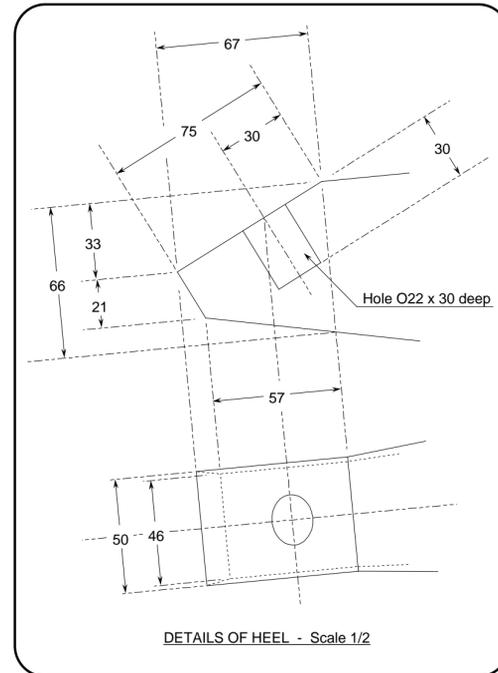


Note:
 Single keel bolts M20 Countersinks Ø42 x 30
 Pairs of keel bolts M16 Countersinks Ø35 x 30

Offsets (And Heights Of Bottom) To Give Shape Of Keel (Allow For Shrinkage When Making Pattern)													
	A	B	C	D	E	F	G	H	I	J	K	L	M
Slab 0	48	58	101	132	152	161	157	143	127	107	80	53	25
Slab -45			84	111	130	139	136	126	112	95	71	49	24
Slab -90			70	96	113	121	120	112	101	86	65	45	
Slab -135				84	99	107	107	100	91	76	60	41	
Slab -180				74	89	96	96	91	83	71	55		
Slab -225					80	86	86	82	76	65			
Slab -270						78	78	75					
Bottom - offset	48	51	63	72	76	77	76	74	71	64	53	41	23
Bottom - height	0	-21	-120	-196	-248	-275	-281	-274	-260	-239	-203	-144	-66

Note: These are all offsets - i.e. half-breadths
 These are heights from the top face of the keel



- Specific Notes:**
- Keel is cast in grey cast iron.
 - Keel bolt holes are drilled clearance for the bolt sizes indicated.
 - Hole in heel of keel is for rudder bottom bearing bush.
 - Keel volume is calculated at 0.168m³ to give keel weight of approximately 1200kg.
 - This drawing gives the finished keel sizes - allow for metal shrinkage upon cooling (c. 1.042%) when making pattern.
 - Keel data is given at 45mm intervals so pattern can be made "bread-&-butter" from 45mm finished thickness slabs.
 - Keel sections (A to M) are at intervals measured along line of keel angle and are drawn square to keel top.
 - Heights on sections are measured from top of keel.
- General Notes:**
- All dimensions are in millimetres unless otherwise noted.
 - The Zero Point is the intersection of the Datum Water Line (dwl) with the stemface.
 - Positions are measured fwd and aft (marked "-") of the Zero Point.
 - Heights are measured above and below (marked "-") the dwl.
 - Offsets are measured each side of the fore-&-aft centreline (marked "c" or c/line).
 - Waterlines are designated "wl" followed by their height.
 - Buttocks are designated "b" followed by their offset.
 - Diagonals are designated "d" followed by their start height on the centreline and their angle to it.
 - Offsets on diagonals are measured down the angle of the diagonal.
 - Offsets are to inside of skin unless noted otherwise.

Whisstock boats and boat plans support@whisstock.com

Boat 140 Ballast Keel

Scale	1/10 & 1/2
Date	14/11/2009
Plan No.	140/005/01
Issue No.	01 web
Drawing Size	895 x 305 - 35" x 12"

© Bmarkweb Ltd 2009 All Rights Reserved