A Point-to-Point is a very easy and relatively quick way (usually less than 1 hour) to define the shape of a pool. It is used to get accurate dimensions of an odd-shaped pool, such as a kidney, mountain lake, or other free forms. Point-to-Points can also be used on simple pools like rectangles that might be out of square. There is no limit to the size or shape of a pool that can be measured with a Point-to-Point. Read the following steps completely before doing the Point-to-Point. Order will not be processed without picture of pool and perimeter measurements.

**Locate X and Y points:**
Locate two points, approx. 15’ apart (not less than 10’ apart). These two points will be referred to as “X” and “Y”. The X and Y points need to be the same distance from the pool edge, at least 3’. When drawing an imaginary line the length of the pool, that line should not cross over the perimeter of the pool edge.

**Mark points around the pool:**
Next, using a pencil, go around the perimeter of the pool making a mark on the coping every 2’. We recommend starting at one side of the shallow end break with Point 1, then proceed marking the points around the perimeter of the pool edge. Points can be less than 2’ apart, but not more. It is helpful to number the marks on the coping; this will help prevent any confusion while recording measurements. While making marks along the coping, look for the shallow end and deep end breaks. If a mark is close to a break line, go ahead and place the next mark at the break line. Be sure to note these points on the order form provided for Shallow End and Deep End Break. Notice that points 14, 23 and 37 on the pool diagram above were adjusted to fall on the break lines.

**Measuring the points:**
Place the end of the measuring tape at point X and record the distance to each mark around the pool edge on the order form provided starting at point 1. Next, place the end of the measuring tape at point Y and record the distance to each mark around the pool edge starting with point 1. All points on the perimeter of the pool will have two measurements, one to the X point and one to the Y point. After finishing with the points around the perimeter, measure the shallow end and deep end depths measuring from the bead track. Next, measure the back and side slopes around the hopper, length and width of the hopper pad, length of slope and length of shallow end as you would any other pool. If the pool has water in it, measuring the hopper dimensions can be done by using a long pole (usually a telepole). With someone holding the pole straight up in the pool, someone else can measure the distance from the pool edge to the pole.

*For Homeowners who have Hydra Pools:
It is not necessary to mark a point every 2’ unless you or your builder has changed the dig specs dramatically. Instead make your marks at each panel joint around the perimeter of the pool. Being the manufacturers, Hydra can determine the individual panel characteristics. Also, it will be necessary to measure to the break lines as described above.

**Sketching the layout:**
After finishing with all the measurements, draw a clear sketch showing the general shape of the pool and where the X and Y points are located. If there is a step, indicate if it is curved or a straight step and sketch the hopper and slope. It is recommended that if the slope curves, or does not follow the normal contour of the pool, to get the dimension of the side slope halfway down the length of the slope. This will help our designers determine the shape of the slope.

NOTE: If a pool is directional, you must specify the direction on the order form. At Hydra Pools, we determine the direction the pool turns (left or right) by standing in the shallow end and looking towards the deep end.
CUSTOMER IS RESPONSIBLE FOR THE PROPER FIT!

By the submission of this order the below named corporation & individual hereby authorize PWH and HYDRA POOLS to manufacture as a special order, a vinyl liner for an in-ground pool in accordance with the design and specifications which have been provided here within, and hereby acknowledge that PWH & HYDRA POOLS has not participated in either the design or formation of this liner & accepts full responsibility for the same, and further agrees to hold PWH and HYDRA POOLS harmless, that is, the below named corporation will pay in full or for any & all claims and expenses that may arise out of the design or use of this special liner. Order will not be processed without picture of pool and perimeter measurements.

SOME POOLS ARE NOT BUILT TO MANUFACTURERS SPECS. IT IS IMPORTANT THAT YOU VERIFY THE DIMENSIONS

Hydra Pools, Inc. (hereafter “Hydra Pool”) and its authorized distributors and dealers, as part of the swimming pool industry, encourage pool safety to prevent the risk of a pool owner, family member, or guest from suffering a severe injury or loss of life due to diving, submerging, jumping, or sliding into swimming pool water of any depth, particularly into shallow water. The dealer or contractor who installs your liner is an independent contractor and is not an agent of the manufacturer. Proper installation is the responsibility of the dealer/builder/contractor. Hydra Pools will produce the liner according to the dimensions, including water depth, you have provided only upon the following conditions.

1. To permanently remove any diving board if it exists prior to the installation of this liner.
2. To relocate any slide if necessary, prior to installation of this liner.
3. To defend, indemnify and hold Hydra Pools and its agent or the manufacturer. Proper installation is the responsibility of the dealer/builder/contractor. Hydra Pools will produce the liner according to the dimensions, including water depth, you have provided only upon the following conditions.

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I UNDERSTAND THE ABOVE WARNING AND REQUIREMENTS, CERTIFY THAT I WILL ABIDE BY ALL CONDITIONS HERETO, AND REQUEST THAT HYDRA POOLS PRODUCE THIS LINER AS ORDERED.

YOU MUST SIGN, DATE, AND RETURN THIS FORM WITHIN 2 BUSINESS DAYS OR IT WILL NOT BE PROCESSED. POOL OWNER SIGNATURE DATE

Rev. Level: B  Rev. Date: 04/09/19  Doc ID: PW300, Vinyl Inground Pool Liner Order Form
Measuring without entering the pool:
You will be able to measure horizontally, all of the bottom dimensions without entering or draining the pool. You can create your own simple measuring tool (an extended Plumb Line) that will take about 5 minutes to assemble and is used by pool professionals taking liner measurements.

Create an extended Plumb Line.
You will Need:
- Long straight pole (Vac Pole).
- String attached to end of pole
- Weight to attach to end of string
- Measuring tape

Hint: Measuring is always easier with someone to help. Only measure down to the nearest 1/4 of an inch.

Horizontal Bottom Measurements:
You should “Plumb” for points that will achieve the desired measurements based on the bottom contour of the pool. To take measurement “F,” you would stand on one side of the pool and “Plumb” for a corner of the hopper, measuring the distance from the bead receiver to the end of where the weight is attached. To take measurement “J,” stand with the pole over the edge of the pool and the string vertical (allow no slack in the string), measure the distance from the edge of the pool to the end of the pole where the string is attached.

BEFORE MEASURING, KEEP THESE IN MIND

1: Do not ASSUME anything – measure it and check it thoroughly. Often, the pool may have slight variances from the original manufacturers specifications.

2: Not all pools are constructed with straight lines and sharply defined changes of plane. Therefore, please note any abnormalities.

3: Always provide exact measurements. The manufacturer will automatically make the liner slightly smaller than the dimensions you give, in order to allow the liner to stretch into place properly. DO NOT try to make extra allowances for stretch in your dimensions.

4: Actual pool measurements should be made even if the original pool plans are available due to the fact that slight variances may have occurred during construction.

LINER TYPES

- Pool Deck
  - Beaded
  - Low Hung Beaded
- Standard Bead
- Esther Williams Bead
Note: If you have more than one type of corner on your pool (such as with a Lazy L) please include a sketch of pool indicating corner type and measurement.

CORNER TYPES

Diagonal Corners

Square Corners

Radius Corners

POOL SHAPES

Rectangle

Oval

Lazy “L” Right

Lazy “L” Left

True “L” Right

True “L” Left

Reverse Corner Types:
Square
Radius
Diagonal

* Shallow End Breakline
--- Follows I Beam
Perpendicular to B Wall
**ADDITIONAL POOL SHAPES**

Grecian

Jewel

Single Roman

Double Roman

Octagon

Round

**HOPPER PAD TYPES**

Square

Radius

Diagonal

Oval
HOPPER TYPES

- Constant Straight Slope Hopper
- Wedge Hopper w/Shallow End
- Wedge Hopper w/Constant Slope
- Cove Hopper
- Sport Bottom Hopper
- Standard Hopper
Use the straight side of the pool to draw an imaginary ‘corners’ on your pool. Then measure from ‘corner’ to the steps on each side.
AB Measurements are required for freeform pools to match the unique curves of your pool. Start by sketching a diagram of the pool on paper. Include location and detail of your pool deck and any non-removable obstructions, such as slides, dive stands, grab rails and ladders that lie within 18 inches of the pool edge. Pictures are required as well.

1. **Using chalk or masking tape to establish your AB plot line**: Start from 5’ away from the widest pool edge, plot a line along the length of the pool. The line should not intersect the pool in any direction and should be at least 2/3 the length of the pool.

2. **Mark plot points around the perimeter of the pool approximately every 3 feet**: Mark your pool deck in roughly 3 foot intervals around the pool perimeter, and numbering each point around the pool. Number all corners, rail locations (front and back of rails) or other obstructions within 18 inches of the pool edge. When tight curves, rocks, waterfalls or similar obstructions are encountered, mark at one foot intervals.
3. **Measure to each plot point from Point A**: Attach or have a partner hold one end of a tape measurer at Point A, measure to each point, starting at point one, and record in the corresponding box A1 on the measuring form. Continue measuring to each point around the pool perimeter and record each measurement. Repeat from Point B to each plot point in numerical order.

4. **Verify pool length and width**: Choose a numbered plot point in the shallow end, and a numbered plot point in the deep end, and record the measurement between the two points to represent overall pool length. Do the same across the widest point of the pool to represent the pool width. You may want to include a few width measurements for curvy pools with varied sections. Once completed, proceed on to the Hopper Style and measurements in the standard measurement form.