



Where Pool Measurement Takes Flight®

**User Guide for Pool Fitter Measuring
Replacement Solid and Mesh Safety Covers**

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Section 1

Introduction to Pool Fitter

This guide will assist you to measure your pool for a replacement solid or mesh safety cover, precisely matching existing anchors using a drone in combination with the Pool Fitter Measuring Kit. The Pool Fitter Process is fast, simple and provides a level of accuracy heretofore unmatched. Using AI Technology in combination with a minimum specification drone and camera, Pool Fitter provides a replacement cover that precisely matches the existing anchors on your pool. Pool Fitter can be used with your existing cover either on or off the pool and eliminates the need to remove the cover, clean it, return it to the manufacturer and the long lead times to have the cover manually measured for replacement.

5 Easy Steps

1. Prepare the pool job site to work safely and follow regulatory guidelines for a safe drone operation and flight.
2. Use the Pool Fitter Measuring Kit to complete the Pool Fitter Measuring Sheet.
3. Take 2 to 8 Drone Pictures
4. Forward Your Measurement Sheet and Pictures to orders@poolfits.com
5. Return your Pool Fitter Measuring Kit for a Full Refund.

Section 2

What is in a Pool Fitter Mesh & Solid Replacement Cover Measuring Kit

Everything you need to successfully complete the Pool Fitter Measurement Process!



Orange Measurement Discs



50' Fiberglass Tape Measure



50 – Existing Anchor Markers



4 – Brass Anchors & Inserts



Hex Anchor Insert Tool



Black Collars & Hex Keys



Paid Return Envelope & Label

Site Preparation and Working Safely

At Pool Fits safety is always at the top of our list. As you prepare to work, review the jobsite carefully and identify any potential hazards keeping the following in mind:

- Take inventory of any potential hazards.
- Talk to everyone participating in the project about working safely before work begins.
- Ensure precautions have been taken to prevent young children and pets from accessing the work area.
- Ensure that all participating in the work can swim and have access to a floatation device.
- Identify and eliminate trip hazards.
- Ensure that electrical cords are handled safely and are moved away from exposure to water.

Drone Operation & Flight

1. It is the drone operator's responsibility to understand all existing regulations pertaining to drone use including national and local regulations.
 - a. Rules & Regulations pertaining to drone use within the United States can be found on the Federal Aviation Administration (FAA) website: www.faa.gov/uas/getting_started
 - b. Rules & Regulations pertaining to drone use within Canada can be found on the Transportation Canada Civil Aviation (TCCA) Directorate website:
<https://laws-lois.justice.gc.ca/eng/regulations/SOR-96-433/Fulltext.html#s-900.01>
<https://laws-lois.justice.gc.ca/fra/regulations/SOR-96-433/Fulltext.html#s-900.01>
 - c. To brush up on the fundamentals of safe drone flight practices visit Fly Robotics at:
<https://www.fly-robotics.com/public-safety-2>
2. Pre-Flight Checklist
 - a. Flight area is outside of controlled airspace.
 - b. Drone Operator is qualified and licensed if necessary.
 - c. Weather of the day is acceptable.
 - d. Operator has reviewed this procedure and knows what photos are required.
 - e. Evaluate flight area for flight hazards such as tree branches, fences, phone & power lines etc...
 - f. Verify flight regulation and permission compliance.

Finding a Qualified Drone Operator

1. If you are not a qualified and trained drone operator do not attempt to fly a drone.
2. Qualified drone operators are widely available in most if not all areas and can be sourced on the web.
3. Alternatively, you can contact your realtor who typically uses a service with a drone operator to photograph properties. They can match you with a qualified operator who has all the equipment required.

Drone Specifications

Pool Fitter requires a Drone/Camera combo equivalent to or better than the Mini-2 by DJI. To view the specifications for the DJI Mini-2 follow this link: <https://www.dji.com/mini-2/specs>

- Highlights
 - o Drone with Hovering Capability
 - o 4k or better Camera
 - o Ability to change Camera Settings (assists with managing sunlight variation)
 - o Gimbal with 90 Degree Setting / Toggle (for vertical picture taking)

Section 3

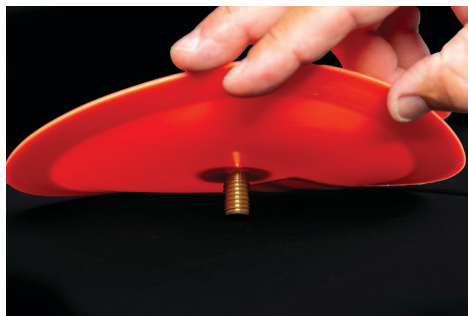
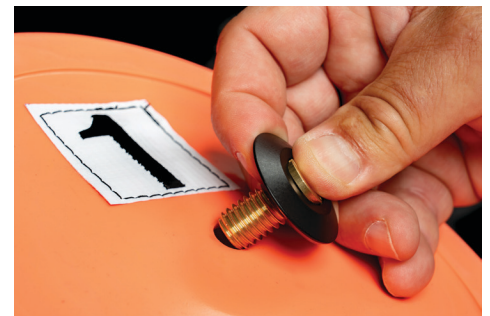
How Set-up and Use the Pool Fitter Measuring Kit

Step #1 – Unpack your Pool Fitter Measuring Kit to ensure you have all of the pieces. Each of the separate items are packaged in cloth pouch for your convenience.

Step #2 – Remove the 4 Brass Anchor Inserts from the Brass Anchors using the Hex Tool as shown below.



Step #3 – Assemble the 4 Orange Measuring Discs using the 4 Brass Anchor Inserts and the 4 Black Anchor Collars a shown below.

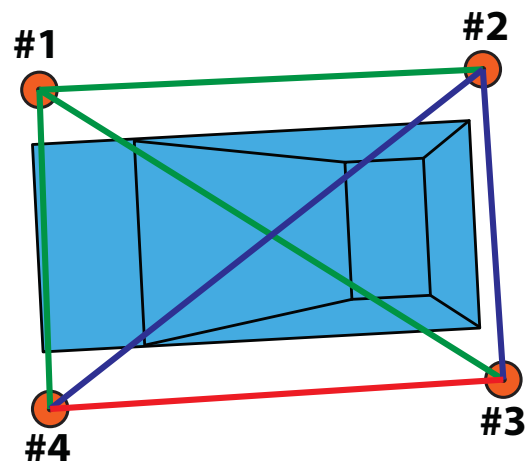
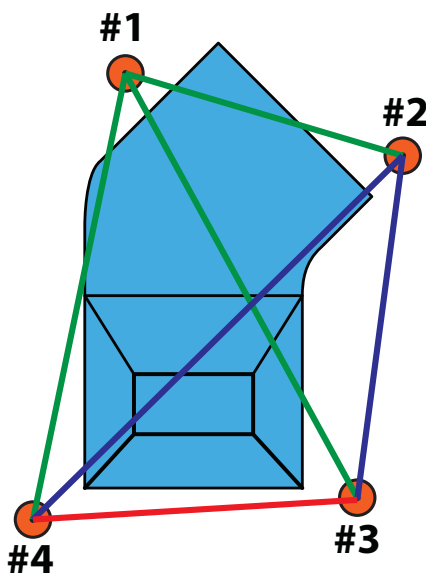
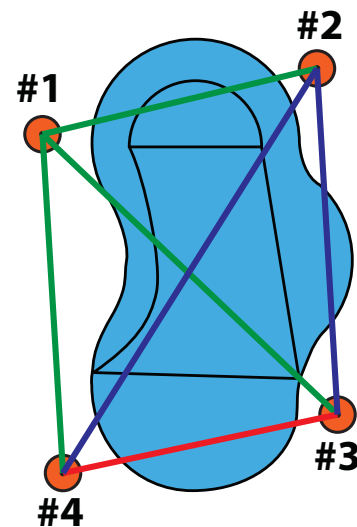
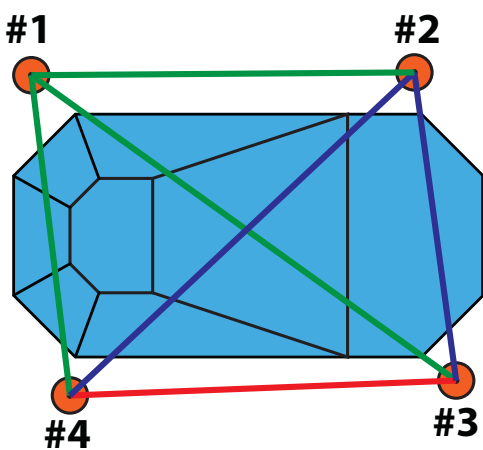


Step #4: The 4 numbered Orange Discs are used to create a large rectangle that will encompass the majority or all of the pool (as seen in the example images below). Proceed as follows:

1. Identify 4 existing anchors on the pool deck that will create the desired rectangle.
2. Remove the brass anchor inserts in those 4 anchors **only** using the Hex Anchor Insert Tool provided.
3. Starting with Disc #1 and using the Hex Anchor Insert Tool, replace the anchor insert so that Disc #1 is held firmly in place against the deck. Then with chalk mark #1 on the deck beside Orange Disc #1.
4. Repeat the same process for Discs #2, #3 and #4 moving clockwise around the pool to complete the rectangle, and marking with chalk the associated Disc # on the deck.

Note: *The Orange Discs can be located with the existing cover in place or with the existing cover removed. If the existing cover is removed, please ensure that the cover is fully removed and not in any of the drone pictures.*

Note: *Leave the chalk markings in place, incase the 6 measurements need to be revisited when our Computer Aided Design Team validates the 6 measurements and diagonals.*



Step #5: Insert the 4 Black Hex Keys in the Brass Inserts of each of the 4 Orange Measurement Discs as shown in the image below.



Step #6: Take and record the 6 Measurements required to complete the Pool Fitter Measurement Form as shown below.



**** See Helpful Tip**

Helpful Tips:

- Take all of the measurements from Disc #1 first
- Take all of the measurements from Disc #2 second
- Take the final measurement from Disc #3 third
- Record Measurements to the nearest 1/8"
- Measure to the Center of the Black Hex Key
- ★★ Measurement shown in the 3rd Image as an example is 20'-2-1/4"

Step #7 – Insert the Red Anchor Markers in **every** existing anchor around the perimeter of the pool, with the exception of the 4 anchors where the Orange Measuring Discs are located. *Make certain to put a marker in every anchor except those 4.* Count the total # of existing anchors, including the 4 where the Orange Measurement Discs are located. Recount to ensure accuracy and record the # of existing anchors on the Pool Fitter Measurement Sheet in the appropriate box. The Red Anchor Markers are inserted in the Existing Anchors as shown below and designed to fit securely inside each Anchor Insert Hex Hole.



Section 4

Drone Flight & Pictures

The Drone Flight and Pictures are perhaps the quickest and yet the most critical part of the Pool Fitter Process. All the work we have done up until this point is in preparation for the Drone Flight and Pictures.

Step #1 – Set Camera to ‘normal’ mode

Step #2 – Set Picture Format to RAW JPEG Mode

Step #3 – Make best effort to face away from direct sunlight

Step #4 – Set gimbal face down and at 90 Degrees (verify at take off and at desired altitude)

Step #5 – Increase the elevation so that the ‘field of view’ encompasses the entire pool and 3’ to 6’ of decking around the pool. While there is no maximum or minimum elevation requirement, the ideal range is between 30’ and 60’ above the pool, but at the lowest elevation that encompasses the required ‘field of view’.

Note: *All Red Anchor Markers must be visible for a successful photo plus approximately 3’ of additional decking. If the deck ends before 3’ then the deck boundary will suffice.*

Step #6 – When the elevation required is achieved, rotate (Yaw) the drone 360 degrees around the vertical axis to ensure the pool, additional decking and Red Anchor Markers remain in the ‘field of view’. If not, Repeat this step at a higher altitude to reverify.

Please read the following Notes:

- *The goal is to achieve the lowest possible altitude that includes the desired ‘field of view’.*
- *If there is an obstruction, such as a tree limb or other structure that prevents the ‘field of view’ from being achieved with the Drone and Camera as close to the center of the pool as possible, then the Drone can be moved off center. The desired position is as close to center as possible to achieve the desired ‘field of view’.*
- *If the desired ‘field of view’ cannot be achieved via increased altitude and positioning the Drone and Camera off-center then the gimbal can be adjusted. **The angle of the gimbal must be noted and added to the Measurement Sheet in this case.***
- *While the ideal position and settings are ‘dead center’, ‘lowest altitude possible’ and with the ‘gimbal at 90 degrees’. To the extent these need to be adjusted to support the desired ‘field of view’ the minimal adjustment is the optimal position in each case. The Pool Fitter AI technology can accommodate each of these instances, either singular or in any combination.*

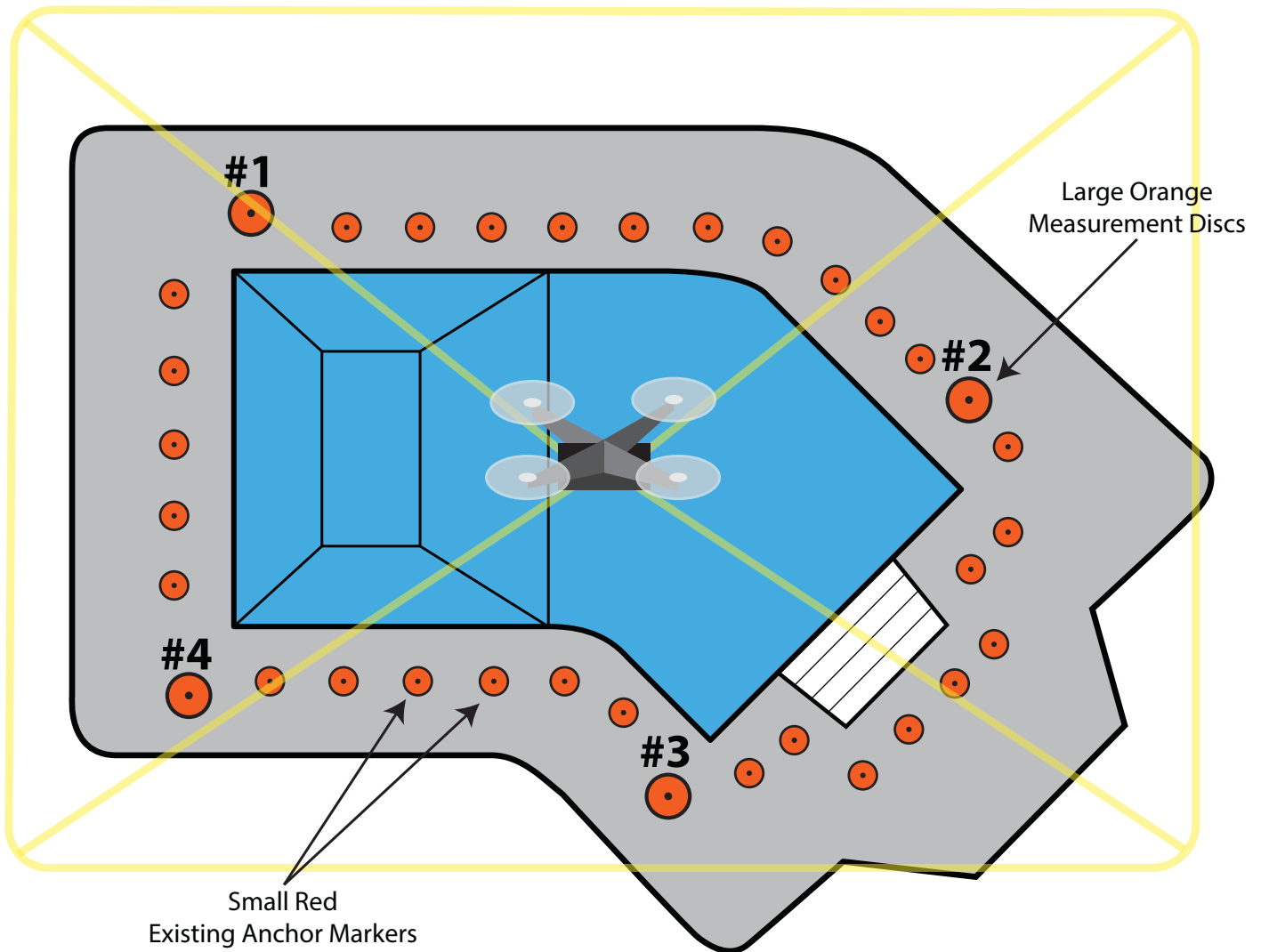


Diagram #1

The Ideal Drone Position is to navigate as close as possible to the center of the pool and deck.

The diagram above shows the drone in its ideal position:

1. At the minimum height that allows the camera's 'Field of View' (as depicted by the yellow lines) to capture all of the Pool Fitter markers, both the Large Orange Measurement Discs and the smaller Existing Anchor Markers as well as the majority of the pool deck.
2. As close as possible to the center of the pool & deck while maintaining the required 'Field of View' (as depicted by the yellow lines) to capture all of the Pool Fitter markers, both the Large Orange Measurement Discs and the smaller Existing Anchor Markers as well as the majority of the pool deck.

Section 5

Pool Fitter Measuring Sheet & Picture Submission

Very Important: Be certain to download the pictures to your phone or tablet before disconnecting and powering down the drone.

After downloading the JPEG images taken during the drone flight save them to file along with a PDF of the completed Pool Fitter Measuring Sheet and email the pictures and the measuring sheet to orders@poolfits.com. Once your Pictures & Measuring Sheet have been submitted, Pool Fits will provide you with a timely Quick Quote for a cover made to match your existing anchors.

Section 6

Placing an Order Using Pool Fitter AI Measurement Technology

Should you choose to convert your quotation into an order, simply send us an email at orders@poolfits.com or call us on our toll-free #1-877-325-3487 and we'll get your order sent to your cart using the information previously submitted.

Section 7

How to Return Your Pool Fitter Measuring Kit

Each Pool Fitter kit is shipped with pre-paid and pre-labelled return packaging. Simply return the Pool Fitter Measuring Kit complete using the packaging and label provided and Pool Fits will refund the entire cost of the Pool Fitter Measuring Kit, provided that all items are returned.