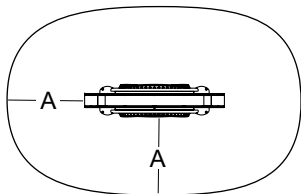


Assembly View (representative structure)



Equipment Use Zone  
A - (ASTM): 72 in. (1830 mm)  
(CSA): 1800 mm  
(EN): 1540 mm

## Installation Instructions

### Playworld Systems<sup>®</sup>




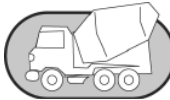



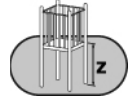
#### Models XX0081 and XX0081S

#### Revo

#### In-Ground and Surface Mount

### Installation Preparation

Recommended Crew: ..... Four (4) adults  
 Installation Time (in-ground):..... 2 installation-hours  
 Installation Time (surface mount): ..... 1 installation-hour  
 Concrete Required:(in-ground models).... 0.26 cubic yard (0,20 cubic meters)  
 Use Zone:..... Refer to the information below  
 User Group Age (years): ..... ASTM/CSA: 5-12, EN: 6-14

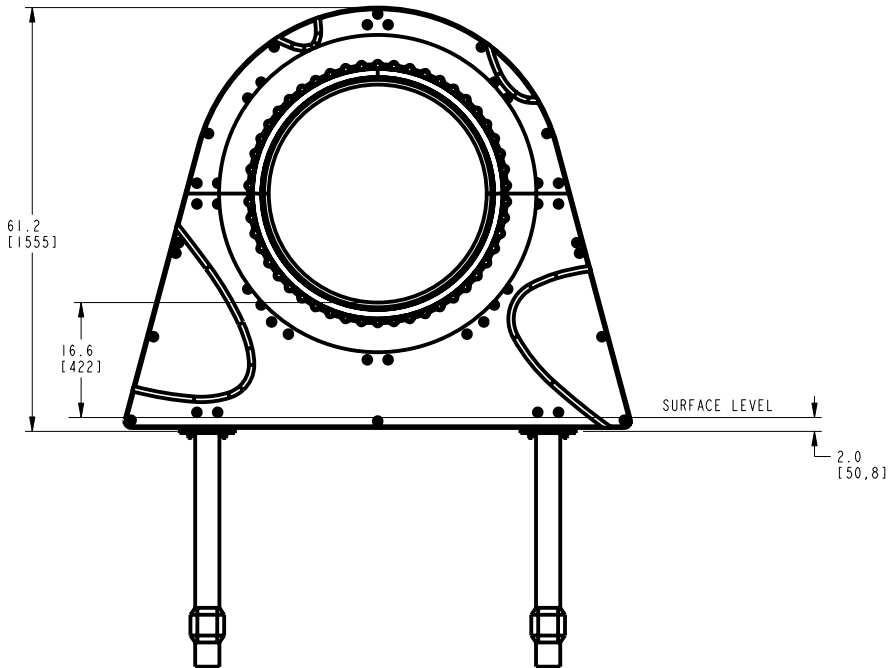
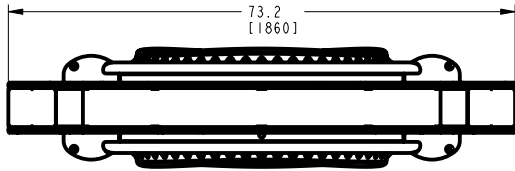
ICON KEY			
	Fully Tighten Hardware		Add 1 Drop of Thread Locking Adhesive
	Do <b>Not</b> Fully Tighten Hardware		Pour Concrete
	Drill		Dig Footing Holes
	Hammer		Critical Fall Height

Refer to the Elevation View for the specific Critical Fall Height for the component.

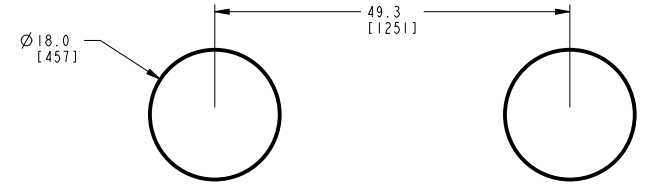
# Installation Instructions

KEY	
Position	Unit of Measurement
Top #	Inches
Bottom #	[Millimeters]

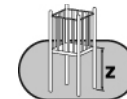
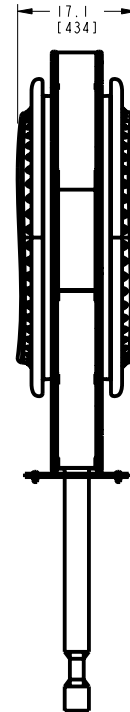
Top View



Elevation Views  
ZZXX0081



Footings Diagram

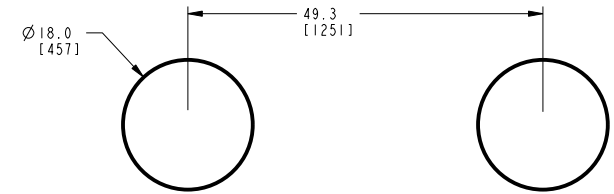
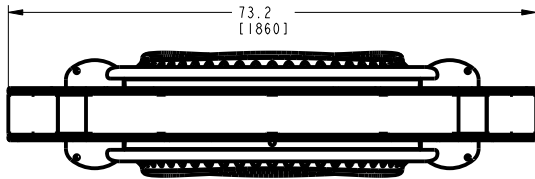


EN: 1555 mm

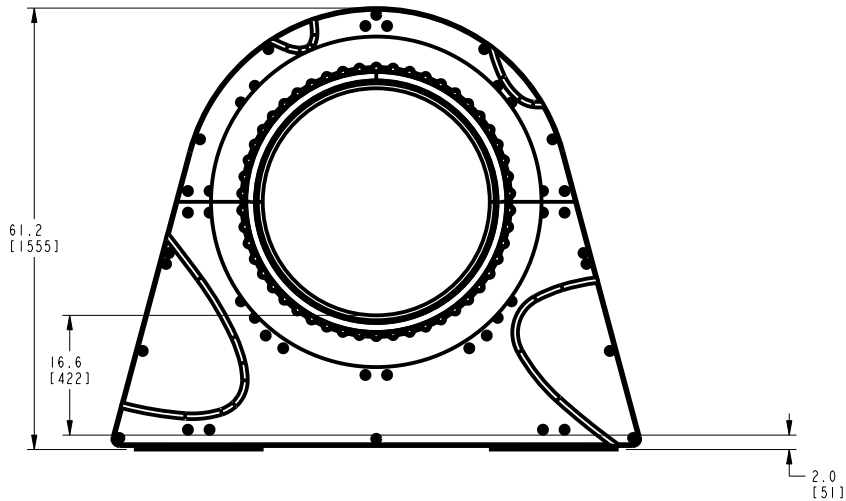
# Installation Instructions

KEY	
Position	Unit of Measurement
Top #	Inches
Bottom #	[Millimeters]

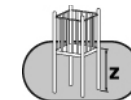
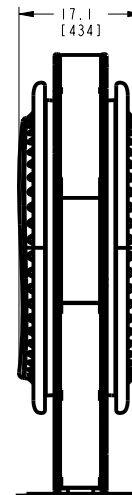
Top View



Footring Diagram



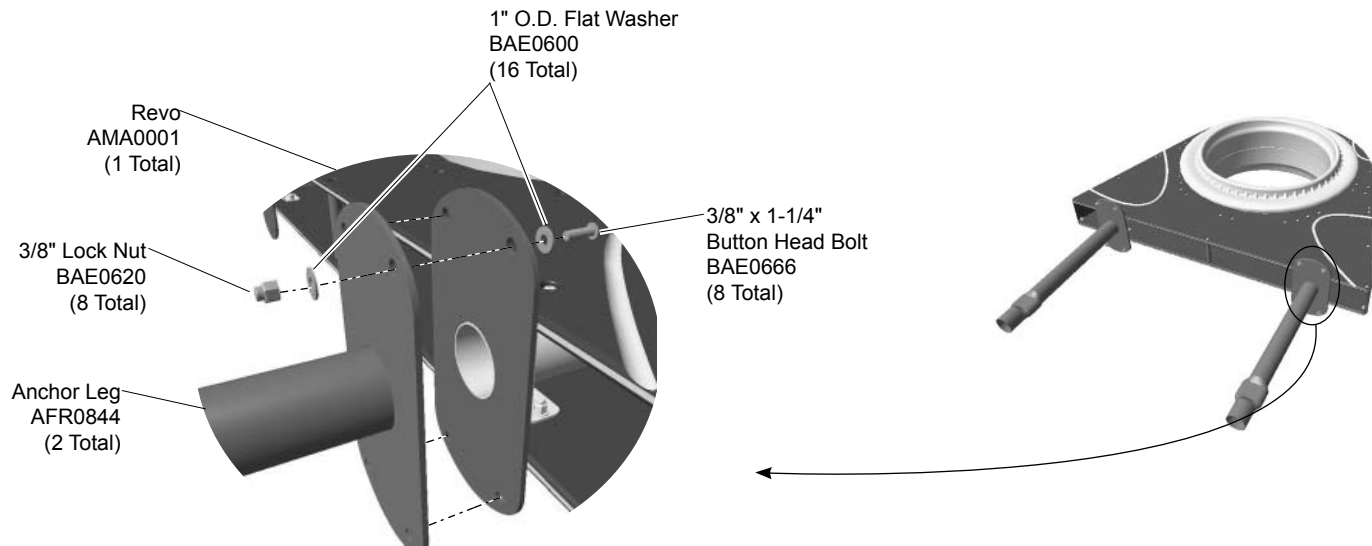
Elevation Views  
ZZXX0081S



EN: 1555 mm

# Installation Instructions

Follow the details in alphabetical order. For clarification, each detail references the step description. The step descriptions start on page 5.



## Detail A Step 4



Attach the anchor legs to Revo  
(in-ground model only)

# Installation Instructions

---

**Notes Before You Begin:** Do not over tighten bolts during assembly, only snug tighten them until assembly is complete.

**Carefully read and understand these installation instructions before you begin.**

**Step 1:** Before attempting to assemble your equipment, please review all installation information carefully. Should you experience any difficulty during the installation process, please call us at the phone number shown on the last page of these instructions.

**Step 2:** Separate and identify all components and hardware.

**Step 3:** Excavate / prepare footings as shown in the **Support Post Footing Detail / Surface Mount Footing Detail** in the Annex at the end of this document.

**Step 4:** (*In-ground model only*) Attach the anchor legs to the Revo. See **Detail A**. Position the legs against the mounting plates on the Revo and attach as shown. Fully tighten the connections.

## **Final Details.**

**Step 5:** Place the Revo in or on it's footing. Plumb and level the component. Fully tighten **all** fasteners according to tightening torque specifications.

## **Torque Specifications:**

*Bolts and nuts* - Snug tighten and then tighten an additional one half turn.

**In-ground:** Block and brace for concrete. Pour concrete after all equipment has been assembled. Allow 72 hours for concrete to completely cure.

**Surface Mount:** Bolt down all surface mount supports in accordance with specifications provided by your registered structural engineer.

**Important Note:** Surface mount hardware is not supplied. Customer is responsible for concrete base and for providing surface mount hardware as specified by a registered structural engineer for each specific project application.

**XX0081 - REVO**

PART NO.	DESCRIPTION	QTY.
AFR0844	LEG - 34.00" x 15.00" x 8.00"	2
AMA0001	REVO	1
BAE0600	WASHER - 1" O.D. FLAT	16
BAE0620	NUT - 3/8"-16 LOCK w/NYLON CAP	8
BAE0666	BOLT - 3/8"-16 x 1-1/4" BUTTON HEAD - SS	8
BAE0902	TOOL - 7/32" SHORT HEX KEY WRENCH	1

**XX0081S - REVO SURFACE MOUNT**

PART NO.	DESCRIPTION	QTY.
AMA0001	REVO	1



**PLAYWORLD**  
The world needs play.™

For Customer Service, Call  
**800-233-8404** or  
**570-522-9800** OUTSIDE U.S.  
 1000 Buffalo Road • Lewisburg, PA 17837  
[www.playworldsystems.com](http://www.playworldsystems.com)



#### Fasteners

- Inspect for loose fasteners.  
Tightening torque specifications are:  
Bolts and Nuts: Snug tighten and tighten an additional one-half turn.
- If during the maintenance process a bolt needs to be removed from a part or parts, it will be necessary to apply a drop of liquid thread lock / loctite to the bolt before reinstallation.
- Inspect for missing, worn or broken fasteners. If any missing, worn or broken fasteners are found, refer to the installation instructions for proper replacement fastener. If any damage is detected, barricade equipment to prevent use until repair is completed. Contact your sales representative immediately for a replacement part.

#### Plastic Parts

- Inspect all plastic surfaces for sharp points, cracks or jagged edges. If any damage is detected and is determined to be unsafe, barricade equipment to prevent use until repair is completed. Minor burrs or sharp edges may be removed by using a sharp utility knife or block plane to remove sharp burr.

#### Finish

- Inspect metal parts for finish damage.  
To repair painted surfaces, sand damaged area with sandpaper and wipe clean. Mask area and paint with primer and allow to dry. Paint primed area with color-matching paint and allow to dry. Recoat area with color-matching paint if required. Drying time is approximately 8 hours between coats.

#### Footings

- Inspect component to be solid in, or on, the footing and secure. If any damage is detected, barricade equipment to prevent use until repair is completed.

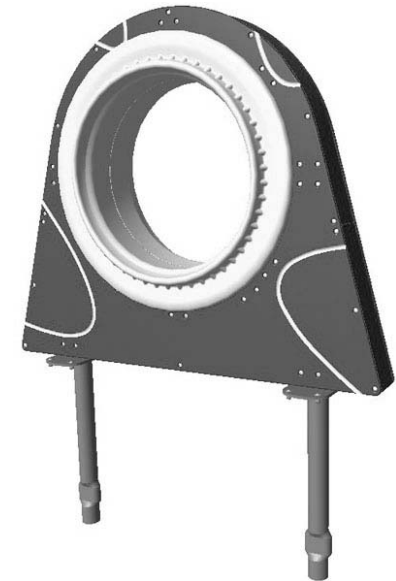
#### Surfacing

- Refer to the specific surfacing maintenance detail sheet for additional information.

#### Replacement Parts

- Refer to your installation instructions to obtain replacement part number.
- Contact your sales representative or call Playworld Systems' Customer Service for a replacement part.

## Equipment Maintenance Playworld Systems® Models XX0081 and XX0081S Revo In-Ground and Surface Mount



# Inspection Form

## Preventive Maintenance

**... for Safety's Sake!**

- Be sure that you are using a copy of this Inspection Form and not your original.
- Use the Inspection Codes listed below and record condition of equipment at time of examination on the Inspection Checklist.
- Document any item from the Inspection Checklist that will require maintenance along with any corrective action on the Maintenance Schedule.
- Be sure to include appropriate dates and signatures on each section to properly document maintenance procedure.

### INSPECTION CHECKLIST

	Frequency	Inspection Code	Date	Date Repairs Completed
Inspect plastic parts for damage.	Medium			
Inspect for loose, missing, worn, or broken fasteners.	High			
Inspect metal parts for structural and finish damage.	Medium			
Inspect surfacing to insure proper depth and distribution.	High			
Inspect footing to insure support is secure and footing is not damaged.	Low			

<b>Inspection Codes</b>
<b>P</b> = Pass <b>F</b> = Fail
<b>NA</b> = Not Applicable

Inspector: Name (Please Print) \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_ / \_\_\_ / \_\_\_

### MAINTENANCE SCHEDULE

Item in Question	Description of Problem	Corrective Action	Date

Repairer: Name (Please Print) \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_ / \_\_\_ / \_\_\_





**Important ! Please Read Completely Before Beginning Installation.** According to a report published by the U. S. Consumer Product Safety Commission (C.P.S.C.) 72% of all playground injuries result from accidental falls. With this in mind, this equipment is designed to fill the need for safe yet challenging play. In conjunction with design efforts to reduce the possibilities of injuries, this equipment **must** be installed "Step by Step" per our installation instructions. As a new owner you are responsible for the correct installation, safe use, and maintenance of your equipment.

## Installation Guidelines

- Identify all parts and thoroughly read the assembly instructions before beginning construction.
- Refer to your playground equipment plan and footing diagram to assure the equipment purchased will fit into your selected site area. The use and no-encroachment zones around the play equipment shall be obstacle-free areas designated for unrestricted circulation.
- **ASTM compliance:** The overall use zone measurements for stationary play equipment should extend a minimum of 72 inches (1829 mm) from its perimeter; dimensions and configuration of the use zone are dependent upon the types of included play equipment. The use zone of stationary play equipment may be overlapped by the use zone of adjacent stationary play equipment if the adjacent designated play surfaces are no greater than 30 inches (762 mm) above the protective surfacing level. They should be a minimum of 72 inches (1829 mm) apart. If the adjacent designated play surfaces are greater than 30 inches (762 mm) above the protective surfacing level, the pieces of equipment should be a minimum of 108 inches (2743 mm) apart.
- **CSA compliance:** The overall use zone measurements for stationary play equipment should extend a minimum of 1800 mm from its perimeter; dimensions and configuration of the use zone are dependent upon the types of included play equipment. The use zone of stationary play equipment may be overlapped by the use zone of adjacent stationary play equipment if the adjacent designated play surfaces are no greater than 700 mm above the protective surfacing level. They should be a minimum of 1800 mm apart.

- **EN compliance:** The overall use zone measurements for stationary play equipment are dependent upon the fall height of the equipment. For a fall height exceeding 1500 mm a formula is applied to determine the use zone (impact zone) of the equipment. There is a minimum of 1500 mm from its perimeter; dimensions and configuration of the use zone are dependent upon the types of included play equipment. Refer to the Use Zone diagram or master structure drawing.
- Site layout is a critical part of the overall installation. Footings must be measured and marked accurately according to the footing diagram. A level and clear installation site is ideal.
- Good drainage around the structure and its supports is important. Inquire with local contractors for appropriate recommendations.
- After laying out all footings and before digging holes, be sure to inquire about underground utilities that may exist.
- Do not leave the job site unattended without making sure that all fastening hardware on all components are tightened according to tightening torque specifications listed on every installation guide. We also recommend roping off construction area and covering all holes that do not contain a piece of equipment with plywood or other suitable material.
- Excavate holes as shown in the footing detail. If a level and clear site cannot be obtained, adjust the depth of footing to maintain a level footing base. If soil conditions are loose or unstable, a larger diameter footing may be required. Inquire with local contractors for appropriate recommendations. Be sure concrete that might have splashed onto the unit is washed off before it dries. Allow concrete to harden 72 hours before allowing your structure to be used. **Assemble the entire structure before pouring concrete unless specifically instructed to do so in the installation instructions.**
- Insure that Age Appropriate and Hard Surface Warning/Playworld Systems identification labels are properly affixed to the play equipment. Labels are to be plainly visible according to current playground equipment guidelines.

## Guidelines

- **IMPORTANT!** Because accidental falls around your playground equipment can occur, Playworld Systems recommends that the area under and around the structure be covered with a resilient material such as sand, bark mulch, or wood chips. If loose fill surfacing materials are used, Playworld Systems recommends a depth of 12 in. (305 mm). An approved rubber safety matting can also be used. **Many protective surfacing materials can become compacted due to weather and use, which reduces their shock absorbency. It is strongly recommended that the surfacing be checked weekly and material added or replaced as necessary. Hard surfaces, such as asphalt, concrete and packed earth are not acceptable for use under playground equipment.**

- The entire area, under and around the playground equipment, must be covered with protective surfacing material. The impact attenuation of the protective surfacing under and around playground equipment should be rated to have a critical height value of at least the height of the highest accessible part of the equipment. The critical height for surfacing is to be rated in accordance with A.S.T.M. standard, designated F1292, A Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment. Critical fall heights for Europe and Canadian compliance shall be listed on the elevation page or master structure drawing if they differ from the ASTM standard. Contact the manufacturer of unitary surfacing materials (rubber matting) for the critical height rating for their products.

**Tools Required:** Playworld Systems supplies a service kit that contains commonly used hex key wrenches required to assemble your equipment. You may also need: shovel, digging iron, post hole digger, steel rake, wheelbarrow, garden hoe, water hose, tape measure, level, alignment tool, 3/8" ratchet with 9/16" socket, and 9/16" combination wrench.

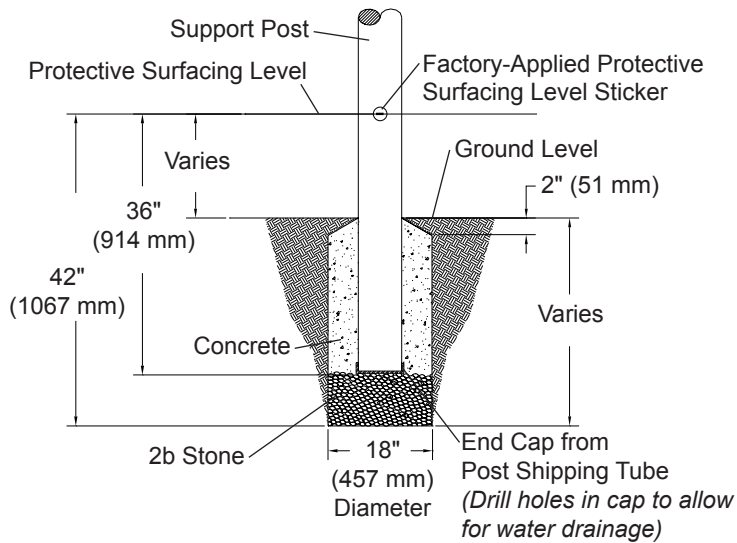
### Maintenance

- Inadequate maintenance of equipment has resulted in injuries on the playground. Because the safety of playground equipment and its stability depends on good inspection and maintenance, **a comprehensive maintenance program must be developed for each playground and strictly followed.** All equipment must be inspected frequently for any potential hazards. Special attention must be given to moving parts and other components that can be expected to wear. Inspections must to be carried out in a systematic manner by trained personnel. Any damaged or worn parts, or any other hazards identified during inspections must be repaired or replaced immediately. Complete documentation of all maintenance inspections and repairs must be retained.

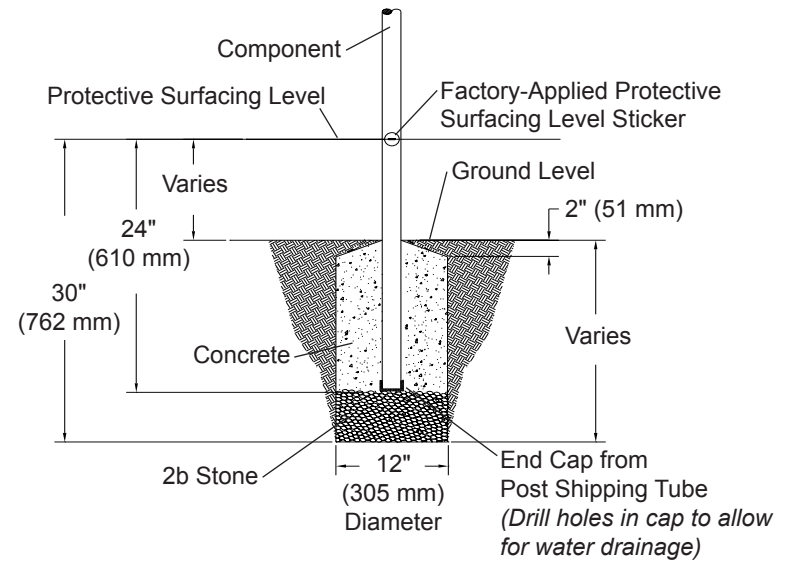
### Supervision Guidelines

- Playworld Systems strongly recommends close supervision of the children as they play as well as intensive classroom and home instruction about safe behavior on playground equipment.
- Playground supervisors should be aware that not all playground equipment is appropriate for all children who may use the playground. Signs should be posted near the equipment indicating the recommended age of the users. Supervisors should direct children to equipment appropriate for their age.
- It is important that playground supervisors recognize that preschool-age children require more attentive supervision on playgrounds than older children.
- Do not permit the use of wet playground equipment. Wet equipment will inhibit necessary traction and gripping capabilities. Slips or falls could occur.
- Do not permit too many children on the same piece of equipment at the same time. It is suggested that children take turns.
- Constantly observe play patterns to discover possible hazardous play and suggest changes in equipment use or play patterns.

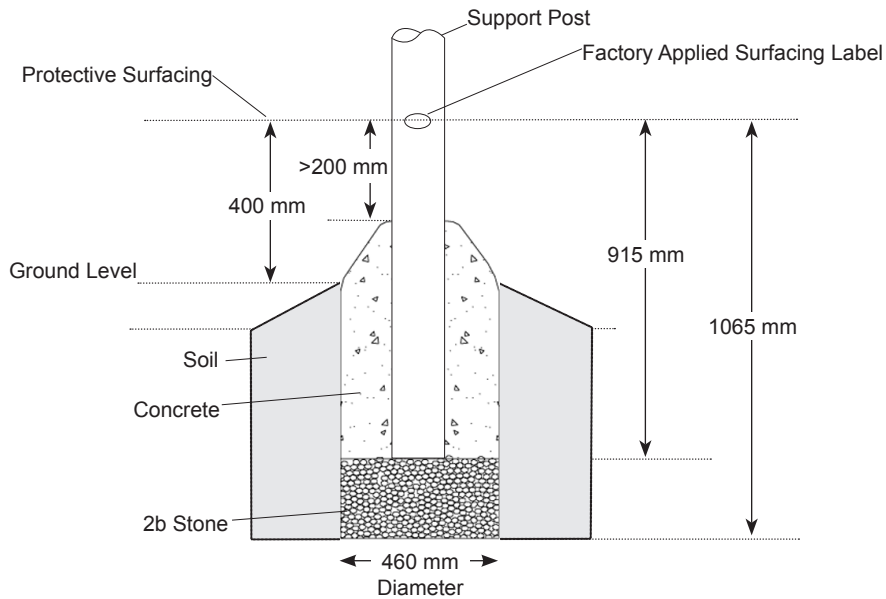
# Footings Details (in ground)



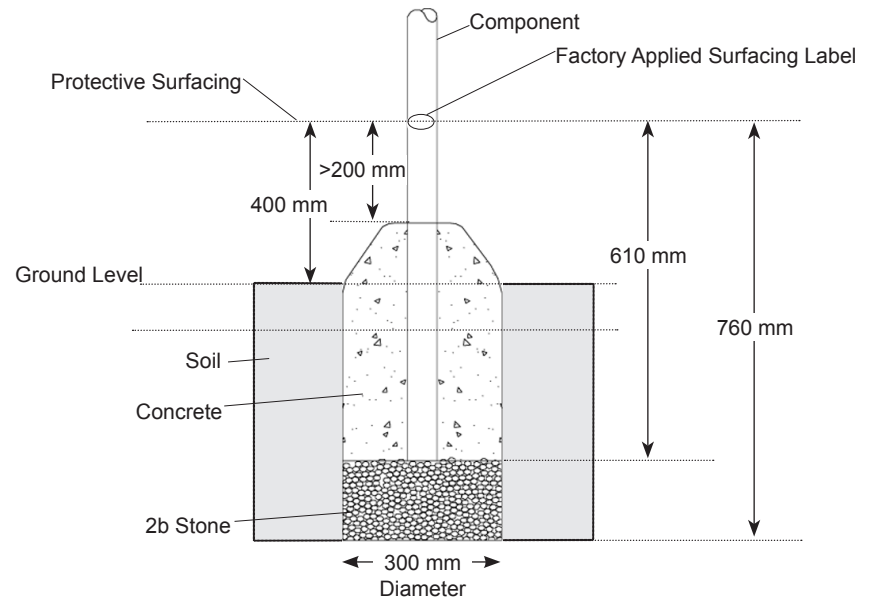
Support Post Footing Detail (ASTM/CSA)



Component Footing Detail (ASTM/CSA)



Footing Detail Support Post (EN)

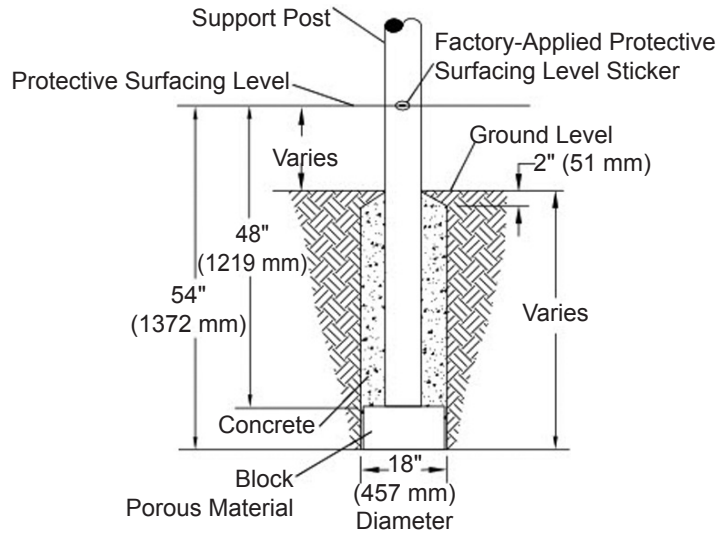


Footing Detail Component Post (EN)



## Footings Notes & Details (in ground)

### IN GROUND FOOTING DIAGRAMS-BLOCK OPTION

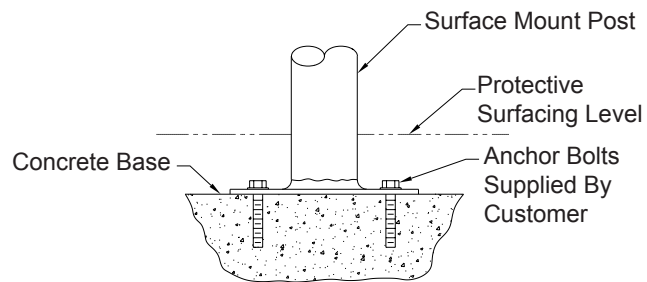


GroundZero® Support Post Footing Detail ASTM/CSA  
Block Option

### FOOTING NOTES (IN GROUND)

- Support post footing depth equals 42 in. (1067 mm) minus the depth of the protective surfacing material. The posts are designed to have 24" (610 mm) in concrete.  
*Example:* If 12 in. (305 mm) of wood mulch is used for surfacing, the footing depth would be 30 in. (762 mm).  
GroundZero® posts are footed 12 in. (305 mm) deeper than the regular support posts, and will be marked as such on the master footing diagram.
- Component footing depth equals 30 in. (762 mm) minus the depth of the protective surfacing material. The posts are designed to have 12" (305 mm) in concrete.  
*Example:* If 12 in. (305 mm) of wood mulch is used for surfacing, the footing depth would be 18 in. (457 mm).
- Most support posts and component support legs will have either a factory-applied sticker with a line, or factory-applied mark designating the level of protective surfacing on a clear and level installation site. The footing depth measurements are based on this line/mark.
- If the play equipment is installed on uneven terrain, maintain support post mark for the protective surfacing level at the lowest grade. Adjust other footings accordingly. Support posts and all attaching decks and play components must be plumb and level.
- Do not encase the bottom of the support post in concrete. Place the post directly on packed stone or other porous material.
- The footings shown on Playworld Systems' documentation are recommendations based on historical performance in average soil conditions. Footing dimensions may be modified by the owner based on actual soil conditions.  
For example:
  - If local soil is loose or unstable, a larger footing may be required.
  - If local soil is considered stable, such as bedrock, clay or hard packed earth, a smaller footing may be used. Before changing footing dimensions, we strongly recommend that the footings be reviewed and approved by a registered engineer.
- The base of the footing must be below the frost line.
- Assemble the entire structure before pouring concrete unless specifically instructed to do so in the installation instructions.

## Footings Notes & Details (surface mount)



Surface Mount Footing Detail

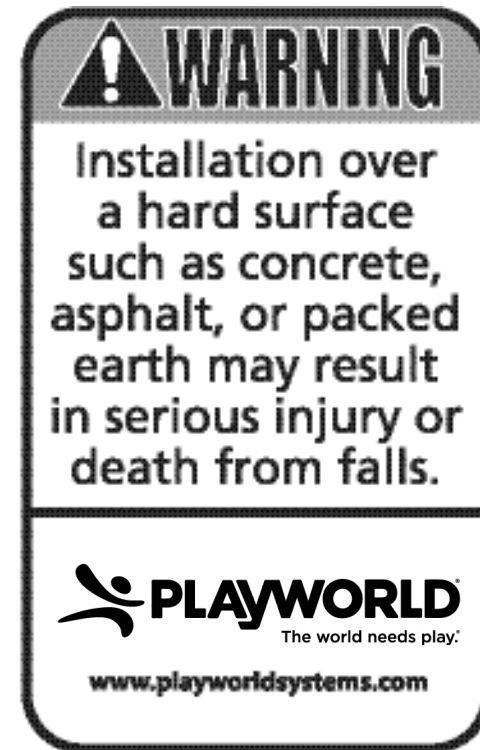
### FOOTING NOTES (SURFACE MOUNT)

- Most support posts and component support legs will have either a factory-applied sticker with line, or factory-applied mark designating protective surfacing level on a clear and level installation site.
- If the play equipment is installed on uneven terrain, maintain support post mark for the protective surfacing level at the lowest grade. Adjust other footings accordingly. Support posts and all attaching decks and play components must be plumb and level.
- The footing size may vary due to local soil and weather conditions.
- Base of footing must be below frost line.

**Surface mount hardware is not supplied. Customer is responsible for concrete base and providing surface mount hardware as specified by a registered structural engineer for each specific project application.**

## FINAL INSPECTION

- Playworld Systems® insists on the installation of protective surfacing within the use zone of each play structure in accordance with the applicable standard or specifications appropriate for the fall height of each structure.
- Playworld Systems® strongly recommends close supervision of children as they play. The owners of playground equipment and the parents or guardians of children are responsible for this proper supervision.
- As the owner of playground equipment, you are responsible for the maintenance of the equipment and surrounding play area. A comprehensive maintenance and inspection schedule must be developed and all equipment inspected frequently. Refer to the inspection and maintenance schedule in the back of this booklet.
- Perform a thorough final check on the installed equipment to insure all equipment is installed as specified by manufacturer's installation instructions.
  - Review all Installation Instructions for specified dimensions. Make sure dimensions called for in instructions agree with actual installation.
  - Double check height dimensions. Height measurements are taken from the top of the protective surfacing material.
  - Insure all fasteners are tightened according to tightening torque specifications listed on your installation instructions.
  - Insure all exposed pipe ends have properly installed end caps. Insure that drive rivets are secure.
  - Clean dried concrete off of components and any other affected surface.
  - Touch-up any scratches or installation damage to powder coated finish with color-matched spray paint.
  - Allow adequate time for proper curing, both for concrete and urethane cement if rubber safety surfacing tiles have been installed.
  - Insure that protective surfacing is properly installed according to C.P.S.C. (or other appropriate body) recommendations. Footings must not be exposed.
- Insure that hard surface warning/Playworld Systems® identification labels are properly affixed to the play equipment. Labels are to be plainly visible according to current playground equipment guidelines. For locations complying with ASTM F1487 or CSA Z-614, Age Appropriate labels must also be applied in a visible location.
- Dispose of all packaging material properly. These materials which include large plastic bags and sheets can be a suffocation hazard. Dispose of these materials out of reach or contact of small children.



Surfacing Warning Label