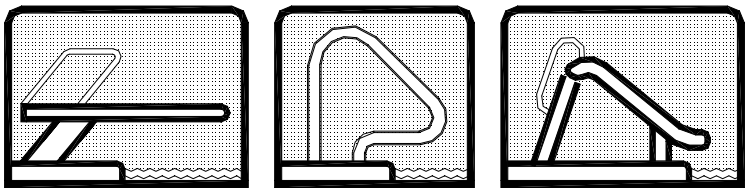
THE CASCADE™ & SLINGER™ FUNSLIDES™

ASSEMBLY AND INSTALLATION INSTRUCTIONS

S.R.Smith, LLC



****CAUTION****

S.R. SMITH CASCADE™ & SLINGER™ FUNSLIDES™ ARE MANUFACTURED FOR INSTALLATION AND USE ON RESIDENTIAL INGROUND POOLS ONLY. CASCADE™ & SLINGER™ FUNSLIDES™ ARE NEVER TO BE INSTALLED AND USED ON PUBLIC INGROUND POOLS, ABOVEGROUND POOLS, ONGROUND POOLS, HOUSEBOATS, BOAT DOCKS, FLOATING DOCKS OR PLATFORMS.

CORPORATE HEADQUARTERS
WESTERN SALES AND MANUFACTURING PLANT
P.O. Box 400 • 1017 SW Berg Parkway
Canby, Oregon 97013
(503) 266-2231 • (503) 266-4334

Table of Contents

INTRODUCTION

S.R. Smith Cascade™ & Slinger™ FunSlides™ are manufactured for installation and use on residential inground swimming pools only. S.R. Smith Cascade™ & Slinger™ FunSlides™ FunSlides™ are NEVER to be installed and used on public inground pools, aboveground pools, onground pools, houseboats, boat docks, floating docks or platforms.

APPLICABLE STANDARDS AND CODES

1. All S.R. Smith Cascade™ & Slinger™ FunSlides™ are manufactured in accordance with Consumer Products Safety Commission STANDARD FOR SWIMMING POOL SLIDES, 16 CFR Ch. 11 Part 1207 (latest edition).

2. Installer must comply with all applicable governmental and building codes.

ASSEMBLY AND INSTALLATION

All S.R. Smith Cascade™ & Slinger™ FunSlides™ are inspected prior to shipment from the factory. Proper assembly and installation is mandatory. Improper assembly and installation voids S.R. Smith's warranty and may affect the safety of the user. S.R. Smith cannot and does not guarantee customer's concrete deck.

DRAWINGS

All drawings in these Assembly and Installation Instructions (FIGURES A through P) are for illustration purposes only and are NOT TO SCALE.

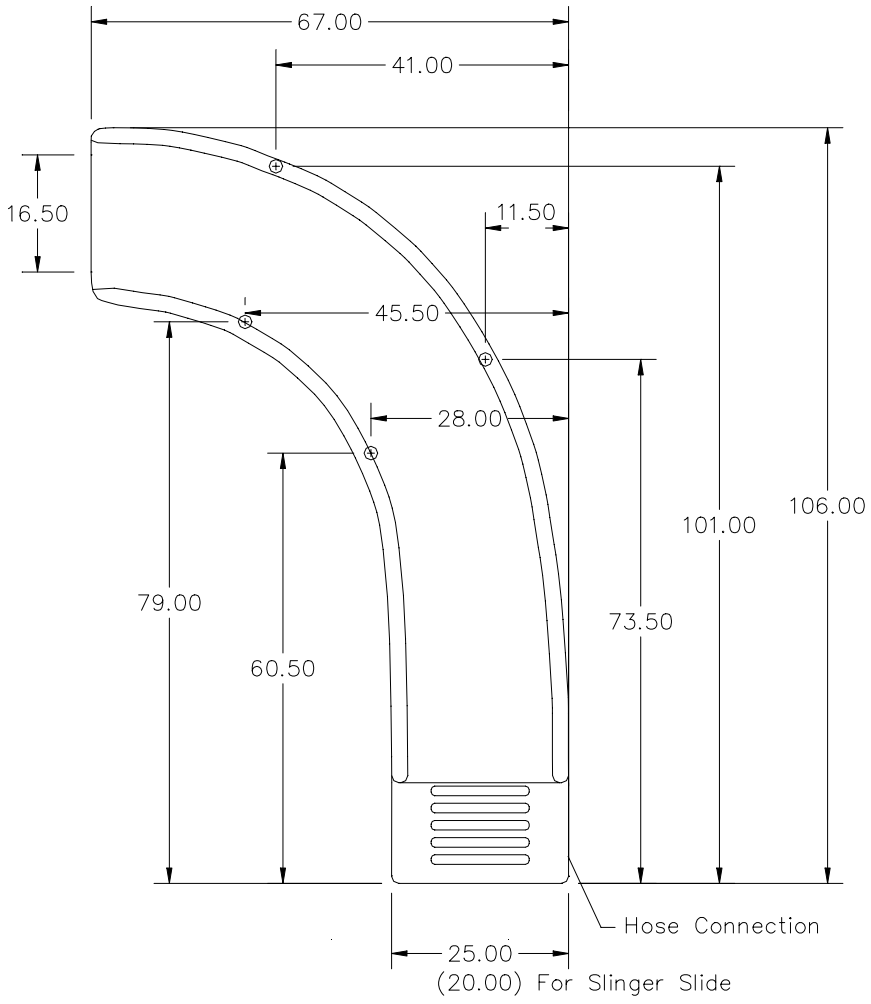
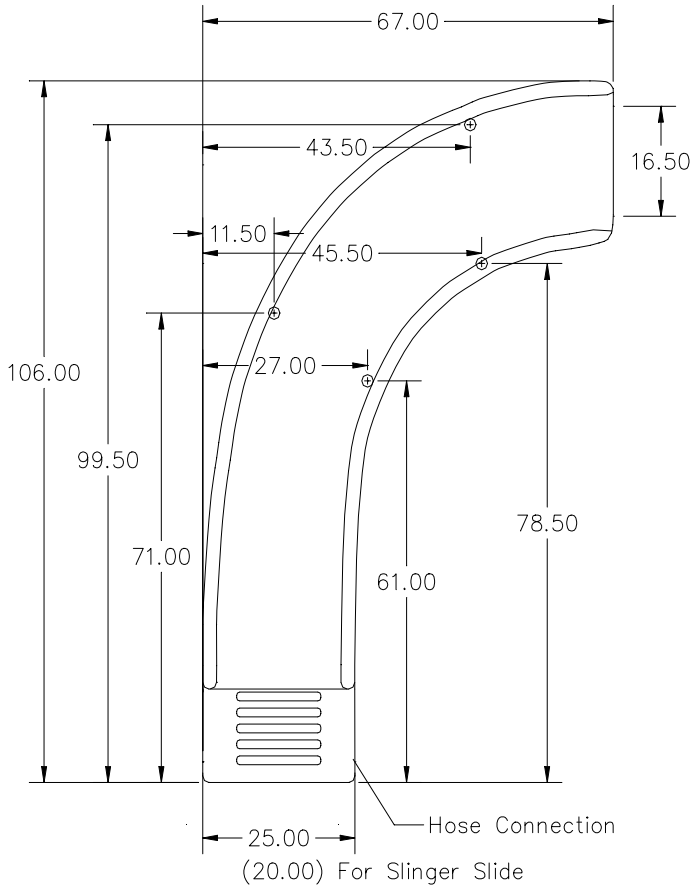


FIGURE A

LEFT CURVE FOOTPRINT

The purpose of this footprint is to serve as a GUIDELINE ONLY for approximate placement of the slide relative to the pool's edge. The actual dimensions after installation may vary according to the slope of the deck and the angle that the slide is oriented relative to the pool wall. **YOU MUST FOLLOW THE INSTALLATION INSTRUCTIONS AS PRINTED IN THIS MANUAL**.



RIGHT CURVE FOOTPRINT

The purpose of this footprint is to serve as a GUIDELINE ONLY for approximate placement of the slide relative to the pool's edge.

The actual dimensions after installation may vary according to the slope of the deck and the angle that the slide is oriented relative to the pool wall.

YOU MUST FOLLOW THE INSTALLATION INSTRUCTIONS AS PRINTED IN THIS MANUAL.

FIGURE B

LEFT CURVE SLIDE WITH FLUSH DECK MOUNTING

The purpose of this side view is to serve as a GUIDELINE ONLY for approximate placement of the slide relative to the deck. The actual dimensions after installation may vary according to the slope of the deck and the angle that the slide is oriented relative to the pool wall. The Cascade Slide is to be deck mounted. The Slinger Slide can be either mounted on the deck or in the deck. When installing the Slinger Slide in the deck, these dimensions will be reduced by at least 3-1/8 inches.

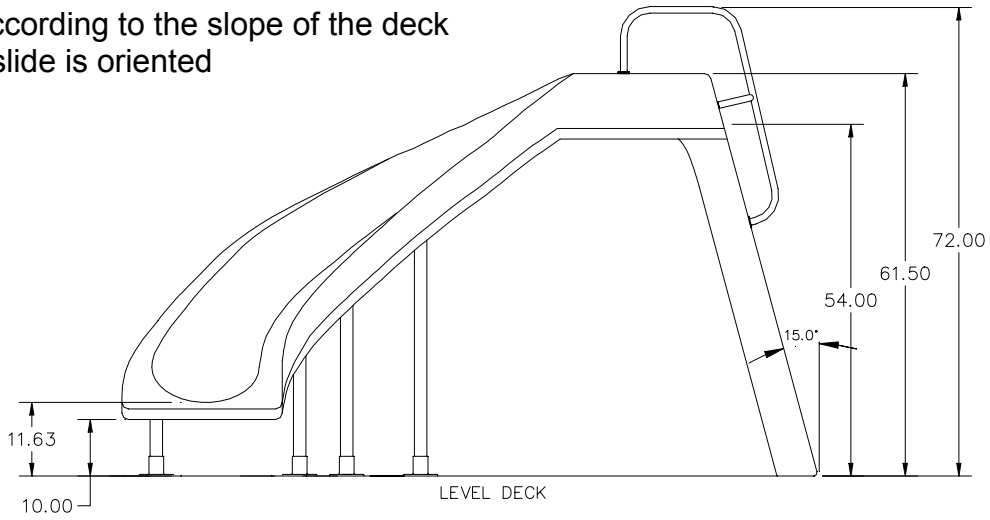


FIGURE C

CASCADE PARTS LIST

Ref # *	PART #	DESCRIPTION	QTY.
1	05-14-110	1/2" x 1-1/4” Fine Thread Bolt Grade 5	2 ea.
2	05-14-115	1/2" Lock Washer S/S	6ea.
3	05-14-114	1/2" x 1-3/8” Flat Washer S/S	6 ea.
4	05-14-116	1/2" Hex Nut S/S	2 ea.
5	05-32-122	1/2" Lag Bolt	2 ea.
6	05-32-123	1/2" Lead Expansion Shield	2 ea.
7	05-31-110	5/16” x 1” Hex Washer Head Tek Screw	4 ea.
8	5-149	1/4" Lock Washer S/S	2 ea.
9	05-155	1/4" x 1-1/4” Hex Head Cap Screw S/S	2 ea.
10	05-144	1/4" –20UNC x 2-1/2” Anchor Stud C/S Zinc Plated	16ea.
11	05-14-111	1/4" x 5/8” Flat Washer S/S	26 ea.
12	05-14-117	1/4" Hex Lock Nut	20 ea.
13	05-14-123	1/4" –20 UNC x 2-3/4” Hex Head Cap Screw	4 ea.
14	01-500	3/8” O.D. Aluminum Bushing	4 ea.
15	75-209-5000	Aluminum Deck Anchor Flange	4 ea.
16	05-752	1/2" Spring Hose Clamps	2 ea.
17	09-700	Thread Locking Compound	1 ea.
18	06-652	Cascade & Slinger Slide Assembly & Installation Instructions	1 ea.
19	06-653	Cascade & Slinger Slide Owner’s Manual	1 ea.

CASCADE ASSEMBLY INSTRUCTIONS

1. Remove the slide runway from its packaging and place upside down on a surface that will not scratch the slide.
2. Open the ladder & parts carton and locate the 4 stainless steel legs. Secure at the end of each leg a (#15) Aluminum Deck Anchor Flange by inserting a (#13) 1/4" x 2-3/4" Hex Head Cap Screw with a (#11) 1/4" x 5/8" Flat Washer through the flange and fasten with a (#11) 1/4" x 5/8" Flat Washer and a (#12) 1/4" – 20UNC Hex Lock Nut. (see FIGURE D) NOTE: The (#14) Aluminum Bushing is not needed for flange installation on stainless steel legs.

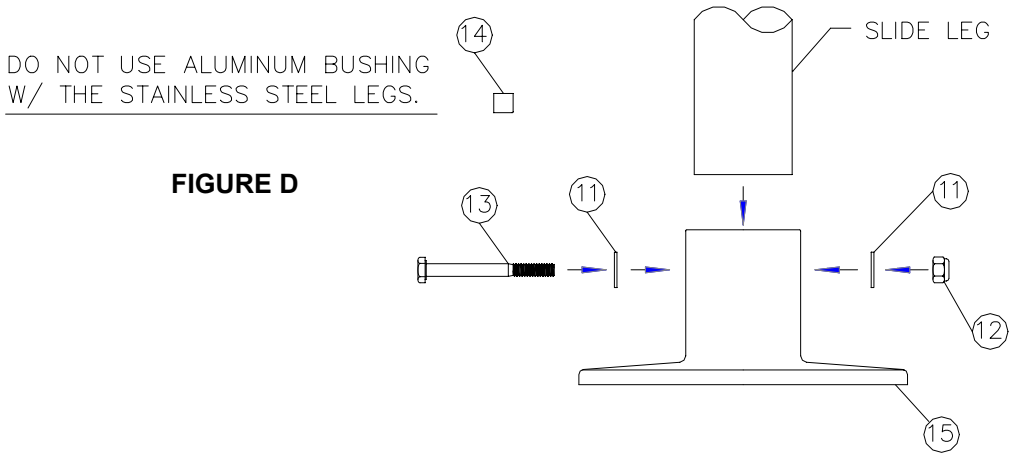


FIGURE D

3. Insert the numbered slide legs into the corresponding leg sockets of the slide. Do not attach the legs permanently at this point.
4. Carefully turn the slide with the legs in place upright for setup. It will be necessary for two people to perform this to avoid damage to the slide and the legs. If necessary use something such as tape to temporarily hold the legs in place while turning the slide over.
5. Bring the ladder into position under the slide and secure with two (#3) 1/2" x 1-3/8" Flat Washers, two (#2) 1/2" Lock Washers and two (#4) 1/2" Hex Nuts. (see FIGURE E)

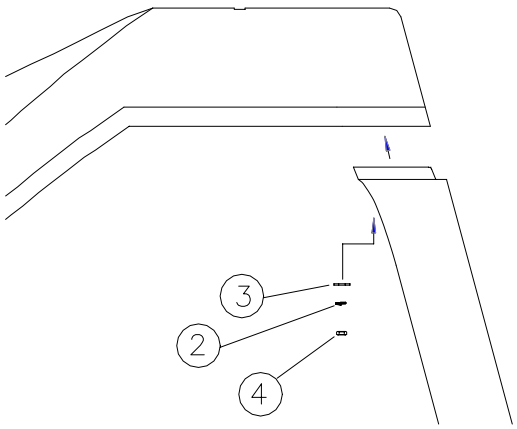


FIGURE E

6. Place the slide at the desired location relative to the pool wall. See Manufacufacturer's Installation Criteria on Pages 14 & 15. Also see ANSI/NSPI-5 1995 STANDARD FOR RESIDENTIAL INGROUND SWIMMIN POOLS.

7. Level as close as possible the exit runway surface horizontally from side to side. Also ensure the top runway surface is level from side to side. (see FIGURE F) If necessary the legs can be adjusted up or down within the leg sockets to help adjust for level. Once the slide is properly leveled the legs shall be permanently attached by drilling a 1/4" hole into each leg using the hole in the leg socket as a guide and fastening with a (#7) 5/16" x 1" Hex Washer Head Tek Screw.

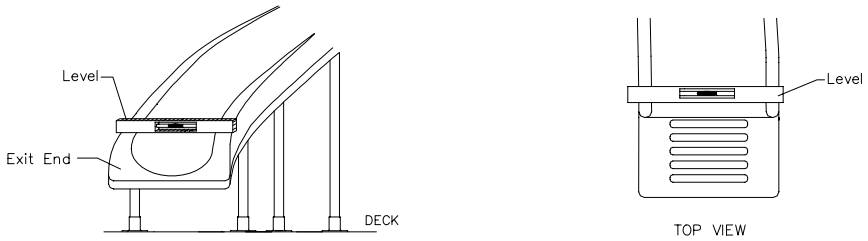


FIGURE F

8. Ensure that the exit runway surface does not exceed 20 inches above the water surface, nor less than 8 inches above the deck/coping surface. (see FIGURE M page 14) The exit runway surface is measured at the point of transition between the runway and the beginning of the exit end radius**.**

9. Re-check the slide to ensure it is properly leveled and in its proper position. Make sure the legs are vertical before proceeding to the next step.

10. Using the four holes in each (#15) Aluminum Deck Anchor Flange and the holes in the base of the ladder as a template, mark the drill locations for the anchors. Move the slide to the side to facilitate drilling of the anchor holes.

11. Using the marked locations drill four 1/4" diameter holes per flange 1-3/8" deep. CAUTION: Do not drill holes larger than 1/4". Maintain drill hole straight and perpendicular for proper holding strength of anchor stud. For the holes marked at the base of the ladder drill 3/4" holes 2" deep, then insert a (#6) 1/2" Lead Expansion Shield into each hole.

12. Move the slide back to its proper position, then use a hammer to drive the (#10) 1/4"-20UNC x 2-1/4" Anchor Studs with a (#11) 1/4" x 5/8" Flat Washer and a (#12) 1/4" Hex Lock Nut on top into each hole of the (#15) Aluminum Deck Anchor Flanges leaving 7/8 of an inch of the stud above the deck. Next tighten the nut until it contacts the flange. Then, tighten the nut approximately three turns to set the anchor stud.

13. Secure the ladder to the deck by inserting the (#5) 1/2" Lag Bolts with a (#3) 1/2" x 1-3/8" Flat Washer and a (#2) 1/2" Lock Washer into the lead expansion shield. Tighten until the lock washers are compressed.

ELECTRICAL BONDING

If electrical bonding is required by the local governmental regulations, it shall be done in accordance with Article NO. 680 of the current National Electrical Code or the local Code whichever is greater.

14. Attach the 1/2" O.D. x 3/8” I.D. Clear Tubing from the slide runway to the water supply piping of the ladder. Trim the tubing if needed. NOTE: Be sure to the (#16) Spring Hose Clamps at the connections.
15. Plumb the water supply to the slide ladder as desired. Install water supply line to base of ladder at water connection.
16. Install the handrails by inserting each handrail into the holes in the top of the runway and securing with the (#9) 1/4" x 1-1/4” Hex Head Cap Screws, the (#8) 1/4" Lock Washers and the (#11) 1/4" x 5/8” Flat Washers. Attach the handrail to the ladder by securing with the (#3) 1/2" x 1-3/8” Flat Washers, (#2) 1/2" Lock Washers and the (#1) 1/2" Fine Thread Bolts. (see FIGURE G) Do not over tighten. Note: Use the (#17) Thread Locking Compound on the 1/2" Fine Thread Bolts used to attach the handrail to the ladder.

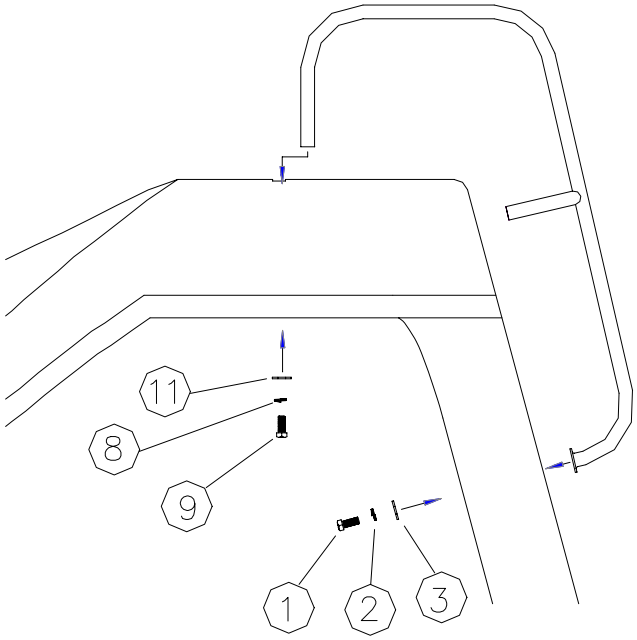


FIGURE G

SLINGER PARTS LIST

Ref # *	PART #	DESCRIPTION	QTY.
1	05-754	3/4" FGHT x 3/4" FIP Swivel	1 ea.
2	05-756	3/4" MPT x 1/2" Hose Barb Elbow	1 ea.
3	02-605	1/2" Braided Tubing	4 ft.
4	05-757	1/2" FIPT x 1/2" Hose Barb Elbow	1 ea.
5	05-758	1/2" MPT x 3/8” Hose Barb Tee	1 ea.
6	05-762	1/2" Med S/S Clip	1 ea.
7	05-760	1/2" Plastic Hose Clamp	2 ea.
8	05-761	3/4" Plastic Hose Clamp	2 ea.
9	05-31-110	5/16” x 1” Hex Washer Head Tek Screw	4 ea.
10	05-616	1/2" x 1-1/2” Round Nylon Washer	2ea.
11	05-14-114	1/2" Flat Washer S/S	2 ea.
12	05-14-115	1/2" Lock Washer S/S	2 ea.
13	05-14-116	1/2" Hex Nut S/S	2 ea.
14	5-157	1/4" x 3/4" Hex Head Cap Screw	9 ea.
15	05-14-111	1/4" x 5/8” Flat Washer	19 ea.
16	05-14-117	1/4" Hex Lock Nut	9 ea.
17	5-149	1/4" Lock Washer S/S	2 ea.
18	05-155	1/4" x 1-1/4” Hex Head Cap Screw S/S	2 ea.
19	05-14-124	1/4" x 1/2" Sheet Metal Screw	5 ea.
20	05-143	1/4" x 3/4" Flat Washer C/S	5 ea.
21	06-652	Cascade & Slinger Assembly & Installation Instructions	1 ea.
22	06-653	Cascade & Slinger Slide Owner’s Manual	1 ea.

SLIDE DECK ANCHOR FLANGE KIT (OPTIONAL – For Flush Deck Mounting)

Ref # *	PART #	DESCRIPTION	QUANTITY
22	**	Deck Anchor Flange	4 ea.
23	05-14-111	1/4" x 5/8” Flat Washer	28 ea.
24	05-14-117	1/4"-20UNC Hex Lock Nut S/S	24 ea.
25	05-14-123	1/4"-20UNC x 2-3/4” Hex Head Cap Screw	4 ea.
26	05-144	1/4"-20UNC x 2-1/4” Anchor Stud C/S Zinc Plated	20 ea.
27	06-622	Anchor Flange Installation Instructions	1 ea.
28	01-500	3/8” O.D. Aluminum Bushing	4 ea.

* Ref #s are shown as (#__) in these ASSEMBLY AND INSTALLATION INSTRUCTIONS

** Deck anchor flanges are available in plastic (05-623) or aluminum (75-209-5000).

SLINGER ASSEMBLY INSTRUCTIONS FOR IN-DECK MOUNTING

1. Place the slide runway upside down on a surface that will not scratch the slide.

2. Open the ladder and parts carton and locate the ladder and the 4 legs.

3. Attach the slide ladder to the slide by using the (#10) 1/2" x 1-1/2" Nylon Washers, (#11) 1/2" Flat Washers, (#12) 1/2" Lock Washers, and the (#13)1/2" Hex Nuts. Do not tighten completely at this point. NOTE: Maker sure to place the nylon washers between the aluminum bracket and the stainless steel washers.

4. Insert the numbered slide legs into the corresponding leg sockets of the slide. Do not attach the legs permanently at this point.

5. Carefully turn the slide with the legs and ladder upright for setup. It will be necessary for two people to perform this to avoid damage to the slide and the legs. If necessary use something such as tape to temporarily hold the legs in place while turning the slide over.

6. Place the slide at the desired location relative to the pool wall. See MANUFACTURER'S PLACEMENT INSTRUCTIONS on pages 14 & 15.

7. Ensure that the exit runway surface does not exceed 20 inches above the water surface, nor less than 8 inches above the deck/coping surface (see FIGURE M page 10). The exit runway surface is measured at the point of transition between the runway and the beginning of the exit end radius.

8. Ensure that the ladder is not twisted relative to the slide.

9. Insert 3/8" diameter rebar (not provided) into the holes located at the bottom of each leg making sure that the rebar will be a minimum of three inches (3") below the deck surface.

10. Install electrical bonding as local code specifies (see ELECTRICAL BONDING page 12).

11. Secure the ladder so that the ladder steps are level, from side to side, and the ladder is slopped 15 degrees from vertical (see FIGURE C page 4).

12. Run the (#3) 1/2" Braided Tubing up the right side of the ladder through the holes located on the end of the steps.

13. Insert at the bottom of the braided tubing a (#2) 3/4" Male Pipe Thread x 1/2" Hose Barb Fitting coupled with a (#1) 3/4" Swivel for water attachment. Secure with a (#8) 3/4" Plastic Hose Clamp. This will be placed just below the last step of the ladder.

14. At the top of the braided tubing insert the (#4) 1/2" Female PipeThread x 1/2" Hose Barb Elbow coupled with a (#5) 1/2" Pipe Thread x 3/8" Hose Barb Tee. Use teflon tape at connection to prevent leaking. Secure with a (#8) 3/4" Plastic Hose Clamp.

15. Adjust the top runway of the slide so that it is level, from side to side as shown in FIGURE H.

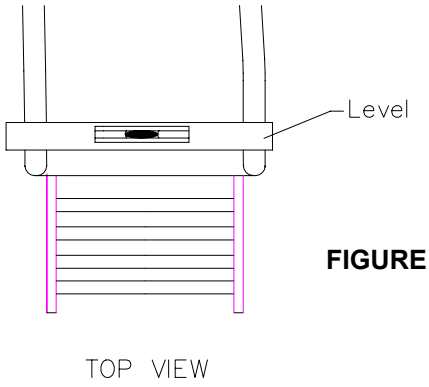


FIGURE H

16. Underneath the top portion of the slide, on the inside flat surface of the aluminum ladder bracket, mark the location where the (#6) 1/2" Med. S/S Clip will need to be placed to hold the plumbing in place, and drill a 1/4" hole.

17. Secure the (#6) 1/2" Med. S/S Clip with the braided hose and the attached fittings up against the aluminum ladder anchor with a (#14) 1/4" x 3/4" Hex Head Cap Screw, (#15) 1/4" x 5/8" Flat Washer and (#16) 1/4" Hex Lock Nut.

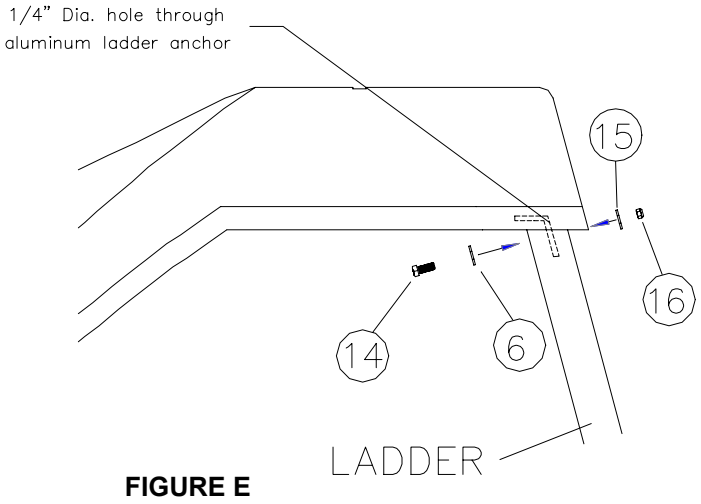


FIGURE E

18. Attach the 3/8" tubing from the slide to the tee and secure with the (#7) 1/2" Plastic Hose Clamps.

19. Level as close as possible the exit runway surface horizontally from side to side. (see FIGURE J)

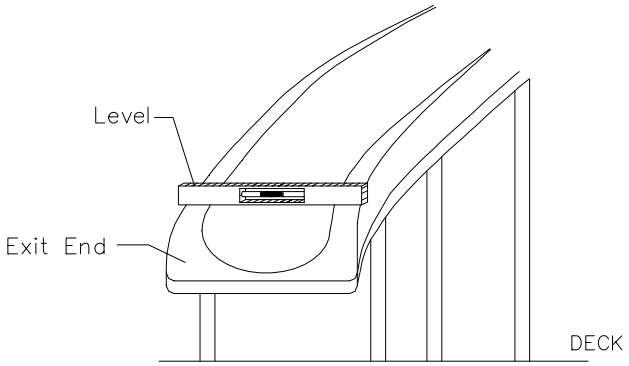


FIGURE J

20. If necessary the legs can be adjusted up and down within the leg sockets to help adjust for level. Once the slide is properly leveled the legs shall be permanently attached by drilling a 1/4" hole into each leg using the hole on the leg socket as a guide and fastening with a (#9) 5/16” Hex Head Washer Head Tek Screw.

21. Install the handrails by inserting each handrail into the holes in the top of the runway and securing with the (#18) 1/4" x 1-1/4” Hex Head Cap Screws, the (#17) 1/4" Lock Washers and the (#15) 1/4" x 5/8” Flat Washers. (see FIGURE K)

22. Attach the handrail to the ladder by first using the holes in the handrail as a template. Mark the location and drill 1/4" holes through the ladder post for attachment of the handrails to the ladder posts. Use a (#14) 1/4" x 3/4" Hex Head Cap Screw, two (#15) 1/4" x 5/8” Flat Washers and a (#16) 1/4" Hex Lock Nut per hole. (see FIGURE K)

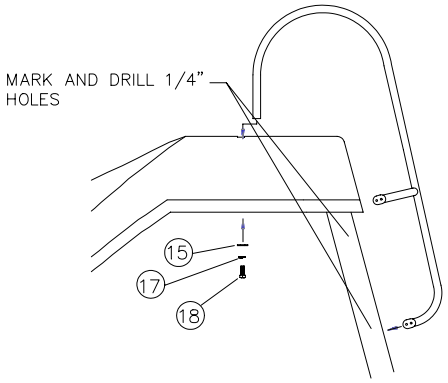


FIGURE K

23. Repeat this procedure for installation of the second handrail.

24. Plumb the water supply to the slide ladder as desired. Install water supply line to base of ladder.

25. After connecting the water hose to ladder water connection, turn on water slowly, to check for leaks. Adjust water flow until spray nozzles provide a uniform water spray over the runway surface without any over spray.

26. Secure the slide, so that it will not move during the concrete pour, to ensure that the settings remain the same.

FIGURE G

27. SUGGESTION: To ensure easy removal of concrete from legs and ladder, wax or wrap with wax paper approximately 12 inches above deck level.

28. Proceed with pouring the concrete deck and finish as desired. Let concrete cure 24 hours before using slide.

ELECTRICAL BONDING

If electrical bonding is required by the local governmental regulations, it shall be done in accordance with Article No. 680 of the current National Electrical Code of the local Code whichever is greater. Five (#19) 1/4" x 1/2" Sheet Metal Screws and five (#20) 1/4" x 3/4" Flat Washers are provided for this purpose. Secure one per slide leg and one per ladder.

SLINGER ASSEMBLY INSTRUCTIONS FOR FLUSH DECK MOUNTING

The following instructions are for mounting a slide on an existing deck.

1. Follow the steps listed on the previous page for in-deck mounting, as they are the same with the exception of the attachment of the deck anchor flanges. NOTE: Rebar will not be used.

2. Place a deck anchor flange over each end of the slide legs.

3. Using the four holes on each flange as a template (see FIGURE L below), drill four 1/4” holes per flange 1-3/8” deep. CAUTION: Do not drill holes larger than 1/4”. Maintain drill hole straight and perpendicular for proper holding strength of anchor stud.

4. Raise the flange up the leg and secure in place while using a hammer to drive the (#26) 1/4”-20UNC x 2-1/4” Anchor Stud, with a (#24) 1/4” Hex Lock Nut on top, into the hole leaving 7/8 of an inch of the stud above the deck. Then tighten the nut until it is flush with the deck. Then, tighten the nut approximately three turns to set the anchor stud. Finally, remove the nuts.

5. Secure the four flanges with (#23) 1/4” x 5/8” Flat Washers and (#24) 1/4" –20UNC Hex Lock Nuts.

6. Using the two holes on each ladder feet as templates, drill holes 1/4" diameter by 1-3/4 inches deep and secure (#26) Anchor Studs as described in 3 & 4 above.

7. Secure the two ladder feet with (#23) 1/4” x 5/8” Flat Washers and (#24) 1/4" –20UNC Hex Lock Nuts while insuring that the ladder maintains 15 degrees from vertical.

8. Drill a 1/4" diameter hole into the slide leg through the 3/8” diameter hole in the flange. Insert the (#28) 3/8” O.D. Aluminum Bushing into the hole in the deck flange and push in until it contacts the slide leg. Now insert the (#25) 1/4"-20UNC x 2-3/4” Hex Head Cap Screws and (#23) 1/4" x 5/8” Flat Washers through the bushing and in about a 1/2" into the hole in the slide leg. With the cap screw in position, drill a 1/4" hole into the slide leg through the 5/16” diameter hole in the opposite side of the deck flange. Take care not to run the drill bit into the 1/4" bolt. Push the cap screw completely through the slide leg. Install the (#23) 1/4" x 5/8” Flat Washers and (#24) 1/4"-20UNC Hex Lock Nuts (see FIGURE L).

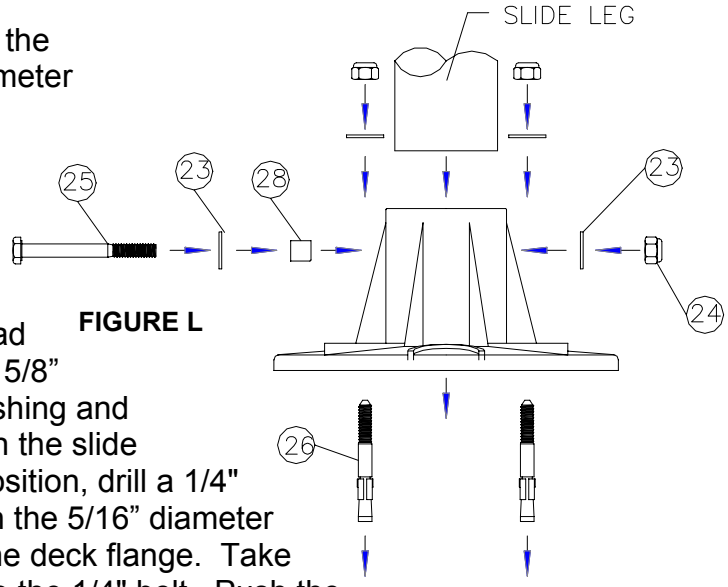


FIGURE L

MANUFACTURER'S PLACEMENT INSTRUCTIONS

1. The critical dimensions for placement of the slide are as shown in FIGURES M and N.

   A. The slide exit runway surface shall not exceed twenty inches (20") above the water surface and not less than eight inches (8") above the deck/coping surface (see Figure M).
   B. The slide shall be positioned so that all water flowing off the runway exit drops into the pool.
   C. The minimum depth of water below the exit lip of the slide shall be three feet (3') and increases to four feet six inches (4'-6") at Pt.A which is a distance of four feet six inches (4'-6") from the exit lip of the slide. (see FIGURE M).
   D. A minimum depth of four feet six inches (4'-6") shall be maintained at a distance of nine feet (9') along the extended centerline of the slide from Pt.A. (see FIGURE M).

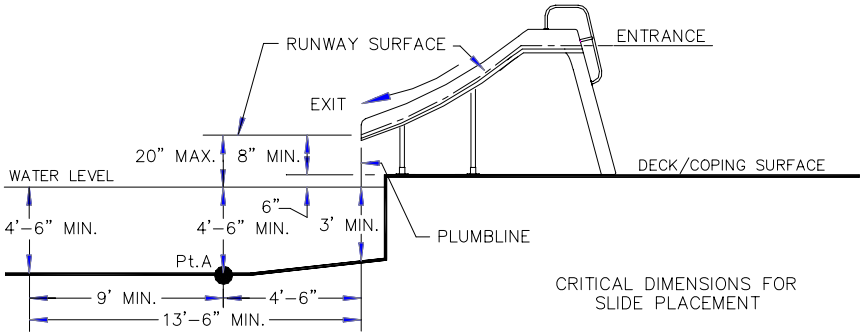


FIGURE M

2. A minimum clearance area in front of the slide shall be maintained away from the coping, another slide, a diving board or a rope and float line. (see FIGURE N)

   A. The minimum clearance distance on either side of the extended centerline of the slide runway shall not be less than three feet six inches (3'-6") at a point no less than two feet six inches (2'-6") from the exit of the slide and extending a distance of thirteen feet six inches (13'-6") in front of the slide. (see FIGURE N)

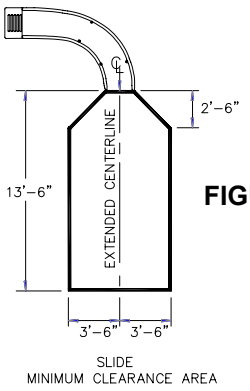


FIGURE N

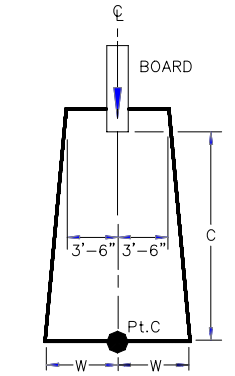
   B. The minimum clearance area in front of a diving board is a minimum distance of three feet six inches (3'-6") on either side of the board's centerline. Pt.C extends a minimum distance of "C" from the tip end of the board. The width distance "W" on either side of Pt.C is given in CHART 1 and shown in FIGURE O.

CHART 1

BOARD MINIMUM CLEARANCE AREA		
TYPE	"C" DIMENSION	"W" DIMENSION
I	14'-6"	5'-0"
II	14'-6"	6'-0"
III	16'-6"	6'-0"
IV	18'-6"	7'-6"
V	21'-0"	7'-6"

See ANSI/NSPI-5 1995 STANDARD FOR RESIDENTIAL INGROUND SWIMMING POOLS Article 5.8 Drawings and Diagrams of Type I-V Diving Equipment Pools.

"C" DIMENSION FOR BOARD = AB + BC
"W" DIMENSION FOR BOARD = WIDTH AT PT.C



BOARD
MINIMUM CLEARANCE AREA

FIGURE O

C. The minimum clearance area of a slide or diving board shall not intersect any coping or rope and float line. (see FIGURE P) The minimum clearance area of a slide or diving board may intersect each other provided that they are not used simultaneously.

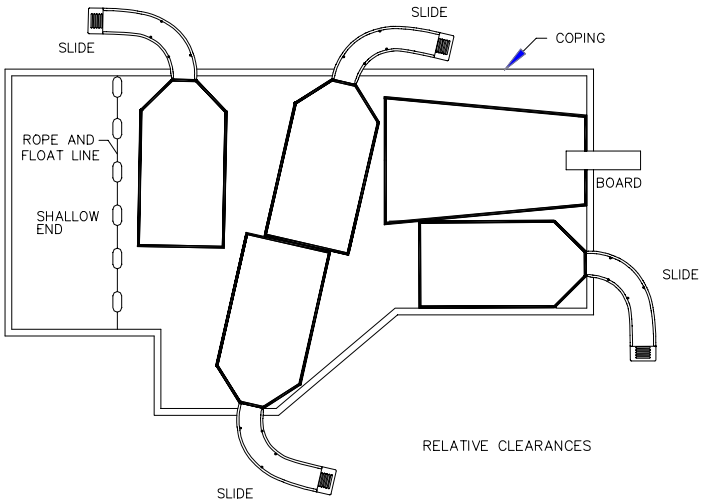


FIGURE P

INSTALLED SLIDES' STRUCTURAL & INSTALLATION CHECKLIST

1. Inspect the runway for visible cracks or tears.
2. Inspect the slide for sharp edges, protrusions, cracks or tears.
3. Inspect all attachment flanges for loose or corroded fasteners.
4. For the Slinger Slide inspect all ladder tread or step-attachment points for evidence of shear, bending yield, or fatigue in the ladder steps, rails, or attachments means. Yield is evidenced by crystallization or fine cracking of the ladder tread and/or surface.
5. Inspect the ladder handrails for rigidity and attachment. (Can they be pulled out of their sockets?)
6. Measure the following dimensions and compare with the Manufacturer's Placement Instructions on pages 14 and 15. Also review the ANSI/NSPI-5 1995 STANDARD FOR RESIDENTIAL INGROUND SWIMMING POOLS.
    - Measure the depth of water in front of the slide exit. (4-1/2' min. depth 4-1/2' from exit end of slide.)
    - Measure the height of the slide runway exit above the water. (20" max.)
    - Measure the distance between the slide centerline and the edge of other pool equipment.
7. Observe the position of the exit of the slide as shown in FIGURES M, N and O on pages 14 and 15.

IMPORTANT

PERSONALLY GIVE TO SLIDE OWNER THE CASCADE™ & SLINGER™ FUNSLIDE™ OWNER'S MANUAL, THE WARRANTY CARD AND ANSWER ALL QUESTIONS.