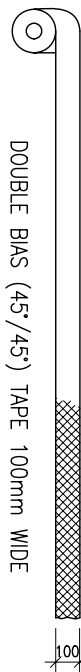


MDF OR SECOND GRADE PLYWOOD	16mm	8 SHEETS
MARINE PLYWOOD	12mm	1 SHEET
FOAM	10mm 75kg/cu m (standard density)	28 SHEETS (SHEET SIZE 2170x1220)
FIBREGLASS	400gsm BIAKXIAL CLOTH (1200mm WIDE)	125 LIN METRES
	400gsm DOUBLE BIAS TAPE (100mm WIDE)	465 LIN METRES
	450gsm CHOPPED STRAND MAT (1200mm WIDE)	10 LIN METRES
	600gsm DOUBLE BIAS CLOTH (1200mm WIDE)	12 LIN METRES
	900gsm UNIDIRECTIONAL CLOTH (1200mm WIDE)	11 LIN METRES
	750gsm TRIAXIAL CLOTH (1200mm WIDE)	28 LIN METRES
PEEL PLY		150 LIN METRES
RESIN	POLYESTER, VINYLESTER OR EPOXY	175 LITRES
FILETING POWDER		20 kg
SANDING FILER		5 kg
LEXAN FOR WINDOWS	6mm THICK TINTED	2300 x 600
PAINT-HIGH BUILD PRIMER/UNDERCOAT	PREFERABLY 2 POT POLYURETHANE	APPROX 12-16 LITRES
PAINT-GLOSS TOP COAT	PREFERABLY 2 POT POLYURETHANE	APPROX 12 LITRES
FOLDING SYSTEM PIVOT PINS	LASER OR WATER JET CUT 5083 ALLOY, H321 TEMPER (ALLOW APPROX \$1300 AUD) 6061 ALLOY T6 TEMPER (ALLOW APPROX \$100 AUD)	
ALUMINIUM FLAT BAR 25mm x 6mm	FOR BACKING PLATES	2 LIN METRES
SICKLEX SEALANT		2 CYLINDERS
VARIOUS FABRICATED & STANDARD FITTINGS (eg RONSTAN)		
VARIOUS NUTS, BOLTS & SCREWS		
CONSUMABLES	Gloves Paper towels Mixing jugs & cups Measuring pumps for epoxy Mixing sticks Solvent for cleaning – acetone for polyester or vinylester –white vinegar for epoxy Brushes Sanding disks Sand paper Gyprok (dry wall) screws (for temporary assembly)	

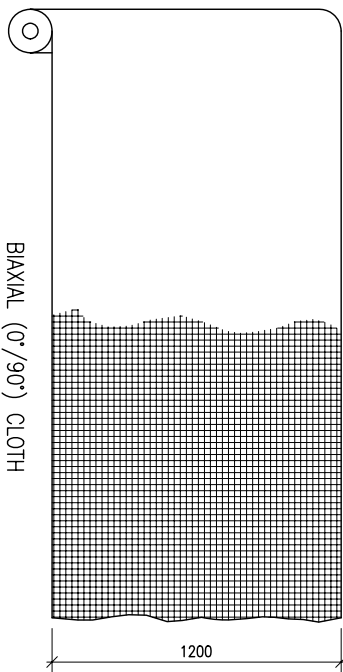
**TOOLS REQUIRED**  
Jig Saw  
Drill & Drill bits  
Several hole saws  
100mm Angle Grinder  
Rubber backed sanding disk for grinder  
Random Orbital Sander (pre 150mm dia)  
Files & Rasp  
Ruler  
8 metre measuring tape

Best to have both mains power and cordless.  
May be home made or modified putty knives or plasterer's tools.  
Plastic Gyprok filler spreaders work well.  
Several chisels  
Stanley knife (sometimes called a box cutter)  
Scissors  
Laminating tables  
Saw horses  
3 sheets 16mm plywood (second grade) covered with plastic. May be supported on sawhorses.  
Standard saw horses or the folding clamping cheepies. (The legs can be shortened if required)

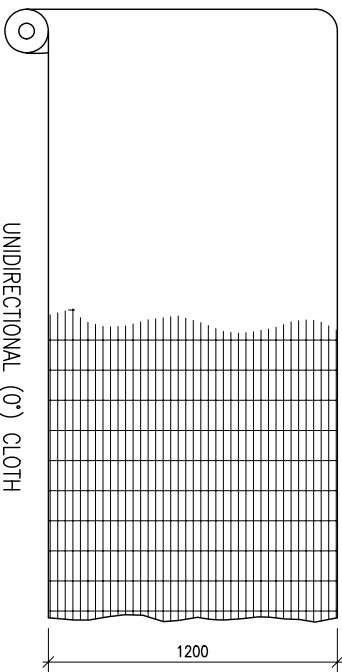
PHOTOCOPIER  
SCALE UP A4 DRAWING BY  
1.414 TO OBTAIN A3 SIZE



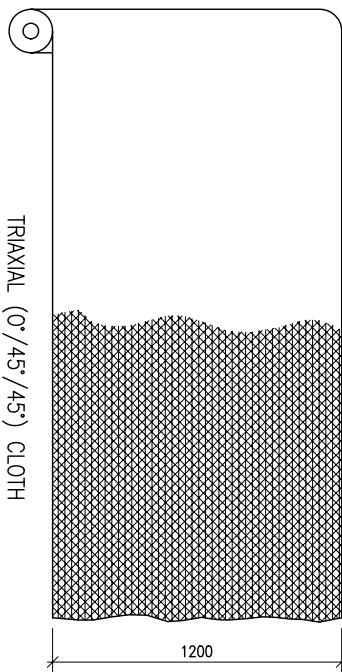
DOUBLE BIAS (45°/45°) TAPE 100mm WIDE



BIAKXIAL (0°/90°) CLOTH



UNIDIRECTIONAL (0°) CLOTH



TRIAKXIAL (0°/45°/45°) CLOTH

**Scarab 18 Sport**  
18 foot (5.50 metre) FOLDING TRIAXIAL  
MATERIAL LIST FOR FOAM SANDWICH CONSTRUCTION

**Team Scarab**  
MULTIROLL DESIGNS BY FRANK KENDRICK  
466 DEVERON ROAD GLENWOOD QLD 4570

© R. KENDRICK 2008  
DATE: SEPT 08  
SCALE: NOT TO SCALE  
DRAWING NUMBER:  
S18-SP10

MAIN HULL COMPONENTS	
COMPONENT	MATERIAL
HULL PANELS *	6mm PLY COVERED BOTH SIDES WITH 300gsm DOUBLE BIAS CLOTH
BULKHEADS	9mm PLY (UNCOVERED)
PARTIAL BULKHEADS	9mm PLY (UNCOVERED)
SHELF **	9mm PLY (UNCOVERED)
SETTEE RISERS	9mm PLY (UNCOVERED)
CENTREBOARD CASE	9mm PLY (UNCOVERED)
COCKPIT SEAT RISERS	6mm PLY COVERED BOTH SIDES WITH 300gsm DOUBLE BIAS CLOTH
COCKPIT SEATS	6mm PLY COVERED BOTH SIDES WITH 300gsm DOUBLE BIAS CLOTH
CABIN SIDES	6mm PLY COVERED BOTH SIDES WITH 300gsm DOUBLE BIAS CLOTH
DECK ***	6mm PLY COVERED BOTH SIDES WITH 300gsm DOUBLE BIAS CLOTH
HATCH	6mm PLY COVERED BOTH SIDES WITH 300gsm DOUBLE BIAS CLOTH

\* BOTTOM PANEL TO HAVE 1 EXTRA LAYER OF 300gsm DOUBLE BIAS CLOTH ON THE OUTSIDE

\*\* SHELF COMPRESSES BUNK/SETTEE TOPS AND COCKPIT FLOOR

\*\*\* DECK PANEL TO BE INITIALLY LAMINATED ON THE UNDERSIDE SURFACE WITH 300gsm DOUBLE BIAS CLOTH, PANEL THEN FITTED & GLED TO SHEER ANGLES, BULKHEADS & STRINGER, TOP OF PANEL THEN LAMINATED WITH 300gsm DOUBLE BIAS CLOTH.

FLOAT HULLS	
COMPONENT	MATERIAL
HULL PANELS *	6mm PLY COVERED BOTH SIDES WITH 300gsm DOUBLE BIAS CLOTH
BULKHEADS 2 & 5	9mm PLY (UNCOVERED)
DECK **	6mm PLY COVERED BOTH SIDES WITH 300gsm DOUBLE BIAS CLOTH
BULKHEADS 4A, 4B 8A & 8B	9mm PLY FILLETED & TAPED TO HULL PANELS BOTH SIDES WITH 2 LAYERS 400gsm DOUBLE BIAS (45/45°) TAPE x 100mm WIDE DIAPHRAGMS
BEAM MOUNTING DIAPHRAGMS	9mm PLY FILLETED & TAPED TO HULL PANELS BOTH SIDES WITH 2 LAYERS 400gsm DOUBLE BIAS (45/45°) TAPE x 100mm WIDE

\* BOTTOM PANEL TO HAVE 1 EXTRA LAYER OF 400gsm BIAKAL ON THE OUTSIDE

\*\* DECK PANEL TO BE INITIALLY LAMINATED ON THE UNDERSIDE SURFACE WITH 300gsm DOUBLE BIAS CLOTH, PANEL THEN FITTED & GLED TO SHEER ANGLES, BULKHEADS & STRINGER, TOP OF PANEL THEN LAMINATED WITH 300gsm DOUBLE BIAS CLOTH.

1 REMOVE TEMPORARY FRAMES.  
2 CLEAN UP JOINTS REMOVING ALL RINGS & TACKS\*  
3 FILL JOINTS WITH FILLER & ROUND OFF.  
4 FIBREGLASS INSIDE OF STEEL & PER DEKAL.  
5 FIBREGLASS INSIDE OF STEEL & PER DEKAL.  
6 FIBREGLASS INSIDE OF STEEL & PER DEKAL.  
7 FIBREGLASS INSIDE OF STEEL & PER DEKAL.  
8 GUE & FILLET IN DECK STRINGERS.  
9 GUE & FILLET IN DECK STRINGERS.  
10 CUT EXCESS OFF SIDE & CHINE PANELS AT STRIN & GUE IN TRANSOM.  
11 FIBREGLASS INSIDE OF STEEL & PER DEKAL.  
12 STRIPS TO HOLD WHITE GUE SET.  
13 ROUND DECK EDGE & LAMINATE 300gsm DOUBLE BIAS CLOTH OVER DECK & LIP 50mm ON/D HULL SIDES.

MDF or Second grade plywood	16mm	8 SHEETS
Plywood	6mm Gaboon (Okume) or Pacific Maple 9mm Gaboon (Okume) or Pacific Maple 12mm Gaboon (Okume) or Pacific Maple	20 SHEETS (SHEET SIZE 2400x1220) 6 SHEETS (SHEET SIZE 2400x1220) 2 SHEETS (SHEET SIZE 2400x1220)
Fibreglass	300gsm BIAKAL CLOTH (1200mm WIDE) 400gsm DOUBLE BIAS TAPE (100mm WIDE) 450gsm CHOPPED STRAND MAT (1200mm WIDE) 600gsm DOUBLE BIAS CLOTH (1200mm WIDE) 900gsm UNIDIRECTIONAL CLOTH (1200mm WIDE) 750gsm TRAKAL CLOTH (1200mm WIDE)	115 lin metres 465 lin metres 10 lin metres 12 lin metres 11 lin metres 28 lin metres 150 lin metres
Peel Ply	Epoxy	170 litres
Filling powder		20 kg
Sanding filler		5 kg
Lexon for windows	6mm thick tinted	2300 x 600
Point - High build undercoat	Preferably 2 pot polyurethane	Approx 12-16 litres
Point - Gloss top coat	Preferably 2 pot polyurethane	Approx 12 litres
Folding system	LASER OR WATER JET CUT 5083 ALLOY H321 TEMPER (ALLOW APPROX \$1300 AUD) 6061 ALLOY T6 TEMPER (ALLOW APPROX \$100 AUD)	
Pivot pins		
Aluminium flat bar 25mm x 6mm	For backing plates	2 lin metres
Sikaflex sealant		2 cylinders
Various fabricated & standard fittings (eg Ronston)		
Various nuts, bolts & screws		
Consumables	Gloves Paper towels Mixing jugs & cups Measuring pumps for epoxy Mixing sticks Solvent for cleaning - acetone for polyester or vinylster -white vinegar for epoxy Brushes Sanding disks Sand paper Gyprok (dry wall) screws (for temporary assembly)	

**TOOLS REQUIRED**

Jig Saw  
Drill & Drill bits  
Several hole saws  
100mm Angle Grinder  
Rubber backed sanding disk for grinder  
Diamond cutting disc for angle grinder  
Random Orbital Sander (pref 150mm dia)  
Files & Rasp  
Ruler  
8 metre measuring tape  
Square  
Filing tools  
Spreader (for fairing compound)  
Plastic Gyprok filler spreaders work well  
Several chisels  
Stanley knife (sometimes called a box cutter)  
Scissors  
Laminating tables  
Saw horses

Best to have both mains power and cordless.

For cutting thick fibreglass eg trimming beam flanges

3 sheets 16mm plywood (second grade) covered with plastic. May be supported on sawhorses. Standard saw horses or the folding clamping cheapies. (The legs can be shortened if required)

May be home made or modified putty knives or plasterer's tools.

PHOTOCOPIER  
SCALE UP A4 DRAWING BY  
1.414 TO OBTAIN A3 SIZE

**Scarab 18 Sport**  
18 feet (5.5m) FOLDING TRIMARAN  
MATERIAL LIST FOR PLYWOOD CONSTRUCTION

**Team Scarab**  
MULTIHULL DESIGNS BY PAUL KENRICK  
466 DEVERON ROAD GLENWOOD QLD 4570

DATE: SEPT 08  
SCALE: NOT TO SCALE  
DRAWING NUMBER  
S18-SP11

