Schionning Designs

Cosmos 1250 Survey

Study Plans

SCHIONNING DESIGNS
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Cosmos 1250 Survey

This is our first design engineered to comply with Australian Survey Standards. She is currently being built and passed through NSW, SA and WA. The length of 12.50m means that she can be operated in Australian water with a Coxswains ticket and approval can be sought for the various different survey categories.

Following our Cosmos line of cruising cats she is also being offered in a NON-SURVEY standard design and will be perfectly suited to live-aboard, long term cruising in comfort. With a displacement of 5630kg (non survey) she has a pretty good payload and accommodation is comfortable. Designed initially with Charter in mind the layout has two double cabins in the port hull with twin access going fore and aft into these cabins. A shared head/shower is located centrally in this hull with access from both the fore and aft cabins. The saloon is very comfortable with plenty of seating (again a Charter consideration) and a good permanent navigation station.

The port hull has another double cabin with ensuite forward, a large galley amidships and another double cabin aft. This layout could quite simply be altered to a more standard layout as per our other Cosmos designs like the 1160 with 3 doubles and a bigger head and shower aft in the one hull. A galley up is also possible in this design although we feel that it compromises the saloon (lounging) space and the area amidships in the hull suits the galley layout very well. Ventilation in our cats is well thought out in all areas and there is less motion down in the hull – preferable when performing galley duties. We like to keep an ‘open’ feeling of space in our designs so we leave the area between the galley and saloon open. Besides feeling more spacious and assisting the ventilation in warmer climates, the Chef can still converse with the guests in the saloon and pass plates back and forth.

Construction is of Durakore strip planking (or WRC is an option in the standard non-survey version). Duflex balsa panels are used for flat panels and bulkheads and Duflex honeycomb and balsa panels are used for furniture.

The rig is a moderate, performance rig, kept very simple for easy handling. A central winch station is optional. We also sell plans to build your own composite rotating wing mast (optional extra), this will save you thousands of dollars and they are proving exceptionally good being strong and light and improving sailing performance. The general sailing performance should be very good if the boat is built and loaded to her designed displacement, the “Survey” version is a lot heavier so her sailing performance will be compromised.

Motor power is provided by two four stroke 20hp outboards or two small diesel motors also around 20hp.

Our plans for this design are in our new format, very accurate and detailed colour CAD drawings, full size patterns for hull frames and bulkheads and of course we offer support to our builders throughout their project.

Construction Overview

The Cosmos cats are built using the strip planked method of construction. This is a very easy building method producing a strong light composite Multihull not requiring high skill levels or complex and expensive tools.
The choice of materials are either Western Red Cedar planking or Balsa Core planks (Durakore). Western Red Cedar is cheaper and a little easier to use as joins are simpler and it is not affected as much my moisture levels. This is only relevant while each shell is being built, once glassing has been done the shells become stable and from here on both systems are similar to work with.

Durakore planking offers a significant weight saving in the core, of about 30%. It is an excellent product giving a very high strength to weight ratio and will produce a lighter boat allowing either a little more performance for club racing or a better payload for cruising. It is more expensive than W. R.C. but only a small part of the overall cost of the boat.

Hulls are built separately upside down on temporary building frames. These are made out of 13 - 20 mm chipboard or plywood set up on a ladder type strong back set on a concrete floor, or on star pickets driven into the ground.

The hulls are built from a deck to hull join on the outside, to the hull and bridgedeck join on the inside. This includes the flared curve and one has to turn some of the frames around on the strong back to produce a left and right hull.

We find this method of building easy as you have smaller sections to produce at a time, allowing each hull section to be stripped and glassed in a reasonably quick time, avoiding changes in climate which may affect the strip planking before it can be sealed with epoxy and glass. The individual pieces can be more easily turned over in your shed, usually with a case of beer and a group of friends, therefore cutting out crane expenses and the risk of turning big fragile sections usually outside a shed because of limited height.

The hulls are faired while upside down then both shells aligned and leveled in their respective positions, bulkheads now added plus forward beam etc. The inside hull to hull measurement is exactly a full sheet of DuFlex wide and makes assembly very easy. These sheets are all joined on the floor and then lifted and glued into position. This is like a giant square and checks your boat is square and straight. From this stage furniture and decks are added until your cat is completed.
Some of our designs offer the option of having bulkheads and furniture pre-cut. This is proving extremely popular with owner builders as well as Professional builders because the labour time is very much reduced as is the 'thinking' and planning time that is inevitable when building an interior from scratch.

How the pre-cut kit works:

The kit is supplied in the specified size DuFlex or Durakore panels, with every piece of furniture pre-cut and held in place in the 2400 x 1200 mm panel by small tags. The full size panels are scarfed ready to join and once glued and dry, the tags are cut to release the individual pieces. A set of plans is supplied for the pre-cut furniture showing the assembly of each cabin (see example image).

ADVANTAGES OF KITS

• SPEED
  This is the quickest method to build a one off boat! The panels are pre-glassed and pre-cut. The panels are taped together with pre-cut (width) tape. A Wombat Junior wet-out machine (cost approx. $500) eases this process further.

• SIMPLICITY
  There is no doubt, building a boat does not get any simpler than this. The computer generated pre-cut and pre-glassed panels just fit together perfectly.

• HEALTH
  Because of reduced handling of epoxy and cloth, your exposure to hazardous chemicals, fumes and itchy dust is very much reduced.

• EASY TO HANDLE
  The furniture can be assembled on the floor in the workshop and then when dry, taken on board and fitted in position, this makes the job much easier.

• LESS WASTAGE
  The computer nesting ensures maximum use of material and minimal wastage.

• QUALITY END RESULT
  One of the major pluses of using the DuFlex panels is that being pre-glassed under strict factory conditions, they maintain the correct resin to cloth ratio and so maintain the required and desired strength and weight.
Payload seems to be something that is largely misunderstood so we'll try to clarify this as much as we can.

Generally, payload is anything surplus to the working of the boat. In other words, the boat can still be used and will remain seaworthy with rig, sails, motors, anchors, deck gear etc.

So to elaborate, here is a list of what's included in the payload as we see it:

1) Fuel
2) Water
3) Crew weight, usually working on an average of 4.
4) Food
5) Alcoholic beverages (usually heavy!)
6) Personal belongings i.e. clothes, books etc
7) Galley equipment i.e. pots, pans, cutlery, crockery etc
8) Spares i.e. for motor, ropes, fenders etc
9) Diving gear etc
10) Navigation equipment i.e. charts, rulers etc

People always ask us "Can I have bigger water or fuel tanks?" or "Can I have a gen-set?". What we tell them is yes, if you are willing to compensate in another area but this is usually not the case, they want extra in addition to our standard list, which can't and won't work. There is only one DWL (Design Waterline), this is where the boat will float when fully loaded, any extra weight will compromise the design i.e. structural engineering calculations can be upset, bridgedeck clearance is reduced, reserve buoyancy is minimised, the inertia or motion of the boat is more exaggerated and your boat speed will suffer.

In our calculations, we always allow a safety margin for overloading or a bad/heavy build, which means if you achieve a nice light build weight, it is possible for you to load the boat more but we suggest to wait until you know this is definitely the case.

There also seems to be some confusion as to what the term 'displacement' means. The displacement figure is referring to the fully loaded weight of the boat and the water it will displace, the displacement will always include the boats payload.

In conclusion, we suggest to keep the boat as light as possible during the build and fit-out, also keeping your equipment simplistic, you can always add weight and gear later if you find you've come in under-weight.
WHAT IS SUPPLIED IN THE PLANS?
NOTE: THE COSMOS 1250 HAS CAD DRAWN PLANS

COST OF PLANS: Cosmos 1250 - survey construction plans cost $11,000.00
Prices valid until 31st October 2004.

BACK UP SERVICE: 10 hours of personal backup is included in your plan fee, after this back up is charged to you at $35.00 per hour and your credit card will be required for payment. You will find that the free back up is based on most builder requirements is very generous. Very few builders use more help than this.

HOW TO ORDER PLANS: We require a signed and faxed or mailed PLAN ORDER FORM with every plan order. This form explains the terms and conditions and plans will not be mailed until a signed order form is received. See form included in study plans.

PAYMENT: WE ACCEPT: Bank cheques or direct deposit into our bank account. Please email info@schionningdesigns.com.au for our account details. Credit cards are not accepted for plan purchase.

SHIPPING: Plans are sent by express mail within Australia and EMS over seas at no extra charge to you.

Building a boat is definitely a challenge but with good plans, our helpful friendly support and the modern materials available, it’s never been easier. The investment of time and money is very worth while, offering a rich life experience, fun reward when you launch her and financially you can certainly stand to gain substantially.

We look forward to hearing from you again and wish you the very best with your project.

The Schionning Designs Team
# Purchase Agreement Order Form

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<th>Buyer’ Details</th>
<th>Contact Person</th>
<th>Previous Agreement</th>
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Buyer’s Trading Name: ________________________________

ABN: ____________________________________________

SoleTrader [ ] Partnership [ ] Company [ ]

Name: ________________________________

Name to put on plans: [ ] As above [ ]

Address: __________________________________________

Phone No: __________________ Fax no: ______________ Mobile: ______________

E-mail: __________________________________________

## Purchase Order

Description of Purchase: (including any special instructions) e.g. Boat (describe number and type of Kit Boat) or Design Plans (describe number and type of plans) or other

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

If insufficient space please attach a detailed description of the services required

Purchase Date: ________________ Delivery Date: ________________

GST Inclusive: __________________________

Price: A$ __________________________

Number of boats which may be constructed from plans, please specify number: __________________________

Third Party Builder: Yes/No - If Yes please provide details

____________________________________________________________________

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____________________________________________________________________
Terms of Sale

1) Sale and Purchase. In consideration of payment of the Price set forth in the attached Order Form, Schionning Designs Pty Ltd ("the Seller") sells to the Buyer the goods or plans (as the case may be) (hereafter called "the goods") described in the attached Order Form upon these terms of sale.

2) Passing of Title. Title to the goods shall pass to the Buyer upon payment in full.

3) Delivery of Orders. The seller must make the goods sold available for collection by or delivery to the Buyer at a date and time agreed by the Parties and specified in the Order Form.

4) Risk. The risk in the goods remains the Seller's until delivery of the goods to the Buyer.

5) Copyright/Design Rights. The copyright, design rights and all other intellectual property rights in the plans or boats or other goods sold pursuant to this agreement shall at all times remain the property of the Seller.

6) No Reproduction. None of the plans sold may be copied in full or in part by the Buyer unless specifically permitted in writing by the Seller to do so.

7) Licence. In the case of a purchase of plans, the Buyer may use the plans purchased for the sole purpose of constructing the number of boats specified on the Order Form.

8) Further Payment. If the Buyer wishes to use the plans for constructing more than the agreed number of boats specified in the Order Form then the Buyer must seek the Seller's written consent and further fees shall apply.

9) Liability. (a) The plans or goods sold pursuant to this agreement are sold in good faith, having regard of the technical knowledge and information available to the Seller at the time of sale. (b) So far as may be permitted by law, the Seller excludes any representations or warranties, whether expressed or implied, with respect to the plans or goods sold, including but not limited to any warranty of merchantability, fitness for the purpose or otherwise and will not, to the maximum extent permitted by law accept any loss, damage, or personal or other injury or liability, howsoever arising out of the sale or supply of the plans or goods sold pursuant to this agreement.

(c) The buyer agrees to build the boat according to the construction plans and will not deviate from these plans without the written consent from the Seller. (d) The Seller reserves the right to deem a boat built by or on behalf of the Buyer to be unworthy of being advertised, branded or otherwise promoted as a Schionning Design boat, if the design has, in the opinion of the Seller, been sufficiently altered or the plans have been deviated from to such an extent that the Seller considers such alterations to be less than satisfactory.

10) Third Party Builder. a) If the Buyer purchases plans and engages a builder to build and or construct one or more boats pursuant to this agreement, the Buyer shall procure from the builder a covenant in favour of the Seller that it will not copy, sell or otherwise use the plans and specifications except as expressly permitted by the terms of this agreement and shall otherwise be bound by the provisions of this agreement in so far as this agreement applies to protect the intellectual property rights of the Seller. b) The Seller may refuse to deliver the plans until after the Buyer has procured from the builder and provided to the Seller the covenant required by sub-clause 1 of this clause.

11) Restrictions on Assignment. The Buyer must not without the prior written consent of the Seller, which may be granted or refused absolutely or granted subject to conditions, transfer or assign his interest in the plans or goods sold pursuant to this agreement.

Please Note: Construction plans may NOT be returned for a refund due to obvious possible breach of copyright so please consider carefully before ordering.

Offer and Acceptance

Offer

Acceptance

This agreement is entered into in accordance with the terms and conditions above which the Customer confirms he has read and accepts.

Buyer's Signature:   Accepted by Seller :

Date:   Date:   Terms of Payment:  Cash/ Direct Deposit/Cheque upon signing order please.