Liner Order Form No.1 for Single Markouts

ABGAL Liners & Covers

ABGAL PTY LTD. ACN: 010 151 578. ABN: 78 033 608 597

Please read the conditions marked with a ★ and fill out all details and tick boxes where applicable

QUOTE No: ..... PRICE $ ..... DATE Required: .....

Your Name: ..... PH: .....

Your Client: ..... Order No: .....

Welded Bead: Facing ❑ ~~~ or ❑ ~~~ Type (A) (B) (C) See overleaf for bead type & size profiles

★ Measure wall height from hook on fixing extrusion to floor, list an exact wall height for welded bead.

Pool Wall Height: ..... mm or ❑ use 1 panel Width of 1120mm

A to B Measurement: ..... mm Pool Length: ..... mm

Last Point Before B: ..... Pool Width: ..... mm

T/port Co: ..... ❑ P/up Perimeter: ..... mm

All fixing extrusions are in 3m lengths, list quantity of lengths required

Above Water: Retainer EXTRET ..... Capping EXTCAP .....

★ NEW: Retainer for T-Lock EXTW1F ..... T-Lock Black strip EXTW1T .....

Below Water: W/line Male EXTWL3M ..... W/line Female EXTWL3F .....

Distance from Point A	Distance from Point B	Wall Height
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
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16	16	16
17	17	17
18	18	18
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34	34	34
35	35	35
36	36	36
37	37	37
38	38	38
39	39	39
40	40	40
41	41	41
42	42	42
43	43	43
44	44	44
45	45	45
46	46	46
47	47	47
48	48	48
49	49	49
50	50	50
51	51	51
52	52	52
53	53	53
54	54	54
55	55	55

★ ❑ **STEP OR MORE POINTS ON NEXT PAGE**

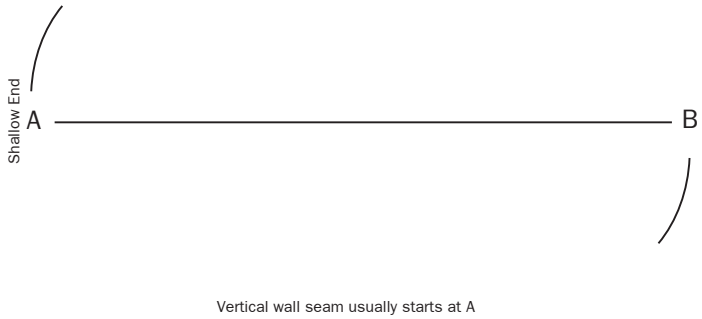
Colour

Tick ✓	
Dark Blue	
Light Blue	
Medit. Marble	
Pacific	
Antique	
Caribbean	
Maldive	
Coral Sand	
Reef Pebble	
Bahama	
Casblanca	
Costa Rica	
Reflections	
Reflect Tile Bd	
Mosaic Tile	

NUMBERS ARE TAKEN AS CLOCKWISE FROM A

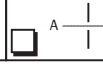
Please sketch pool

★ Pool Brand _____ Model _____ (if known)



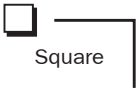
Vertical wall seam usually starts at A

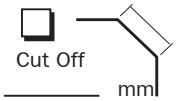
Seam direction: Choose the direction the edge of the seams face in the pool, TOP is the default direction.

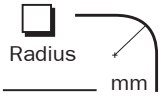
❑ (T) Top (default) ❑ (C) Centre  ❑ (B) Bottom

Corners: (Plan view)

❑ Standard Square 70mm Radius

❑ Square 

❑ Cut Off _____ mm 

❑ Radius _____ mm 

CHECK POINT OR DISH BASE DIMENSIONS:

❑ YES, DISH LINER

Refer overleaf to Diagram 5 for measuring details

Distance from:		Tight	Loose
Point No. A	**Point No. B**		
Point No.	Point No.		
Point No.	Point No.		
Point No.	Point No.		
Point No.	Point No.		
Point No.	Point No.		
Point No.	Point No.		
Point No.	Point No.		
Point No.	Point No.		

★ A dished base liner will be supplied and charged for if the YES box has been ticked, or the loose measurement is more than 8% longer than the tight measurement.

Please supply one pool liner as per these specifications and conditions:

Signed ..... **Date** ..... Sign here

Additional Notes:

For Office Use Only
Job number:

★ All liners are custom made and hence are non-returnable. This form is to order liners with vertical walls and square wall/floor joins. For pools with tapered walls and/or are curved where the wall meets the floor, use ABGAL's 3D A—B Measuring System or ABGAL's 3D Laser Measuring System. Please refer to ABGAL's Inground Liner Manual for more information on measuring. Thanks ...

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abgal.com.au Fax: 1800 808 786

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Your Name: _____ Your Client: _____ Job Number:

Instructions for pool liner markout

Please supply a sketch of the pool on the ABGAL markout sheet with the position of "A" and "B" clearly marked as well as some of the numbered points and their relative positions around the pool. Next we need the pool length, width and the perimeter listed on the markout sheet.

1. Envisage a line running through the longest length of the pool and using chalk, a crayon or permanent marker, mark each end of this line at the wall to floor join of the pool. Name the mark in the shallow end "A" and the other mark "B". See Diagram 1.

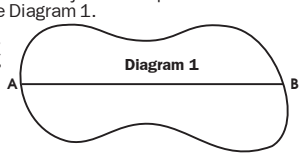


Diagram 1

2. Measure the distance between "A" and "B". List this measurement on your markout sheet. If the pool is being measured by one person, it is advisable to hammer a masonry nail or similar into the pool at both "A" and "B". Alternatively you can use a weight to hold one end of the tape measure, but you have to constantly check it has not moved as you go.

   Do not measure around corners, as this will distort the actual shape of the pool causing the Liner not to fit. If the tape is obstructed by a wall, measure from the top of the pool, or use 2 posts held vertical and measure above the obstacle. Never leave any points with part measurements, at ABGAL we need at least 2 intersecting measurements for each point.

N.B. Always measure Horizontal and the tape is always held taut when measuring between any points (unless otherwise told).

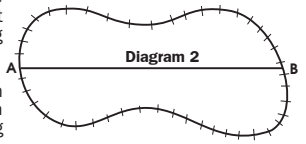


Diagram 2

3. Moving in a CLOCKWISE direction around the pool from "A", mark the pool wall with 50mm long marks for each point to be measured. The points are spaced according to the shape of the particular section of the pool being measured. If the pool has a varying wall height, mark each change of wall height as a separate point. See Diagram 2.

   Below is a chart indicating the distance between points for certain radius curves on the pool. The points around the pool should be numbered consecutively from "A" starting with No. 1. In a square corner there should be a point 100mm before the corner, a point right on the corner and a point 100mm after the corner.

Wall Radius in Millimetres	Distance apart for points (mm)
Straight	1500
50 - 150	50
150 - 300	100
300 - 1000	300
1000 - 1800	600
1900 - 2500	700
2600 - 6000	800

4. It is a good idea to write the number of each point you have marked around the pool. Starting from "A" and going in a clockwise direction, number every point. Holding the zero end of the tape on "A", measure to point No. 1 and record the distance on your markout sheet. Still holding the tape on "A", measure now to point "2" and record that distance. (see Diagram 3) Continue in a clockwise direction from "A" and record all the distances to every numbered point from "A". After the last point has been measured, transfer the zero end of the tape to point "B".

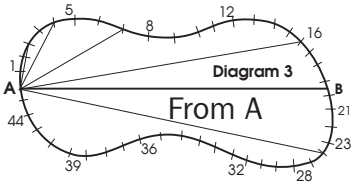


Diagram 3

5. Now measure from "B" to point No. "1" and then from "B" to point "2" and continue in a clockwise direction until you have measured the distance from "B" to all the points in the pool. You should now have 2 times as many measurements as points around the pool, one lot measured from "A" and the other lot measured from "B". See Diagram 4.

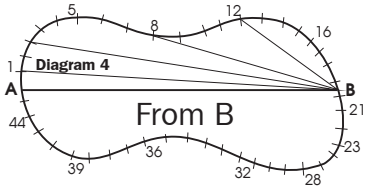


Diagram 4

6. The next step is to take 4 to 5 measurements across the width of the pool. (approximately 1m - 2m apart) These are from one markout point to another, across the width of the pool. Eg. Point "5" to point "39" ,then point "8" to point "36" etc. as shown on diagram 5. These are used for 2 purposes, firstly to check the markout is the correct width when it is processed by computer. Secondly, to check if the liner needs special shaping in the floor and if it does, provide accurate measurements to have the floor of the liner shaped when it is manufactured. This is called having a "dished base" put into the liner. It is optional for most pools, but is mandatory when the pool is either narrow, or deep or simply has an acute floor shape.

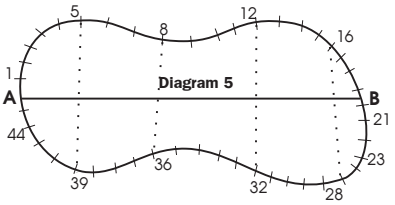


Diagram 5

7. To check if the pool needs a "dished base", here at ABGAL we calculate the difference in the width of the pool between 2 points with the tape measure held "tight" and the width between those same points with the tape measure running straight between the points, but lying "loose" on the floor of the pool. The "loose" measurement is the actual distance along the contour of the floor between 2 points. You can calculate this yourself by dividing the "loose" measurement by the "tight" measurement and if the result is greater than 1.08, the liner needs to be specially shaped (in other words "a dish"). Eg. the "tight" distance between point 5 and point 39 is 4500 and the "loose" is 4950, then dividing 4950 by 4500 = 1.10, which is greater than 1.08 and therefore the ABGAL liner needs "a dish".

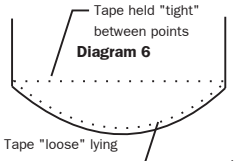
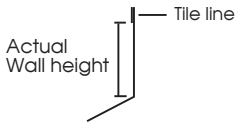


Diagram 6

8. The wall height measurement is taken from the wall to floor join up to the point where the liner fits into the extrusion. If the pool has a tile line, do not include the tiles as part of the wall height. When the pool has a varying wall height, a number of measurements are required to obtain the true shape of the wall. Take these height measurements at each numbered point around the pool, and list them down alongside the A to B measurements in the column provided.



When a pool has 1 step to be covered by the ABGAL liner, you need to complete 2 markouts. The first is a markout of the pool shape as described above. The second is a markout using the same A & B for the pool, to new points around the whole step. See diagram 9. List these points and measurements on the chart above. (Write each point number in a box and the corresponding measurements alongside)

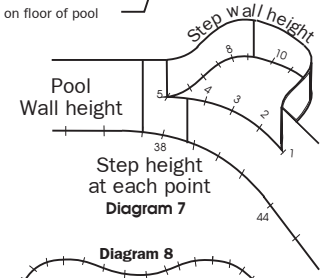


Diagram 7

The step points must align exactly with the pool points, so the step can be matched to the pool. Beginning with 1 at the start of the step closest to "A", number each step point and continue in a clockwise direction around the complete step including the front edge. Now measure from "A" to point 1, point 2 and write these measurements on the markout sheet. When you have measured all the points on the step from "A", transfer the zero end of your tape to "B" and then measure from "B" to point 1, point 2 etc.

Check that you have an equal number of measurements from A & B, if not, recheck each measurement. Next measure the step heights. There are 2 heights to measure, the "riser" from the pool floor to the "tread" or top of the step and the wall of the step. The wall of the step is usually a constant height, but the "riser" will vary if the pool floor is not completely flat. Take each "riser" height and write it down on the chart above, beside the A & B measurements. Then measure the height from the tread to the liner fixing point and write it in the 4th column of the chart. These 2 step heights (riser & step wall) should add together to equal the pool wall height at the same point. Lastly, if there is more than 1 step to be covered by the ABGAL liner, do a separate markout for each step.

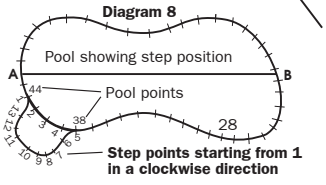


Diagram 8

Lastly, all of us at ABGAL thank you for taking the time to carefully and accurately measure the pool according to these instructions. Your time taken will be rewarded by an ABGAL liner made exactly to these dimensions for a perfect fit. By the way, if you have any questions about measuring any pool, please call us — we'll be delighted to hear from you.

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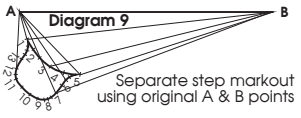
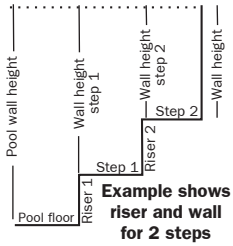


Diagram 9

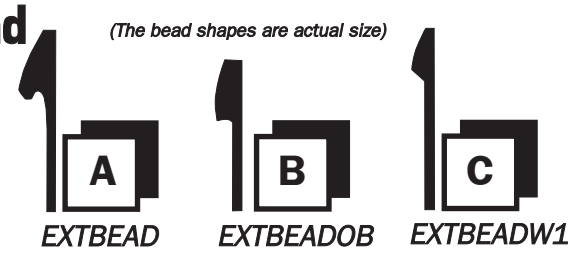
Tick ✓ Step m/out or Pool m/out continued

A - B length _____ Pt. ___ to Pt. ___

If these measurements are for a step, list the Step A-B length and the points on the pool that match the step A-B points. Sketch the side elevation of the step(s) like the example shown.



Example shows riser and wall for 2 steps

Write point numbers in boxes	From A	From B	Step or Pool Wall Ht.	Step Riser Ht.

Bead *(The bead shapes are actual size)*