

Markout guide for measuring Pool Liners

How do I measure this pool?

Before measuring a pool for a liner, you need to determine the style of pool. Inground pools are built in many different ways and the style will dictate the way it needs to be measured and the number of measurements you need to take.

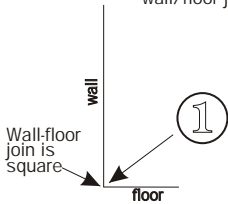
Here at ABGAL, we several methods of measuring pools specific to the shape of the pool and how the liner for that pool is designed and manufactured.

Download measuring sheets and Liner Order Forms at www.abgal.com.au

ABGAL Style 1

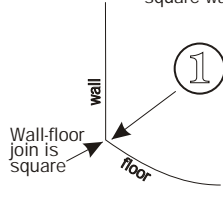
This style of Inground pool is most suited to lining as it has a vertical wall and a square corner where the wall of the pool meets the floor. See Diagrams below. This pool can usually be measured as a "Single Markout" using one set of perimeter measurements and wall heights to re-create the shape of the pool in our Liner factory. Examples of this style are "Pre-fabricated vinyl pools" and "Block Pools" with square wall/floor joins.

VSF Vertical wall and flat floor with square wall/floor join



"Single Markout" measured at arrow and typical of the profile in

VSS Vertical wall and sloping floor with square wall/floor join

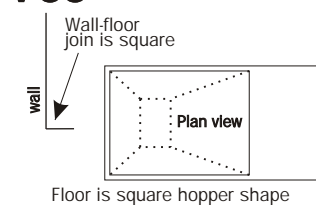


"Single Markout" measured at arrow and typical of the profile

ABGAL Style 2

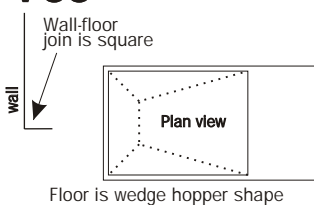
This style of Inground pool is an existing vinyl lined type as it has a vertical wall and a square corner where the wall of the pool meets the floor. The pool shape is made up of straight panels and is usually rectangular. The floor shape on this pool is called a square hopper or wedge hopper style. The pool has a fixed wall height and the floor is shaped with straight slopes to form the deep end of the pool. This pool is measured using horizontal and vertical measurements along the length and width of the pool. See Diagrams below.

VSS Vertical wall and sloping floor with square hopper



"Hopper Markout" measured with horizontal and vertical measurements along the length and width of the pool. Diagonals to check pool is square.

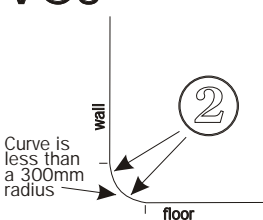
VSS Vertical wall and sloping floor with wedge hopper



ABGAL Style 3a

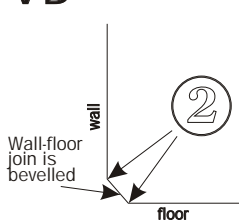
This pool has vertical walls and no steps to be covered by the liner, but is a little more complex to measure as the wall/floor join is either curved or bevelled. The liner needs to be specially shaped to fit this style and therefore needs one extra set of measurements to be taken. If the pool has a bevelled edge, 2 sets of measurements are required, one at the top and the other at the bottom of the bevel. If the wall/floor join is curved and has a radius between 100mm and 300mm, the first set of measurements would be taken at the top of the wall and the second set of measurements 1/4 down the curve, well above the level of the floor. Use the 3D AB markout method for this style of pool. You will need to take some vertical wall measurements as well. See Diagrams below.

VC3 Vertical wall with curved wall/floor join



"3D Markout" measured at arrows and typical of a cove in a "Block Pool" or a formed concrete

VB Vertical wall with bevelled wall/floor join

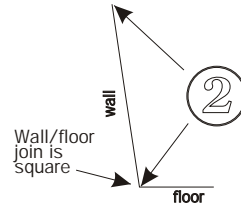


"3D Markout" measured at arrows and typical of a bevel in a "Block Pool" or a formed concrete

ABGAL Style 3b

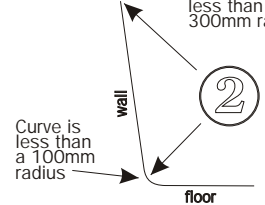
This pool has Non-Vertical walls and no steps to be covered by the liner, but requires more than 1 markout. The liner wall needs to be specially shaped to fit this style and therefore needs one extra set of measurements to be taken. If the pool has a square wall/floor join then take one set of measurements at the top of the pool and the other set where the wall meets the floor. If the wall/floor join is curved and has a radius less than 100mm the second set of measurements would be taken 1/4 of the way down the curve or about 75mm above the floor. See Diagrams below. If the radius is larger than 100mm then refer to type NVC3 as you will need wall shape measurements too, both styles use the 3D AB method.

NVS Non-Vertical wall with square wall/floor join



"3D Markout" measured at arrows and typical of a tapered wall of a Fibreglass pool, or the cove in some Sprayed Concrete pools.

NVC1 Non-Vertical wall with a curved wall/floor join less than a 300mm radius



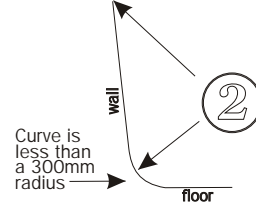
ABGAL Style 4

This will usually be a Sprayed Concrete or Fibreglass construction pool that has walls that are not vertical. The walls lean out slightly toward the top of the pool and have a radius larger than 100mm where the wall meets the floor. This pool style needs 3D measurements, usually there is one set at the top of the pool, then 1/4 the way down the wall/floor curve and the rest are taken on the walls to provide an exact shape of the curve of the wall.

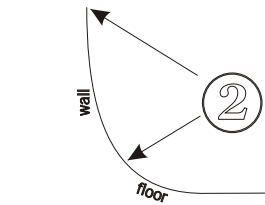
Use the 3D AB method for pools with NO steps or benches. (Liner Order Form No 3) Or use the 3D laser method for all pools, but especially those with steps and benches that are being covered by the liner. (Liner Order Form No. 4)

"Cut on Site" method of shaping the Pool Liner can be used for these styles of pools. Use the COS Liner Order Form no. 7 and supply a plan of the material required to be taken to site. The wall and steps of the liner are tailored in the fabric taken to site, the wall is taken to 1/4 down the curve and the floor is measured as a single markout with reference measurements marked on the back of the wall. Please contact Abgal for further details on these methods.

NVC3 Non-Vertical wall with curved wall/floor join



CWCF Curved wall with curved wall/floor join

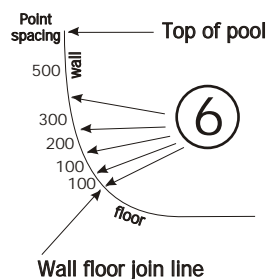


This profile is typical of a sprayed concrete or fibreglass construction pool and requires 3D AB or 3D laser measuring. If the pool has steps to be covered by the liner, use 3D laser method or the Cut On Site method by an experienced Liner tailor.

Point spacings floor & wall

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

Use a least 6 points for a 3D wall profile



What to do for steps

If the pool has steps, you need to do an individual markout for each step using the original AB points for the measurements or new points that are linked to the original AB points. For all 3D measured steps, each step must have a different reference code so it can imported individually into our design program.

Steps heights are only required for single markout methods. All levels of the step are required to be measured and the point spacing on steps needs to be closer to improve the accuracy of the shape.