

U-STYLE STAND DIVING SYSTEM Assembly & Installation Instructions



3050 S. ALVERNON WAY • TUCSON, AZ 85713 520.790.7040 • 800.737.5386 • FAX 520.790.7127 inter-fab.com



WARNING: IMPORTANT INSTALLATION INFORMATION

The installation of this product should be done only by a licensed and professional installer. Installation should be done strictly in conformance with all local building codes, electrical codes and other building and safety laws and regulations. Among other things, that your installer should carefully analyze the need to bond the product to prevent an electrical hazard. Failure to properly install this product could result in a dangerous condition, including but not limited to electrical and or structural hazards. Inter-fab, Inc. disclaims all liability arising from the installation and the user assumes all risk associated with the installation.

For Technical Support or Assistance, Contact Customer Service at:

> INTER-FAB, INC. 3050 S. ALVERNON WAY TUCSON, AZ 85713 (800) 737-5386

or visit: www.inter-fab.com

To obtain complete copies of the ANSI/APSP/ICC-5 2011 Standard for Residential Inground Pools or to obtain copies of the "Plan Your Dive, Steer Up" or "The Sensible Way to Enjoy Your Inground Swimming Pool" contact:

The Association of Pool & Spa Professionals (APSP)
2111 Eisenhower Ave.
Alexandria, VA 22314
(703) 838-0083

or visit: www.theapsp.org

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WARNING SAFETY FIRST!

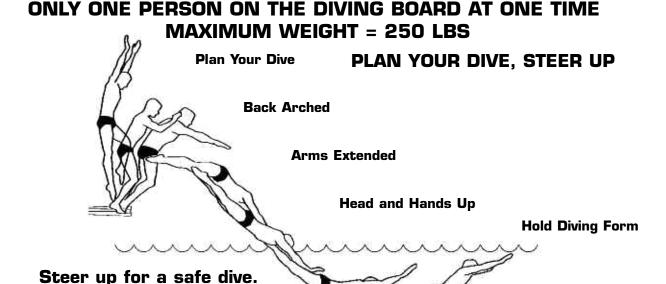
This Inter-Fab diving board and/or stand shall be installed only by a professional swimming pool contractor or with the direct supervision of a licensed professional, engineer or architect. Diving boards may be installed only on residential or public inground swimming pools properly designed for their use. Diving boards that are improperly installed can be very dangerous to the user resulting in possible serious head and/or spinal column injury, including the paralysis or death of the user.

It is very important that this diving board and/or stand be installed only on residential inground pools which meet or exceed the minimum water envelope dimensions of the American National Standard for Residential Inground Swimming Pools [ANSI/APSP/ICC-5 2011] or on public inground pools that meet or exceed the minimum water envelop dimensions of the ANSI/APSP/ICC-1 2014 standard for public pools and in accordance with the included INTER-FAB POOL SPECIFICATIONS. Installation should conform to local building regulations if they exceed the ANSI/NSPI standards.

In addition to the above standards and referenced specifications, these installation instructions provided by Inter-Fab, Inc. must be followed diligently.

It is also important that any and all warnings provided with the diving board be strictly adhered to and posted in a conspicuous location. If not provided or they are misplaced, please purchase warning signs from your pool contractor or professional pool supply store and post them in a location that the users of the diving board can clearly see.

"A pool is the safest place to swim and a diving board installed in compliance with manufacturers instructions and the ANSI/APSP/ICC-5 2011 standards for residential inground swimming pools and the ANSI/APSP/ICC-1 2014 standards for public inground swimming pools is the safest place to dive from. To ensure that you are able to safely enjoy your diving board for many years, it is critical that you follow the following instructions."





DIVING TIPS: Even the safest equipment must be used properly. Inter-Fab promotes safe diving by offering these tips on the proper use of your diving board: always dive into water that meets depth requirements, with arms extended; be aware of the bottom and the walls of the pool; avoid collisions with pool toys and floats; and instruct your pool users to always "steer up". When you begin your dive you must get ready to steer up. As you enter the water, your arms must be extended over your head, hands flat aiming up. Hold your head and arch your back.



A pool is the safest place to swim and a diving board installed in compliance with manufacturers instructions and the ANSI/APSP/ICC-5 2014 standards for residential inground swimming pools and the ANSI/APSP/ICC-1 2014 standards for public inground swimming pools is the safest place to dive from. To ensure that you are able to safely enjoy your diving board for many years, it is critical that you follow the following instructions.

DO

- 1. Know the shape and depth of the pool before
- 2. Make sure that all family members and guests are familiar with these instructions before they use your pool and diving board.
- 3. Make sure that the diving board has been installed in compliance with the Assembly and Installation Instructions and with the 2011 ANSI/APSP Standards for In-ground Pools. This includes the shape and depth of the pool as well as the height of the diving board.
- 4. Enter feet first the first time.
- 5. Plan your path to be sure you avoid any other swimmers, or objects in or under the water, such as floats, tires, toys etc.
- 6. Keep your head up, arms up and fully extended and steer up with your hands.
- 7. Practice carefully before you dive headfirst.
- 8. Become familiar with the diving board and its spring before diving headfirst
- 9. Dive straight ahead, not to the side of the board or pool.
- 10. Dive from the diving board only.
- 11. Make sure that children and non-swimmers are supervised at all times.
- 12. Always remember that when you dive you **must** steer up.
- 13. Inspect your diving board, base and stand on a regular basis (at least twice a year) and keep them in proper repair.
- 14. Contact your dealer, installer or Inter Fab (800-737-5386) with any questions or concerns about the safe use of your diving board.

DON'T

- 1. Don't drink and dive.
- 2. Don't install this or any diving board on an above ground pool or dive into an above ground pool from any surface.
- Don't dive into a pool from anyplace not specifically designated for diving. Never dive into the shallow portion of any pool.
- 4. Don't dive across the width of the pool or to the sides of the pool.
- 5. Don't Run and dive.
- 6. Don't engage in horseplay in or around the diving board or pool.
- 7. Don't use your diving board as a trampoline.
- Don't do a back dive. Backyard pools are not built for that type of activity.
- 9. Don't try fancy dives. Keep the dives simple.
- 10. Don't dive into or through objects or toys such as inner tubes.
- 11. Don't swim or dive alone.
- 12. Don't use a diving board or stand or base that is rusted or worn out or in poor repair.

THE U-STAND DIVING SYSTEM IS A DIVING BOARD



WARNING IMPORTANT NOTICES TO THE INSTALLER

The specifications found in this manual represent the minimum water envelope required by Inter-Fab and by the ANSI/APSP/ICC-5 2011 Standards for Inground Swimming Pools. Each of these dimensions must be met or exceeded. Installation of a diving board of any type on a pool that does not meet or exceed each of the minimum specifications as provided in this manual including but not limited to the slope requirement, is in direct violation of this manufacturer's instructions and the 2011 Standards, and can result in serious injury or death.

A 6' diving board can only be installed on a 12" or 18" U-Stand base: an 8' diving board can only be installed on a 12" or 18" U-Stand base; a 10' diving board can only be installed on an 18" or 24" U-Stand base; and a 12' diving board can only be installed on a 24" U-Stand base.

Comply with local government regulations for Inground Swimming Pools if they exceed the ANSI/APSP/ICC-5 2011 Standards.

Read carefully pages 9-12 and pages 15-21 of this installation manual which contain portions of the ANSI/APSP/ICC-5 2011 Standard for Residential Inground Swimming Pools, and the ANSI/APSP/ICC-1 2014 Standard for Public Swimming Pools.

NOTE: The installation of this diving board and/or stand is not complete until you, the installer have measured the pool as well as the diving board's height above water and the board's overhang to ensure they meet Inter-Fab's minimum water envelope specifications and the ANSI/APSP/ICC-5 2011 Standards For Inground Swimming Pools. In addition, the installation of this diving board and/or stand is not complete until you the installer have delivered to your customer and reviewed with your customer the "Owners Manual" as well as the "Plan Your Dive Steer-Up" brochure.

ONLY ONE PERSON AT A TIME ON THE DIVING BOARD, WITH A MAXIMUM WEIGHT LIMIT OF 250 LBS.

INTER-FAB BOARD TO BASE COMPATIBILITY CHART **

| | DU | IRO-BE <i>i</i> | М | DURO-S | SPRING | | TECHN | I-BEAM | | ВА | JA | 0 | LYMPIA | N | | сомм | ERCIAL | |
|-------------|----|-----------------|-----|--------|--------|----|-------|--------|-----|----|----|----|--------|-----|-----|------|--------|-----|
| BASE TYPE | 6' | 8' | 10' | 6' | 8' | 6' | 8' | 10' | 12' | 6' | 8' | 6' | 8' | 10' | 10' | 12' | 14' | 16' |
| U-Stand 12" | S | S | _ | _ | _ | U1 | U1 | _ | _ | _ | _ | U2 | U2 | _ | _ | _ | _ | _ |
| U-Stand 18" | S | S | S | _ | _ | U1 | U1 | U1 | _ | _ | - | U2 | U2 | U2 | U3 | _ | _ | _ |
| U-Stand 24" | _ | _ | S | _ | _ | _ | _ | U1 | U1 | - | ١ | _ | _ | U2 | U3 | U3 | - | - |

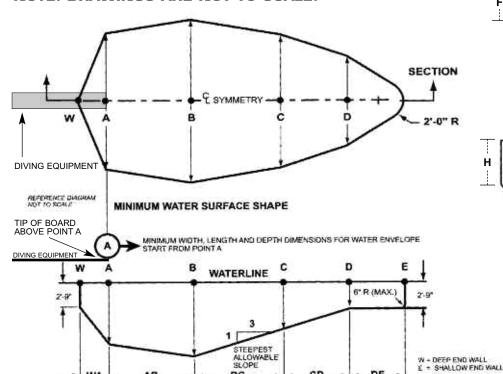
CHART KEY:

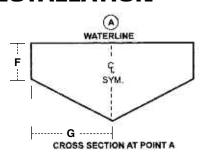
S = STANDARD; U1 = UPGRADE 1; U2 = UPGRADE 2; U3 = UPGRADE 3; - = NOT AVAILABLE

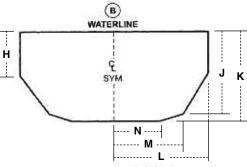
* * NOTE: The Chart above refers to standard wood core diving boards and u-stands.

MINIMUM DIVING WATER ENVELOPE:

NOTE: DRAWINGS ARE NOT TO SCALE.







CROSS SECTION AT POINT B

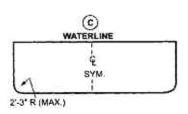
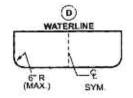


TABLE 1 - MINIMUM WATER ENVELOPE (ANSI/APSP/ICC-5 2011)

| POOL | M | NIMUN AT P | 1 DEPTH OINT | HS | MINIMUM WIDTHS AT POINT | | | | MINIMUM LENGTHS BETWEEN POINTS | | | | | |
|------|--------|---------------|-----------------|-------|----------------------------|--------|--------|-------|-----------------------------------|-------|--------|--------|-------|--------|
| TYPE | А | В | С | D | А | В | С | D | WA | AB | BC | CD* | DE | WE |
| 0 | | DI | VI | N G | E (| 3 U I | P M | EN | T P | RO | HI | BIT | E D | |
| 1 | 6'-0" | 7'-6" | 5'-0" | 2'-9" | 10'-0" | 12'-0" | 10'-0" | 8'-0" | 1'-6" | 7'-0" | 7'-6" | VARIES | 6'-0" | 28'-9" |
| II | 6'-0" | 7'-6" | 5'-0" | 2'-9" | 12'-0" | 15'-0" | 12'-0" | 8'-0" | 1'-6" | 7'-0" | 7'-6" | VARIES | 6'-0" | 28'-9" |
| III | 6'-10" | 8'-0" | 5'-0" | 2'-9" | 12'-0" | 15'-0" | 12'-0" | 8'-0" | 2'-0" | 7'-6" | 9'-0" | VARIES | 6'-0" | 31'-3" |
| IV | 7'-8" | 8'-6" | 5'-0" | 2'-9" | 15'-0" | 18'-0" | 15'-0" | 9'-0" | 2'-6" | 8'-0" | 10'-6" | VARIES | 6'-0" | 33'-9" |
| V | 8'-6" | 9'-0" | 5'-0" | 2'-9" | 15'-0" | 18'-0" | 15'-0" | 9'-0" | 3'-0" | 9'-0" | 12'-0" | VARIES | 6'-0" | 36'-9" |

CROSS SECTION AT POINT C



CROSS SECTION AT POINT D

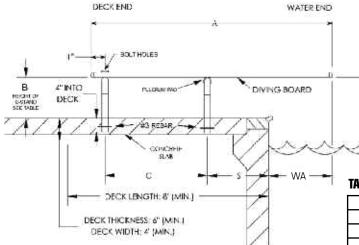
TABLE 2 - INTER-FAB RESIDENTIAL POOL MINIMUM SPECIFICATIONS

| POOL | MAX. DIVING BOARD LENGTH | MAX. HEIGHT OVER WATER AT POINT A | DIMENS | ECTIONAL SIONS AT NT A | CROSS SECTIONAL DIMENSIONS AT POINT B | | | NT B | MIN. HEAD ROOM ABOVE | | |
|------|--------------------------------|---|--------|------------------------------|---------------------------------------|---------|-------|---------|----------------------------|---------|--------------------|
| TYPE | DBL** | HOW** | F | G | Н | J | К | L | М | N | DIVING SURFACES |
| 0 | | DIVII | V G | EQUI | PME | ENT | PR | OHI | BIT | E D | |
| | 6' DB/6' JB | 20" | 2'-9" | 5'-0" | 4'-0" | 7'-2.5" | 7'-6" | 6'-0" | 3'-9" | 2'-1.5" | 12' |
| Ш | 8' DB/6' JB | 20" | 2'-9" | 3'-10" | 4'-2" | 7'-2.5" | 7'-6" | 6'-8" | 3'-9" | 2'-1.5" | 12' |
| III | 10' DB/8' JB | 26" | 2'-9" | 4'-4.75" | 4'-4.5" | 7'-5.5" | 8'-0" | 6'-7" | 3'-11.5" | 1'-7.5" | 13' |
| IV | 10' DB/8' JB | 30" | 2'-9" | 5'-10.5" | 3'-10" | 7'-8" | 8'-6" | 8'-3" | 5'-7" | 2'-7" | 13' |
| V | 12' DB/8' JB | 40" | 2'-9" | 6'-2" | 3'-11.5" | 7'-9.5" | 9'-0" | 8'-2.5" | 5'-9" | 2'-7" | 14' |

*Min. length between points CD may vary based upon water depth at point D and the slope between points C & D ABBREVIATIONS: **DBL=Diving Board Length; DB=Diving Board; JB=Jump Board; **HOW=Height Over Water

| NOTES: | |
|--------|---|
| | |
| | |
| | _ |
| | _ |
| | _ |
| | _ |
| | _ |
| | _ |
| | _ |
| | |

NOTE: READ THESE INSTRUCTIONS IN THEIR ENTIRETY BEFORE ATTEMPTING THE INSTALLATION.



HACKLA PAD

FIG. A - U-STAND RESIDENTIAL PLACEMENT SPECIFICATIONS:

TABLE 3 - U-STAND SPECS TABLE 4 - U-STAND MATERIAL

IMPORTANT NOTICE: WHEN PROPERLY INSTALLED, INTER-FAB'S 12" AND 18" U-STANDS WILL HAVE 4" OF THE RAIL EMBEDDED WITHIN THE DECK AND WILL MEASURE (RESPECTIVELY) 12" OR 18" FROM THE TOP OF THE RAIL TO THE SURFACE OF THE DECK. THE 24" U-STAND IS DIFFERENT, WHEN PROPERLY INSTALLED 4" OF THE RAIL WILL BE EMBEDDED WITHIN THE DECK AND IT WILL MEASURE 20" FROM

A B C 6' 12", 18" 30" ±3" 8' 12", 18" 40" ±4" 10' 18", 20" 52" ±5" 12' 20" 62" ±6"

HOW

CHRISTICAL CHARLE

THE TOP OF THE RAIL TO THE SURFACE OF THE DECK.

| MODEL | SIZE | OD | WALL |
|----------|------|-------|-------|
| DBU12049 | 12" | 1.90" | .049" |
| DBU18049 | 18" | 1.90" | .049" |
| DBU18065 | 18" | 1.90" | .065" |
| DBU24065 | 20" | 1.90" | .065" |

INTER-FAB CANNOT GUARANTEE CUSTOMER'S CONCRETE OR THICKNESS NOTE: WHEN COPING IS USED, DO NOT SET FRONT U-STAND

CLOSER THAN 3" FROM THE BACK EDGE OF THE COPING.

TABLE 5 — RESIDENTIAL PLACEMENT CHART

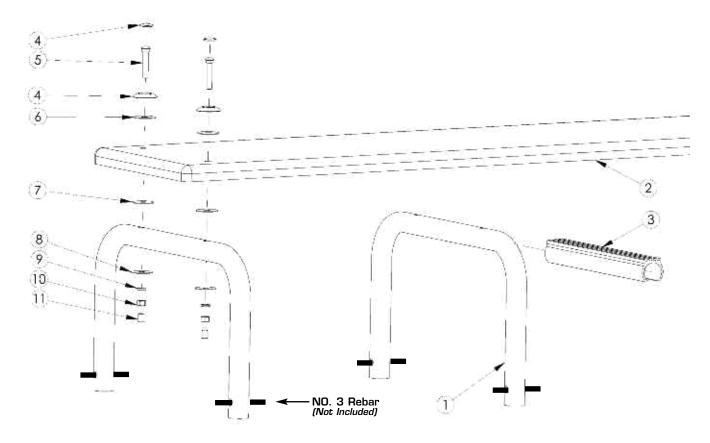
ADDITIONALLY REFER TO: ANSI/APSP/ICC-5 2011 American National Standard for Residential Inground Swimming Pools and to page 5 for Inter-Fab Residential Inground Pool Minimum Specifications.

| IMPORTANT: THESE DIMENSIONS | U-STANDARDS PART # (Note: there are several sizes available for each pool type) | NOMINAL BOARD LENGTH | ANSI/ NSPI-5 POOL TYPE | DISTANCE FROM WATER'S EDGE TO FORWARD U-STAND (S)* | DISTANCE FROM END OF BOARD TO FORWARD U-STAND | MIN. OVERHANG (WA)** | MAX HEIGHT OF BOARD ABOVE WATER (HOW) | | |
|-----------------------------|---|----------------------------|---------------------------------|--|---|----------------------------|---|--|--|
| ARE ACCURATE ONLY | DBU12049 | 6' | I | 18.25" | 36.25" | 18" | 20" | | |
| FOR VERTICAL POOL | DBU12049 | 6' | II | 18.25" | 36.25" | 18" | 20" | | |
| WALLS, <u>Typically</u> | DBU12049 or DBU18049 | 6 | | 12.25" | 36.25" | 24" | 26" | | |
| GUNITE CONSTRUC- | DBU12049 or DBU18049 | 6' | IV | 6.25" | 36.25" | 30" | 30" | | |
| <u>tion</u> , with less | DBU12049 or DBU18049 | 6' | V | Not recommended. | Call customer | service for mor | re information. | | |
| THAN A 3' RADIUS TO | | 8' | | NOT ALLOWED | | | | | |
| | DBU12049 | 8' | | 32" | 50" | 18" | 20" | | |
| THE POOL FLOOR. | DBU12049 or DBU18049 | 8' | | 26" | 50" | 24" | 26" | | |
| DUE TO THE VARYING | DBU12049 or DBU18049 | 8' | IV | 20" | 50" | 30" | 30" | | |
| SIZES OF OTHER | DBU12049 or DBU18049 | 8' | V | 14" | 50" | 36" | 40" | | |
| | | 10' | | NOT ALLOWED | | | | | |
| POOLS, <u>TYPICALLY</u> | | 10' | | | NOT ALLO | WED | | | |
| VINYL LINER CON- | DBU18049 or DBU24049 | 10' | | 37.5" | 61.5" | 24" | 26" | | |
| STRUCTION , PLEASE | DBU18049 or DBU24049 | 10' | IV | 31.5" | 61.5" | 30" | 30" | | |
| CONTACT CUSTOMER | DBU18049 or DBU24049 | 10' | V | 25.5" | 61.5" | 36" | 40" | | |
| SERVICE FOR PROPER | | 12' | | | NOT ALLO | WED | | | |
| PLACEMENT. | | 12' | | NOT ALLOWED | | | | | |
| PLAGEIVIENT. | | 12' | | | NOT ALLO | WED | | | |
| 1-800-737-5386 | | 12' | IV | | NOT ALLO | WED | | | |
| | DBU24 | 12' | V | 40" | 76" | 36" | 40" | | |

^{*} IMPORTANT: The distance for setting the front u-stand (S) from the water's edge is valid only if the minimum water depth is maintained at the tip of the board noted as point "A" in ANSI/APSP/ICC-5 2011 American National Standard for Residential Inground Swimming Pools. If minimum water depth is not maintained the distance (S) must be adjusted accordingly.

^{** &}quot;WA" dimension is valid only in conjunction with the minimum depth at point "A" for type pool in accordance with ANSI/APSP/ICC-5 2011 American National Standard for Residential Inground Swimming Pools.

FIG. B - U-STAND BASE EXPLODED VIEW



| DRAWING REPRESENTS THE FOLLOWING PART NUMBERS: |
|--|
| DBU12049 (shown) |
| DBU18049 |
| DBU18065 |
| DBU24049 |
| DBU24065 |

TABLE 6 - PARTS LIST

| | | | KITS - | – QTY. |
|--------|------------------|--|---------|--------|
| ITEM # | COMPONENT | DESCRIPTION | DB-TB-M | N/A |
| 1 | DBU12049 | 12" U Style Diving Standards | | 2 |
| 2 | DB6WW | 6' Duro-Beam White w/White Top Tread & Hdw Kit | | 1 |
| 3 | FC | Fulcrum Cover For U-Standard Base | | 1 |
| 4 | H-WHT WAS/CAP | I.F. White Washer/Cap | 2 | |
| 5 | H-SS 5 C BOLT | 1/2-13 x 5 Carriage Bolt S.S. | 2 | |
| 6 | H-1/2 BLK WASH | 1/2 x 2" Black Rubber Washer | 2 | |
| 7 | H-1/2 RED WASH | 1/2 x 2" Red Rubber Washer | 2 | |
| 8 | H-SS 1/2 F WAS | 1/2 USS Flat Washer S.S. | 2 | |
| 9 | H-SS 1/2 LOC WA | 1/2 Lock Washer S.S. | 2 | |
| 10 | H-SS 1/2 H NUT | 1/2"- 13 Hex Finish Nut S.S. | 2 | |
| 11 | H-1-1/2 W/HT CAP | 750 x 1-1/2 White HV Nut Can | 2 | |

TIGHTENING SCHEDULE:

Secure Board to Stand with Mounting Hex Nuts at 20-25 FT-LBS

HARDWARE NOTE:

Use a small dab of anti seize lubricant (included) on all bolt threads.

NOTES:

DB6WW diving board shown in exploded view for illustration purposes. Must be purchased separately. Other diving board options available.

U-Stand Diving Base RESIDENTIAL POOL INSTALLATION INSTRUCTIONS

Be sure the concrete deck surrounding the U-Stands complies with the minimum dimensions as shown in Figure A on page 6.

Read and understand the ANSI/APSP/ICC-5 2011 American National Standard for Residential Inground swimming Pools and Table 1 and Table 2 on page 5 before you install the U-Stand Diving System.

The U-Stands should be set in accordance with Figure A and Table 3 on page 6. The diving board must be placed on the deep end of the pool on centerline.

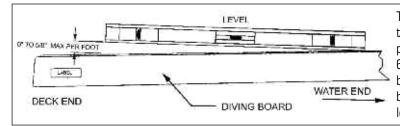
Make sure the U-Stands are set 4" into the concrete with ample concrete depth below the stand in accordance with Figure A on page 6. Do not install the U-Stand Diving System if the deck does not meet the minimum requirements.

When finishing the deck surface, maintain a level deck where the U-Stands project out of the deck surface. Both U-Stands must be leveled left to right and to each other when installing. This will allow the diving board to sit level left to right and have a slight upward pitch at the toe end once the rubber fulcrum pad is in place. Allow the cement to fully cure before bolting the diving board to the U-Stands.

When mounting diving board to a newly installed stand with a permanently fixed fulcrum, the correct measurement between the mounting holes and the fulcrum must be maintained so as not to void the warranty. See Figure A and Table 3 on page 6.

The rubber fulcrum pad MUST be used so as not to void the Inter-Fab warranty.

The Diving Board must be installed according the below board leveling instructions:



The top surface of the diving board from the deck end to the tip end shall be level or have an upward slope of 5/8" per foot maximum. Elevation difference shall not exceed 6" from the deck end to the tip of the board. There shall be no downward slope towards the water. The slope shall be measured using a level as shown in the graphic to the left.

ONLY ONE PERSON ON THE DIVING BOARD AT A TIME, WITH A MAXIMUM WEIGHT OF 250 LBS.

Extracted from ANSI/APSP/ICC-5 2011, American National Standard for Residential Inground Swimming Pools

To obtain complete copies of the ANSI/APSP/ICC-5 2011
Standard for Residential Inground Pools contact:

The Association of Pool & Spa Professionals (APSP) 2111 Eisenhower Ave. Alexandria, VA 22314 (703) 838-0083

or visit: APSP.org

5 Pool Dimensions and Tolerances

- 5.1 General requirements. Design dimensions shall comply with the specifications in this standard. The pool shall be constructed to these design dimensions within the tolerances listed in 5.1.1.
- **5.1.1 Construction tolerances.** There shall be construction tolerances allowed on dimensional designs. The length, width, and depth shall be limited to a tolerance of plus or minus 3 in. (±76 mm). All other dimensions shall be limited to a tolerance of ±2 in. (±51 mm), unless otherwise specified.

NOTE: Negative construction tolerances shall not be applied to the shallow area dimensions of the Minimum Diving Envelope given in Table 1, p. 4.

5.2 Perimeter shape. No limits are specified for shapes of pools. Consideration shall be given to circulation and safety to the user.

5.3 Walls-Requirements

- 5.3.1 Walls in the shallow area and deep area of the pool shall not slope greater than 11" (5:1 slope ratio) to a transition point of the floor (see Figure 1). The transition to the bottom of the pool between points D and E (see Figure 3, p. 5) shall not be less than 2 ft 3 in. (686 mm) below the waterline.
- 5.3.2 As shown in Figure 2, at the depths of (A) and (B), the walls are permitted to continue to join the floor.

Figure 1 Maximum allowable wall slope

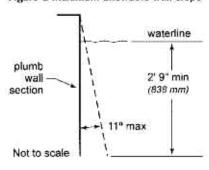
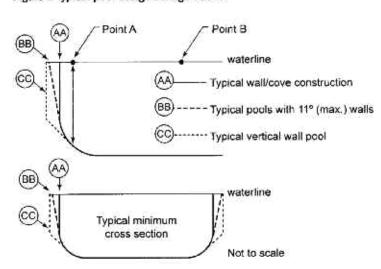


Figure 2 Typical pool design configurations



Extracted from ANSI/APSP/ICC-5 2011, American National Standard for Residential Inground Swimming Pools

Figure 3 Minimum diving water envelope

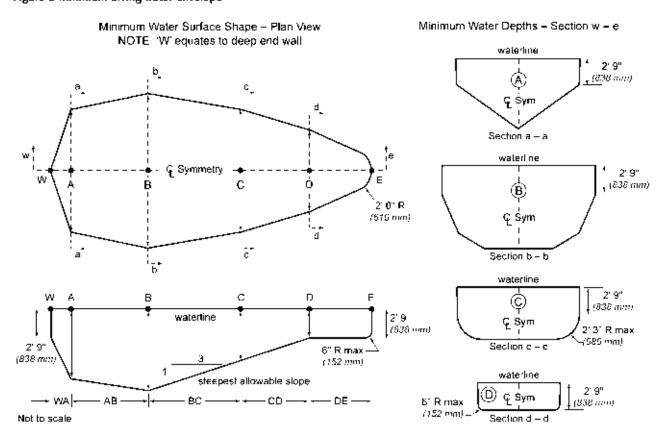


Table 1. Minimum diving water envelope for swimming pools designated types I-V

| Pool | M | inimum D | epths at P | oint | Mi | Minimum Widths at Point | | | Minimum Lengths between Points | | | | | | |
|-------|--------------------|-------------------|-------------------|-------------------|--------------------|-------------------------|--------------------|-------------------|--------------------------------|-------------------|--------------------|--------|-------------------|--------------------|--|
| Types | A | В | С | D | A | В | С | D | WA | AB | BC | CD | DE | WE | |
| 0 | | | | | M | enufacture | d diving e | quipment | is prohibite | d | | | | | |
| 1 | 6' 0" (1.82 m) | 7° 6" (2.29 m) | 5' 0" (1.52 m) | 2' 9" (838 mm) | 10° 0" (3.05 m) | 12° 0" (1.52 m) | 10' 0" (3.05 m) | 8' 0" (2.44 m) | · 1' 6" (457 mm) | 7' 0" (2.13 m) | 7' 6* (2 29 m) | Varies | 6' 0" (1.82 m) | 28' 9" (8.76 m) | |
| 2 | 6' 0" (1.82 m) | 7° 6" (2.29 m) | 5' 0" (1,52 m) | 2' 9" (838 mm) | 12' 0' (3,66 m) | 15' 0" (4.57 m) | 12' 0" (3.66 m) | 8' 0" (2.44 m) | 1' 6" (457 mm) | 7' 0° (2.13 m) | 7° 6° (2.29 m) | Varies | 6' 0" (1.82 m) | 28° 9° (8.76 m) | |
| 3 | 6" 10" (2.08 m) | 8' 0" (2.44 m) | 5' 0" (1.52 m) | 2" 9" (838 mm) | 12' 0" (3.66 m) | 15' 0" (4.57 m) | 12' 0" (3,66 m) | 8' 0" (2,44 m) | 2' 0" (610 mm) | 7' 6" (2.29 m) | 9' 0" (2.74 m) | Varies | 6' 0" (1.82 m) | 31' 3" (9.53 m) | |
| 4 | 7' 8" (2.34 m) | 8' 6" (2.59 m) | 5' 0" (1.52 m) | 2' 9" (838 am) | 15' 0" (4.57 m) | 18' 0" (5.49 m) | 15" 0" (4.57 m) | 9" 0" (2.74 m) | 2' 6" (762 mm) | 8' 0" (2.44 m) | 10' 6" (3.20 m) | Varies | 6' 0" (1.82 m) | 33' 9" (10.3 m) | |
| 5 | 8' 6" (2.59 m) | 9' 0" (2.74 m) | 5' 0' (1.52 m) | 2' 9" (838 mm) | 15' 0" (4.57 m) | 18' 0" (5.49 m) | 15' 0" (4.57 m) | 9' 0" (2.74 m) | 3' 0" (914 mm) | 9' 0' (2.74 m) | 12' 0" (3.66 m) | Varies | 6' 0" (1.82 m) | 36' 9" (11.2 m) | |

NOTES

- 1. Minimum length between points CD may vary based upon water depth at point D and the slope between points C and D.
- 2 Drawings are not to scale.
- Negative construction tolerances (see para. 5.1.1) shall not be applied to any of the dimensions shown in the Minimum Water Envelopes given in Table 1.
- 4. Pool types designate minimum water envelope sizes as specified by the diving board manufacturers.

Extracted from ANSI/APSP/ICC-5 2011, American National Standard for Residential Inground Swimming Pools

Figure 4 Offset ledges

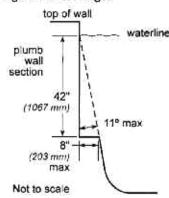
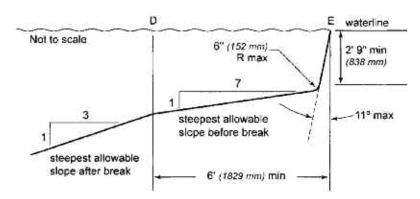


Figure 5 Shallow end depths



5.4 Offset Ledges

- 5.4.1 Offset ledges shall be a maximum of 8 in. (203 mm) wide.
 - 5.4.1.1 Offset ledges located less than 42 in. (1.07 m) below waterline shall be proportionately less than 8 in. (203 mm) wide and fall within 11° from plumb, measured from the top of the waterline (see Figure 4).
- 5.5 Floor slopes. Floor slopes shall be reasonably uniform and comply with paras. 5.5.1 through 5.5.3.
- 5.5.1 The slope of the floor from the shallow end wall towards the deep area shall not exceed a 1:7 incline to the point of the first slope change, if any (D-E) as shown in Figure 5.
- 5.5.2 Changes in slope between shallow and deep areas shall be at a minimum water depth of 2 ft 9 in. (838 mm) and be at least 6 ft (1.83 m) from the shallow end, except as specified in para. 6.3.
- 5.5.3 The slope of the floor shall not exceed a 1:3 incline under the lengths (B-D) of the Diving Envelope (see Figure 5).
- 5.6 Shallow end water depths. Water depth in the shallow area shall be a minimum of 2 ft 9 in. (838 mm), except for those locations specified in para. 6.3 "Shallow End Detail for Beach and Sloping Entries."
- 5.7 Manufactured diving equipment for in-ground swimming pools (diving board/stand combination, manufactured platform, or field fabricated)
- **5.7.1** When manufactured or field fabricated diving equipment is installed, it shall conform to the specifications set forth in paras. 5.7–5.9. It shall be located in the deep area of the pool to provide the minimum dimensions as shown in para. 5.8, and shall be installed in accordance with manufacturer's instructions.

- 5.7.1.1 Manufactured or field fabricated diving equipment shall be located directly above Point A. Diving equipment shall not be installed on Type O pools (see Table 1).
- 5.7.1.2 Maximum elevation of a diving board above the water shall be in accordance with manufacturer's installation instructions. Raised decking may be installed around the diving board up to level with the top of the board.
- 5.7.2 Manufactured diving equipment installation and use instructions shall be provided by the diving equipment manufacturer and shall specify the minimum water dimensions required for each diving board and diving stand combination. They shall refer to the diving envelope type of their choice by dimensionally relating their products to Point A on the diving envelopes as shown in Figure 3, Table 1, and paras. 5.8.1–5.8.3.
 - 5.7.2.2 Diving equipment shall be permanently labeled and affixed to the diving equipment or jump boards and include, but not be limited to the following:
 - manufacturer's diving equipment name and address date of manufacture
 - minimum diving envelope maximum weight limitations.

surfaces.

Table 1.

- 5.7.2.3 Diving equipment shall have slip-resisting tread.
- 5.8 Figure 3 diagrams show dimension points referred to in
- 5.8.1 Point A: Point A is the point from which all other forward dimensions of width, length, and depth are then established for the Minimum Diving Water Envelope. If the tip of the diving board or diving platform overhang is located at a distance of WA or greater from the deep end wall and the water depth at that location is equal to or greater than the water depth requirement at Point A (see Table 1), then the point on the water surface directly below the center of the tip of the diving board or diving platform shall be identified as Point A.

Extracted from ANSI/APSP/ICC-5 2011, American National Standard for Residential Inground Swimming Pools

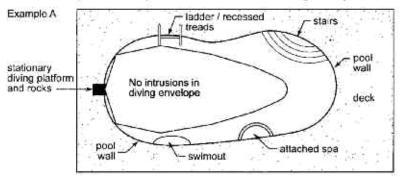
5.8.1.2 Location of Point A: The minimum Diving Water Envelope dimensions for pools with manufactured diving equipment shall be taken from Point A as shown in Figure 3. Point A shall be defined as the point on the water surface where the water depth is required at Point A and is provided at a distance of WA as shown in Table 1 from the deep end wall. The center of the tip of the diving board, platforms, manufactured or field fabricated shall be located directly above Point A.

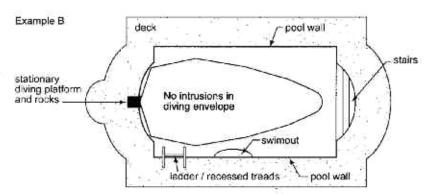
5.8.1.3 Point A as shown in Figure 3 and Table 1 shall be the reference point of origin for all dimensions defining the minimum diving envelope.

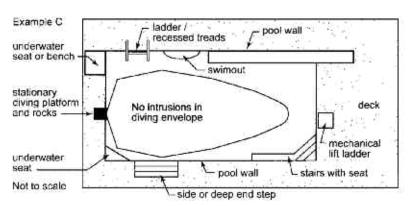
- 5.8.2 Type 0 pools (where diving is prohibited) shall not be limited in width, length, or water depth except as specifically provided for in this standard.
- 5.8.3 Location of equipment and pool features in the minimum diving envelope. If the pool is designed for use with diving equipment, all steps, pool stairs, ladders, underwater benches, offset ledges special features and other accessory items or any parts thereof, these features shall be located outside the Minimum Diving Envelope (see Figure 6).
- 5.9 Stationary diving platform(s) and diving rock(s). Stationary diving platform(s) and diving rock(s) built on site field fabricated shall be allowed to be flush with the wall and located in the diving area of the pool. Point A shall be in front of the wall at the platform or diving rock centerline. Diving rocks or platforms are prohibited on Pool Type O.
- Stationary diving platform(s) and diving rock(s)
- 5.10.1 Stationary diving platform(s) and diving rock(s) shall not be permitted on Pool Type O.
- 5.10.2 The maximum height of the stationary diving platform or diving rock above the waterline shall be as follows:

Pool Type I 42 in. (1.07 m)
Pool Type II 42 in. (1.07 m)
Pool Type III 50 in. (1.27 m)
Pool Type IV 60 in. (1.52 m)
Pool Type V 69 in. (1.75 m).

Figure 6 Top view examples of accessory equipment and pool features prohibited in the minimum diving envelope







5.10.3 The diving equipment manufacturer shall specify minimum headroom above water.

5.11 Swimming pool slides

- 5.11.1 Slides, where installed, shall be installed in accordance with the manufacturer's specifications and comply with the U.S. Consumer Product Safety Commission (CPSC) Standard for Swimming Pool Slides as published in the Code of Federal Regulations, 16 CFR Ch. II, Part 1207.
- 5.11.2 Slides constructed on-site are not covered by this standard.

NOTE: For consumer safety information, warnings, and education programs, see Appendices F, G, H, and K.

-1/Z

PUBLIC POOL INSTALLATION

NOTE: READ THESE INSTRUCTIONS IN THEIR ENTIRETY BEFORE ATTEMPTING THE INSTALLATION.

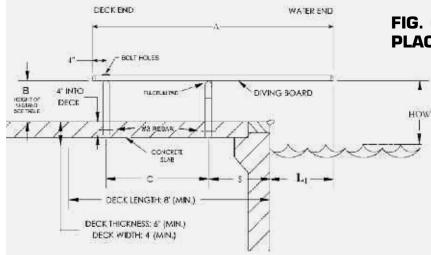


FIG. C - U-STAND COMMERCIAL PLACEMENT SPECIFICATIONS:

H VEH ORACE

TABLE 7 - U-STAND MATERIAL

| MODEL | SIZE | OD | WALL | | |
|----------|------|-------|-------|--|--|
| DBU18065 | 18" | 1.90" | .065" | | |
| DBU24065 | 24" | 1.90" | .065" | | |

MATERIALS: 1.90" OD, .065" WALL, 304 STAINLESS STEEL.

NOTE: ONLY .065" U-STANDS CAN BE INSTALLED ON A PUBLIC POOL.

INTER-FAB CANNOT GUARANTEE CUSTOMER'S CONCRETE OR THICKNESS

NOTE: WHEN COPING IS USED, DO NOT SET FRONT U-STAND CLOSER THAN 3" FROM THE BACK EDGE OF THE COPING.

TABLE 8 - INTER-FAB PUBLIC POOL SPECIFICATIONS

IMPORTANT NOTICE: WHEN PROPERLY INSTALLED, INTER-FAB'S 18" U-STAND WILL HAVE 4" OF THE RAIL EMBEDDED WITHIN THE DECK AND WILL MEASURE 18" FROM THE TOP OF THE RAIL TO THE SURFACE OF THE DECK. THE 24" U-STAND IS DIFFERENT, WHEN PROPERLY INSTALLED 4" OF THE RAIL WILL BE EMBEDDED WITHIN THE DECK AND IT WILL MEASURE 20" FROM THE TOP OF THE RAIL TO THE SURFACE OF THE DECK.

| | RELATED DIVIN | IG EQUIPMENT |
|--------------|--------------------------------|------------------------------------|
| POOL Type | MAX. DIVING BOARD LENGTH | MAX. BOARD HEIGHT OVER WATER |
| VI | 10' | (2/3 Meter) 26" |
| VII | 12' | (3/4 Meter) 30" |
| VIII | 16' | 1 Meter |
| IX | 16' | 3 Meter |

Placement of boards shall observe the following minimum dimensions. With multiple board installations, minimum pool widths must be increased accordingly.

| Deck Level Board to Pool Side1 Meter Board to Pool Side | 8' 10' |
|--|-----------|
| 3 Meter Board to Pool Side | 11' |
| • 1 Meter or Deck Level Board to 3 Meter Board | 10' |
| • 1 Meter or Deck Level Board to Another | |
| 1 Meter or Deck Level Board | 8' |
| • 3 Meter to Another 3 Meter Board | 10' |

TABLE 9 - COMMERCIAL PLACEMENT CHART

ADDITIONALLY REFER TO: ANSI/APSP/ICC-1 2014 American National Standard for Public Swimming Pools.

| U-STANDARDS Part # | NOMINAL BOARD LENGTH (A) | ANSI/ APSP/ICC-1 2014 POOL TYPE | DISTANCE FROM WATER'S EDGE TO FORWARD U-STAND (S)* | DISTANCE FROM END OF BOARD TO FORWARD U-STAND | MIN. OVERHANG (L ₁)** | MAX HEIGHT OF BOARD ABOVE WATER (HOW) | HEIGHT OF U-STAND (B) | FULCRUM SETTING (C) |
|-----------------------------|-----------------------------------|---|--|---|---|---|-----------------------------|---------------------------|
| DBU18065 or DBU24065 | 10' | VI | 31.5" | 61.5" | 30" | 26" | 18", 20" | 52" ± 5" |
| DBU18065 or DBU24065 | 10' | VII | 25.5" | 61.5" | 36" | 30" | 18", 20" | 52" ± 5" |
| DBU24065 | 12' | VII | 40" | 76" | 36" | 30" | 20" | 62" ± 6" |

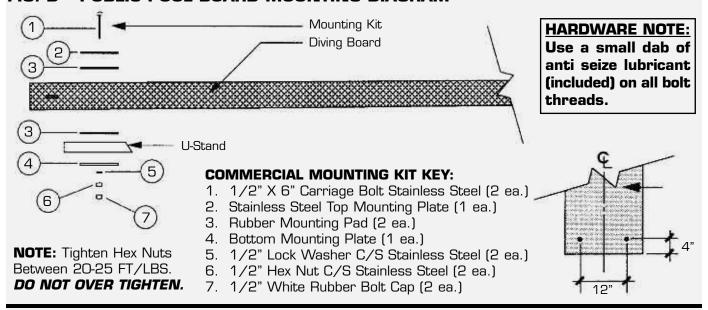
IMPORTANT: THESE DIMENSIONS ARE ACCURATE ONLY FOR VERTICAL POOL WALLS, **TYPICALLY GUNITE CONSTRUCTION**. PLEASE CONTACT CUSTOMER SERVICE FOR PROPER PLACEMENT. **1-800-737-5386**

^{*} IMPORTANT: The distance for setting the front jig bolt (S) from the water's edge is valid only if the minimum water depth is maintained at the tip of the board noted as point "A" in ANSI/APSP/ICC-1 2014 American National Standard for Public Inground Swimming Pools. If minimum water depth is not maintained the distance (S) must be adjusted accordingly.

^{**} L₁ dimension is valid only in conjunction with the minimum depth at point "A" for type pool in accordance with ANSI/APSP/ICC-1 2014 American National Standard for Public Inground Swimming Pools.

PUBLIC POOL INSTALLATION

FIG. D - PUBLIC POOL BOARD MOUNTING DIAGRAM



U-STAND DIVING BASE PUBLIC POOL INSTALLATION INSTRUCTIONS

Be sure the concrete deck surrounding the U-Stands complies with the minimum dimensions as shown in Figure C on page 15.

Read and understand the ANSI/APSP/ICC-1 2014 American National Standard for Public Swimming Pools and Table 8 and Table 9 on page 15 before you install the U-Stand Diving System.

The U-Stands should be set in accordance with Figure C and Table 8 and 9 on page 15. The diving board must be placed on the deep end of the pool on centerline.

Make sure the U-Stands are set 4" into the concrete with ample concrete depth below the stand in accordance with Figure C on page 15. Do not install the U-Stand Diving System if the deck does not meet the minimum requirements.

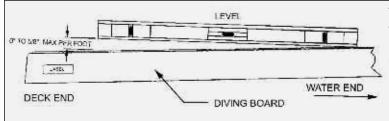
When finishing the deck surface, maintain a level deck where the U-Stands project out of the deck surface. Both U-Stands must be leveled left to right and to each other when installing. This will allow the diving board to sit level left to right and have a slight upward pitch at the toe end once th rubber fulcrum pad is in place. Allow the cement to fully cure before bolting the diving board to the U-Stands.

When mounting diving board to a newly installed stand with a permanently fixed fulcrum, the correct measurement between the mounting holes and the fulcrum must be maintained so as not to void the warranty. See Figure C and Table 8 and 9 on page 15.

The rubber fulcrum pad MUST be used so as not to void the Inter-Fab warranty.

A rubber mounting pad MUST be installed between the bottom of the diving board and the heel end U-Stand as not to void the Inter-Fab warranty.

The Diving Board must be installed according the below board leveling instructions:



The top surface of the diving board from the deck end to the tip end shall be level or have an upward slope of 5/8" per foot maximum. Elevation difference shall not exceed 6" from the deck end to the tip of the board. There shall be no downward slope towards the water. The slope shall be measured using a level as shown in the graphic to the left.

Extracted from ANSI/APSP/ICC-1 2014, American National Standard for Public Swimming Pools

Standard for Public Swimming Pools

1 Scope

1.1 Public swimming pools. This standard covers public swimming pools to be used for swimming, bathing, competitive activities, or recreational activities and operated by an owner, lessee, operator, licensee, or concessionaire, regardless of whether a fee is charged for use.

1.1.1 Public swimming pools covered by this standard. Public swimming pools covered by this standard

Public swimming pools covered by this standard include the following:

- 1.1.1.1 Class A pools. Any pool intended for use for accredited competitive aquatic events such as Federation Internationale De Natation (FINA), USA Swimming, USA Diving, USA Synchronized Swimming, USA Water Polo, National Collegiate Athletic Association (NCAA), National Federation of State High School Associations (NFHS). The use of the pool is not limited to competitive events.)
- 1.1.1.2 Class B pools. Any pool, not otherwise classified, intended for public recreational use.
- 1.1.1.3 Class C pools. Semi-public pools. Any pool operated solely for and in conjunction with lodgings such as hotels, motels, apartments, condominiums.)
- **1.1.1.4 Class F pools.** Class F pools are wading pools and are covered within the scope of this standard as set forth in Sections 6.9 and 8.4.2 and as noted in other sections of the standard.
- 1.2 Variation in design. This standard provides specifications for the design, equipment, operation, warning signs, installation, sanitation, new construction, and renovation of public swimming pools. This standard permits variations in equipment, materials, and design to accommodate special needs and considerations and advances in technology and to provide the required quality, strength, durability, and safety for the intended use.
- 1.3 Renovation. Renovation does not include ordinary maintenance. Only those items that are renovated shall adhere to this standard. (See Section 3 Definitions)

2 Normative references

The following standards contain provisions that, through reference in this text, constitute provisions of this American National Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated at right.

Americans with Disabilities Act (ADA) Accessibility guidelines for buildings and facilities; recreation facilities¹

ACI 302.1 R-04 (2004), Guide for concrete floor and slab construction?

ANSI/APSP-2 1999 Standard for Public Spas 3

ANSI/NSF 50 (2012), Circulation system components and related materials for swimming pools, spas/hot tubs ⁴

ANSI/NSF 14 (2012), Plastics piping system components and related materials 5

ANSI/NEMA-MG1-2007, Motors and generators⁶

ANSI/APSP/ICC-7 2013 Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins ⁷

ANSI/APSP-16 2011 Standard for Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs* ANSI/NFPA 70: National Electrical Code, 2014*

ANSI Z21.56-2013/CSA 4.7-2013, Gas fired pool heaters 10

UL 1261 (2001), Standard for electric water heaters for pools and tubs ¹¹

UL 1995 (2011), Standard for heating and cooling equipment ¹²
ANSI/NFPA 54/ANSI Z223.1 2012, National Fuel Gas Code ¹³
ANSI/NFPA 58 2014, Liquefied Petroleum Gas Code ¹⁴
ASME A112.1.2 (2012), Air gaps in plumbing systems ¹⁵
ANSI/APSP-11 2009 Standard for Water Quality in Public Pools and Spas ¹⁶

ANSI Z535 series for safety signs and colors (5 standards) (2011) 17

ASTM F2208-08, Standard specification for pool alarms ¹⁸
ASTM 1346-91(2010), Standard performance specification for safety covers and labeling requirements for all covers for swimming pools, spas, and hot tubs ¹⁹

- U.S. Architectural and Transportation Barriers Compliance Board, 1331 F Street, NW, Suite 1000, Washington, DC 20004, (202) 272-0080, www.access-board.gov
- American Concrete Institute, 38800 Country Club Drive, Farmington Hills, MI 48331, (248) 848-3800, www.concrete.org
- 7, 8, The Association of Pool and Spa Professionals, 2111 Elsenhower
 Avenue, Alexandria, VA 22314, (703) 838-0083, www.APSP.org
- NSF international, 789 N. Dixboro Rd., Ann Arbor, MI 48113 (734) 769-8010, www.nsf.org
- The Association of Electrical Equipment and Medical Imaging Manufacturers (NEMA), 1300 N. 17th Street, Suite 1847, Rosslyn, VA 22209 (703) 841-3200, www.nema.org
- 9, 13. National Fire Protection Association (NFPA), 1 Batterymarch
- Park, Quincy, MA 02269 (617) 770-3000, www.nfpa.org
- American National Standards Institute (ANSI), 25 West 43rd Street, New York, NY 10036, NY (212) 642 4900, www.ansi.org
- Underwriters Laboratories (UL), 333 Pfingsten Road. Northbrook, IL 60062, (847) 272-8800, www.ul.com
- American Society of Mechanical Engineers (ASME), 3 Park Avenue, 20th Floor, New York, NY 10016, (212) 591-8562, www.asme.org
- 18. 19. ASIM International, 100 Barr Harbor Drive, W. Conshohocken, PA 19428, (610) 832-9585, www.astm.org

Extracted from ANSI/APSP/ICC-1 2014, American National Standard for Public Swimming Pools

3 Definitions

Public swimming pools are classified as follows for purposes of reference and application of this standard:

Class A pools: Class A pools are pools intended for use for accredited competitive aquatic events such as Fédération internationale de Natation (FINA), USA Swimming, USA Diving, USA Synchronized Swimming, USA Water Polo, National Collegiate Athletic Association (NCAA), National Federation of State High School Associations NFHS), etc. The pool may also be used for recreation. Class A pools are covered unless otherwise noted in the body of the standard.

Class B pools: Class B pools are pools intended for public recreational swimming not otherwise classified. Class B pools are covered within the scope of this standard.

Class C pools: Class C pools are pools intended for use for apartments, condominiums, property owners associations, multifamily owned pools, etc. and are covered within the scope of this standard. Pools operated solely for and in conjunction with lodgings such as hotels and motels are also covered within the scope of this standard.

Class D pools: Class D pools are not covered within the scope of this standard. Class D pools are operated for special purposes, including but not limited to wave action pools, activity pools, leisure rivers, vortex pools, and sand bottom pools.

Class E pools: Class E pools are pools used for physical therapy and are above 86 °F (30 °C) and are not covered within the scope of this standard.

Class F pools: Class F pools are wading pools and are covered within the scope of this standard as set forth in Sections 6.9 and 8.4.2, and as noted in other sections of this standard.

remodel: To install cosmetic changes, accessory add-ons, alterations, or modernizations to a commercial installation. See Renovate.

renovate: To restore or repair all or part of a pool structure and/or its component parts, including the rebuilding and/or replacing of worn or broken parts. See Remodel.

slip-resisting: A surface that has been so treated or constructed to significantly reduce the chance of a user slipping. The surface shall not be an abrasion hazard.

4 Code compliance

4.1 Codes. Pools covered by this standard shall be constructed and operated to comply with all local, state, and federal codes governing safety and environmental regulations.

5 General design

5.1 Plans and permits. Prior to construction, remodeling, or renovation of a permanently installed public swimming pool, plans and specifications shall be submitted to the authority (state or local) for review, approval, and issuance of a permit to construct, remodel, or renovate as required by the authority having jurisdiction.

- 5.2 Materials. Swimming pools and all appurtenances thereto shall be constructed of materials that are nontoxic to humans and the environment; that are generally or commonly regarded to be impervious and enduring; that will withstand the design stresses; and that will provide a watertight structure with a smooth and easily cleanable surface without cracks or joints, (excluding structural joints), or to which a smooth, easily cleanable surface/finish is applied or attached.
- 5.2.1 Use of sand. Clean sand or similar material, if used in a beach or pool environment, shall be used only over an impervious surface. The sand area shall be designed and controlled so that the circulation system, maintenance, safety, sanitation, and operation of the overall pool are not adversely affected.
- 5.3 Structural design. The structural design shall be in accordance with accepted engineering practices.
- **5.4 Freeze protection.** In climates subject to freezing temperatures, the pool shell and appurtenances, piping, filter system, pump and motor, and other components shall be designed and constructed to facilitate protection from damage due to freezing.
- 5.5 Surface condition. The surfaces within the pool intended to provide footing for users shall have a slip-resisting surface and shall not cause injury to the feet during normal use.
- **5.6 Colors and finishes.** The colors, patterns, or finishes of the pool interior shall not obscure objects or surfaces within the pool.
- 5.7 Accessibility for persons with disabilities. For Americans with Disabilities Act (ADA) requirements for accessibility for persons with disabilities into public swimming pools, see ADA Accessibility guidelines for buildings and facilities, recreation facilities (ADAAG).

NOTE: For ADA requirements, see U.S. ADA Accessibility guidelines (ADAAG). (For more information on the U.S. Department of Justice Americans with Disabilities Act, visit the ADA web site at www.ada.gov. Some pools may be exempt from ADA. See ADA definition of public accommodation for Title II and (Title III facilities).

6 Dimensional design

6.1 Perimeter shape. This standard is not intended to regulate the perimeter shape of swimming pools. It is the designer's responsibility to take into account the effect a given shape will have on the safety of the occupants and required circulation to ensure sanitation. All other dimensions, unless otherwise specified, should allow a ± 2 in. (51 mm) tolerance.

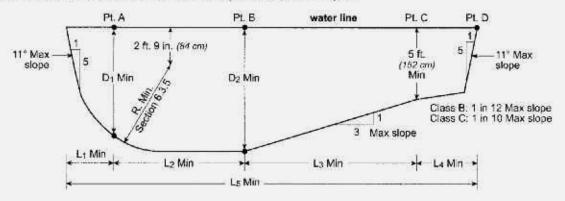
Extracted from ANSI/APSP/ICC-1 2014, American National Standard for Public Swimming Pools

- 6.1.1 There shall be no protrusions, extensions, and means of entanglement, or other obstructions in the swimming pool areas that may cause the entrapment or injury of the user.
- **6.2 Allowable construction tolerances.** Finished pool dimensions shall be held within the following construction tolerances as shown in *Table 6.2*.

| Table 6.2 Construction Tolerances | | | | | |
|--|---|--|--|--|--|
| Design Requirements | Construction Tolerance Allowed | | | | |
| Length - overall | ± 3 in. (± 76 mm) | | | | |
| Widtn overall | ± 3 in. (± 76 mm) | | | | |
| Depth - deep area | ± 3 in. (± 76 mm) | | | | |
| Depth - shallow area | ± 2 in. (± 51 mm) | | | | |
| Step treads & risers | ± 1/2 in. (± 13 mm) | | | | |
| Waterline – pools with adjustable weir skimmers | ± 1/4 in. (± 6 mm) | | | | |
| Waterline – pools with non-adjustable: skimming systems (gutters) | ± 1/8 in. (± 3 mm) | | | | |
| All dimensions not otherwise specified in this standard | ± 2 in. (± 51 mm) | | | | |
| Competitive pools – Class A pools – All dimensional requirements | As governed by authority having jurisdiction | | | | |

- 6.2 These construction tolerances are not applicable to Class A pools.
- **6.2.2 Diving Envelope.** Negative construction tolerances shall not be applied to the shallow dimensions of the Minimum Diving Envelope in *Table 6.2.2.*
- 6.3 Floor slope. Floor slopes shall be in compliance with 6.3.1 through 6.3.5, except the requirements by the ADA Accessibility Guidelines (ADAAG).
- 6.3.1 All pool floors shall be sloped to the drain.
- **6.3.2** The slope of the floor in the shallow area shall not exceed 1 ft in 10 ft in Class C pools or 1 ft in 12 ft (1: 12) in Class B pools in any direction to the point of the first slope change, if a slope change exists.
- **6.3.3** The point of the first slope change shall be defined as the point at which the floor slope exceeds 1 ft in 10 ft (1: 10) in Class C pools or 1 ft in 12 ft (1: 12) in Class B pools.
- **6.3.4** The slope of the floor from the point of the first slope change to the deep area shall not exceed 1 ft in 3 ft (*I: 3*).

Figure 6.2.2: Construction dimensions for water envelopes for Class B and C pools

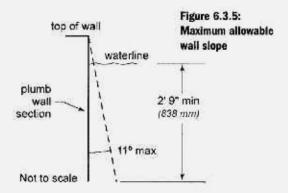


| Pool | S | | Minimum Dimensions | | | | | | Minimum Width of Pool at: | | | |
|------|---------------------|--------------------|--------------------|-------------------|---------------------|--------------------|----------|--------------------|---------------------------|--------------------|---------------------|--|
| Type | Dı | D2 | R | Li | 12 | L3 | L4 | 1.5 | Pt. A | Pt. B | Pt. C | |
| VI | 7" -0" | 8' -6" | 5'-6" | 2' -6" | 8' -0" | 10° -6° | 7' -0* | 28' -0" | 16' -0" | 18°-0° | 18' -0" | |
| | (213 cm) | (259 cm) | (168 cm) | (76 cm) | (244 cm) | (320 cm) | (213 cm) | (853 cm) | (488 cm) | (549 cm) | (549 cm) | |
| VII | 7" -6" | 91-0" | 6' -0* | 3'-0" | 9° -0° | 12"-0" | 4'-0" | 28' -0" | 18' -0" | 20'-0" | 20' -0" | |
| | (229 cm) | (274 cm) | (183 cm) | (91 cm) | (274 cm) | (365 cm) | (122 cm) | (853 cm) | (649 cm) | (610.cm) | (610 cm) | |
| via | 8° -6° | 10" -0" | 7" -0" | 4' -0" | 10' -0" | 15" -0" | 2" -0" | 31' -0' | 20" -0" | 22°-0° | 22'-0" | |
| | (259 cm) | (305 cm) | (213 cm) | (122 cm) | (305 cm) | (457 cm) | (610 mm) | (945 cm) | (610 cm) | (671 cm) | (671 cm) | |
| ıx | 11' -0" (335 cm) | 12"-0" (366 cm) | 8'-6" (259 cm) | 6'-0" (183 cm) | 10' -6" (320 cm) | 21°-0° (640 cm) | (0 cm) | 37'-6' (11.4 m) | 22' -0" (671 cm) | 24'-0" (732 cm) | 24' -0" (732 cm) | |

Note 1: Negative tolerances (see Section 6.2) shall not be applied to any to the dimensions shown in this table.

Note 2: Pool types dictate the minimum water envelope dimensions as specified by the diving board manufacturers.

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6.3.5 Walls. Where walls join the floor the transitional point or profile shall comply with the following:

Except for Class A pool walls where racing lanes terminate, walls may slope a maximum of 11° from plumb (see Figure 6.3.5).

- Walls may intersect with the floor at an angle or a transition profile.
- At water depths between 3 ft to 5 ft (91 to 152 cm)
 the maximum radius shall be 2 ft 3 in. (69 cm).
- -At water depths of 3 ft (91 cm) or less, a transitional radius shall not exceed 6 in. (15 cm) and shall be tangent to the wall and may be tangent to or intersecting the floor.
- -At water depths greater than 3 ft (91 cm), a transitional radius shall be tangent to the wall at a point no less than 2 ft 6 in. (76 cm) below the water surface and may progressively increase from 6 in. (15 cm) to a value capable of being tangent to, or intersecting, the floor.
- **6.4 Water depths.** Water depths for swimming areas shall be a minimum depth of 3 ft (91 cm) unless the authority having jurisdiction specifies otherwise.
- 6.4.1 Class A pools shall be designed and constructed to provide the dimensions specified by Fédération Internationale de Natation (FINA), USA Swimming, USA Diving, USA Synchronized Swimming, USA Water Polo, NCAA, NFHS, or other appropriate sanctioning body.
- 6.5 Diving. This standard does not cover diving requirements for Class A pools. This standard covers diving requirements for Class B and Class C pools.
- **6.5.1** When manufactured or field fabricated diving equipment is installed, it shall conform to the specifications set forth in Sections 7.2.1 through 7.2.5.6. It shall be located in the deep area of the pool to provide at least the minimum dimensions as shown in *Table 6.2.2* and shall be installed in accordance with the manufacturer's instructions.

- 6.6 Manufactured diving equipment installation and use instructions shall be provided by the diving equipment manufacturer, and shall specify the minimum water dimensions required for each diving board and diving stand combination. They shall refer to the diving envelope type of their choice by dimensionally relating their product to Point A on the diving envelopes as shown in Figure 6.2.2, Table 6.2.2, and Sections 6.6–6.6.1.2.
- 6.6.1 Point A. Point A is the point from which all dimensions of width, length, and depth are established for the Minimum Diving Water Envelope (see Figure 6.2.2 and Table 6.2.2). If the tip of the diving board or diving platform overhang is located at a distance of Point A or greater from the deep end wall, and the water depth at that location is equal to or greater than the water depth requirement at Point A, then the point on the water surface at the design water level directly below the center of the tip of the diving board or diving platform shall be designated as Point A.
 - **6.6.1.1 Location of point A.** The Minimum Diving Water Envelope dimensions for pools with manufactured diving equipment shall be taken from Point A as shown in *Figure 6.2.2*. Point A shall be defined as the point on the water surface at the design water level where the water depth is required at Point A and is provided at a distance of Point A as shown in *Figure 6.2.2* and *Table 6.2.2* from the deep end wall. The center of the tip of the diving board or platform, manufactured or field fabricated, shall be located directly above Point A.
 - 6.6.1.2 Point A, as shown in Figure 6.2.2 and Table 6.2.2, shall be the reference point of origin for all dimensions defining the minimum diving envelope.
- **6.6.2** Location of equipment and pool features in the minimum diving envelope. If the pool is designed for use with diving equipment, all steps, pool stairs, ladders, underwater benches, offset ledges, special features, and other accessory items, or any parts thereof, shall be located outside the Minimum Diving Envelope (see Figure 6.3.5).
- 6.7 Rest ledges. Rest ledges along the pool walls are permitted. They shall not be less than 4 ft (122 cm) below the water surface. If a ledge is provided it shall be at least 4 in. (10 cm) wide and no more than 6 in. (15 cm) wide.
- **6.8 Maximum user load.** The maximum user load of Class B or Class C pools shall be in accordance with *Table 6.8.*
- 6.9 Wading pools. A wading pool shall be a separate pool with an independent circulation system and physically separated from the main pool as described in Sections 6.9.1 through 6.9.5.

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| Table 6.8: Maximum User | 8: Maximum User Load | | | | |
|---|--|---------------------------------------|-------------------------------------|--|--|
| Pool/Deck Area | Shallow Instructional or Wading Areas | Deep Area (not including diving area) | Diving Area (per each diving board) | | |
| Pools with minimum deck | 15 sq ft. per user | 20 sq ft. per user | 300 sq ft. per user | | |
| area (see 7.1.6-7.1.6.1.) | (1.35 m² per user) | (1.8 m² per user) | (27 m² per user) | | |
| Pools with deck area at least equal to water surface area | 12 sq ft. per user | 15 sq ft. per user | 300 sq ft. per user | | |
| | (1.08 m² per user) | (1.35 m² per user) | (27 m² per user) | | |
| Pools with deck area at least | 8 sq ft. per user | 10 sq ft. per user | 300 sq ft. per user | | |
| twice the water surface area | (0.72 m² per user) | (0.9 m² per user) | (27 m² per user) | | |

- **6.9.1** Areas where the water depth at the edge of the pool exceeds 9 in. (23 cm) shall be considered non-entry areas and must be protected by natural or artificial barriers.
- 6.9.2 Floors of wading pools shall be uniform and sloped to drains, if existing with a maximum slope of 1 ft in 12 ft (1: 12).
- 6.9.3 The maximum water depth shall be 18 in. (457 mm).
- 6.9.4 The maximum distance from the top of the deck to the water line shall not exceed 6 in. (15 cm).
- 6.9.5 Suction entrapment avoidance methods for wading pools shall be in accordance with ANSI/APSP/ICC-7.

Exception: Suction outlets are prohibited in wading pools.

7 Decks and deck equipment

- 7.1 Decks shall comply with Sections 7.1.1 through 7.1.17, as applicable.
- 7.1.1 Deck(s) shall be designed and installed in accordance with the engineering methods required by the authority having jurisdiction.
 - 7.1.1.1 In the absence of specific local requirements, a concrete deck shall be designed and constructed in accordance with the recommended practices of the latest published edition of American Concrete Institute (ACI) Standard 302.1r-2004, Guide for Concrete Floor and Slab Construction, or in accordance with the requirements of the local authority, the authority having jurisdiction, or both. The deck shall be designed and constructed to meet the applicable requirements of the Americans with Disabilities Act.
- 7.1.2 Decks, ramps, coping, and similar step surfaces shall be slip-resisting and cleanable.
- 7.1.3 Special features in or on deck(s) such as markers, brand insignias, or similar materials shall be slip-resisting.

7.1.4 Step risers for the deck shall be uniform and have a minimum height of 3-3/4 in. (9.5 cm) and a maximum height of 7-1/2 in. (19 cm). A handrail shall be provided for stairs having three or more risers. The minimum tread distance from front to back shall be 11 in. (28 cm).

7.1.5 The deck or unobstructed

access shall be provided at a minimum of 65% of the pool perimeter to meet the requirement of the 10/20 rule.

NOTE: The 10/20 rule states that a qualified lifeguard or a number of lifeguards shall be trained and stationed in a manner that will permit them to identify an incident or trauma within ten (10) seconds of its initiation. Upon identification of the incident or trauma, the guard shall be able to respond to and initiate indicated protocol appropriate to the circumstance within twenty (20) additional seconds.

- 7.1.5.1 A minimum 4 ft (122 cm) deck width shall be provided on the sides and rear of any diving equipment, including diving boards, jump boards, diving rocks, platforms, starting blocks. A deck clearance of 3 ft (91 cm) shall be provided around all other deck equipment.
- 7.1.6 The minimum slope of the deck(s) shall be 1/8 in. per ft (1: 96) for textured, hand-finished concrete decks: 1/4 in. per ft (1: 48) for exposed aggregate concrete decks; 1/2 in. per 1 ft (1: 24) for indoor/outdoor carpeting decks; and 3/8 in. per ft (1: 32) for brick and heavy textured finishes, unless an alternate drainage method is provided that prevents the accumulation of pooling of water (see Table 7.1.6).
 - **7.1.6.1** Decks shall be sloped so that standing water shall be no deeper than 1/8 in. (3 mm), 20 minutes after the cessation of the addition of water to the deck.

NOTE: Two stacked U.S. quarters can be used to measure the depth. Water should not cover the quarters.

| Table 7.1.6: Typical minimum drainage slopes | | | | |
|--|---------------------------|--|--|--|
| Surface | Minimum drainage slope | | | |
| Textured, hand-finished concrete | 1/8 in./ft (1: 96) | | | |
| Exposed aggregate | 1/4 in./ft (1: 48) | | | |
| Carpet | 1/2 in./ft (1: 24) | | | |
| Brick and heavy textures, finished | 3/8 in./ft (1:32) | | | |

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- 7.1.7 The maximum slope of all decks, other than wood decks, shall be 1/2 in. per ft (1: 24) except for ramps.
 - 7.1.7.1 The maximum slope for wood decks shall be 1/8 in. per ft (1: 96).
 - 7.1.7.2 Gaps shall be required between deck boards in wood decks, and shall be consistent with approved engineering methods with respect to the type of wood used. They shall not cause a tripping bazard.
- **7.1.8** The maximum open gap between pool decks and adjoining decks or walkways, including joint material, shall be 3/4 in. $(19 \, mm)$. The difference in vertical elevation between the pool deck and the adjoining sidewalk shall be 1/4 in. $(6 \, mm)$ unless it conforms to Section 7.1.4.
- 7.1.9 Construction joints where the pool coping meets the concrete deck(s) shall be watertight.
- **7.1.10** Construction joints where the pool coping meets the concrete deck(s) shall be installed to protect the coping and its mortar bed from damage as a result of the anticipated movement of adjoining deck(s).
- 7.1.11 Control joints in deck(s) shall be provided to minimize visible cracks outside the control joints due to imposed stresses and/or movement of the slab.
- 7.1.12 Areas where decks join existing concrete work shall be protected by an expansion joint to protect the pool from the pressures of relative movements.
- 7.1.13 The edges of all decks shall be radiused, tapered, or otherwise designed to eliminate sharp corners.
- 7.1.14 Pressure tests. The pressure testing of the pool piping shall be maintained throughout the pool's construction and in accordance with Section 8.4.
- 7.1.15 Valves installed in or under any deck(s) shall have access provided for operation, service, and maintenance. Access covers shall be provided.
- 7.1.16 Hose bibb(s), with a cross connection control to prevent backflow, shall be provided for rinsing down the entire deck and shall be in accordance with the authority having jurisdiction.
- 7.1.17 Water-powered devices (such as water-powered lifts) shall have a dedicated hose bib (water source) with approved backflow protection in accordance with the authority having jurisdiction.
- 7.2 Deck equipment. Deck equipment including diving facilities and starting blocks shall comply with Sections 7.2.1 through 7.4, as applicable.

- 7.2.1 A minimum 4 ft (122 cm) deck width shall be provided on the sides and rear of any diving equipment, including diving boards, jump boards, diving rocks, platforms, starting blocks.
- 7.2.2 Starting blocks. Starting blocks are intended for competitive swimming and shall conform to Fédération Internationale de Natation (FINA), USA Swimming, National Collegiate Athletic Association (NCAA), or National Federation of State High Schools Associations (NFHS) regulations.
- **7.2.3** The diving equipment manufacturer shall specify minimum head room required above the tip of the board.
- 7.2.4 Public pools with diving equipment of 1 meter (39.4 in.) or greater in height, or pools designed for springboard or platform diving, shall comply with the dimensional design requirements of Fédération Internationale de Natation (FINA), USA Diving, National Collegiate Athletic Association (NCAA), National Federation of State High Schools Association (NFHS) or the appropriate sanctioning body.
- 7.2.5 Diving equipment. Diving equipment shall be installed in accordance with the manufacturer's specifications.
 - 7.2.5.1 The diving equipment manufacturer shall affix a label to the diving equipment.
 - 7.2.5.2 A label shall be permanently affixed to and visibly located on the diving equipment or jump board and shall include but not be limited to the following:
 - The minimum water envelope required for each diving board and diving stand combination,
 - Manufacturer's name and address,
 - Manufacturer's identification and date of manufacture, and
 - The maximum weight of the user.
 - 7.2.5.3 The diving equipment manufacturer shall provide diving equipment use instructions.
 - **7.2.5.4** Diving equipment shall have slip-resisting tread surfaces
 - 7.2.5.5 Supports for diving equipment. Supports, platforms, stairs, and ladders for diving equipment shall be designed to carry the anticipated loads. Stairs and ladders shall be of corrosion-resisting material and shall be easily cleanable and with slip-resisting tread. All diving stands higher than 21 in. (53 cm) measured from the deck to the top back end of the board shall be provided with stairs and/or a ladder. Step treads shall be self-draining.

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7.2.5.6 Diving equipment 1 meter (39.4 in.) high or higher shall be provided with a top guard rail, which shall be at least 30 in. (76 cm) above the diving board, and extend to above the edge of the pool wall.

7.2.5.7 Springboard fall protection guards. Springboards located at a height greater than 5 ft (1.5 m) above the pool deck shall have a fall protection guard on each side of the springboard. The design and the selection of the materials of construction of such fall protection guards shall be determined by the manufacturer of the springboard support structure. The installation and maintenance of such fall protection guards shall be in accordance with the fall protection guard manufacturer's instructions.

7.3 Swimming pool slides. Swimming pool slides, when installed, shall comply with the requirements of the U.S. Consumer Product Safety Commission (CPSC) as published in the Code of Federal Regulations, 16 CFR, Part 1207. The manufacturer shall provide installation and use instructions with each slide. Each slide shall be installed in accordance with the manufacturer's instructions.

7.4 Play/water activity equipment. When installed, play/ water activity equipment shall be installed in accordance with manufacturer's instructions. To obtain complete copies of the ANSI/APSP/ICC-1 2014 Standard for Public Swimming Pools contact:

The Association of Pool & Spa Professionals (APSP) 2111 Eisenhower Ave. Alexandria, VA 22314 (703) 838-0083

or visit: www.apsp.org

SUPPORT INFORMATION: ARTICLE 23.1.5

Extracted from ANSI/APSP/ICC-1 2014, American National Standard for Public Swimming Pools

23.1.5 If the pool is designed for use with diving equipment, the entries and exits, pool stairs, ladders, underwater benches, special features, and other accessories shall be located outside the minimum diving water envelope as shown in *Figure 23.1.5*.

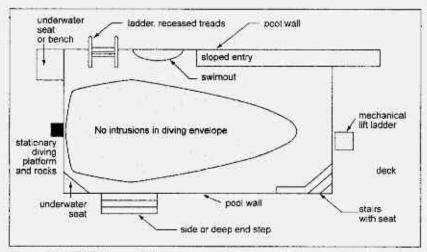


Figure 23.1.5: Minimum diving water envelope

LIMITED WARRANTY

Inter-Fab, Inc. will repair or replace, at its option, any product manufactured by Inter-Fab, Inc. that fails during the applicable warranty period because of a manufacturing or material defect; provided that the defect is not the result of improper installation, improper use or care, negligence, alterations or modifications to the product, or natural accidents (acts of God). The applicable warranty period for products manufactured by Inter-Fab, Inc. is three (3) years from the date of retail purchase, except as specified below:

Water Sports[™] sports equipment warranty periods are as follows: Volleyball Poles, Basketball Poles, Basketball Rim, and Basketball Backboard are one (1) year from date of retail purchase. Volleyball, Volleyball Net, Basketball, Basketball Net, and pumps are warranted for ninety (90) days from date of retail purchase.

The **Board Fall** used for the $\mathbf{T7}^{\mathsf{TM}}$ and $\mathbf{aquaBoard}^{\mathsf{TM}}$ products, have a warranty period of one (1) year from the date of retail purchase.

Zoomerang™ slide products warranty period is one (1) year from the date of retail purchase.

Build Your Own Slide™ (BYOS™), Build Your Own Slide 2™ (BYOS 2™), Garden Ride Series™*, River Run Series™*, Rock-r-Lounger™, Pool/Spa Table™, and Pool/Spa Seat™ products warranty periods are one (1) year from the date of retail purchase.

City 2™ Slide and City Base™ products warranty period are one (1) year from the date of retail purchase.

Unless expressly stated otherwise all products manufactured by Inter-Fab are for **residential installation (single family residence)** inground pool use only. Inter-Fab, Inc. expressly disclaims any and all warranties and liability arising from the installation or use of its residential products for any non-residential use such as semi-public, public, or commercial applications. Products expressly manufactured for commercial installation and use will be subject to this limited warranty.

This limited warranty is in lieu of all other warranties, whether express or implied. Inter-Fab, Inc. disclaims any warranty of merchantability or fitness for a particular use, and noninfringement in relation to any of its products and Inter-Fab, Inc. is not liable for consequential, incidental or specific damages. This warranty is limited to the repair or replacement of the manufacturing or material defect, or refund of the original purchase price, whichever is less, at the sole option of Inter-Fab, Inc., and expressly does not cover any labor or reinstallation expenses related to the replacement of any and all Inter-Fab products. This limited warranty shall be the sole and exclusive remedy of irrespective of whether the claims are made in contract, tort, warranty, law, equity or by statue.

This warranty is to the original purchaser of the product only. Inter-Fab's limited warranty is neither transferable nor portable from consumer to consumer. The effective coverage date begins at the date of retail purchase. Product owner or representative must notify Inter-Fab, Inc. (or its wholesale agent) in writing, giving a full description of the nature of the product defect or failure along with proof of purchase, serial number(s) of the product and photos within thirty (30) days of the expiration of the applicable warranty period. Inter-Fab, Inc. reserves the right to physically inspect damaged or defective products or components to determine the cause of the damage or defect, prior to authorizing repair or replacement of its products.

* Please see specific warranty information for the Garden Ride Series and River Run Series slides.



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