the boat, consideration has been given to:

Safety

All aspects of the RYA Brief

Exciting, efficient performance

A long design life

Low manufacturing costs

Rig and hull proportions which encourage helm and crew to be of equal size.

A hull shape which is forgiving and easy to steer.

Ease of transportation.

Class measurement rules.

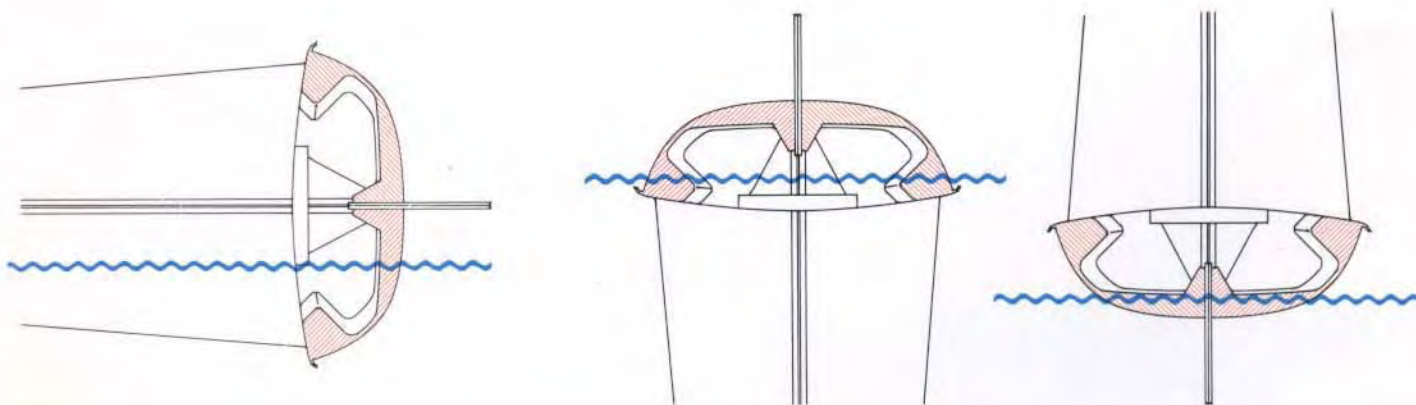
The design deviates from the RYA Brief in one respect. The **405** dinghy is designed for a mean crew weight of 105 kg (16½ stone, or 230 lbs) which we believe is a more realistic target weight than the 112 kg specified by the RYA.

## THE 405 DINGHY HAS THREE UNIQUE FEATURES ★

### BUOYANCY CONFIGURATION:

A conventional dinghy with high volume sidetanks gives a fully inverted (turtled) boat buoyant-stability akin to that of a catamaran. In contrast to that, the **405** dinghy is designed with *Very Low Volume Sidetanks* which have their buoyancy as close to the mast tip as possible. This makes the boat less likely to invert, and more easy to right from an inverted position. The *Very Low Volume Sidetanks* also allow the capsized boat to float with the daggerboard closer to the water, making it easier for the crew to reach and climb onto the board following a capsizing. In addition to the *Very Low Volume Sidetanks*, there is a low double-floor, which assists in draining water from the righted boat, and there are bow and stern buoyancy compartments of normal volume.

During the course of our sailing trials, our 105 kg trials crew were able to self-rescue the fully inverted boat on their own initiative without any instruction or assistance.



Very Low Volume Sidetanks float low in the water.

Very Low Volume Sidetanks depress more easily in a fully inverted position. Gunwales are wide enough to stand on.

Low double-floor assists draining.



### OPTIONAL, RETROFITTABLE ASYMMETRIC SPINNAKER:

Clearly, the immediate need is for an Intermediate Race-Training Dinghy with a symmetric spinnaker, and the **405** dinghy has a symmetric spinnaker system which works without compromise. It is also becoming increasingly clear that well within the lifespan of any dinghy introduced in 1991 the asymmetric spinnaker will become as common to high-performance dinghies as the trapeze is today.

Evidence of this is seen across the whole spectrum of technology-led classes:—

Australian Skiff Classes

The America's Cup Class

BOC Around the World Yachts

Formula 40s and Offshore Multi-hulls

The International 14

Ultimate 30s/Ultra 30s

Further evidence is seen in new boats being introduced into the marketplace:

Johnstone One-Design 14

Reflex 21

Victoria 16

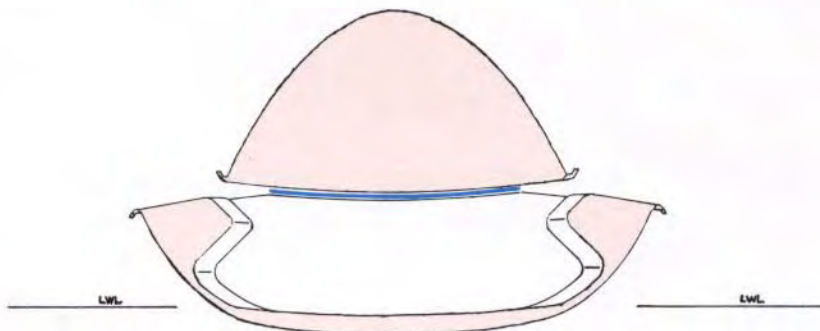
Olympic 5000 from the Warsash Group

To accommodate this trend towards asymmetric spinnakers, the **405** dinghy has been designed with an optional asymmetric spinnaker which gives equivalent performance to that of the symmetric spinnaker. The boat has been designed in such a way that the asymmetric system can be easily retro-fitted to existing boats, and a boat can be rigged with both systems, and then sail with either sail.

As soon as there is a need for a youth race-training dinghy with an asymmetric spinnaker, the **405** dinghy is ready to fill that need. The equipment design and class rules are in place, and any existing boats can be fitted with the system. There need be no reason to go through the whole process of creating another new class in ten years time just because we then need to accommodate the asymmetric spinnaker.

### STACKING SYSTEM:

For ease of transportation, the **405** dinghy has been designed to allow two boats to be stacked together with only padding in between. No cradling is necessary for the second boat, and all loose gear, including booms, can be packed into the bottom boat.



For long distance travel, it would be viable for one car to transport three complete boats, using only a standard road trailer, and a set of roof racks.





**THE RYA APPROVED  
INTERMEDIATE YOUTH RACE TRAINING DINGHY**

From Hobie Cat Europe

Beginning with the 1993 winter training sessions, the 405 is part of the RYA Youth Race Training Programme, and has a 405 Class National Coach funded by Hobie Cat Europe. The first season schedule of **405 Training Events and Open Meetings**, organised in conjunction with the RYA, is available from early September.

The 405 Class is a proprietary one-design class with all production tooling from a single set of master plugs. All production boats are identical, constructed to HOBIE CAT's usual high standard, with vacuum-bagged PVC foam core and fiberglass cloth used in every boat. Following extensive testing of the prototype, final product testing, especially two-boat spar and sail testing, has taken place over the last few weeks - the only significant change we have made from our prototype is that the double-floor is now fully self-draining through the transom.

From September we have a trailer with four 405's available for on-the-water demonstrations, many of which are already scheduled. Our first priority is to develop UK fleets and a UK 405 Class Association. We are working to develop our exposure in Europe at the same time, and we have a systematic view of which countries are our top priorities.

Fully developed production boats are available from September 1992.

The 405 includes a symmetric spinnaker system as standard equipment. A simple, easy to install asymmetric spinnaker system is available as a kit, or as a factory installed extra.

**1993 is the RYA Year of Youth**

Hobie Cat are there, providing an exciting, thoroughly modern race-training dinghy for the youth of today.

Further on-the-water demonstrations are available from October onwards.  
We will consider going anywhere in the UK or Europe.

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