

U-STYLE STAND DIVING SYSTEM Assembly & Installation Instructions



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U-STYLE STAND DIVING SYSTEM OWNER'S MANUAL



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or visit: www.inter-fab.com

To obtain complete copies of the most current ANSI/NSPI 2003 Standards for 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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SAFETY FIRST!

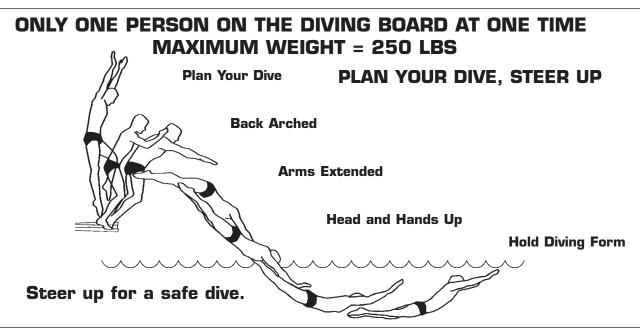
This Inter-Fab diving board and/or stand shall be installed only by a professional swimming pool contractor or with the direct supervision of a licensed professional, engineer or architect. Diving boards may be installed only on residential or public inground swimming pools properly designed for their 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/NSPI-5 2003] or on public inground pools that meet or exceed the minimum water envelop dimensions of the ANSI/NSPI-1 2003 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/NSPI-5 2003 standards for residential inground swimming pools and the ANSI/NSPI-1 2003 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.

SAFETY FIRST!

A pool is the safest place to swim and a diving board installed in compliance with manufacturers instructions and the ANSI/NSPI-5 2003 standards for residential inground swimming pools and the ANSI/NSPI-1 2003 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.

- 1. Know the shape and depth of the pool before you dive.
- 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 2003 ANSI/NSPI 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.
- 8. 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

IMPORTANT NOTICES TO THE INSTALLER

The specifications found in this manual represent the minimum water envelope required by Inter-fab and by the ANSI/NSPI 2003 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 2003 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/NSPI 2003 Standards.

Read carefully pages 9-14 and pages 17-25 of this installation manual which contain portions of the ANSI/NSPI-5 2003 Standard for Residential Inground Swimming Pools, and the ANSI/NSPI-1 2003 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/NSPI 2003 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 **

		IRO-BE <i>i</i>	ıM	DURO-S	SPRING	G TECHNI-BEAM BAJA			0	OLYMPIAN COMMERCI			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	_	_	_	-	U2	U3	U3	-	-

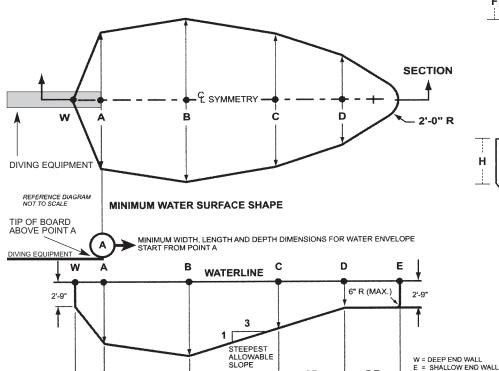
CHART KEY:

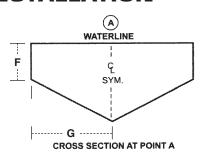
S = STANDARD; U1 = UPGRADE 1; U2 = UPGRADE 2; U3 = UPGRADE 3; - = NOT AVAILABLE

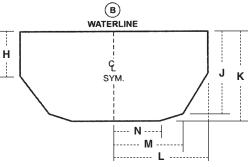
** NOTE: The Chart above refers to standard wood core diving boards and standard fiberglass and steel diving bases.

MINIMUM DIVING WATER ENVELOPE:

NOTE: DRAWINGS ARE NOT TO SCALE.







CROSS SECTION AT POINT B

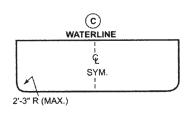
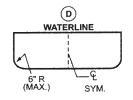


TABLE 1 - MINIMUM WATER ENVELOPE (ANSI/NSPI-5 2003)

WA

POOL	М	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+/-3"	AB	BC	CD*	DE	WE
0		DI	VI	N G	E (<u> 1 U E</u>	P M	EN	T P	RO	HI	BIT	E D	
	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	CRO	SS SECTIO	DNAL D	IMENSION	IS AT POI	NT B	MIN. HEAD ROOM ABOVE
TYPE	DBL**	HOW**	F	G	Н	J	К	L	М	N	DIVING SURFACES
0		DIVII	V G	EQUI	P M I	ENT	PR	OHI	BIT	E D	
ı	6' DB/6' JB	20"	2-9"	5'-0"	4'-0"	7'-2.5"	7'-6"	6'-0"	3-9"	2'-1.5"	12'
II	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.

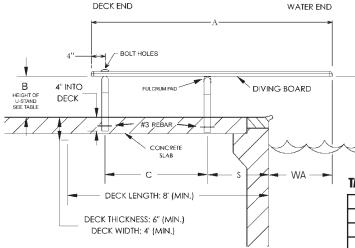


FIG. A - U-STAND RESIDENTIAL PLACEMENT SPECIFICATIONS:

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

FULCRUM PAD

U-FRAME

FINISH GRADE

#3 REBAR

TABLE 3 - U-STAND SPECS

HOW

TABLE 4 - U-STAND MATERIAL

Α	В	С
6'	12", 18"	30" ±3"
8'	12", 18"	40" ±4"
10'	18", 20"	52" ±5"
12'	20"	62" ±6"

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

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

TABLE 5 - RESIDENTIAL PLACEMENT CHART

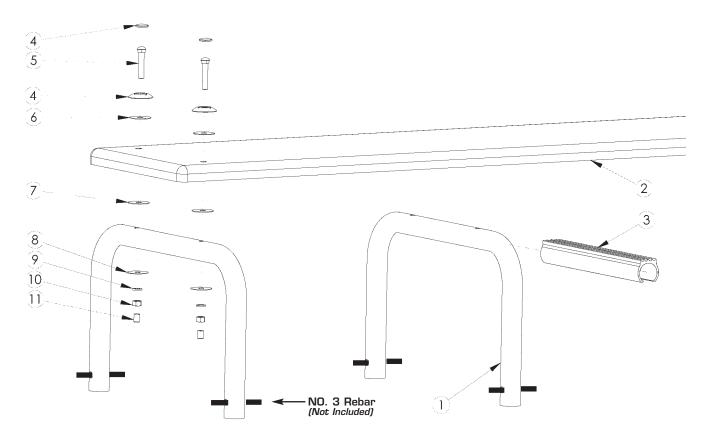
ADDITIONALLY REFER TO: ANSI/NSPI-5 2003 American National Standard for Residential Inground Swimming Pools and to page 5 for Inter-Fab Residential Inground Pool Minimum Specifications.

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 PLUS OR MINUS 3" (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, TYPICALLY	DBU12049 or DBU18049	6'	III	12.25"	36.25"	24"	26"		
GUNITE CONSTRUC-	DBU12049 or DBU18049	6'	IV	6.25"	36.25"	30"	30"		
TION, WITH LESS	DBU12049 or DBU18049	6'	V	Not recommended.	Call customer	service for mor	re information.		
THAN A 3' RADIUS TO		8'	ı		NOT ALLO				
	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 ALLO	WED			
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 ALLOWED					
PLACEMENT.		12'		NOT ALLOWED					
PLAGEIVIEN I.		12'	III NOT ALLOWED						
1-800-737-5386		12'	IV		NOT ALLO				
	DBU24	12'	V	40"	76"	36"	40"		

^{*} 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/NSPI-5 2003 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/NSPI-5 2003 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-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 WHT CAP	750 x 1-1/2 White LIV 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/NSPI-5 2003 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.

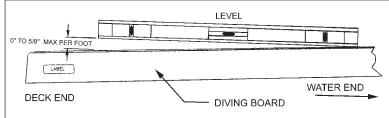
Make sure the U-Stands are set 4" into the concrete with ample concrete depth below the stand in accordance with Figure A on page 6. Do not install the U-Stand Diving System if the deck does not meet the minimum requirements.

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/NSPI- 2003, American National Standard for Residential Inground Swimming Pools

5 Pool dimensions and tolerances

- **5.1 General requirements.** Design dimensions shall comply with 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 overall length, width and depth shall be limited to a tolerance of plus or minus 3 inches (\pm 7.6 cm). All other dimensions shall be limited to a tolerance of plus or minus 2 inches (\pm 5.1 cm), unless otherwise specified.
- **5.2 Perimeter shape.** No limits are specified for shape of pools except that consideration shall be given to shape from the standpoint of circulation of the swimming pool water 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° (1:5 slope

ratio) to a transition point. The transition point shall not be less than 2 feet and 9 inches (83.8 cm) below the waterline. See figure 1.

5.3.2 As shown in figure 2, at the depths of (a) and (b), the walls are permitted to join the floor.

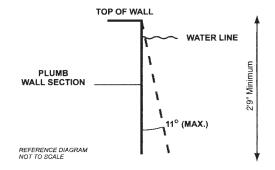


Figure 1 - Maximum allowable wall slope

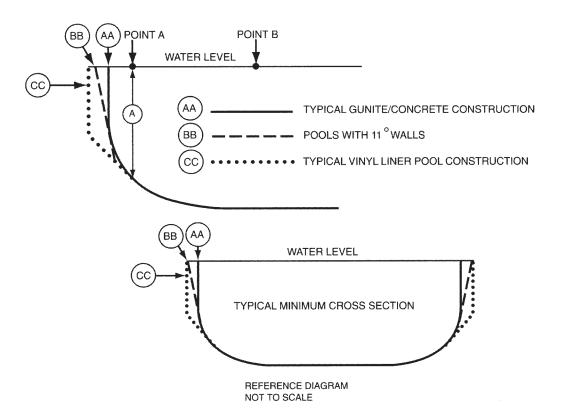


Figure 2 – Typical pool design configurations

Extracted from ANSI/NSPI- 2003, American National Standard for Residential Inground Swimming Pools

5.3.3 The walls of Type I pool, when defining the minimum diving water envelope, shall be plumb or outside of Type I water geometry. (See figure 3, table 1.)

5.4 Maximum allowable wall slope

5.4.1 Maximum allowable wall slope shall not slope greater than 11° from plumb.

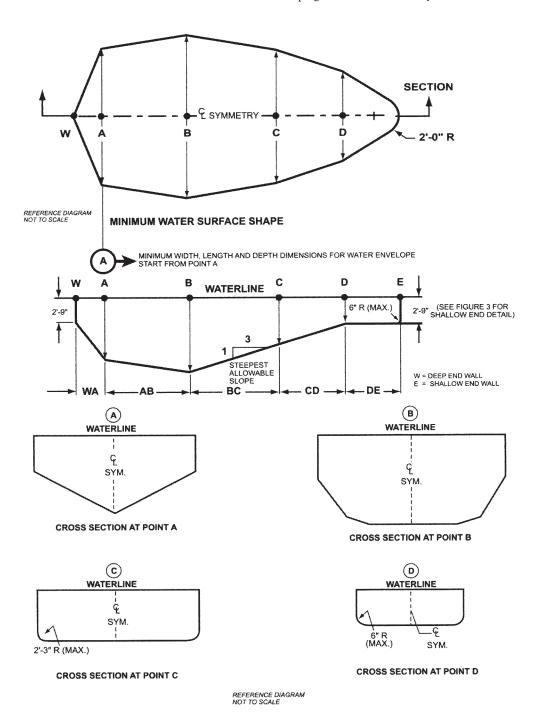


Figure 3 – Minimum water envelope

Extracted from ANSI/NSPI- 2003, American National Standard for Residential Inground Swimming Pools

Pool	Minimum depths of at point			-						Minimum lengths between points					
type	A	В.	C	D	A	В	C	D	WA	AB	BC	CD*	DE	WE	
Ο,	Manuf	actured diving equipment is prohibited													
I	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"	

Table 1 – Minimum water envelope

- NOTE:
- 1. *Minimum length between points CD may vary based upon water depth at point D and the slope between points C & D.
- 2. Figure 3 drawings are not to scale. (For pool types, see Glossary.)

5.5 Offset ledges

5.5.1 Offset ledges shall be a maximum of 8 inches (20.3 cm) wide.

5.5.1.1 Offset ledges, located less than 42 inches (1067 mm) below waterline shall be proportionately less than 8 inches (20.3 cm) wide and fall within 11° from plumb, measured from the top of the waterline. See figure 4.

5.6 Floor slopes. Floor slopes shall be reasonably uniform and comply with 5.6.1 through 5.6.3.

- **5.6.1** The slope of the floor from the shallow end wall towards the deep area shall not exceed 1 foot in 7 feet (30 cm: 213 cm) to the point of the first slope change as shown in figure 5.
- **5.6.2** Changes in slope between shallow and deep areas shall be at a minimum water depth of 2 feet 9 inches (83.8 cm) and be at least six feet (182.9 cm) from the shallow end, except as specified in 6.3.
- **5.6.3** The slope of the floor from the point of the first slope change toward the deep end shall not exceed 1 foot in 3 feet (30 cm: 91 cm).

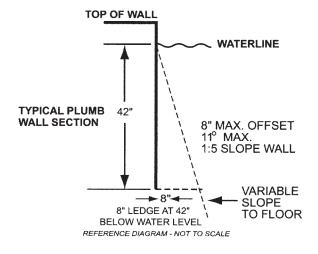


Figure 4 - Offset ledges

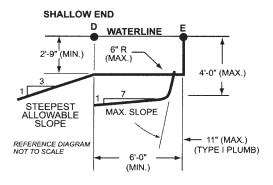


Figure 5 – Shallow end depths

Extracted from ANSI/NSPI- 2003, American National Standard for Residential Inground Swimming Pools

- 5.7 Shallow end water depths. Water depth in the shallow area shall be a minimum of 2 feet 9 inches (83.8 cm) except for those locations specified in 6.3 "Shallow End Detail for Beach and Sloping Entries." The water depth at the shallowest point shall not exceed four feet (121.9 cm) as shown in figure 5.
- 5.8 Manufactured diving equipment for inground swimming pools (diving board/stand combination or manufactured platform)
- NOTE For consumer safety information, warnings and education programs, See appendices D, E, and F.
- **5.8.1** When manufactured diving equipment is installed, it shall conform to the specifications set forth in 5.8 through 5.9 and shall be located in the deep area of the pool so as to provide the minimum dimensions as shown in 5.9.
- **5.8.1.1** Manufactured diving equipment shall not be installed on Type 0 pools.
- **5.8.2 Diving equipment.** Diving equipment shall be designed for swimming pool use and shall be installed in accordance with the manufacturer's specifications.
- 5.8.2.1 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 may refer to the water envelopes type of their choice by dimensionally relating their products to Point A on the water envelopes as shown in figure 3 and table 1, 5.9.1 through 5.9.3.
- **5.8.2.2** Diving equipment shall be permanently labeled and affixed to the diving equipment or jump boards and shall include but not be limited to:
 - manufacturer's name and address;
 - date of manufacture;
 - minimum water envelope required for each diving board and diving stand combination; and
 - maximum weight limitations of the user as specified by the board manufacturer.

- **5.8.2.3** Diving equipment shall have slip-resisting tread surfaces.
- **5.9** Figure 3 contains suggested drawings and diagrams for minimum water envelope for swimming pools designated type I V. Individual pool types are shown in figure 3 and table 1.
- **5.9.1** Location of point A. Point A shall be defined as a point located on the minimum water envelopes.
- **5.9.1.1 Point A.** Point A is a construction location nearest the deep end wall where the minimum water depth is satisfied.
- **5.9.1.2** Point A as shown in figure 3 and table 1 shall be the reference point of origin for all dimensions defining the minimum water envelope.
- **5.9.2** Type 0 pool (where diving is prohibited) shall not be limited in width, length, or water depth except as specifically provided for in this standard.
- 5.9.3 Location of equipment and pool features in the minimum water envelope. If the pool is designed for use with diving equipment, steps, pool stairs, ladders, underwater benches, special features and other accessory items shall be located outside the minimum water envelope. (See figure 6)
- **5.9.4** Typical pool design configurations. Vinyl liner, shotcrete, fiberglass and concrete constructions shall conform to, but are not limited to, the typical pool configurations shown in figure 2.
- **5.10** Stationary diving platform(s) and diving rock(s). Stationary diving platform(s) and diving rock(s) built on site 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.
- $NOTE-For\ consumer\ safety\ information,\ warning,\ and\ education\ programs,\ See\ appendices\ D,\ E,\ and\ F.$

Extracted from ANSI/NSPI- 2003, American National Standard for Residential Inground Swimming Pools

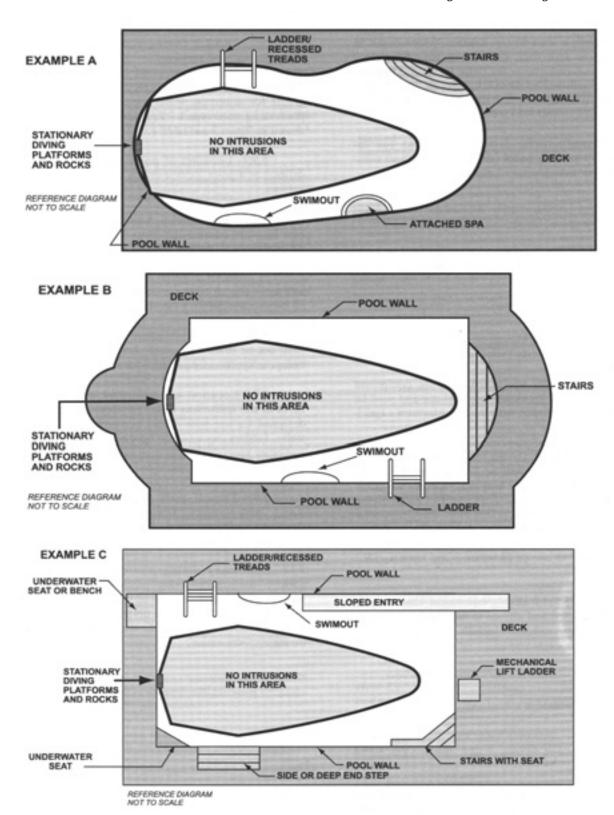


Figure 6 - Top view examples of accessory equipment and pool features prohibited in the water envelope

Extracted from ANSI/NSPI- 2003, American National Standard for Residential Inground Swimming Pools

5.10.1 The maximum height of the stationary diving platform or diving rock above the waterline shall be as follows:

Pool Type I 42 inches (106.7 cm);
 Pool Type II 42 inches (106.7 cm);
 Pool Type III 50 inches (127.0 cm);
 Pool Type IV 60 inches (152.4 cm); or
 Pool Type V 69 inches (175.3 cm)

- **5.10.2** Stationary diving platform(s) and diving rock(s) shall not be permitted on Pool Type 0.
- **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 manufacturer's specifications.

NOTE – For consumer safety information, warnings, and education programs, see appendices D, E, and F.

To obtain complete copies of the ANSI/NSPI-5 2003 Standard for Residential Inground Pools contact:

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

or visit: www.theapsp.org

PUBLIC POOL INSTALLATION

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

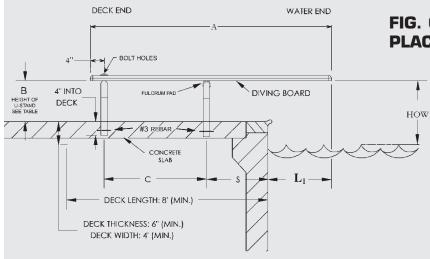


FIG. C - U-STAND COMMERCIAL PLACEMENT SPECIFICATIONS:

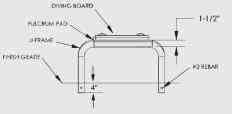


TABLE 7 - U-STAND MATERIAL

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 DIVING 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 Side	8'
1 Meter Board to Pool Side	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/NSPI-1 2003 American National Standard for Public Swimming Pools.

U-STANDARDS Part #	NOMINAL BOARD LENGTH (A)	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 (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"

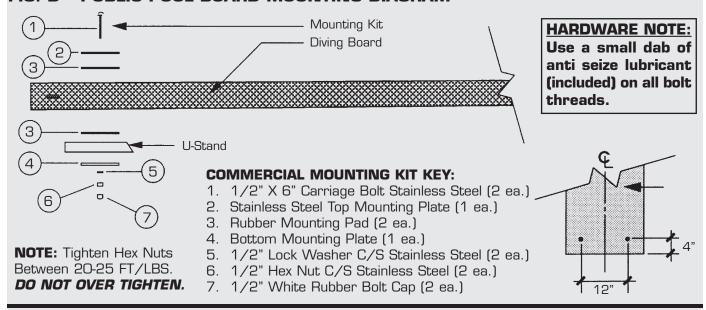
IMPORTANT: THESE DIMENSIONS ARE ACCURATE ONLY FOR VERTICAL POOL WALLS, **TYPICALLY GUNITE CONSTRUCTION**. PLEASE CONTACT CUSTOMER SERVICE FOR PROPER PLACEMENT. **1-800-737-5386**

^{*} 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/NSPI-1 2003 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/NSPI-1 2003 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/NSPI-1 2003 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.

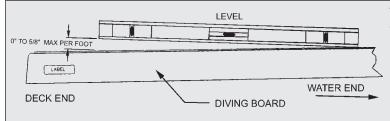
When finishing the deck surface, maintain a level deck where the U-Stands project out of the deck surface. Both U-Stands must be leveled left to right and to each other when installing. This will allow the diving board to sit level left to right and have a slight upward pitch at the toe end once th rubber 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/NSPI-1 2003, American National Standard for Public Swimming Pools

ANSI/NSPI-1 2003

Standard for Public Swimming Pools

1 Scope

- **1.1 Public swimming pools.** This standard covers public swimming pools to be used for bathing and operated by an owner, 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 include Class A pools (pools used for competitive aquatic sports), Class B and Class C pools, (pools intended for public or semi-public recreational swimming), and Class F pools (for wading). (See article 3 for definitions.)
- 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.** (See appendix H, Glossary.) Renovation does not include ordinary maintenance. Only those items that are renovated shall adhere to this standard.

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 below.

ANSI/ASME A112.19.8M–1987 (1996), Suction fittings for swimming and wading pools, spas, hot tubs, and whirlpool bathtub appliances ¹

ANSI/ICC A117.1 (2003), Standard on accessible and useable buildings and facilities ²

ANSI/NEMA-MG1-1998, Motors and generators ³

ANSI/NSF 14 (2003), Plastics piping system components and related materials ⁴

ANSI/NSF 50 (2001), Circulation system components and related materials for swimming pools, spas/hot tubs ⁵

ANSI Z21.56-2001/CSA 4.7-2001, Gas fired pool heaters ⁶

ACI 302.1R-96 (1996), Guide for concrete floor and slab construction ⁷

Americans with Disabilities Act (ADA) Accessibility guidelines for buildings and facilities; recreation facilities 8

ASME A112.1.2 (2002), Air gaps in plumbing systems ⁹

ASTM 1346-91 (2003), Standard performance specification for safety covers and labeling require-

U-STAND-IM Rev. 3/09 (BK-USTAND BOOK)

¹American National Standards Institute (ANSI), 25 West 43rd Street, New York, NY 10036, NY (212) 642-4900, www.ansi.org

² ANSI, previously listed

³ National Electrical Manufacturers Association (NEMA), 1300 N. 17th Street, Suite 1847, Rosslyn, VA 22209 (703) 841-3200, *www.nema.org*

⁴ NSF International, 789 N. Dixboro Rd., Ann Arbor, MI 48113 (734) 769-8010, www.nsf.org

⁵ NSF, previously listed

⁶ ANSI, previously listed

⁷ American Concrete Institute, 38800 Country Club Drive, Farmington Hills, MI 48331, (248) 848-3800, www.aci-int.org

⁸ U.S. Architectural and Transportation Barriers Compliance Board, 1331 F Street, NW, Suite 1000, Washington, DC 20004, (202) 272-0080, www.access-board.gov

⁹ American Society of Mechanical Engineers (ASME), 3 Park Avenue, 20th Floor, New York, NY 10016, (212) 591-8562, www.asme.org

Extracted from ANSI/NSPI-1 2003, American National Standard for Public Swimming Pools

ments for all covers for swimming pools, spas and hot tubs 10

ASTM F2208-02, Standard specification for pool alarms 11

ANSI/NFPA 54-2002, National fuel gas code 12

ANSI/NFPA 70-2002, National electric code 13

UL 1995 (1999), Standard for heating and cooling equipment ¹⁴

UL 1261 (2001), Standard for electric water heaters for pools and tubs ¹⁵

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 Federation Internationale de Natation (FINA), U.S.A. Swimming, U.S. Diving, National Collegiate Athletic Association (NCAA), National Federation of State High Schools Associations (NFSHSA), 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, multi-family 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 $86\ ^{\circ}F\ (30\ ^{\circ}C)$ 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 6.9 and 8.4.2 and as noted in other sections of the standard.

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, rehabilitation, or alteration 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 or rehabilitate 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 cleaned surface without cracks or joints, excluding structural joints, or to which a smooth, easily cleaned surface/finish is applied or attached.
- **5.2.1 Selection of materials.** Clean sand or similar material, if used in a beach pool environment, shall be used only over an impervious surface. The

¹⁰ ASTM International, 100 Barr Harbor Drive, W. Conshohocken, PA 19428, (610) 832-9585, *www.astm.org*

¹¹ ASTM, previously listed

¹² National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, MA 02269 (617) 770-3000, www.nfpa.org

¹³ NFPA, previously listed

¹⁴ Underwriters Laboratories (UL), 333 Pfingsten Road, Northbrook, IL 60062, (847) 272-8800, www.ul.com

¹⁵ UL, previously listed

Extracted from ANSI/NSPI-1 2003, American National Standard for Public Swimming Pools

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).

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 \pm 2 inches (51 mm) tolerance.

- **6.1.1** There shall be no protrusions, extensions, 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.** These construction tolerances are not applicable to Class A pools.
- **6.2.1** Finished pool dimensions shall be held within the following construction tolerances as shown in table 1.
- **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 foot in 10 feet in Class C pools or 1 foot in 12 feet 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 foot in 10 feet in Class C pools or 1 foot in 12 feet in Class B pools.

Table 1 - Construction tolerances

Design requirements	Construction tolerance allowed
Length - overall	± 3 in. (76 mm)
Width - overall	<u>+</u> 3 in. (76 mm)
Depth - deep area, including diving area	± 3 in. (76 mm)
Depth - shallow area	<u>+</u> 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 nonadjustable skimming systems (gutters)	± 1/8 in. (3 mm)
Wall slopes	± 3 degrees
All dimensions not otherwise specified in this standard	<u>±</u> 2 in. (51 mm)
Competitive pools - Class A pools - All dimensional requirements	As governed by sanctioning authority

Extracted from ANSI/NSPI-1 2003, American National Standard for Public Swimming 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 foot in 3 feet.
- **6.3.5** Walls. Where walls join the floor the transitional point or profile shall comply with the following:
 - Walls may intersect with the floor at an angle or a transition profile.
 - At water depths between 3 feet to 5 feet (91 cm to 152 cm) the maximum radius shall be 2 feet 3 inches (69 cm).
 - At water depths of 3 feet (91 cm) or less a transitional radius shall not exceed 6 inches (15 cm) and shall be tangent to the wall and may be tangent to or intersecting the floor.
 - At water depths greater than 3 feet (91 cm) a transitional radius shall be tangent to the wall at a point no less than 2 feet and 6 inches (76 cm) below the water surface and may progressively increase from 6 inches (5 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 feet (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 Federation Internationale de Natation (FINA), U.S.A. Swimming, U.S. Diving, or other appropriate sanc-

- tioning body. (See appendix H, Glossary for the definition of pools, Commercial/Public Pool: Class A)
- **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. (See appendix H, Glossary.)
- **6.5.1** When diving equipment is installed, it shall conform to the specifications set forth in 7.2.1 through 7.2.5.6. Equipment shall be located in the diving area of the pool on the appropriate ANSI/NSPI pool type (or other water envelopes specified by the diving equipment manufacturer) in accordance with the manufacturer's installation instructions and the minimum dimensions as shown in figure 1. Competitive diving equipment shall not be installed on Class B and Class C pools.
- 6.6 The manufacturer of the diving equipment shall specify minimum water envelopes for its products. They may refer to the water envelope type of their choice by dimensionally relating their products to Point "A" on that water envelope. Point "A" as shown in figure 1 is designated as the point of origin on the water surface for the water envelope dimension.
- **6.6.1** Point A is a point located on the water surface of pool water envelopes.
- **6.6.2** Point A is a construction location nearest the deep end wall where the minimum water depth D_1 is satisfied.
- **6.6.3** Point A, as shown in figure 1 and table 2, shall be the referenced point of origin for all dimensions defining a minimum water envelope.

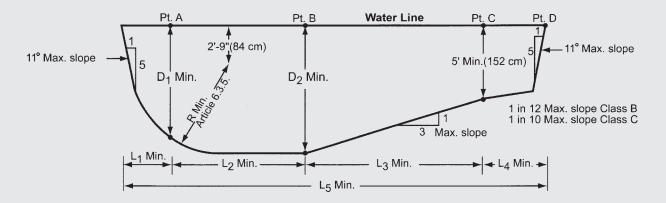
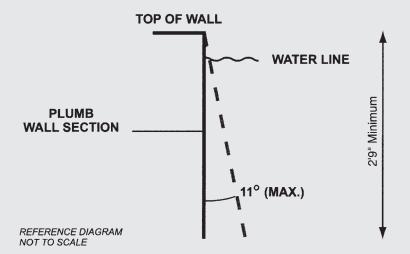


Figure 1 - Construction dimensions for water envelopes for Class B and Class C pools

Extracted from ANSI/NSPI-1 2003, American National Standard for Public Swimming Pools



Use for all pools except Class A pool walls where racing lanes terminate.

Figure 2 – Maximum allowable wall slope

Table 2 – Minimum water envelopes

Pool		Minimum dimensions							Minimum width of pool at:		
type	\mathbf{D}_1	\mathbf{D}_2	R	L_1	L_2	L_3	L_4	L_5	Pt. A	Pt. B	Pt. C
	7'-0"	8'-6"	5'-6"	2'-6"	8'-0"	10'-6"	7'-0"	28'-0"	16'-0"	18'-0"	18'-0"
VI	(213 cm)	(259 cm)	(168 cm)	(76 cm)	(244 cm)	(320 cm)	(213 cm)	(853 cm)	(488 cm)	(549 cm)	(549 cm)
	7'-6"	9'-0"	6'-0"	3'-0"	9'-0"	12'-0"	4'-0"	28'-0"	18'-0"	20'-0"	20'-0"
VII	(229 cm)	(274 cm)	(183 cm)	(91 cm)	(274 cm)	(366 cm)	(122 cm)	(853 cm)	(549 cm)	(610 cm)	(610 cm)
	8'-6"	10'-0"	7'-0"	4'-0"	10'-0"	15'-0"	2'-0"	31'-0"	20'-0"	22'-0"	22'-0"
VIII	(259 cm)	(305 cm)	(213 cm)	(122 cm)	(305 cm)	(457 cm)	(61 cm)	(945 cm)	(610 cm)	(671 cm)	(671 cm)
	11'-0"	12'-0"	8'-6"	6'-0"	10'-6"	21'-0"	0	37'-6"	22'-0"	24'-0"	24'-0"
IX	(335 cm)	(366 cm)	(259 cm)	(183 cm)	(320 cm)	(640 cm)	(0 cm)	(11.4 m)	(671 cm)	(732 cm)	(732 cm)

NOTE – For definition of pool types see Glossary

Extracted from ANSI/NSPI-1 2003, American National Standard for Public Swimming Pools

Table 3 - Maximum user load

Pool/Deck area	Shallow instruc- tional or wading areas	Deep area (not including the diving area)	Diving area (per each diving board)
Pools with minimum deck area	15 sq. ft. per user	20 sq. ft. per user	300 sq. ft.
(See 7.1.6 through 7.1.6.1.)	$(1.35 \text{ m}^2 \text{ per user})$	(1.8 m ² per user)	(27 m^2)
Pools with deck area at least equal to	12 sq. ft. per user	15 sq. ft. per user	300 sq. ft.
water surface area	$(1.08 \text{ m}^2 \text{ per user})$	$(1.35 \text{ m}^2 \text{ per user})$	(27 m^2)
Pools with deck area at least twice the	8 sq. ft. per user	10 sq. ft. per user	300 sq. ft.
water surface area	$(0.72 \text{ m}^2 \text{ per user})$	$(0.9 \text{ m}^2 \text{ per user})$	(27 m^2)

- **6.7 Rest ledges.** Rest ledges along the pool walls are permitted. They must be not less than 4 feet (122 cm) below the water surface. If a ledge is provided it shall be at least 4 inches (10 cm) wide and no more than 8 inches (20 cm) wide.
- **6.8 Maximum user load.** The maximum user load of Class B or Class C pools shall be in accordance with table 3.
- **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 6.9.1 through 6.9.4.
- **6.9.1** Areas where the water depth at the edge of the pool exceeds 9 inches (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 drain with a maximum slope of 1 foot in 12 feet (30 cm in 360 cm).
- **6.9.3** The maximum water depth shall be 18 inches (46 cm).
- **6.9.4** The maximum distance from the top of the deck to the water line shall not exceed 6 inches (15 cm).

7 Decks and deck equipment

- **7.1** Decks shall comply with 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 most recent edition of American Concrete Institute (ACI) Standard 302.1R-96, *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 inches (9.5 cm) and a maximum height of 7-1/2 inches (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 inches (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. (See appendix H, Glossary.)
- 7.1.5.1 A minimum 4 feet (122 cm) deck width shall be provided on the sides and rear of any diving equipment. A deck clearance of 3 feet (91 cm) shall be provided around all other deck equipment.
- **7.1.6** The minimum slope of the deck(s) shall be 1/8 inch per 1 foot (3.2 mm per 304.8 mm) for textured, hand-finished concrete decks; 1/4 inch per 1 foot (6.4 mm per 304.8 mm) for exposed aggregate

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concrete decks; 1/2 inch per 1 foot (12.7 mm per 304.8 mm) for indoor/outdoor carpeting decks; and 3/8 inch per 1 foot (9.5 mm per 304.8 mm) for brick and heavy textures finishes, unless an alternate drainage method is provided that prevents the accumulation of pooling of water. (See table 4.)

- **7.1.6.1** Decks shall be sloped so that standing water shall be no deeper than 1/8 inch (3.2 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.
- **7.1.7** The maximum slope of all decks, other than wood decks, shall be 1/2 inch per foot (12.7 mm per 304.8 mm) except for ramps.
- **7.1.7.1** The maximum slope for wood decks shall be 1/8 inch per 1 foot (3.2 mm per 304.8 mm).
- **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 and shall not cause a tripping hazard.
- **7.1.8** The maximum open gap between pool decks and adjoining decks or walkways, including joint material, shall be 3/4 inch (19.1 mm). The difference in vertical elevation between the pool deck and the adjoining sidewalk shall be 1/4 inch (6.4 mm) unless it conforms to 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.** A pressure test shall be maintained throughout the deck pour and in accordance with 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 bib(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).
- **7.2 Deck equipment.** Deck equipment including diving facilities and starting blocks shall comply with 7.2.1 through 7.4 as applicable.

Table 4 – Tv	pical minimu	ım drainage slope
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	Typical minimum drainage slope
Surface	(inch per foot)
Textured, hand-finished concrete	1/8 in. (3.2 mm)
Exposed aggregate	1/4 in. (6.4 mm)
Carpet	1/2 in. (12.7 mm)
Brick and heavy textures finished	3/8 in. (9.5 mm)

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- **7.2.1** A minimum 4 feet (122 cm) deck width shall be provided on the sides and rear of any diving equipment.
- **7.2.2 Starting blocks.** Starting blocks are intended for competitive swimming and shall conform to Federation Internationale de Natation (FINA), U.S.A. Swimming, National Collegiate Athletic Association (NCAA), or National Federation of State High Schools Associations (NFSHSA).
- **7.2.3** There shall be a completely unobstructed distance of 14 feet (427 cm) above the tip of the diving board or as specified by the diving equipment manufacturer or the authority having jurisdiction.
- **7.2.4** Public pools with diving equipment of 1 meter (39 inches) or greater in height, or pools designed for springboard or platform diving, shall comply with the dimensional design requirements of Federation Internationale de Natation (FINA), U.S. Diving, National Federation of State High Schools Association (NFSHSA) 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 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, visibly located on the diving board.
- **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 inches (53 cm) measured from the deck to the top butt end of the board shall be provided with stairs and/or a ladder. Step treads shall be self-draining.
- **7.2.5.6** Diving equipment 1 meter high (39 inches) or greater shall be provided with a top guard rail, which shall be at least 30 inches (76 cm) above the diving board and extend to the edge of the pool wall and to the deck surface.
- **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.

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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 3.

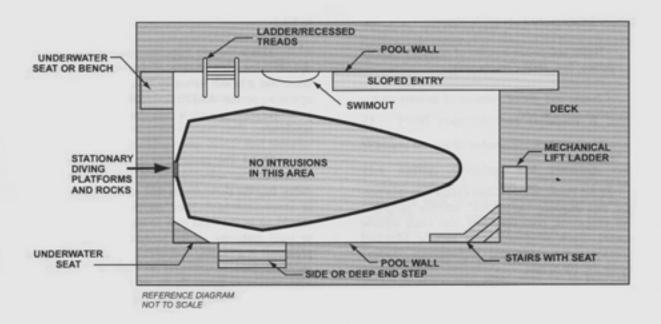


Figure 3 - Minimum diving water envelope

To obtain complete copies of the ANSI/NSPI-1 2003 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

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