

## **T680 Build Methodology**

The T680 is to be built female moulded by builders licensed by Thompson Design.

### **Mould construction method**

- Build male plug for deck first on order that the hull plug can be built on the finished deck to ensure that the hull/deck flange is accurately constructed.
- Paint and finish deck mould plug, including non skid where required.
- Make the deck mould over the plug
- Build complete deck inside the mould
- Build the hull plug and place on upside down deck (still in the deck mould), this will ensure that the hull and deck flanges are built accurately
- Take off hull mould, including flanges.
- Build the first hull inside the hull mould and take off internal mould components.
- Make up deck skin to fit prod tube while glassing into hull.

### **Moulds required**

- Hull mould
- Deck mould
- Rudder mould
- Keel mould
- Mast support in spinnaker chute
- Hatches
  - Cockpit locker
  - Foredeck hatch
- Prod tube
- Prod tube aft joiner
- Internals
  - Mast support frame
  - Cockpit locker support
  - Aft cockpit support
- Trailer bunks (forward and aft)
- Mast supports (forward and aft)

### **Boat construction methodology**

Both the T680 Club and Sport are to built using the same methodology. The only difference is in the materials used.

Basic methodology for moulded components except keel and rudder.  
Use High quality Vynalester resin marine polyester Gelcoat throughout.

The Gelcoat is to be applied and then the chopped matt tie layer.  
Once this has gone off the outside skin is applied.  
The core and inside skin are vacuumed in place in one stage.

The internals are fitted, including the prod sleeve and the hull and deck bonded together.

The aft end of the prod is fitted after the hull and deck is bonded.

The rudder is to be made from an extended T590 mould with the cast aluminium cassett and SS gudgeoins used from the T590 also.

Drains are fitted to the transom and the inside of the cockpit locker.

Hinges and catches are fitted to the cockpit locker.

The front deck hatch is secured while sailing with slam catches

## Material List

|           |                   |
|-----------|-------------------|
| Boat Name | <b>T680 Sport</b> |
| Date      | 30-Jul-02         |

| <u>Surface Areas</u> |             | <u>Weight summary</u> |               |
|----------------------|-------------|-----------------------|---------------|
| Hull                 | 18.4        | Hull and decks        | 190           |
| Deck                 | 11.9        | Equipment             | 120           |
| Cockpit sole         | 5.0         | Ballast               | 250           |
| Cockpit hatch        | 0.4         | Crew                  | 340           |
| Deck hatch           | 0.8         | Total boat            | <b>900 kg</b> |
| Keel and bulb        | 2.1         |                       |               |
| Rudder               | 0.7         |                       |               |
| <b>Total</b>         | <b>35.3</b> |                       |               |

| <u>Material legend</u> | <u>Material</u> | <u>Weight</u> | <u>Orientation</u> |
|------------------------|-----------------|---------------|--------------------|
| EDB400                 | Eglass          | 0.4kg/msq     | 45/45              |
| CU300                  | carbon uni      | 0.3kg/msq     | 0                  |
| ETW1135                | Eglass          | 1.135kg/msq   | 45/45/90           |
| CM200                  | Eglass          | 0.2kg/msq     | Choppo             |

| Material    | Weight/kg | Area  | Total Weight | Resin L     |
|-------------|-----------|-------|--------------|-------------|
| 12mm x 80kg | 0.96      | 32.4  | 31.1         | 8.1         |
| 15mm x 80kg | 1.20      | 5.0   | 6.0          | 1.3         |
| CM200       | 0.20      | 39.3  | 7.9          | 7.9         |
| CU300       | 0.30      | 6.0   | 1.8          | 1.4         |
| EDB400      | 0.40      | 107.5 | 43.0         | 34.4        |
| Epoxy       | 1.00      | 15.0  | 15.0         | 3.8         |
| ETW1135     | 1.14      | 2.5   | 2.8          | 2.3         |
| Gelcoat     | 0.70      | 39.2  | 27.4         |             |
|             |           |       | <b>135.0</b> | <b>59.1</b> |

Total Wt **194.1**

Lead Bulb 250kg lead bulb  
Keel Bolts 12mm SS 2 full length bolts

# Material List

|           |                  |
|-----------|------------------|
| Boat Name | <b>T680 Club</b> |
| Date      | 17-Jul-02        |

## Weight summary

|                             |                     |                    |                |                      |
|-----------------------------|---------------------|--------------------|----------------|----------------------|
| <b><u>Surface Areas</u></b> | Hull                | 18.4               | Hull and decks | 240                  |
|                             | Deck                | 11.9               | Equipment      | 120                  |
|                             | Cockpit sole        | 5.0                | Ballast        | 250                  |
|                             | Cockpit hatch       | 0.4                | Crew           | 340                  |
|                             | Deck hatch          | 0.8                | Total boat     | <b><u>950</u> kg</b> |
|                             | Keel and bulb       | 2.1                |                |                      |
|                             | Rudder              | 0.7                |                |                      |
|                             | <b><u>Total</u></b> | <b><u>35.3</u></b> |                |                      |

| <b><u>Material legend</u></b> | <u>Material</u> | <u>Weight</u> | <u>Orientation</u>   |
|-------------------------------|-----------------|---------------|----------------------|
|                               | EDB400          | Eglass        | 0.4kg/msq 45/45      |
|                               | EDB600          | Eglass        | 0.6kg/msq 45/45      |
|                               | CU300           | carbon uni    | 0.3kg/msq 0          |
|                               | ETW1135         | Eglass        | 1.135kg/msq 45/45/90 |
|                               | CM200           | Eglass        | 0.2kg/msq Choppo     |

|                | <u>Material</u> | <u>Weight/kg</u>    | <u>Area</u>         | <u>Total Weight</u> | <u>Resin L</u>      |
|----------------|-----------------|---------------------|---------------------|---------------------|---------------------|
| Core           | 12mm x 80kg     | 0.96                | 14.0                | 13.4                | 3.5                 |
| Core - Cockpit | 15mm x 80kg     | 1.20                | 5.0                 | 6.0                 | 1.3                 |
| Copped mat     | CM200           | 0.20                | 39.3                | 7.9                 | 7.9                 |
| Core           | Core mat        | 1.00                | 18.4                | 18.4                | 36.8                |
| Carbon Uni     | CU300           | 0.30                | 6.0                 | 1.8                 | 1.4                 |
| In Skin        | EDB400          | 0.40                | 72.2                | 28.9                | 23.1                |
| Out Skin       | EDB600          | 0.60                | 35.3                | 21.2                | 16.9                |
| Core           | Epoxy           | 1.00                | 15.0                | 15.0                | 3.8                 |
| Out Skin       | ETW1135         | 1.14                | 2.5                 | 2.8                 | 2.3                 |
| Gelcoat        | Gelcoat         | 0.70                | 39.2                | 27.4                |                     |
|                |                 |                     | <b><u>246.9</u></b> | <b><u>142.8</u></b> | <b><u>96.9</u></b>  |
| Bulb           |                 | 250kg lead bulb     |                     | Total Wt            | <b><u>239.8</u></b> |
| Bolts          | 12mm SS         | 2 full length bolts |                     |                     |                     |