

# FitTech

## UP191J SHOULDER ROTATOR ACCESSIBLE (FOOTING) UP191S SHOULDER ROTATOR ACCESSIBLE (IN GROUND) UP191SM SHOULDER ROTATOR ACCESSIBLE (SURFACE)

Parts List				
DESCRIPTION	UP191J (FOOTING)	UP191 (IN GROUND)	UP191SM (SURFACE)	PART NUMBER
POST ASS'Y	1	1	1	211582
SHOULDER WHEEL ASS'Y	4	4	4	403743
SHOULDER ROTATOR ARM ASS'Y	1	1	1	211577
SHOULDER ROTATOR ARM ASS'Y (ACCESSIBLE)	1	1	1	211579
HDPE FILLER PLATE	4	4	4	403670
5" BASE COVER	1	1	1	207659
FOOTBUCK WELD ASS'Y	0	1	0	206467
<b>HARDWARE COMPLETE</b>	0	0	1	403946
<b>HARDWARE COMPLETE</b>	1	0	0	403944
<b>HARDWARE COMPLETE</b>	0	1	0	403945
1/2" ANCHOR ROD	0	2	0	135038*
PLASTIC CAP	4	4	4	403661*
3/8" LOCKWASHER	28	28	28	817334*
3/8" FLAT WASHER (1" O.D.)	1	24	1	817401*
3/8" LOCK NUT	16	16	16	804353*
3/8" x 1 1/4" HEX HEAD BOLT	4	4	4	801004*
3/8" FLAT WASHER (1 1/4" O.D.)	4	4	4	817424*
3/8" x 1 1/4" P.B.H.C.S. w/PATCH	16	16	16	812051*
3/8" x 1" P.B.H.C.S. w/PATCH	8	8	8	812050*
3/4" LOCKWASHER	4	4	4	817354*
3/4" HEX NUT	8	4	0	804058*
3/4" FLATWASHER (2" O.D.)	8	4	0	817420*
3/4" x 4 1/4" WEDGE ANCHOR	0	0	4	206358*
3/4" ANCHOR BOLT	4	0	0	800001*
3/4" x 2" HEX HEAD CAP SCREW	0	4	0	801533*
5" INJECTION MOLDED CAP	1	1	1	207710*
USAGE/WARNING LABEL (ACCESSIBLE)	1	1	1	403908*
USAGE/WARNING LABEL	1	1	1	403916*

Unless Otherwise Specified, All Units of Measure are Each

\*Items listed below Hardware Complete line are included with Hardware Complete Number

**Warning: During Installation, Hardware And Small Parts Are Choking Hazards For Young Children. Store Unused Parts Appropriately Until Assembly Is Completed. Once Assembly Is Completed, Remove Any Unused Parts From The Play Environment And Dispose/Save Them In A Secure Location. Any bolt end protruding more than two full threads beyond the face of the nut causes risk of clothing entanglement.**

**Promptly cut-off flush, file smooth, and treat to prevent corrosion.**

**Note: Peen Tee-Nuts and Flatwashers to match radius of pipe after assembly is complete.**

**Note: Loctite (supplied by others) should be used on any non-patch hardware.**

Issued/Revised: 10/17/16

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## UP191J SHOULDER ROTATOR ACCESSIBLE (FOOTING) UP191S SHOULDER ROTATOR ACCESSIBLE (IN GROUND) UP191SM SHOULDER ROTATOR ACCESSIBLE (SURFACE)

### **SPECIFICATIONS:**

**CRANK ARM:** The Crank Arm shall be constructed from aluminum and chromium coated.

**5" PLASTIC CAP:** The 5" Plastic Cap shall be constructed from injection molded Low Density Polyethylene, black in color.

**WHEEL FILLERS:** Shall be 3/4" HDPE Densetec Anti-skid Diamond Texture Sheet.

**MAIN PIPE:** The main frame shall be an all welded assembly fabricated from SPP (carbon steel pipe) and dual phase steel plate. The frame shall be powder coated.

**HARDWARE:** All nuts, bolts, screws, and lock washers used in the assembly shall be stainless steel, yellow dichromate plated steel, blue-coat plated steel, mechanically galvanized or powder coated/yellow dichromate plated steel. All primary fasteners shall be 304 alloy stainless steel. Fasteners with yellow dichromate treatment have an electro-deposited, 99.9% pure zinc substrate applied from a specially.

**NOTE:** Do not overtighten bolts. To overtighten may cause buckling or dimpling of some parts.

**NOTE:** Read installation instructions thoroughly before starting assembly. Pour concrete only after final assembly is completed. Bracing material is required during assembly.

**NOTE:** Assembly and leveling times will be greatly reduced if a transit is used to set location and depth of ground holes.

### **INSTALLATION INSTRUCTIONS FOR UP191J (FOOTING):**

1. Dig holes or drill holes according to Plan View and Elevation View. **NOTE:** Due to extremes in weather and soil conditions, hole size may have to be increased to meet local conditions.
2. Fill hole with concrete. While the concrete is still soft, yet firm enough to support the Shoulder Rotator Accessible, Place (4) Anchor Bolts of the Shoulder Rotator Accessible in position. See Footing Detail. **NOTE:** Use Shoulder Rotator Accessible as a template for Anchor Bolt location, then remove Shoulder Rotator Accessible.

**IMPORTANT:** DO NOT MOUNT THE SHOULDER ROTATOR ACCESSIBLE TO THE ANCHOR BOLTS FOR AT LEAST 7 DAYS.

3. After concrete has cured and set for a minimum of 7 Days, attach Shoulder Rotator Accessible to 3/4" Anchor Bolt using 3/4" FlatWasher (2" O.D.), 3/4" Lock Washer, and 3/4" Hex Nut. See Footing Assembly Detail.
4. Attach Base Cover to Equipment Post using Base Cover Nut and Base Cover Bolt included with Base Cover. See Base Cover Detail.
5. Attach Shoulder Rotator Arm Assembly to Post Assembly using 3/8" x 1" P.B.H.C.S. w/Patch, 3/8" Lockwasher, and 3/8" Flatwasher. See Shoulder Rotator Assembly.
6. Attach Wheel to Arm Assembly using Plastic Cap, 3/8" X 1 1/4" Bolt, 3/8" Lockwasher, and 3/8" Flatwasher. See Wheel Assembly
7. Attach Wheel Cover to Wheel Assembly using 3/8" x 1 1/4" P.B.H.C.S. w/ Patch, 3/8" Flatwasher, 3/8" Lockwasher, and 3/8" Locknut.

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## *UP191J SHOULDER ROTATOR ACCESSIBLE (FOOTING) UP191S SHOULDER ROTATOR ACCESSIBLE (IN GROUND) UP191SM SHOULDER ROTATOR ACCESSIBLE (SURFACE)*

### **INSTALLATION INSTRUCTIONS FOR UP191S (IN-GROUND):**

1. Dig holes or drill holes according to Plan View and Elevation View. **NOTE:** Due to extremes in weather and soil conditions, hole size may have to be increased to meet local conditions.
2. Attach the Footbuck Weld Assembly to the Shoulder Rotator Accessible using 3/4" Hex Nut, 3/4" Lockwasher, 3/4" Flatwasher (2" O.D.), and 3/4" x 2" Hex Head Cap Screw. See In-Ground Assembly Detail.
3. Place Shoulder Rotator Accessible into hole making sure it rests on the brick. See In-Ground Detail.
4. Level Shoulder Rotator Accessible using sway bracing.
5. Pour concrete according to the Plan View and Elevation View. Allow concrete to cure for a minimum of 7 days.
6. Attach Base Cover to Equipment Post using Base Cover Detail.
7. Attach Shoulder Rotator Arm Assembly to Post Assembly using 3/8" x 1" P.B.H.C.S. w/Patch, 3/8" Lockwasher, and 3/8" Flatwasher. See Shoulder Rotator Assembly.
8. Attach Wheel to Arm Assembly using Plastic Cap, 3/8" X 1 1/4" Bolt, 3/8" Lockwasher, and 3/8" Flatwasher. See Wheel Assembly.
9. Attach Wheel Cover to Wheel Assembly using 3/8" x 1 1/4" P.B.H.C.S. w/ Patch, 3/8" Flatwasher, 3/8" Lockwasher, and 3/8" Locknut.

### **INSTALLATION INSTRUCTIONS FOR UP191SM (SURFACE):**

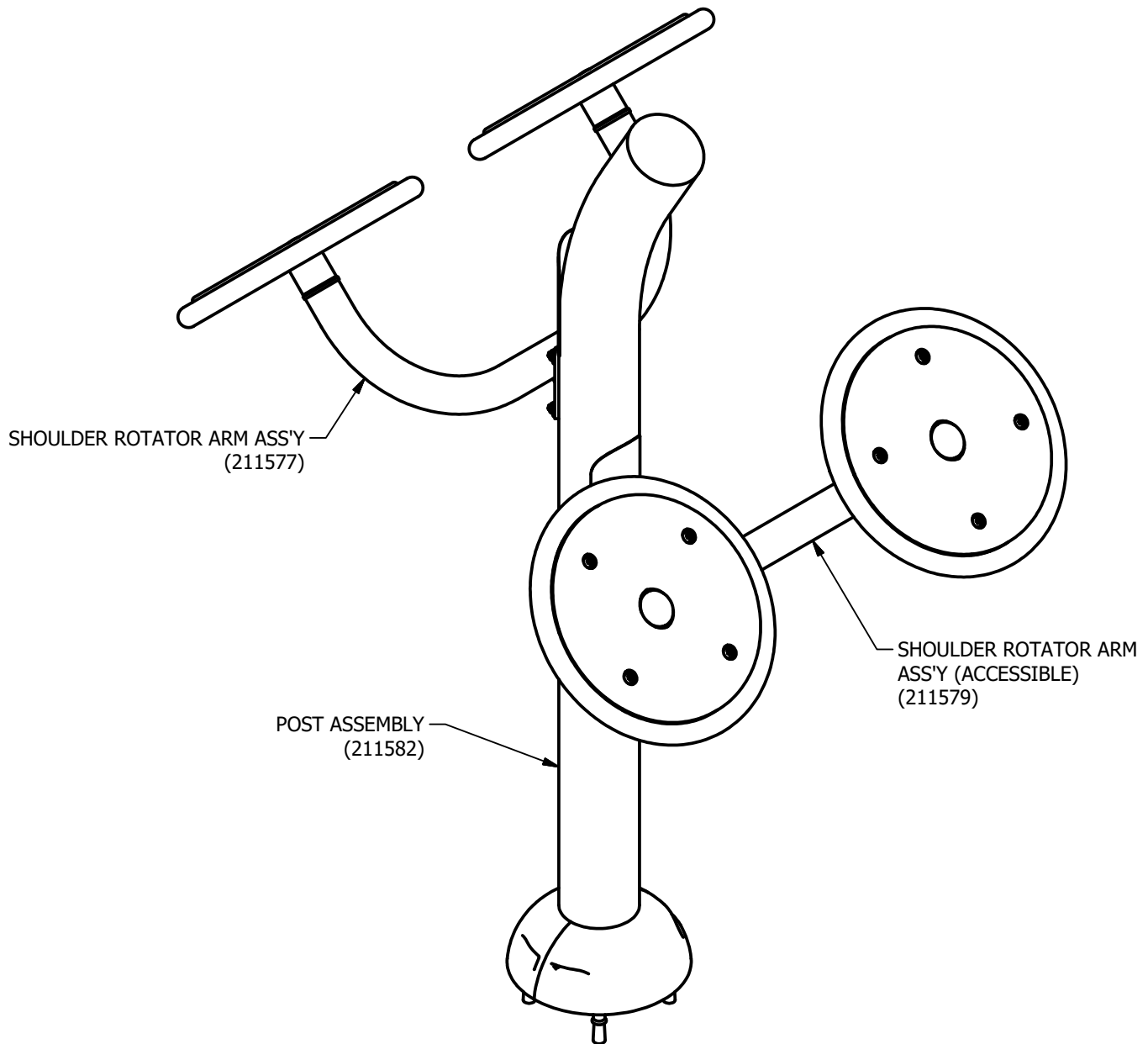
1. Mark correct location of holes for Wedge Anchor using the Base Plate as a guide.
2. Drill 3/4" x 2 1/2" hole in concrete for Wedge Anchor. See Surface Detail.
3. Insert Wedge Anchors and secure with 3/4" Flatwasher (2" O.D.), 3/4" Lockwasher, and 3/4" Hex Nut. See Surface Assembly Detail.
4. Attach Base Cover to Equipment Post using Base Cover Detail.
5. Attach Shoulder Rotator Arm Assembly to Post Assembly using 3/8" x 1" P.B.H.C.S. w/Patch, 3/8" Lockwasher, and 3/8" Flatwasher. See Shoulder Rotator Assembly.
6. Attach Wheel to Arm Assembly using Plastic Cap, 3/8" X 1 1/4" Bolt, 3/8" Lockwasher, and 3/8" Flatwasher. See Wheel Assembly.
7. Attach Wheel Cover to Wheel Assembly using 3/8" x 1 1/4" P.B.H.C.S. w/ Patch, 3/8" Flatwasher, 3/8" Lockwasher, and 3/8" Locknut.

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## **UP191J SHOULDER ROTATOR ACCESSIBLE (FOOTING) UP191S SHOULDER ROTATOR ACCESSIBLE (IN GROUND) UP191SM SHOULDER ROTATOR ACCESSIBLE (SURFACE)**

### **MAINTENANCE PROCEDURE:**

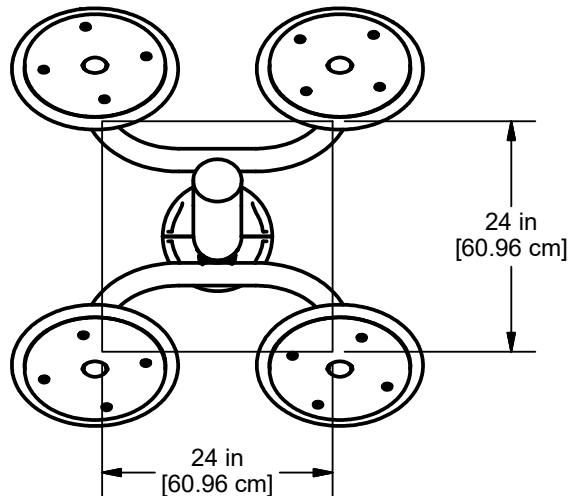
Periodically check hardware for tightness, and tighten as necessary. Always check all parts for breakage or wear, and immediately put equipment out of service until any faulty parts found are repaired or replaced. Also Check all metal parts for rust, paint loss and touch-up if necessary with paint. Check for welded areas and verify integrity. Check periodically resilient surfacing for appropriate depth and remove extraneous materials that could cause injury, infection, or disease. Maintain detailed installation, inspection, maintenance, and repair records for each public-use playground equipment.



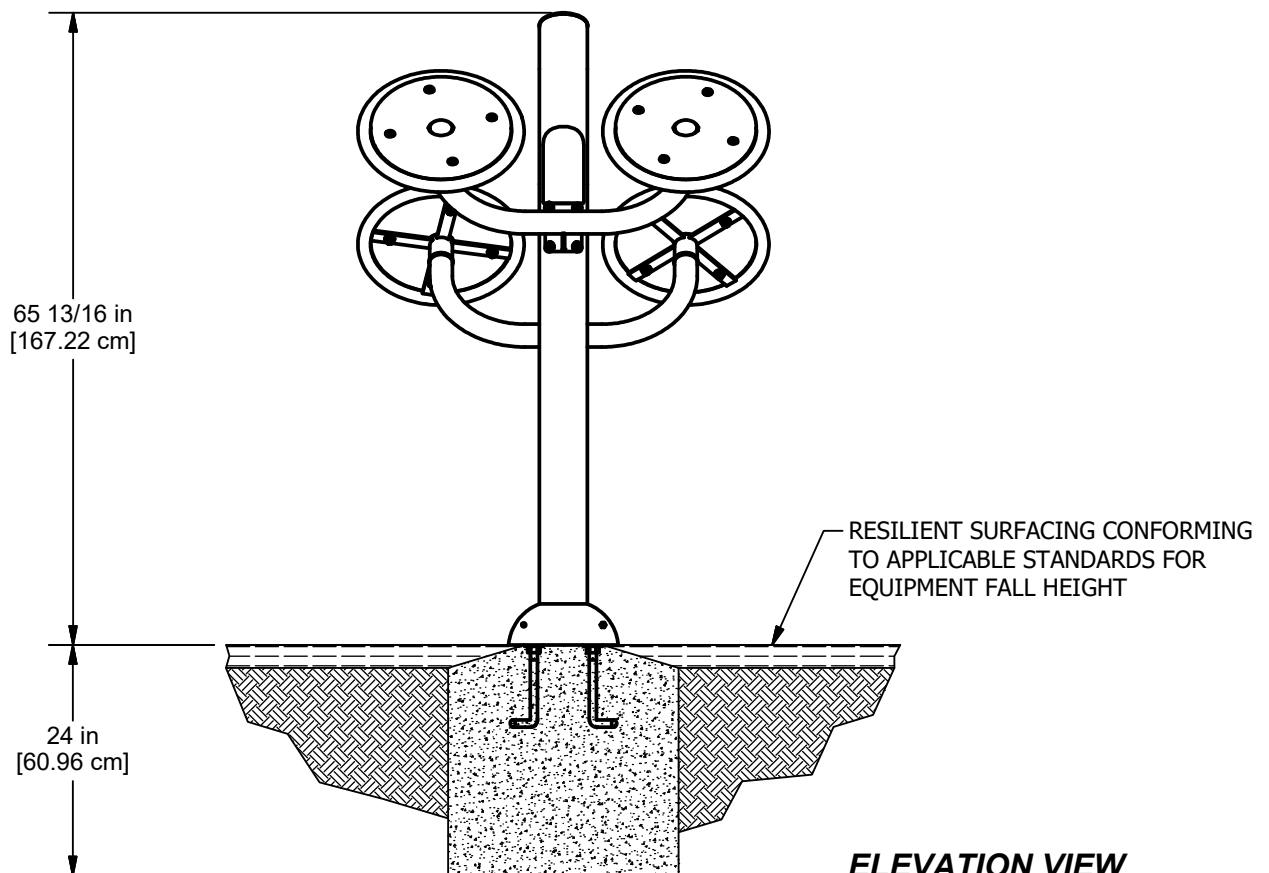
**FINISHED ASSEMBLY**

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**UP191J SHOULDER ROTATOR ACCESSIBLE (FOOTING)**  
**UP191S SHOULDER ROTATOR ACCESSIBLE (IN GROUND)**  
**UP191SM SHOULDER ROTATOR ACCESSIBLE (SURFACE)**



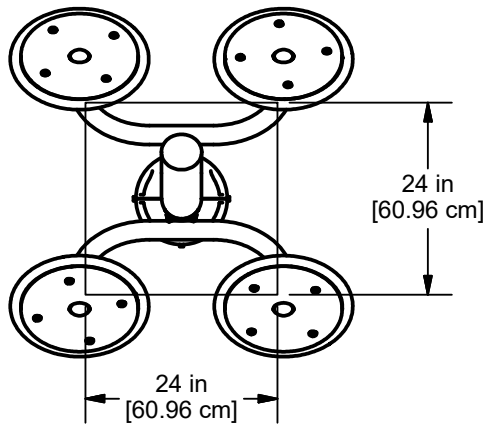
**PLAN VIEW**



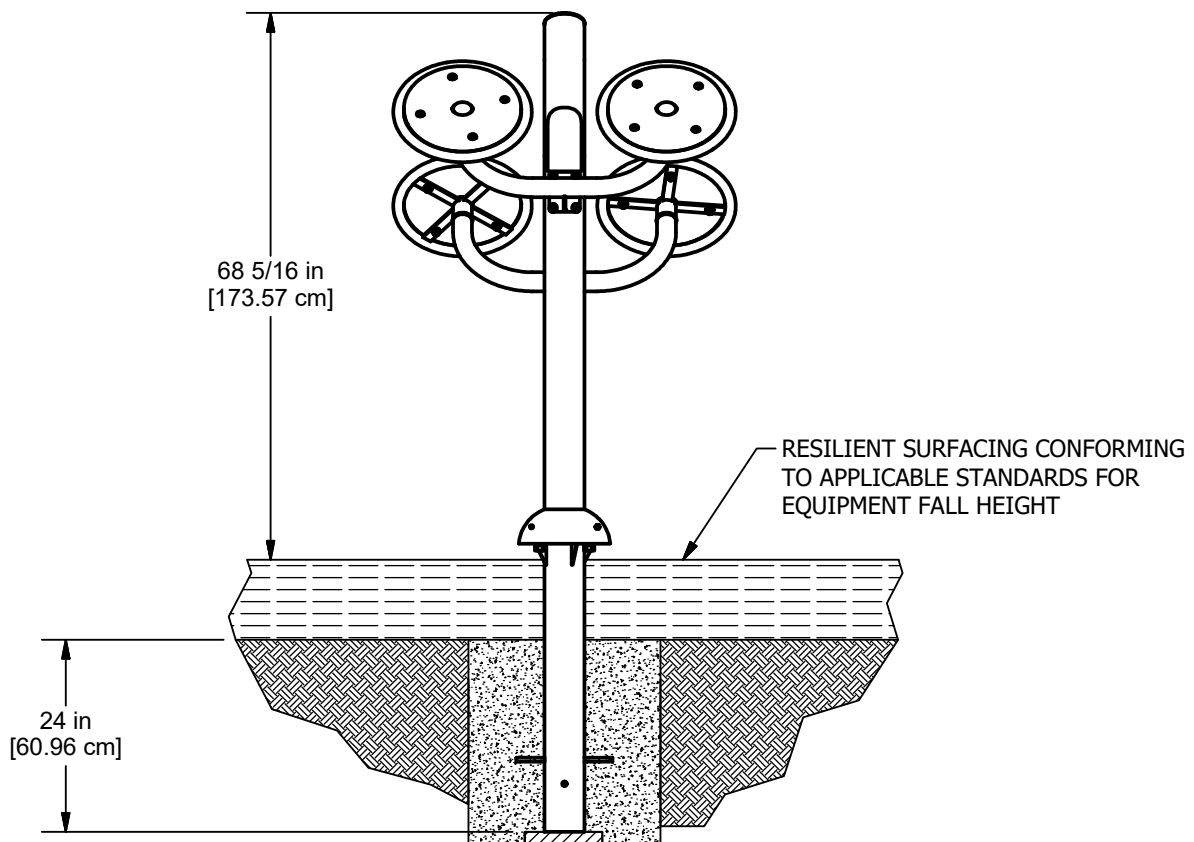
**ELEVATION VIEW**  
**UP191J (FOOTING)**

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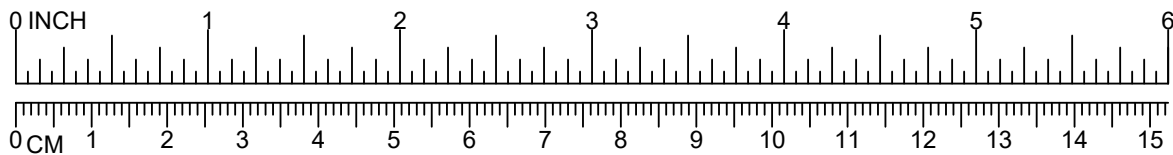
**UP191J SHOULDER ROTATOR ACCESSIBLE (FOOTING)**  
**UP191S SHOULDER ROTATOR ACCESSIBLE (IN GROUND)**  
**UP191SM SHOULDER ROTATOR ACCESSIBLE (SURFACE)**



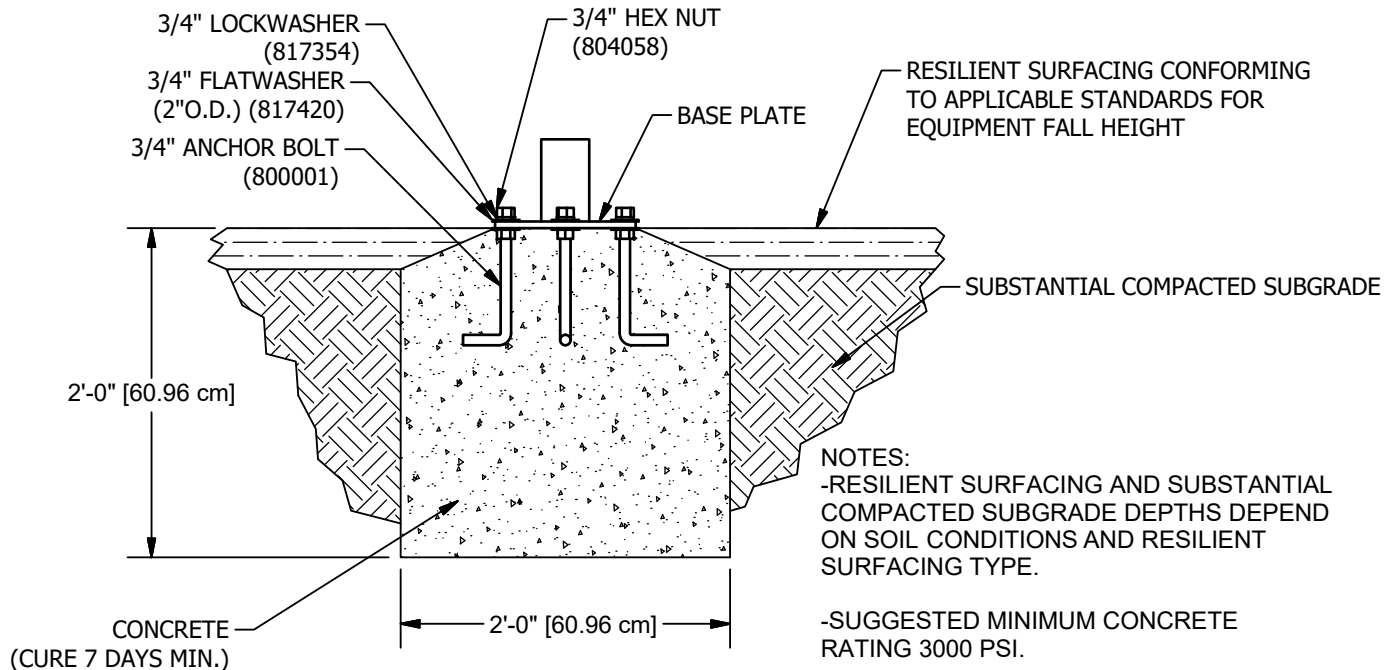
**PLAN VIEW**



**ELEVATION VIEW**  
**UP191S (IN GROUND)**

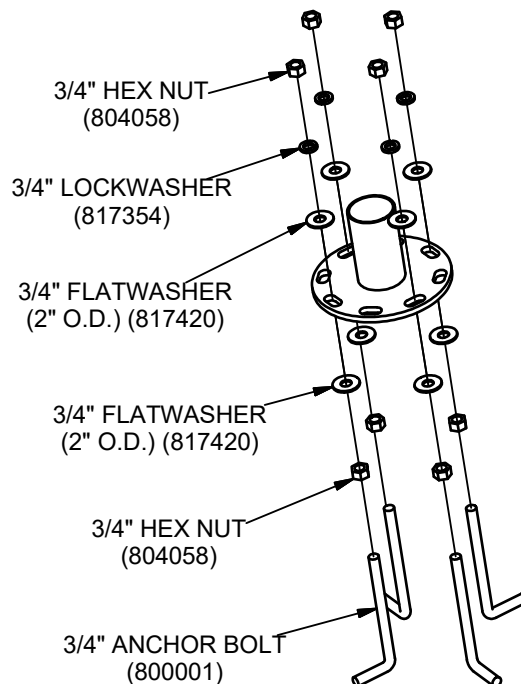


**UP191J SHOULDER ROTATOR ACCESSIBLE (FOOTING)**  
**UP191S SHOULDER ROTATOR ACCESSIBLE (IN GROUND)**  
**UP191SM SHOULDER ROTATOR ACCESSIBLE (SURFACE)**



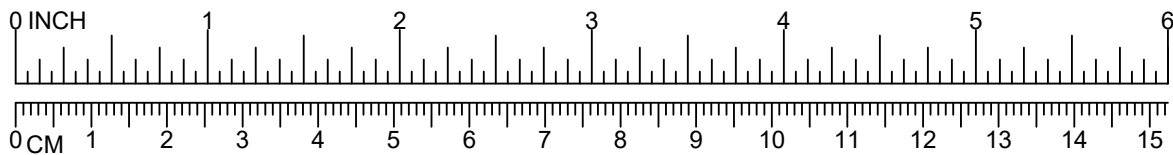
**FOOTING DETAIL**

CONCRETE REQUIRED:  
 .30 CUBIC YARDS  
 .23 CUBIC METERS

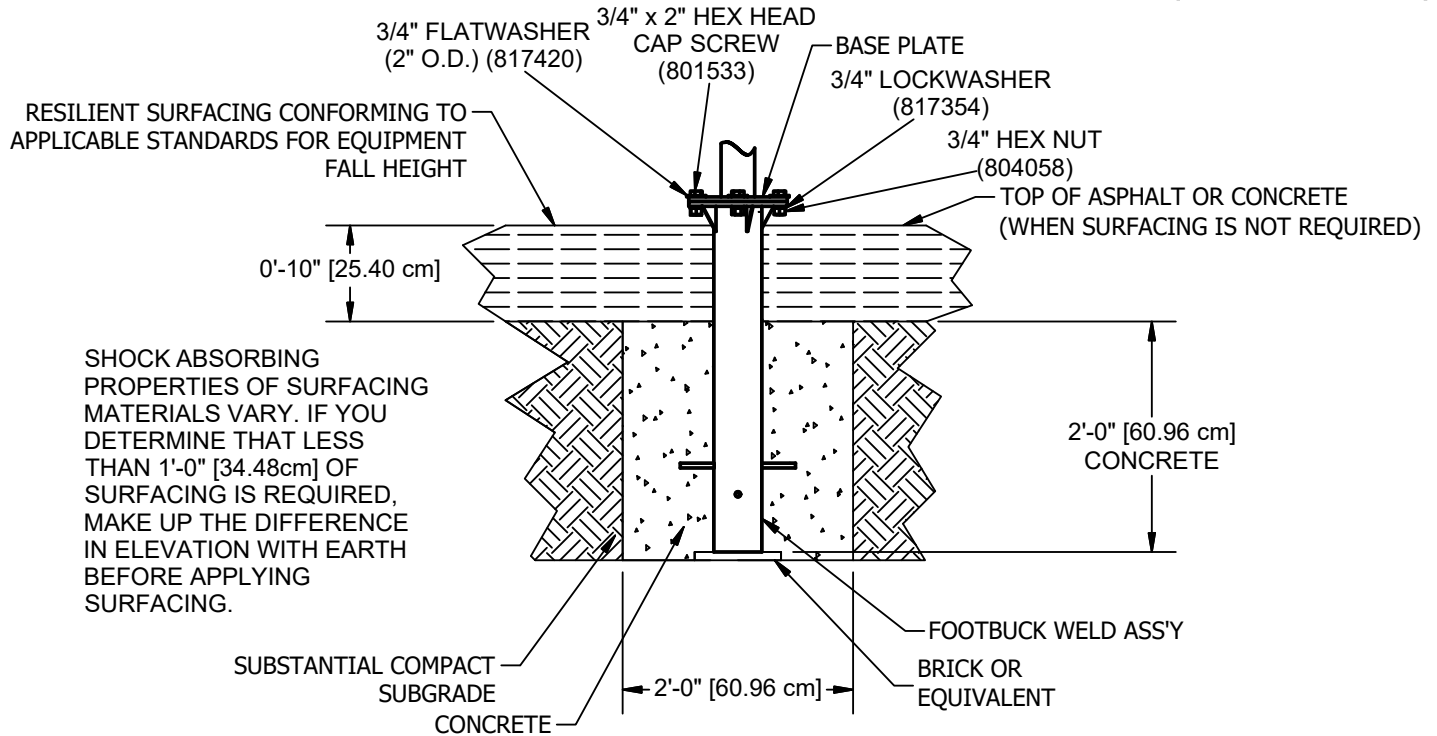


**FOOTING ASSEMBLY DETAIL**  
**UP191J (FOOTING)**

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# **UP191J SHOULDER ROTATOR ACCESSIBLE (FOOTING)** **UP191S SHOULDER ROTATOR ACCESSIBLE (IN GROUND)** **UP191SM SHOULDER ROTATOR ACCESSIBLE (SURFACE)**



## **IN GROUND DETAIL**

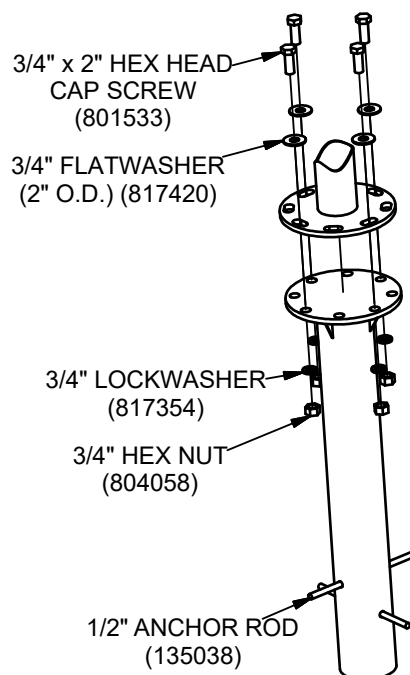
**CONCRETE REQUIRED:**  
 .30 CUBIC YARDS  
 .23 CUBIC METERS

### **NOTE:**

-RESILIENT SURFACING AND SUBSTANTIAL COMPACTED SUBGRADE DEPTHS DEPEND ON SOIL CONDITIONS AND RESILIENT SURFACING TYPE.

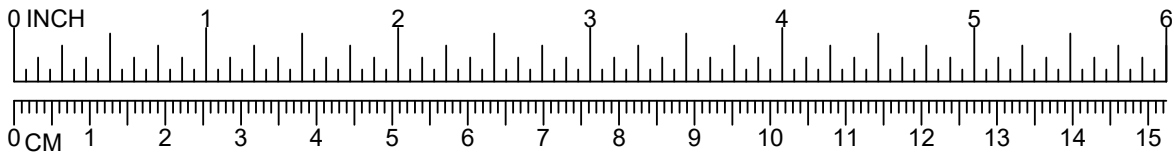
-SLOPED FOOTING (45° MIN) IS A REQUIREMENT OF EUROPEAN STANDARD EN1176-1 ONLY.

-SUGGESTED MINIMUM CONCRETE RATING 3000 PSI.

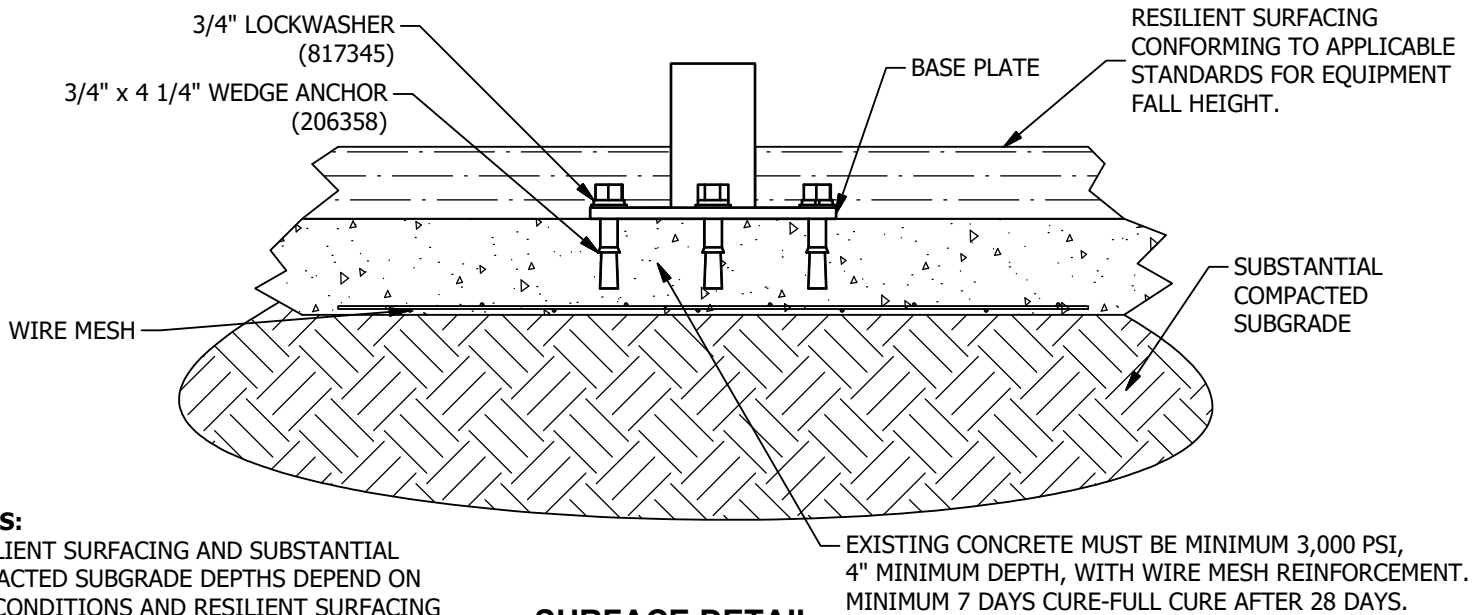


## **IN GROUND ASSEMBLY DETAIL** **UP191S (IN GROUND)**





# **UP191J SHOULDER ROTATOR ACCESSIBLE (FOOTING)** **UP191S SHOULDER ROTATOR ACCESSIBLE (IN GROUND)** **UP191SM SHOULDER ROTATOR ACCESSIBLE (SURFACE)**



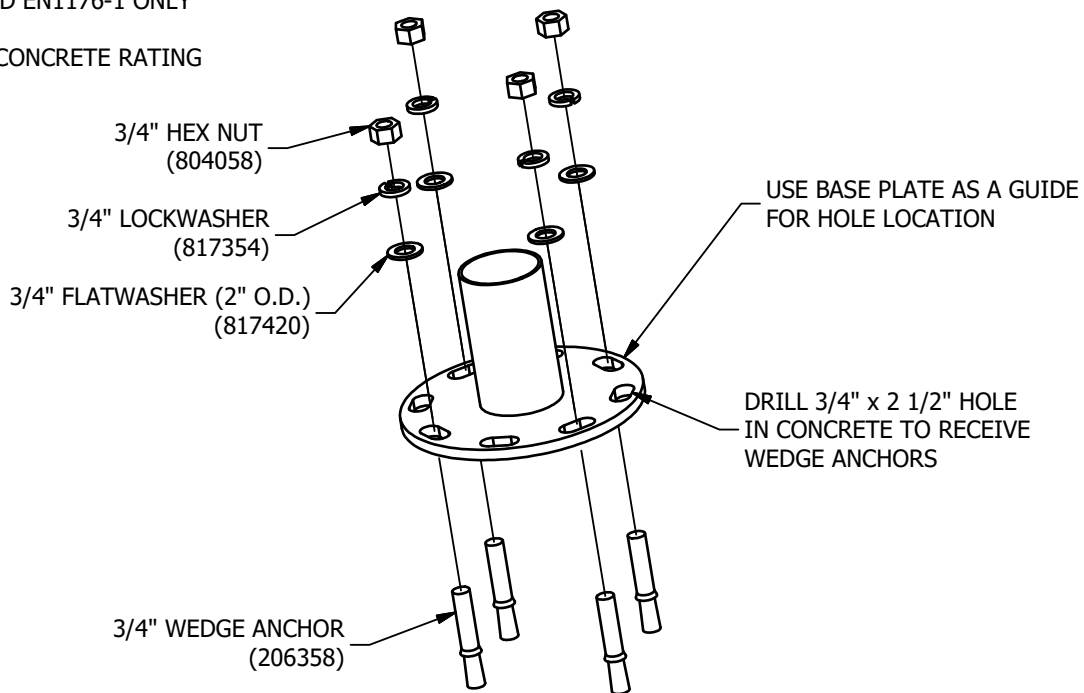
## **NOTES:**

-RESILIENT SURFACING AND SUBSTANTIAL COMPACTED SUBGRADE DEPTHS DEPEND ON SOIL CONDITIONS AND RESILIENT SURFACING TYPE.

-SLOPED FOOTING IS A REQUIREMENT OF EUROPEAN STANDARD EN1176-1 ONLY

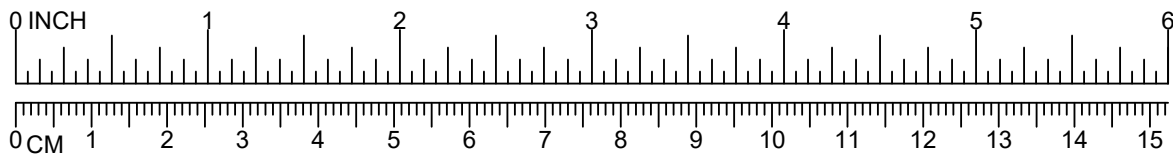
-SUGGESTED MINIMUM CONCRETE RATING 3000 PSI.

## **SURFACE DETAIL** **UP191SM (SURFACE)**

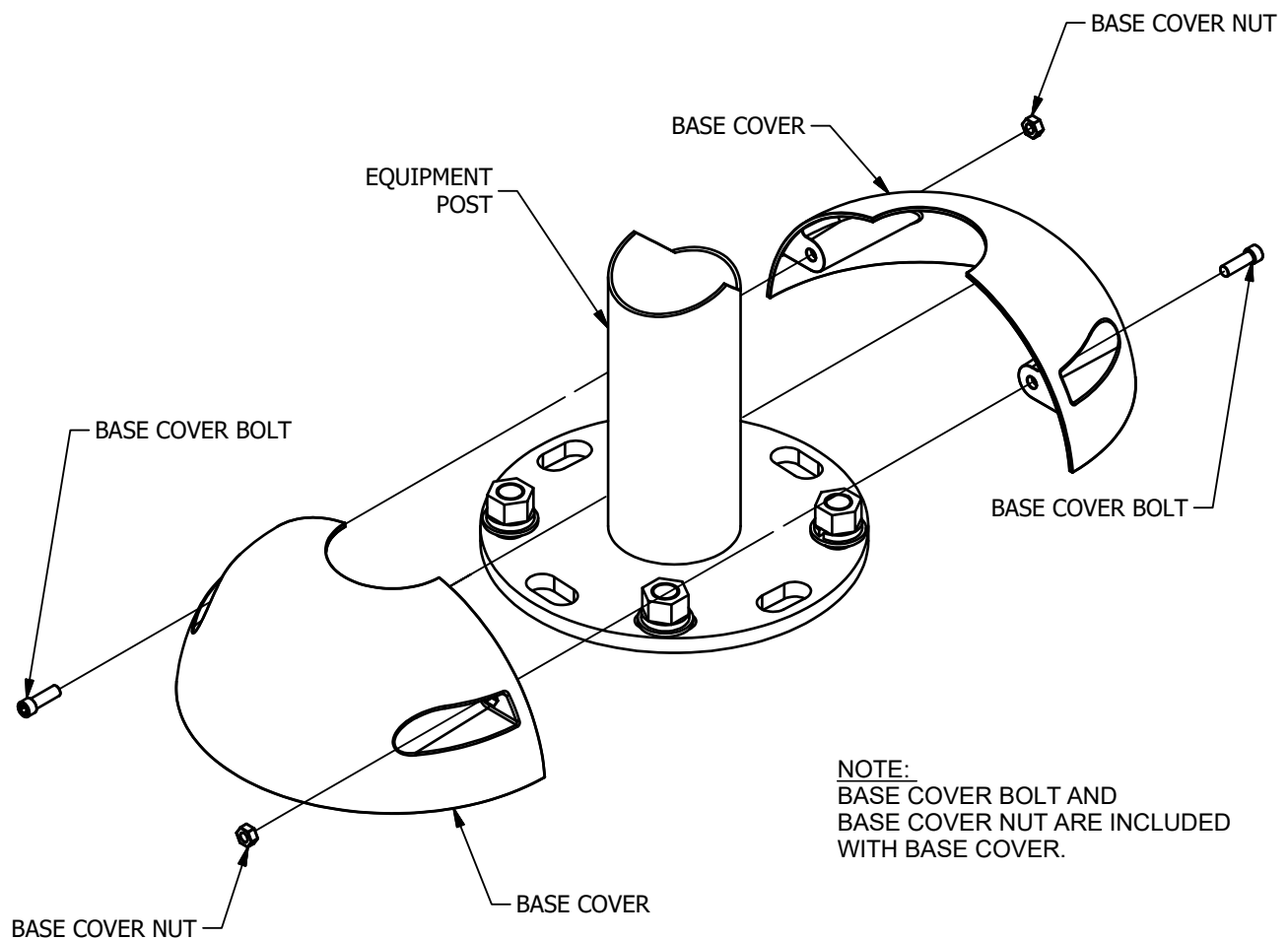


## **SURFACE ASSEMBLY DETAIL** **UP191SM (SURFACE)**

Issued/Revised: 10/17/16

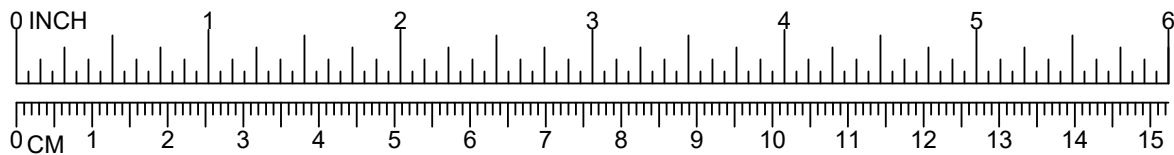


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**UP191SM SHOULDER ROTATOR ACCESSIBLE (SURFACE)**

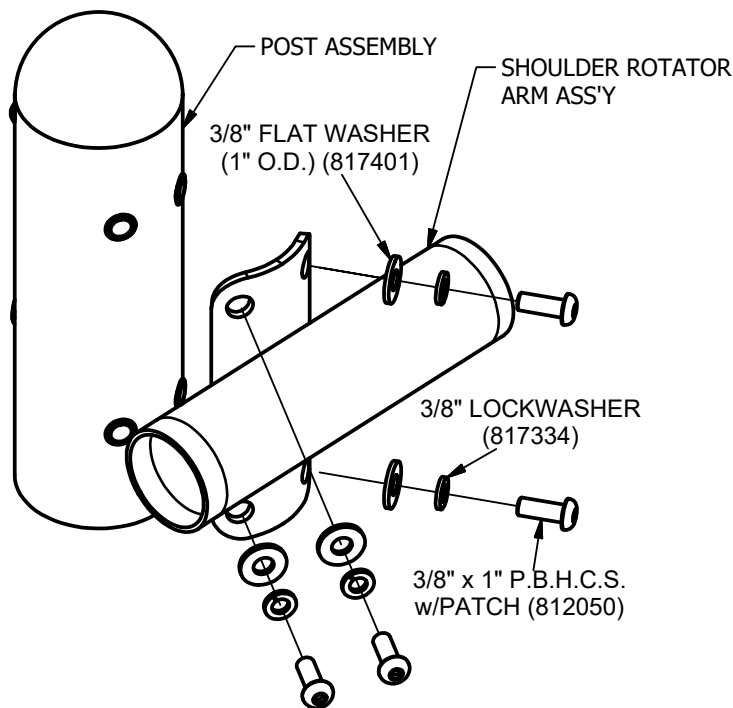


**NOTE:**  
BASE COVER BOLT AND  
BASE COVER NUT ARE INCLUDED  
WITH BASE COVER.

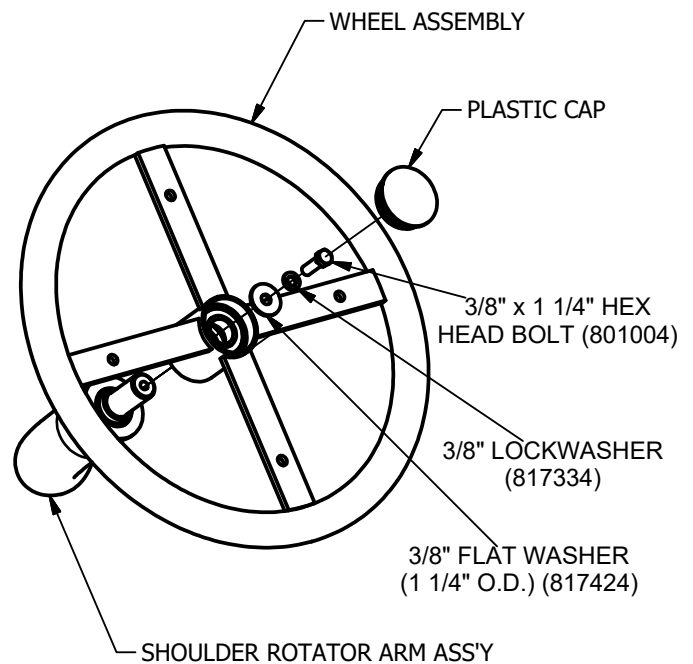
**BASE COVER DETAIL**



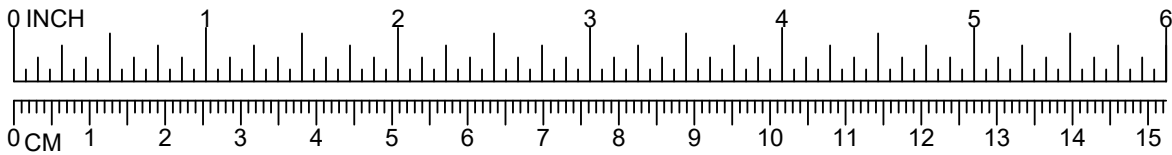
**UP191J SHOULDER ROTATOR ACCESSIBLE (FOOTING)**  
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**UP191SM SHOULDER ROTATOR ACCESSIBLE (SURFACE)**



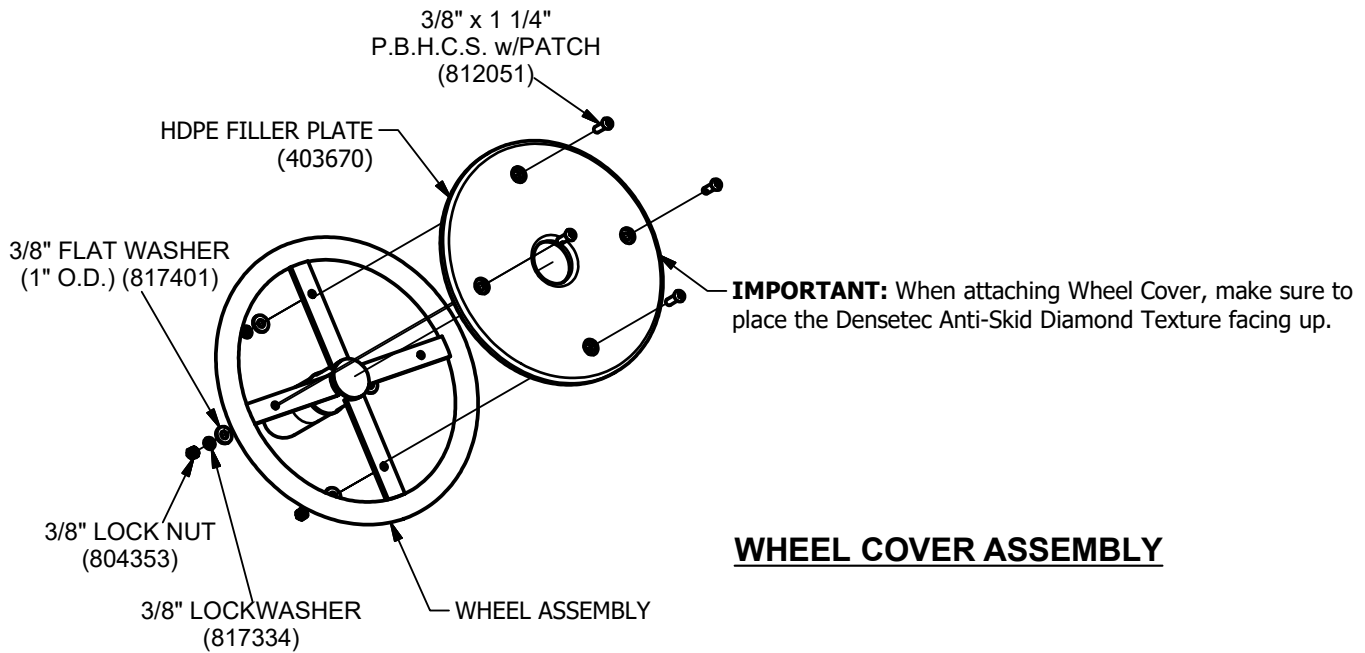
**SHOULDER ROTATOR ASSEMBLY**



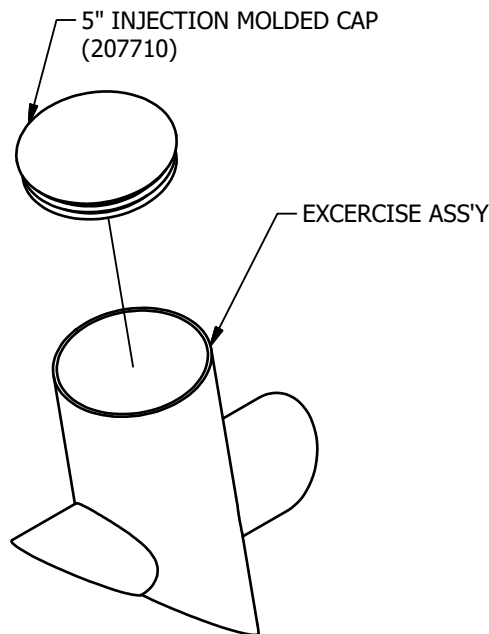
**WHEEL ASSEMBLY**



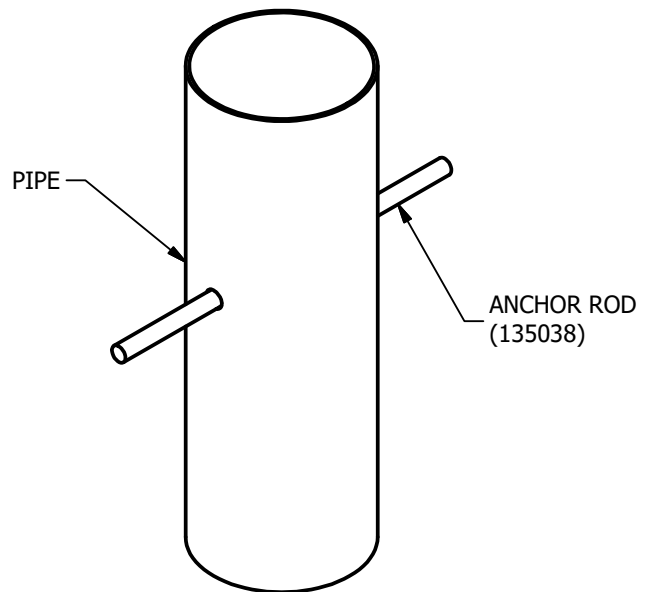
**UP191J SHOULDER ROTATOR ACCESSIBLE (FOOTING)**  
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**UP191SM SHOULDER ROTATOR ACCESSIBLE (SURFACE)**



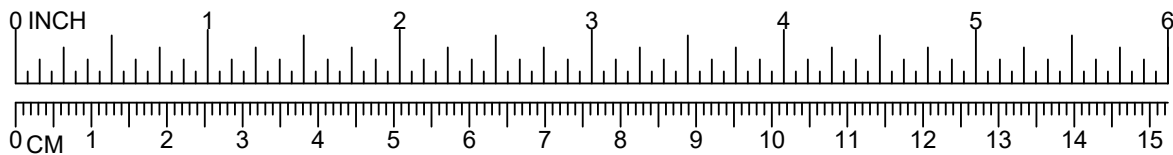
**WHEEL COVER ASSEMBLY**



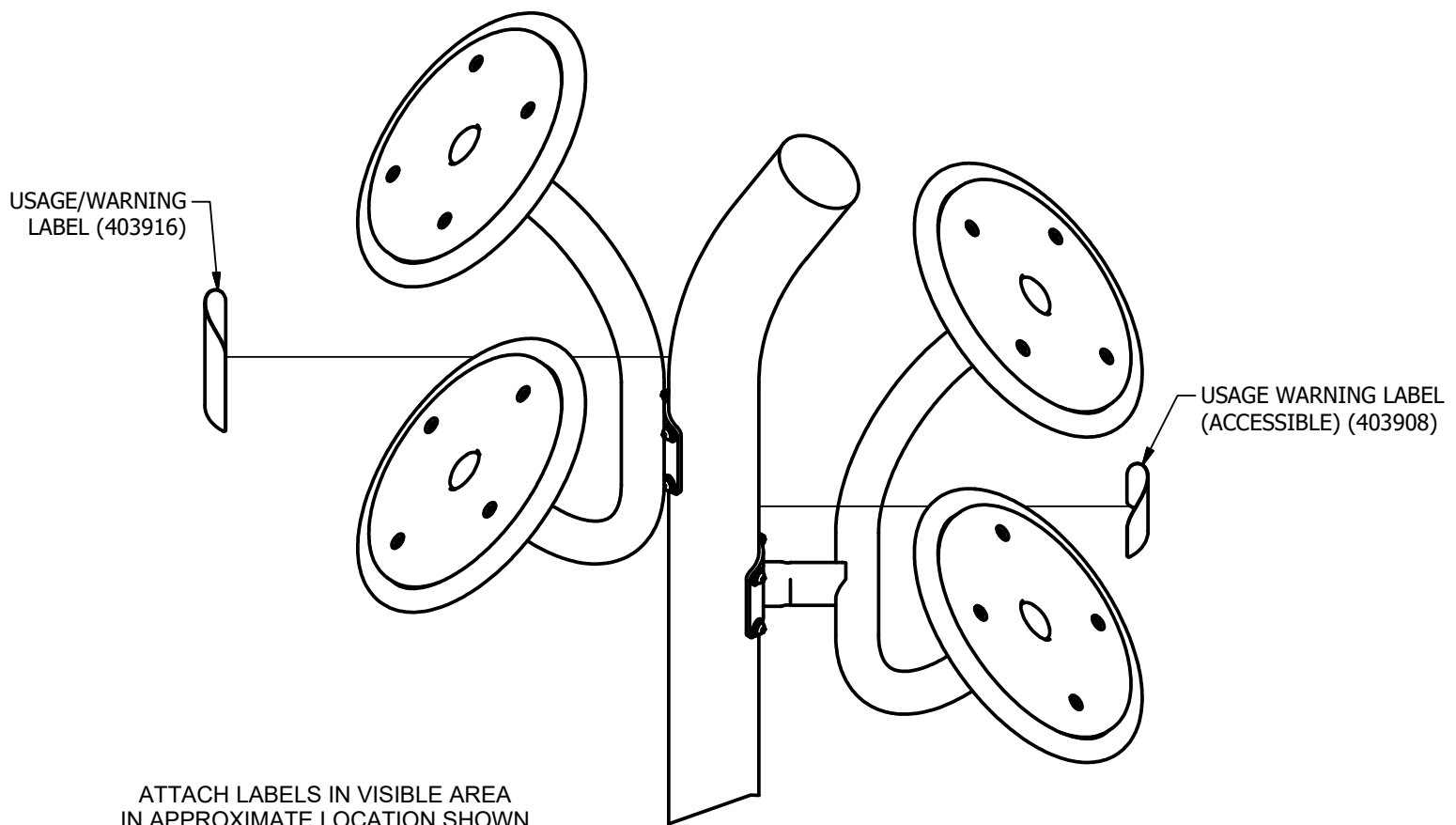
**CAP DETAIL**



**ANCHOR ROD ASSEMBLY**



**UP191J SHOULDER ROTATOR ACCESSIBLE (FOOTING)**  
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**LABEL ATTACHMENT DETAIL**