

# TURBOTWISTER™

## ASSEMBLY AND INSTALLATION INSTRUCTIONS



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## **INTRODUCTION**

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**DANGER – FAILURE TO FOLLOW THESE WARNINGS, INSTRUCTIONS AND THE OWNER'S MANUAL MAY RESULT IN SERIOUS INJURY OR DEATH**

THE TURBOTWISTER™ SLIDE IS DESIGNED AND MANUFACTURED FOR INSTALLATION AND USE ON INGROUND SWIMMING POOLS ONLY. DO NOT INSTALL THE TURBOTWISTER SLIDE ON ABOVE GROUND POOLS, HOUSEBOATS, BOAT DOCKS, FLOATING DOCKS OR PLATFORMS, OR OTHER BODIES OF WATER SUCH AS LAKES, PONDS, RIVERS, ETC. PROPER ASSEMBLY, INSTALLATION, USE, AND SUPERVISION IS ESSENTIAL FOR PROPER OPERATION AND TO REDUCE THE RISK OF SERIOUS INJURY OR DEATH.

CHECK INSIDE ALL BOXES AND PACKAGING MATERIALS FOR PARTS. BEFORE BEGINNING ASSEMBLY, READ ALL INSTRUCTIONS AND IDENTIFY PARTS USING THE FIGURES AND PARTS LISTED IN THIS DOCUMENT. IT IS CRITICAL THAT ALL PARTS BE CAREFULLY INSPECTED BY THE INSTALLER PRIOR TO INSTALLATION TO ENSURE THAT NO DAMAGE OCCURRED IN TRANSIT AND THAT A DAMAGED PART IS NOT USED. PROPER INSTALLATION CANNOT BE OVERSTRESSED, AS AN IMPROPER INSTALLATION VOIDS S.R. SMITH'S WARRANTY AND MAY AFFECT THE SAFETY OF THE USER.

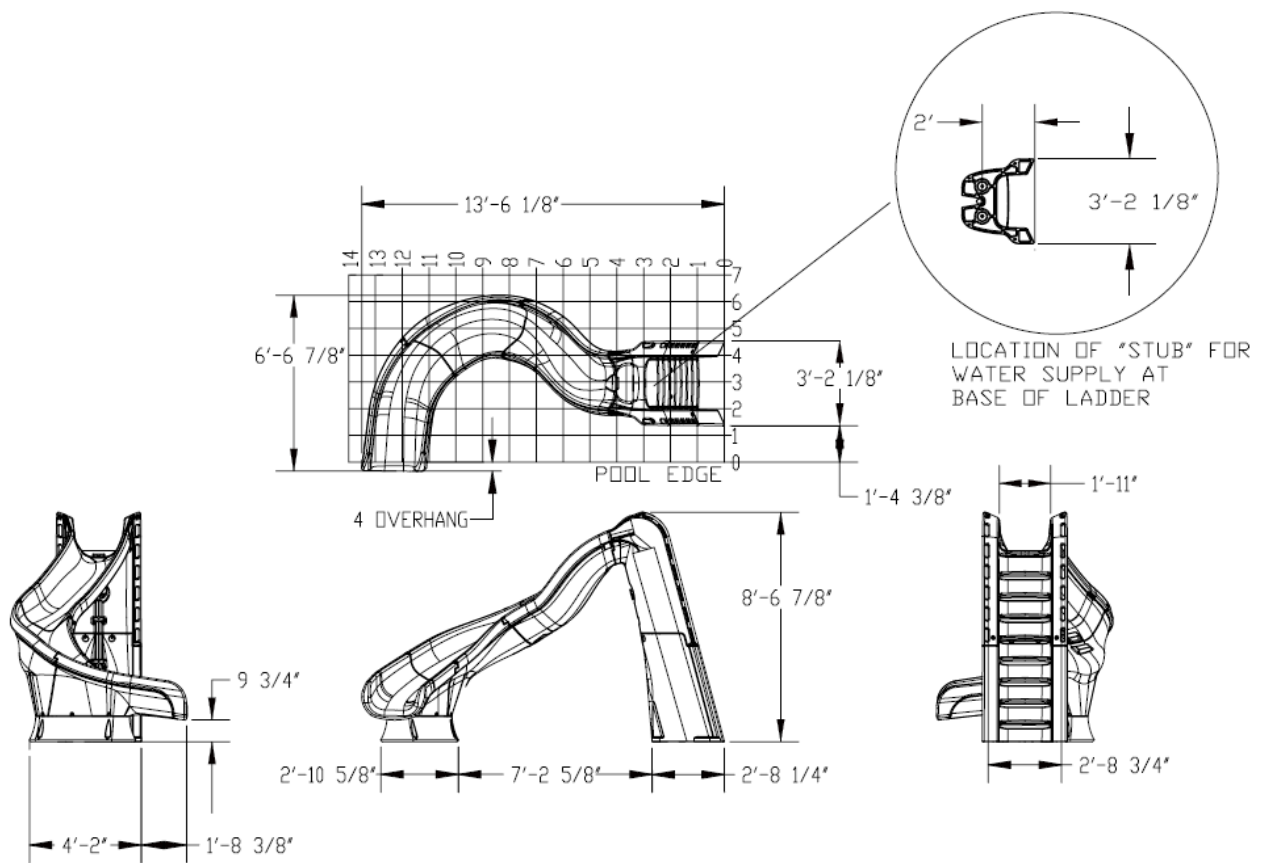
INSTALLER MUST GIVE TO SLIDE OWNER: TURBOTWISTER SLIDE INSTALLATION AND OWNER'S MANUAL, THE WARRANTY CARD, AND ANSWER ALL QUESTIONS REGARDING SAFE AND PROPER USE AND SLIDE MAINTENANCE.

FOR COMPLETE SLIDE SAFETY INFORMATION REFER TO THE OWNER'S MANUAL.

## **INSTALLED TURBOTWISTER STRUCTURAL & INSTALLATION CHECKLIST**

### **(INSTALLER TO REVIEW WITH SLIDE OWNER UPON COMPLETION OF SLIDE INSTALLATION)**

1. INSPECT THE RUNWAY FOR VISIBLE CRACKS OR TEARS.
2. INSPECT THE SLIDE FOR SHARP EDGES, PROTRUSIONS, CRACKS OR TEARS.
3. INSPECT ALL FASTENERS TO MAKE SURE THEY ARE FULLY TIGHTENED.
4. INSPECT THE LADDER FOR RIGIDITY AND ATTACHMENT.
5. MEASURE THE FOLLOWING DIMENSIONS AND COMPARE WITH THE MANUFACTURER'S PLACEMENT INSTRUCTIONS ON PAGES 13 AND 14.
  - MEASURE THE DEPTH OF WATER IN FRONT OF THE SLIDE EXIT. (4'-6" (1371 mm) MIN. DEPTH AT A DISTANCE OF 4'-6" (1371 mm) FROM EXIT END OF SLIDE.)
  - MEASURE THE HEIGHT OF THE SLIDE RUNWAY EXIT ABOVE THE WATER. (20" (508 mm) MAX.)
  - MEASURE THE DISTANCE BETWEEN THE SLIDE CENTERLINE AND THE EDGE OF OTHER POOL EQUIPMENT.
6. OBSERVE THE POSITION OF THE EXIT OF THE SLIDE AS SHOWN IN FIGURES 8, 9 AND 11 ON PAGES 13 AND 14.



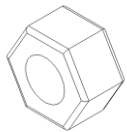
**FIGURE 1**

Left curve shown for illustration -  
Right curve is a mirror image of the left.

For SI: 1 degree = 0.017 rad, 1 inch = 25.4 mm, 1 foot = 304.8 mm

# **TURBOTWISTER™ PARTS LIST**

ITEM #	PART #	DESCRIPTION	QTY.
1	5-139	3/8" Hex Nut	16 ea.
2	5-151	3/8" Lock Washer	16 ea.
3	05-14-115	1/2" Lock Washer	8 ea.
4	5-145	3/8" Flat Washer	37 ea.
5	5-235	3/8" x 2-1/4" Carriage Bolt	2 ea.
6	5-236	3/8" x 2-1/4" Button Head Cap Screw	2 ea.
7	5-249	3/8" x 3-1/4" Button Head Cap Screw	4 ea.
8	5-239	3/8" x 2-1/2" Stud	4 ea.
9	5-240	3/8" x 3-1/2" Lag Screw	9 ea.
10	5-237	3/8" x 5" Button Head Cap Screw	4 ea.
11	5-238	3/8" x 6" Hex Head Cap Screw	4 ea.
12	5-242	#14" x 1" Pan Head Tapping Screw	6 ea.
13	5-241	1/2" x 5" Anchor Stud	8 ea.
14	05-787	2" PVC Pipe Strap	2 ea.
15	05-788	1-1/2" Pipe Clamp	2 ea.
16	05-789-1	1.5" PVC Flex Hose, 6' Length	1 ea.
17	05-789-2	1.5" PVC Flex Hose, 15" Length	1 ea.
18	05-777	1.5" Ball Valve	1 ea.
19	05-781	1-1/2" Coupling	1 ea.
20	05-780	1-1/2" x 3/4" Reducer	1 ea.
21	05-779	Garden Hose Adapter	1 ea.
22	8-532	.5" High X .5" Wide X 32" Long Rubber Gasket	1 ea.
23	8-531	.375" High X .5" Wide X 33" Long Rubber Gasket	1 ea.



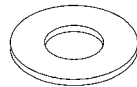
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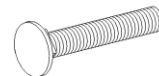
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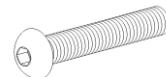
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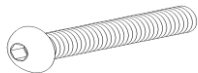
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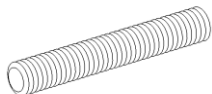
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(6)



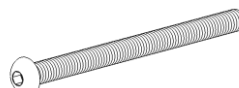
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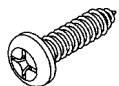
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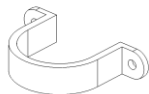
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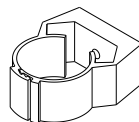
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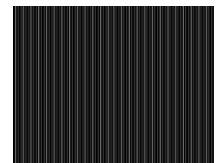
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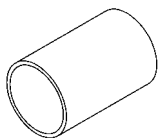
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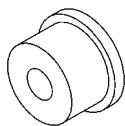
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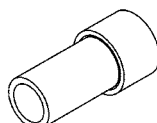
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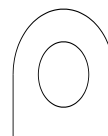
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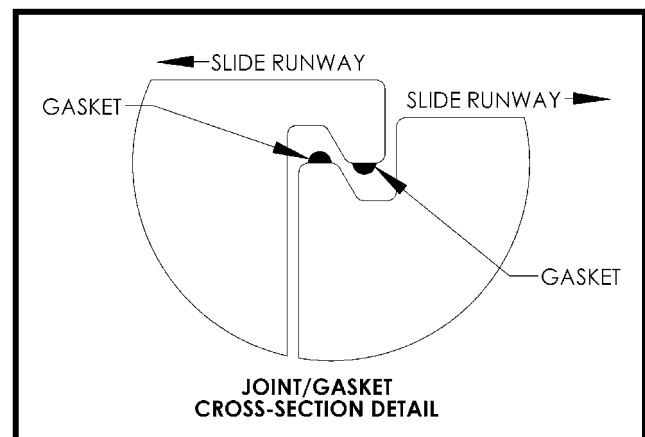
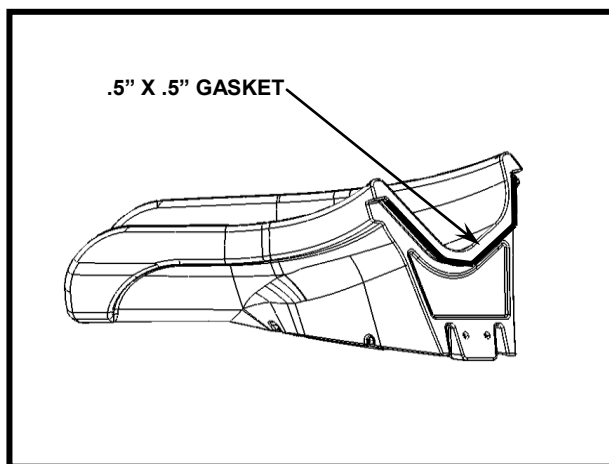
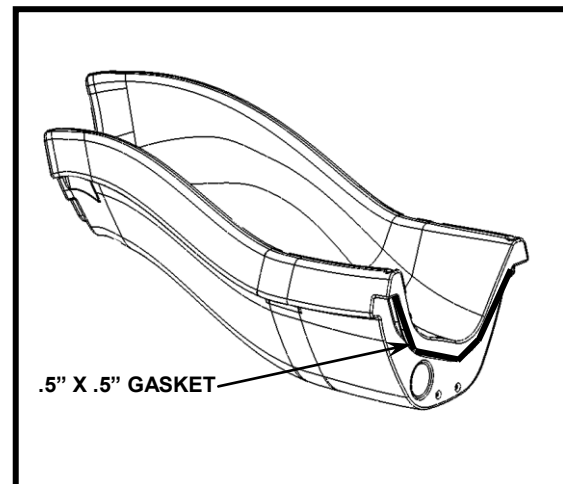
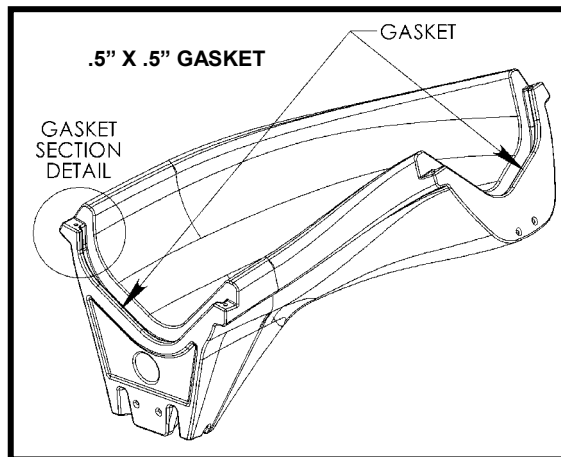
## ASSEMBLY INSTRUCTIONS

### Tools Required:

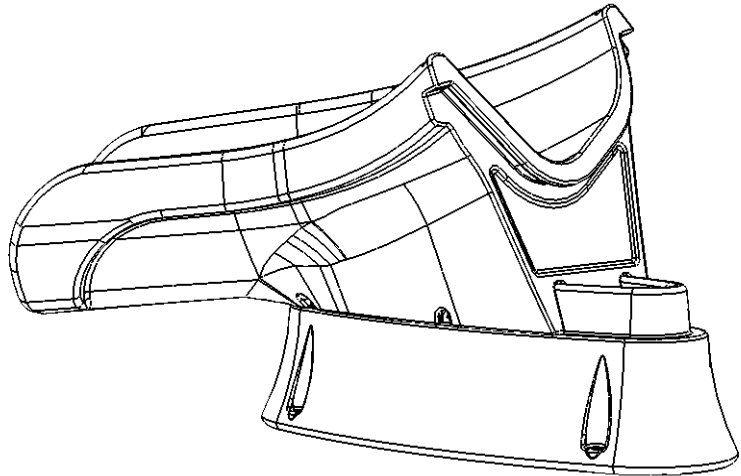
1. Ratchet handle
2. 9/16" deep socket
3. 9/16" wrench
4. 3/4" socket or wrench
5. 7/32" allen wrench
6. Phillips head screwdriver
7. 1/2" (12.7 mm) concrete drill bit
8. 1/4" (6.3 mm) drill bit
9. Power drill
10. PVC pipe primer & glue
11. Anti-seize
12. Saw to cut PVC pipe
13. Knife
14. Level

### Gasket Installation:

- Most of the gasket material has been installed at the factory, however additional gasket has been provided in case any gasket has fallen off during shipping. If gasket installation is required, follow the instructions below. The gasket on the face of the ladder is not installed in the factory, but detailed instructions are provided in step 7 on page 7.
- Apply gasket in the required locations as shown in the figures below.
- Place gasket along the section to determine the length needed.
- Cut gasket to appropriate length.
- Remove backing and adhere gasket to slide.
- All gaskets below are applied as shown in the gasket section detail (see step 7 for further details on installing the ladder gasket, PN 8-531)



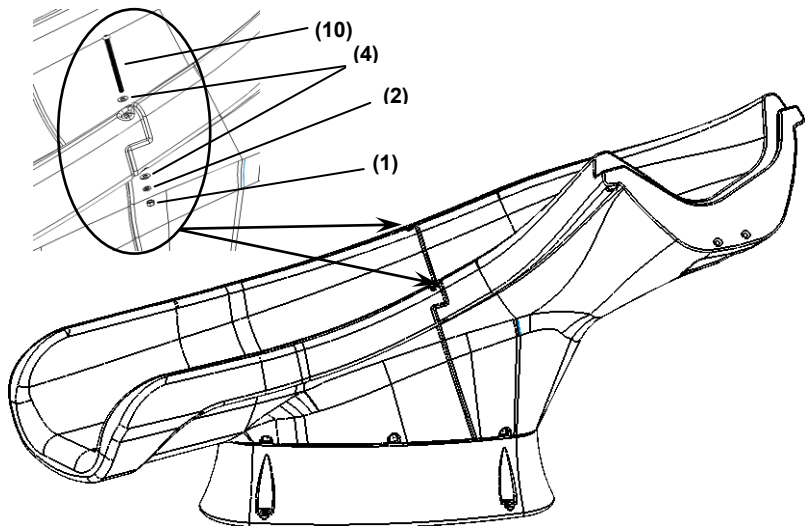
1. Place the pedestal on the ground and set the exit slide section on top.



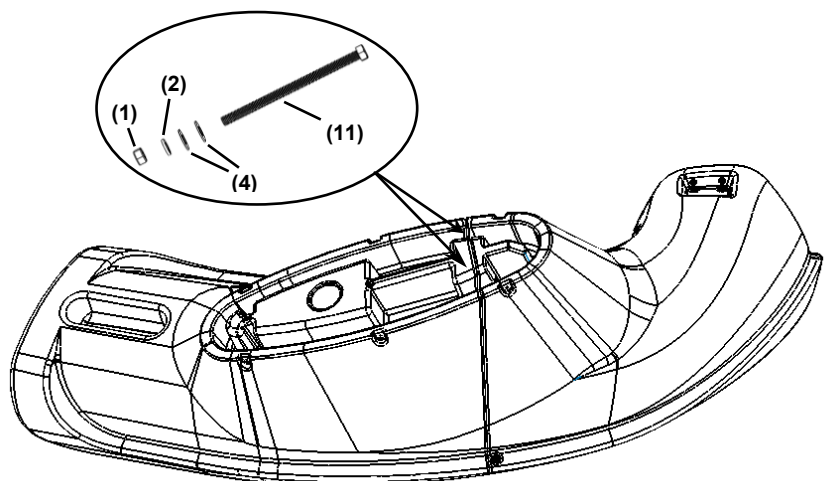
2. Attach the exit slide section to the middle slide section using the hardware shown. If necessary lift up on the exit end to keep the joint tight while fastening.

**Note:** *Ensure gasket material at the joint is intact before assembling.*

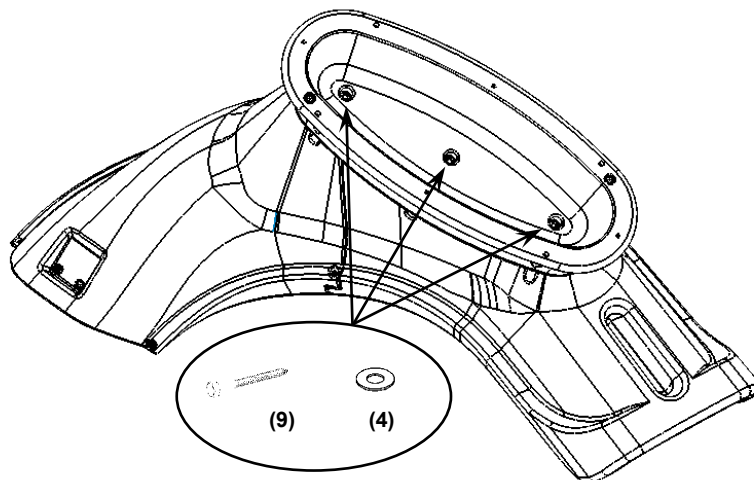
**NOTE:** When assembling the slide, apply a thin even coating of anti-seize to all stainless steel fasteners. Anti-Seize helps aid in assembly, prevents galling, and improves corrosion resistance. Anti-Seize can be purchased at most auto parts stores.



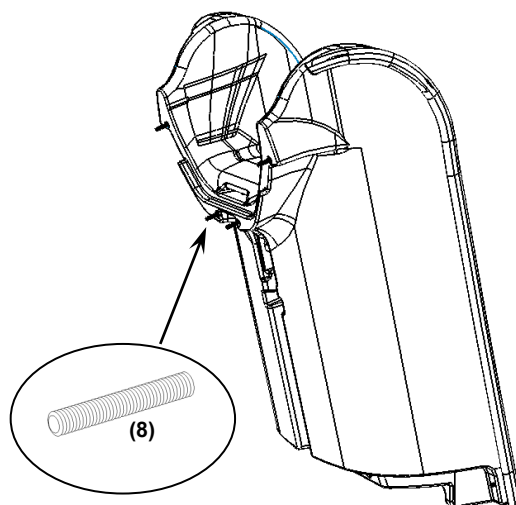
3. Remove the assembled exit and middle slide sections from the pedestal. Turn over and fasten from the underside as shown.



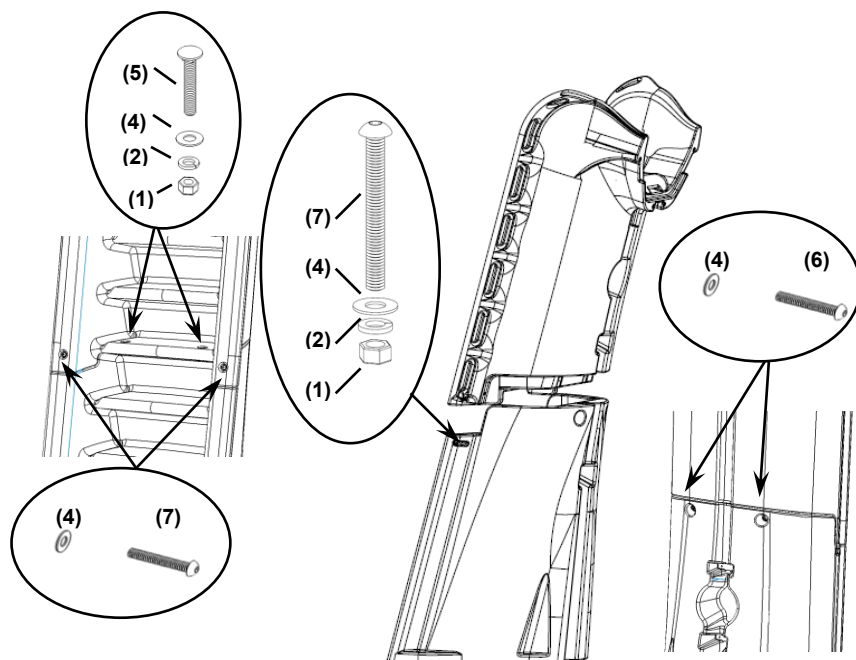
4. Attach the pedestal to the middle and exit slide sections as shown in (3) locations.



5. Install the 3/8" studs into the threaded inserts in the top of the ladder as shown in (4) locations.

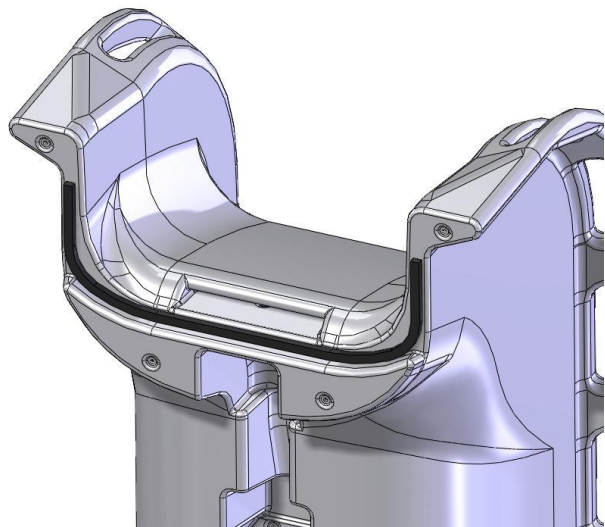
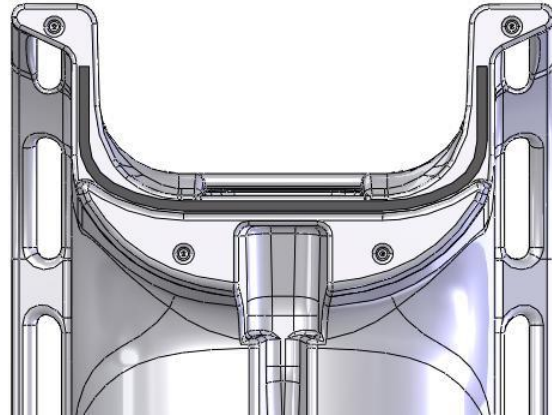


6. Assemble the top and bottom ladder sections as shown. Install hardware in the appropriate locations but do not fully tighten. This will help aid in alignment. Once all hardware is in place, fully tighten.



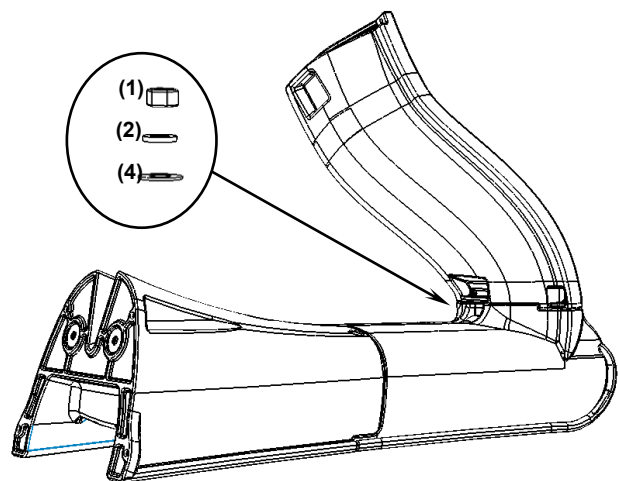


7. Before getting started, be sure that the joint surfaces of the top runway and ladder sections are clean and dry. Unroll the gasket material and hold so that that length of the gasket is centered on the center of the ladder joint. With the exposed adhesive side of the gasket facing the ladder joint surface, apply the gasket starting at the center of the part, working outward to the sides. Be sure that the bottom edge of the gasket material is held against the shelf on the ladder part during installation, see reference images below. Do not make too tight of a bend radius with the gasket when transitioning the gasket up the vertical edges of the joint. The transition radius should be as large as possible. Making too tight of a bend radius will cause the gasket to kink and possibly leak. The gasket should be centered on the available space in the vertical area of the joint, see reference images below. Once the gasket is in place, firmly press down on the gasket in all locations to ensure that the gasket has completely adhered to the ladder joint surface. Remove the paper backing on the gasket to expose the adhesive. Use caution not to remove the adhesive strip from the gasket when removing the paper backing.



8. Lay the ladder flat and attach the top slide section as shown. Use the appropriate hardware in 4 places. **Note: Use caution not to scratch the ladder during this step!**

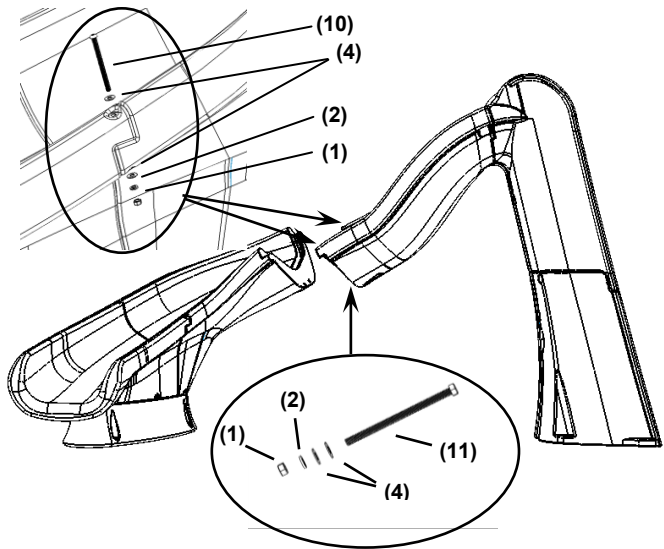
It is strongly recommended that two people are used for this step to ensure that the top runway section is aligned properly with the ladder section. It will be difficult to separate the parts once the gasket comes into contact with the top runway section, so it is important that the two parts are aligned correctly the first time.



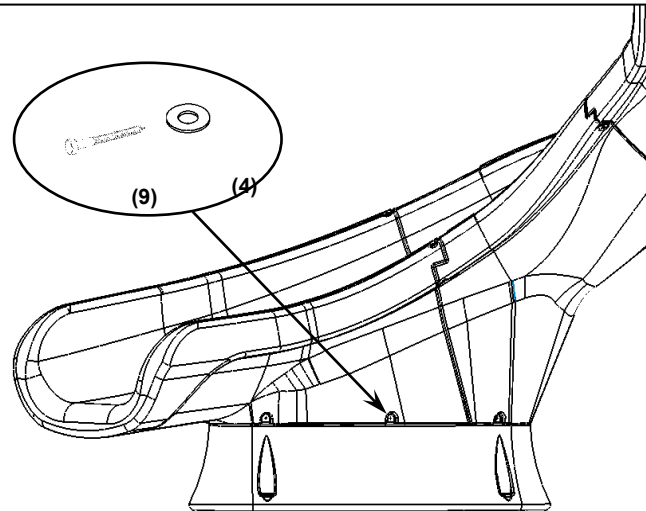


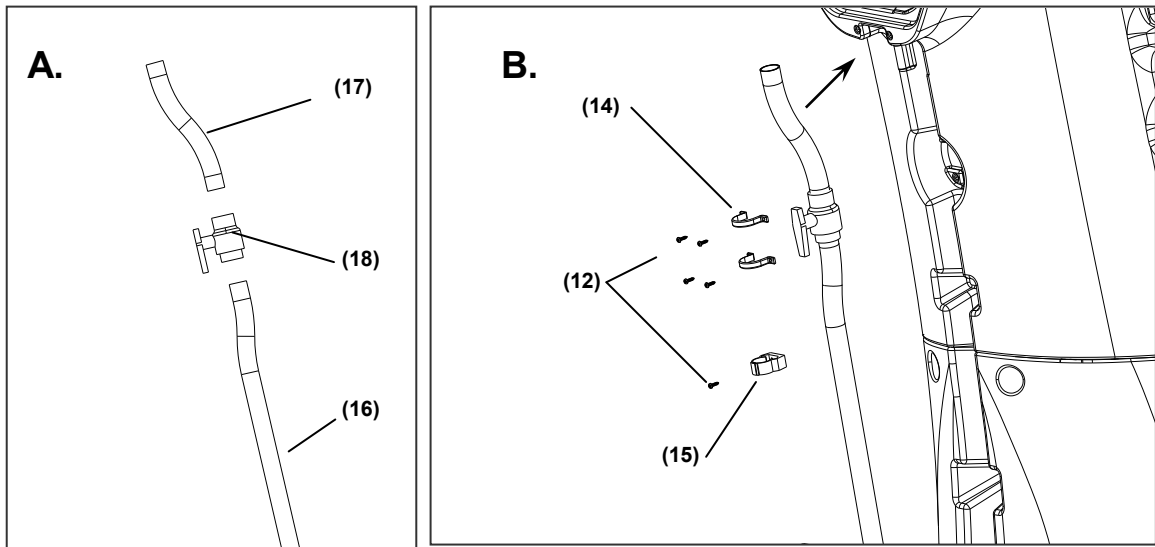
9. Stand the ladder upright and assemble the slide components as shown. Fasten from each side of the slide runway first, then from the underside.

**Note:** *Ensure gasket material at the joint is intact before assembling.*



10. Attach the base unit as shown in (6) locations. Mark and drill a  $\frac{1}{4}$ " (6.3 mm) pilot hole in the center of each recess before fastening with the lag screws.



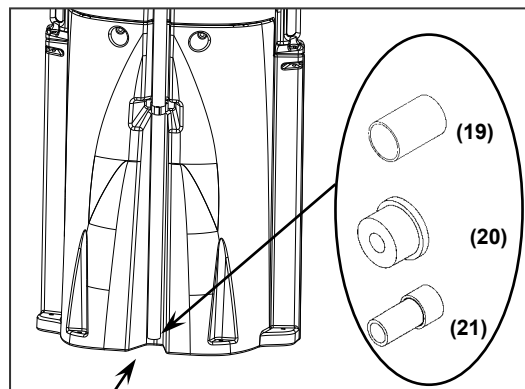


**11. Assembly of Water Supply Plumbing Parts:**

- Assemble parts as shown in Step “A” without glue. Place plumbing assembly in slide ladder to check fit before proceeding.
- Mark alignment of parts with a pencil before disassembling. This will aid in reassembling parts when gluing.
- Use PVC primer and glue to assemble plumbing parts as shown in Step “A” above.
- Glue assembled water supply pipe to the 1.5” PVC fitting installed in the ladder as shown in Step “B”.
- Secure the hose assembly in the ladder in (4) locations with the hardware as shown in Step “B”.

## **PLUMBING INSTRUCTIONS**

1. The TurboTwister is designed for a water supply line of 1-1/2" pipe. Plumb from pool return line with a 1-1/2" PVC pipe "stubbed up" at the deck positioned at the base of the ladder. Refer to FIGURE 1 on page 2. FIGURE 1 is for reference only. Assembled slide should be placed in its correct location and the "stub up" location marked and installed before mounting the slide to the deck. "Stub up" should be dark grey PVC to match the plumbing assembly of the slide. **Note: "Stub up" should extend above the deck 18" (457 mm) in height. It can be cut to proper length further in the installation process.**
2. If a garden hose is to be used, a garden hose adapter fitting is included with the slide. Assemble the pieces as shown and attach to the end of the PVC plumbing assembly at the base of the ladder.
3. Proceed to the following section for **ON-DECK MOUNTING**. After the slide has been mounted to the deck, attach the "stub up" as necessary to the plumbing assembly installed in the ladder.
4. The TurboTwister can handle up to 25 gallons per minute (95L/min). Water flow is to be regulated using the ball valve near the base of the ladder.



"Stub up" location

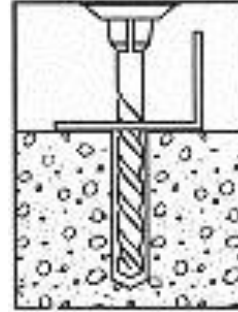
'or'

Garden Hose  
Adapter  
Fittings

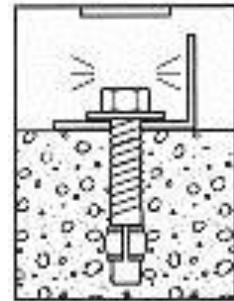
## **ON-DECK MOUNTING INSTRUCTIONS**

1. Place the assembled slide on the deck relative to the pool wall. Ensure that the exit flume clears any coping. Slide may be angled slightly providing all dimensions are maintained as noted in the **Manufacturer's Placement Instructions** noted in the following section.
2. With the slide in its proper location, center punch or otherwise mark through the (8) mounting holes at the bottom of the ladder and pedestal so that a visible mark is apparent on the concrete.
3. Move the assembled slide aside to facilitate drilling of the anchoring holes.

4. Using a power drill and a 1/2" (13 mm) concrete drill bit, drill the holes to a depth of 4" (102 mm). Use tape or a marking on the drill bit to ensure that the hole for the anchor is drilled to the required depth. Maintain drill hole straight and perpendicular for proper holding strength of anchor stud.

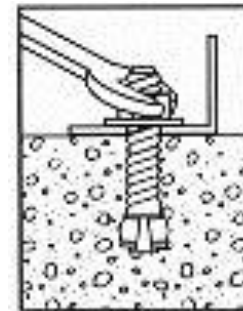


5. Clear the holes of all debris. Assemble anchor with nut and washer so that the top of the nut is flush with the top of the anchor. Move the slide over the holes and insert the anchors. Drive anchor through the slide mounting holes so that nut and washer are flush with the surface material.



6. Ensure the slide ladder is plumb by placing a level on a ladder tread. If necessary, shims can be provided by S.R. Smith to place beneath the base of the ladder to ensure it is plumb due to varying deck slopes. Please call 1. 800.824.4387 if shims are needed.

7. Expand anchor by tightening nut 3 to 5 turns. Once anchor is set remove nut and install a lock washer, item # (3), and retighten nut to a torque of 25 ft.-lbs (33.9 N-m).

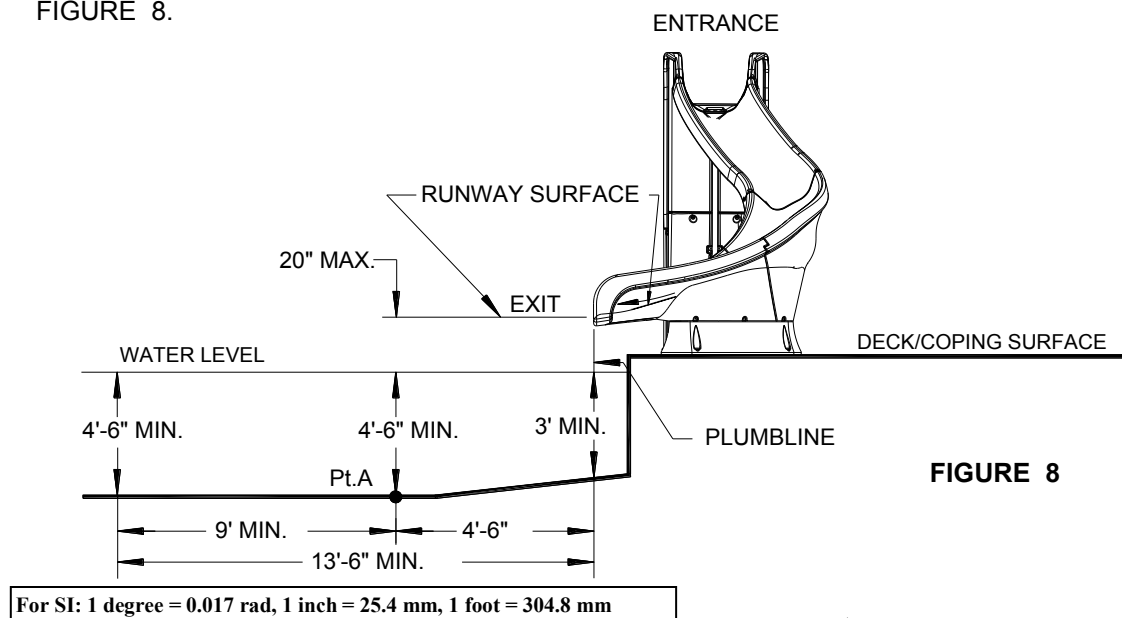


# MANUFACTURER'S PLACEMENT INSTRUCTIONS

**PROPER ASSEMBLY, INSTALLATION, USE, AND SUPERVISION IS ESSENTIAL FOR PROPER OPERATION AND TO REDUCE THE RISK OF SERIOUS INJURY OR DEATH.**

1. The critical dimensions for placement of the TURBOTWISTER™ are as shown in FIGURE 'S 8 and 9.

- A. The slide exit runway surface shall not exceed twenty inches (20") (508 mm) above the water surface as shown in FIGURE 8.
- B. The slide shall be positioned so that all water flowing off the runway exit drops into the pool. The recommended overhang is 4 inches (102 mm).
- C. The minimum depth of water below the exit lip of the slide shall be three feet (3') (914mm) and increase to four feet six inches (4'-6") (1371 mm) at Pt. A, which is a distance of four feet six inches (4'-6") (1371 mm) from the exit lip of the slide as shown in FIGURE 8.
- D. A minimum depth of four feet six inches (4'-6") (1371 mm) shall be maintained at a distance of nine feet (9') (2743 mm) along the extended centerline of the slide from Pt. A. as shown in FIGURE 8.

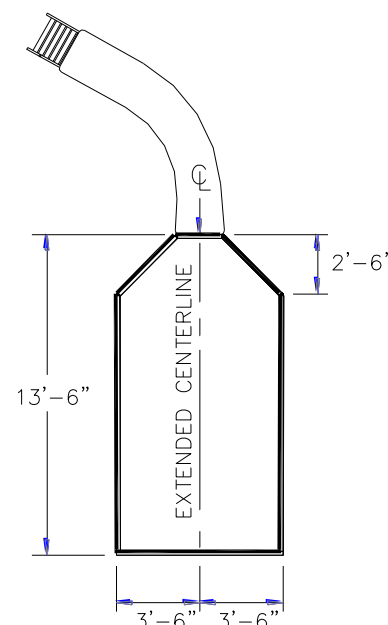


**FIGURE 8**

2. A minimum clearance area in front of the slide shall be maintained at all times as follows:

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") (1067 mm) at a point no less than two feet six inches (2'-6") (762 mm) from the exit lip of the slide and extending a distance of thirteen feet six inches (13'-6") (4115 mm) in front of the slide as shown in FIGURE 9.

For SI: 1 degree = 0.017 rad, 1 inch = 25.4 mm, 1 foot = 304.8 mm



**FIGURE 9**

SLIDE  
MINIMUM CLEARANCE AREA

### 3. SLIDE PLACEMENT INSTRUCTIONS FOR INSTALLATIONS ON POOLS WITH OTHER SLIDES AND/OR DIVING BOARDS

- A. The minimum clearance area in front of a properly installed diving board on an inground swimming pool is a minimum distance of three feet six inches (3'-6") (1067 mm) on either side of the board's centerline as shown in FIGURE 10. Pt. C extends a minimum distance of "C" from the tip end of the board as shown in FIGURE 10. The width distance "W" on either side of Pt. C is given in CHART 1 and shown in FIGURE 10.

**CHART 1**

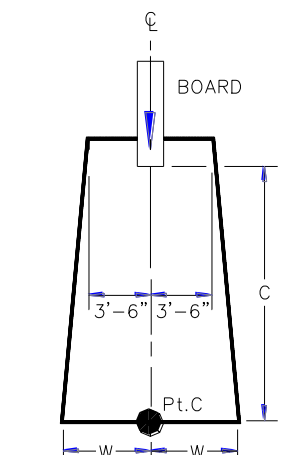
<b>BOARD MINIMUM CLEARANCE AREA</b>		
<b>POOL TYPE</b>	<b>"C" DIMENSION</b>	<b>"W" DIMENSION</b>
I	14'-6"	5'-0"
II	14'-6"	6'-0"
III	16'-6"	6'-0"
IV	18'-6"	7'-6"
V	21'-0"	7'-6"

For SI: 1 degree = 0.017 rad, 1 inch = 25.4 mm, 1 foot = 304.8 mm

See Article 5 contained in ANSI/APSP/ICC-5 2011 STANDARD FOR RESIDENTIAL INGROUND SWIMMING POOLS and refer to FIGURE 3 and Table 1 for Minimum Water Envelope Dimensions AB, BC and Width at Point C.

"C" DIMENSION FOR BOARD = AB + BC

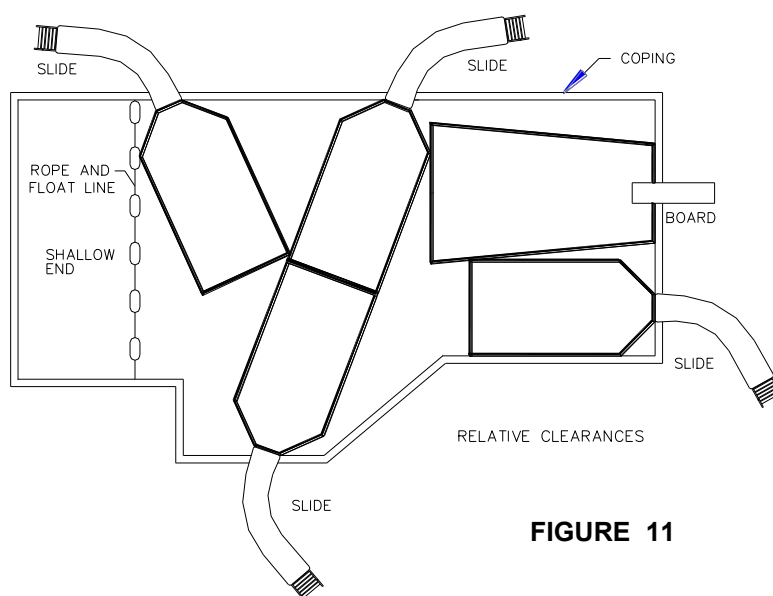
"W" DIMENSION FOR BOARD = WIDTH AT PT.C



BOARD  
MINIMUM CLEARANCE AREA

**FIGURE 10**

- B. The minimum clearance area of a slide or diving board shall not intersect any coping or rope and float line as shown in FIGURE 11. The minimum clearance area of a slide or diving board may intersect each other provided that they are not used simultaneously.



**FIGURE 11**