

#### BT407 NINA

Parts List			
DESCRIPTION	QTY	PART NUMBER	
SWOOP CLIMB	1	BT462	
TWISTED TRIDENT	1	BT468	
SUSPENDED PLAYSHELL	1	BT470	
HELIX SPINNER	1	BT477	
SINGLE DISK CABLE	2	311536	
DOUBLE DISK CABLE	1	311550	
UPRIGHT 1	1	404030	
UPRIGHT 2	1	405503	
UPRIGHT 3	1	405505	
HARDWARE COMPLETE	1	311645	
5" POST TOP COVER	3	311349*	
3/8" x 1/2" P.B.H.C.S. w/PATCH	6	812049*	
3/4" ID BRONZE BEARING	6	817451*	

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.

#### **INSTALLATION INSTRUCTIONS:**

- 1. Dig footing holes as shown in Ground Plan. See specific installation sheets for Elevation Views.
- 2. Refer to specific installation sheets for component attachments, hardware, details, and concrete requirements.
- 3. Attach 5" Post Top Cover to Uprights using 3/8" x 1/2" P.B.H.C.S. w/Patch. See Detail 612.
- 4. Attach Single Disk Cabe and Double Disk Cable to Tabs located on Uprights. See Detail 355.
- 5. Plumb and level the entire assembly and tighten all fasteners.
- 6. After entire discrete unit is assembled pour concrete footings within 4" to the top and taper away from post for water drainage. Allow to cure at least 48 hours before use. **NOTE:** Temporary bracing may be required until concrete cures.
- 7. When the structure is finished and satisfactory, eliminate sharp points and sharp edges (burring) on installed hardware like bolt, nuts, etc. Install resilient surfacing material within the use zone of play structure in accordance with ASTM specifications F1292 appropriate for the fall height of each structure. Refer to the safety guidelines.

#### **MAINTENANCE PROCEDURE:**

1-866-814-8697

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.

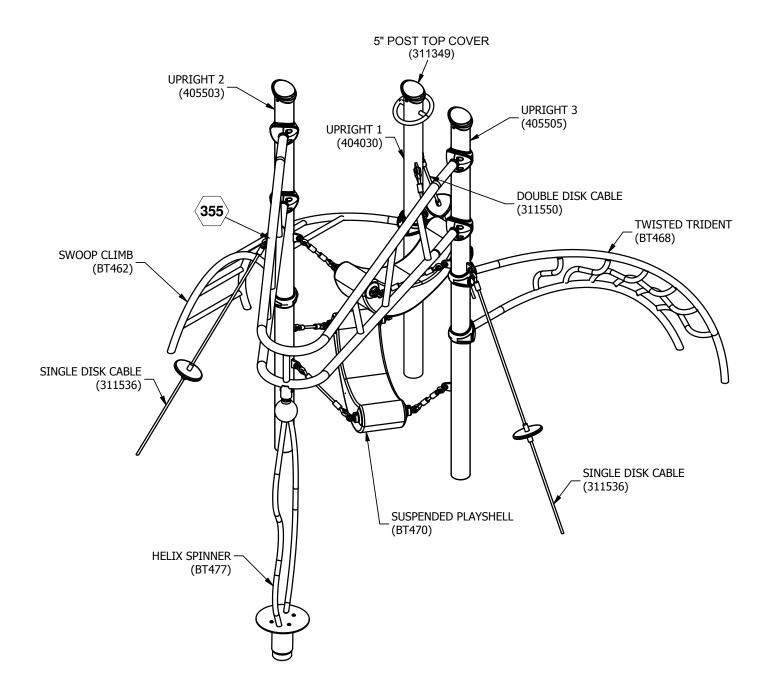
Issued/Revised: 09/20/17



SHEET 1 OF 5



# BT407 NINA





FINISHED ASSEMBLY

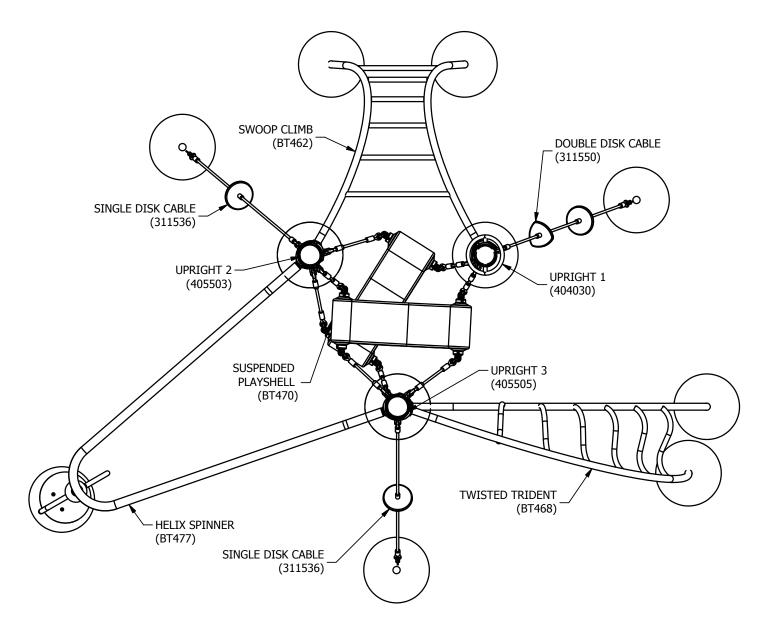
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## BT407 NINA



**PLAN VIEW** 

Issued/Revised: 09/20/17



SHEET 3 OF 5

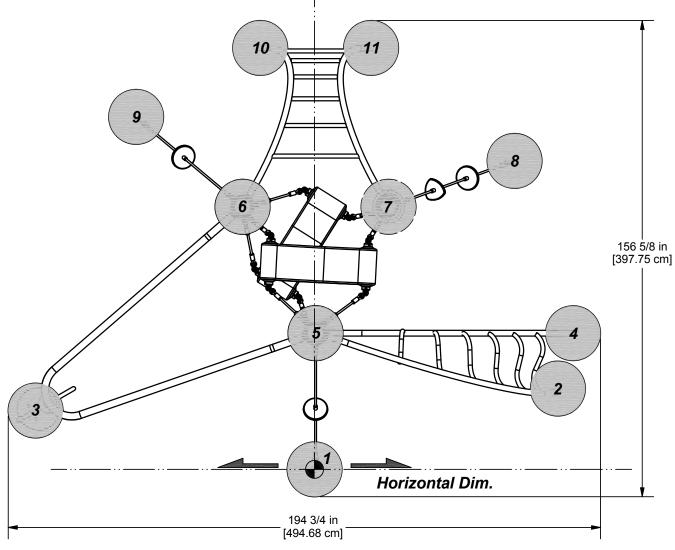
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# BT407 NINA

FOOTING TABLE			
Hole No.	Hor. Dim.	Ver. Dim.	Diagonal
1	0	0	0
2	78 1/8"	19 11/16"	80 9/16"
3	91 3/4"	19 5/16"	93 3/4"
4	84 11/16"	37 3/8"	92 9/16"
5	5/16"	44 3/4"	44 7/8"
6	23 11/16"	86 3/8"	89 9/16"
7	24 5/16"	86 3/8"	89 11/16"
8	65 3/4"	101 7/16"	120 7/8"
9	58 11/16"	115 15/16"	129 15/16"
10	17 7/8"	138 5/8"	139 3/4"
11	18 9/16"	138 5/8"	139 13/16"





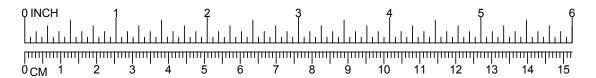
#### **GROUND PLAN**

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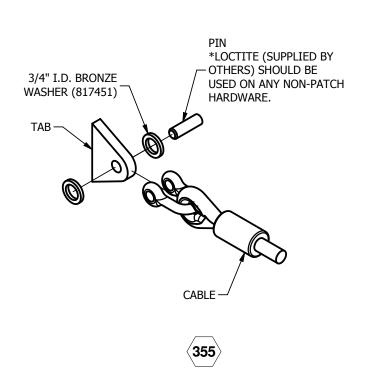


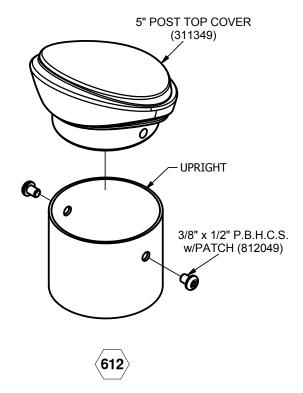
SHEET 4 OF 5

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# BT407 NINA







### BT462 SWOOP CLIMB

Parts List		
DESCRIPTION	QTY	PART NUMBER
METAL CLIMBER	1	311395
HARDWARE COMPLETE	1	311397
SHROUD	2	311350
1/4" x 1 1/4" P.B.H.C.S.	4	812083
1/4" FLAT WASHER (5/8" O.D.)	4	817408
3/8" x 5 3/4" HEX HEAD BOLT	2	801051
3/8" FLAT WASHER	4	817410
3/8" LOCK NUT	2	804353

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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.

#### **INSTALLATION INSTRUCTIONS:**

- 1. Dig footing holes as shown in Elevation and Plan Views. Refer to Top View for correct Upright and orientation.
- 2. Attach Metal Climber to Uprights using 3/8" x 5 3/4" Hex Head Bolt, 3/8" Flat Washer, and 3/8" Lock Nut. See Detail 601.
- 3. Attach Shroud to Upright using 1/4" x 1 1/4" P.B.H.C.S and 1/4" Flat Washer (5/8" O.D.). See Detail 603.
- 4. Plumb and level the entire assembly and tighten all fasteners.

IMPORTANT! Avoid creating any gaps between the components which fall between 3-1/2" and 9". It has been shown that such gaps create entrapment points which can trap a child and cause injury.

- 5. After entire unit is assembled pour concrete footings within 4" to the top and taper away from post for water drainage. Allow to cure at least 48 hours before use. Temporary bracing may be required until concrete cures.
- 6. When the structure is finished and satisfactory, eliminate sharp points and sharp edges (burring) on installed hardware like bolts, nuts, etc. Install resilient surfacing material within the use zone of play structure in accordance with ASTM specifications F1292 appropriate for the fall height of each structure. Refer to the safety guidelines.

#### **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.

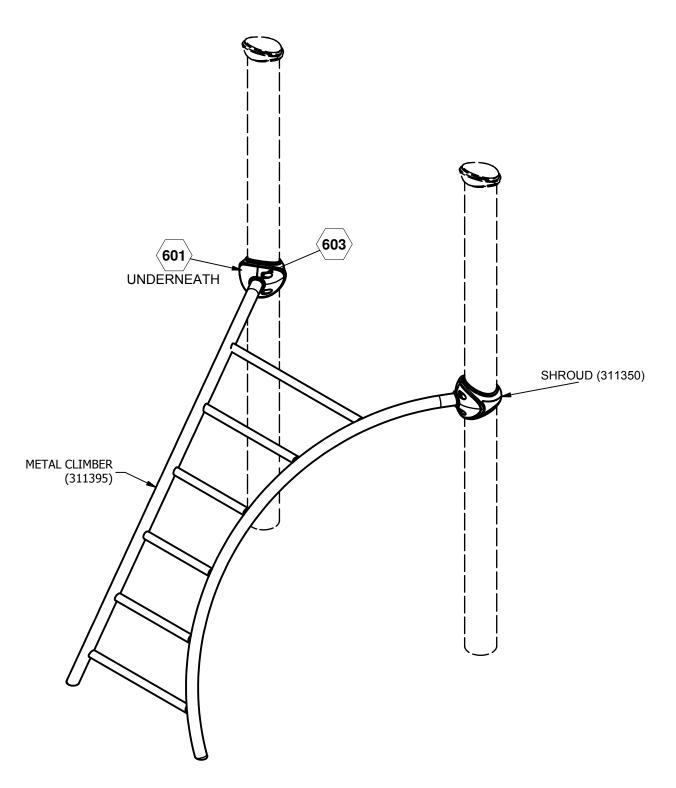
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SHEET 1 OF 4



# BT462 SWOOP CLIMB





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**FINISHED ASSEMBLY** 

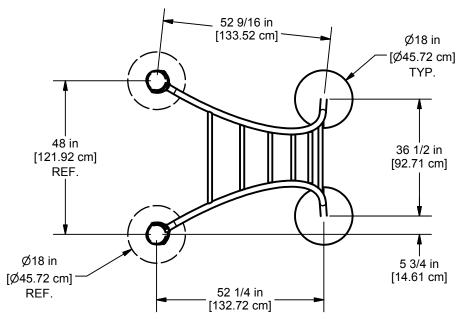


COMPONENTS SHOWN IN HIDDEN LINES ARE SOLD SEPARATELY

SHEET 2 OF 4

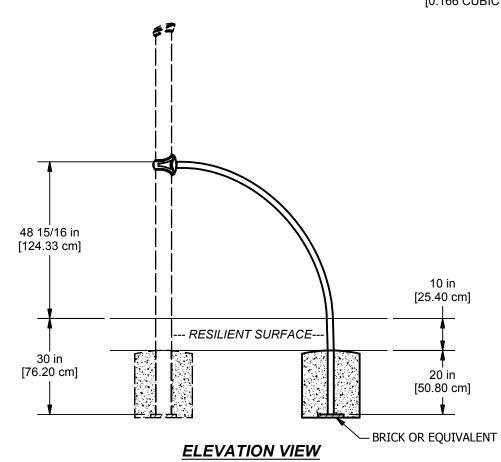


# BT462 SWOOP CLIMB



**PLAN VIEW** 

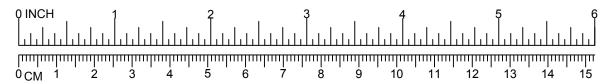
0.218 CUBIC YARDS [0.166 CUBIC METERS]



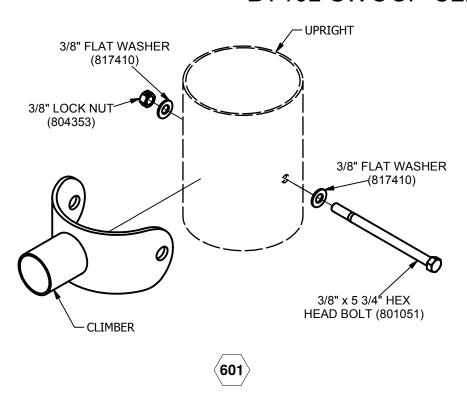
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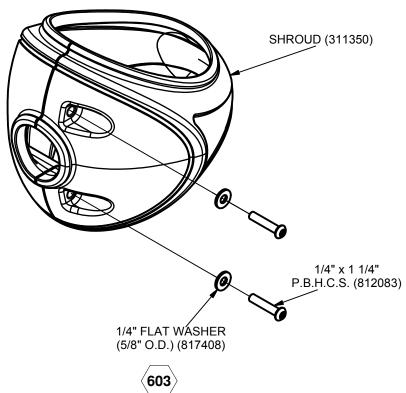


SHEET 3 OF 4



# **BT462 SWOOP CLIMBER**





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SHEET 4 OF 4



Parts List		
DESCRIPTION	QTY	PART NUMBER
WAVE ARCH CLIMBER	1	311463
HARDWARE COMPLETE	1	311513
SHROUD	2	311350
1/4" x 1 1/4" P.B.H.C.S.	4	812083
1/4" FLAT WASHER (5/8" O.D.)	4	817408
3/8" x 5 3/4" HEX HEAD BOLT	2	801051
3/8" FLAT WASHER	4	817410
3/8" LOCK NUT	2	804353

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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.

#### **INSTALLATION INSTRUCTIONS:**

- 1. Dig footing holes as shown in Elevation and Plan Views. Refer to Top View for correct Upright and orientation.
- 2. Attach Wave Arch to Upright using 3/8" x 5 3/4" Hex Head Bolt, 3/8" Flat Washer and 3/8" Lock Nut. See Detail 601.
- 3. Attach Shroud to Uprights using 1/4" x 1 1/4" P.B.H.C.S and 1/4" Flat Washer (5/8" O.D.). See Detail 603.
- 4. Plumb and level the entire assembly and tighten all fasteners.

<u>IMPORTANT!</u> Avoid creating any gaps between the components which fall between 3 1/2" and 9". It has been shown that such gaps create entrapment points which can trap a child and cause injury.

- 5. After entire unit is assembled pour concrete footings within 4" to the top and taper away from post for water drainage. Allow to cure at least 48 hours before use. Temporary bracing may be required until concrete cures.
- 6. When the structure is finished and satisfactory, eliminate sharp points and sharp edges (burring) on installed hardware like bolts, nuts, etc. Install resilient surfacing material within the use zone of play structure in accordance with ASTM specifications F1292 appropriate for the fall height of each structure. Refer to the safety guidelines.

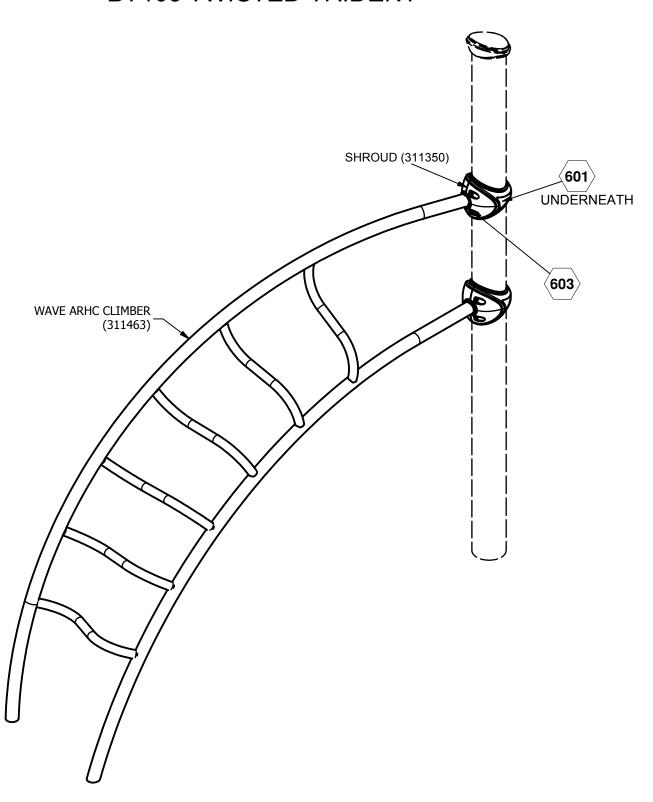
#### **MAINTENANCE PROCEDURE:**

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.

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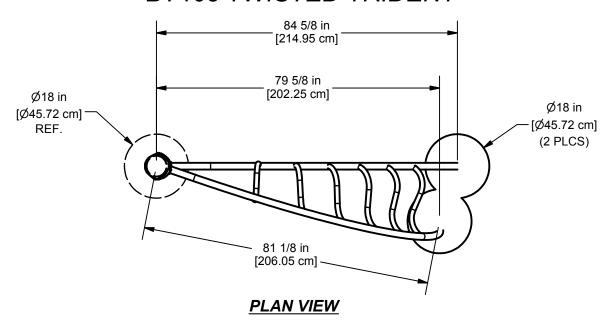
FINISHED ASSEMBLY

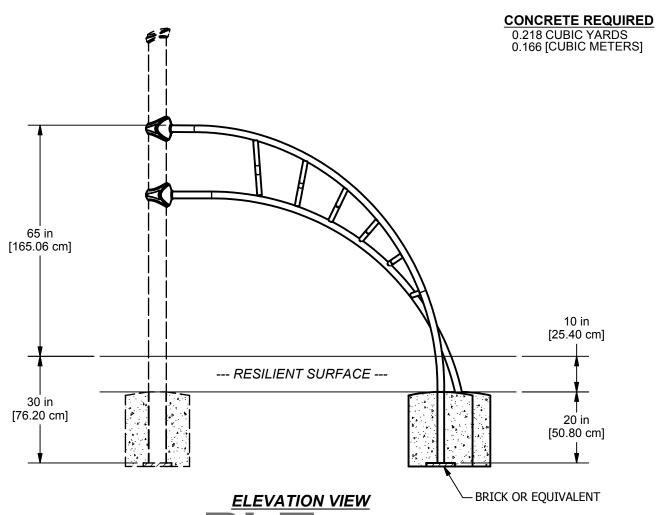


COMPONENTS SHOWN IN HIDDEN LINES ARE SOLD SEPARATELY

SHEET 2 OF 4



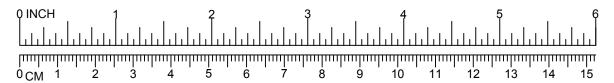


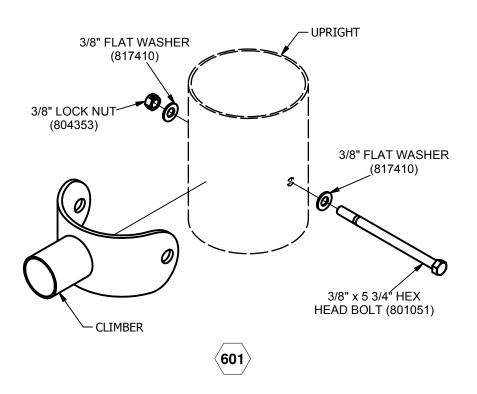


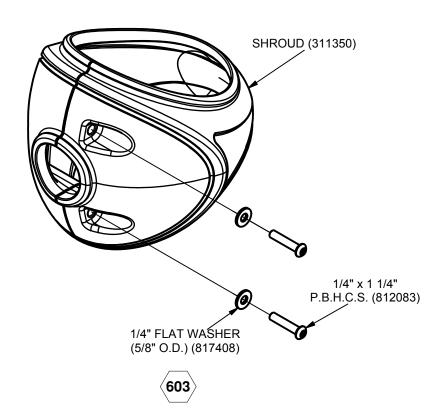
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SHEET 4 OF 4



Parts List			
DESCRIPTION	QTY	PART NUMBER	
PLAYSHELL	2	401549	
PLAYSHELL PIPE	4	402415	
HARDWARE COMPLETE	1	311568	
14 15/16" CABLE	4	309082*	
20 15/16" CABLE	4	309083*	
STOP CASTING ASSEMBLY	8	402250*	
3/4" ID BRONZE BEARING	32	817451*	

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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.

#### **INSTALLATION INSTRUCTIONS:**

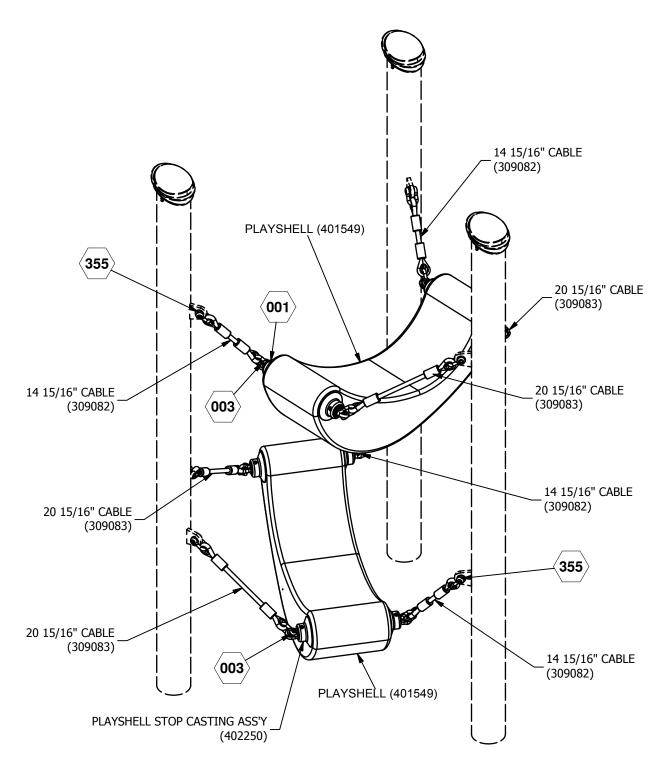
- 1. Dig footing holes as shown in Elevation and Plain Views. Refer to Top View for correct Upright and orientation.
- 2. Locate Playshell and connect Playshell Pipe using Playshell Stop Casting Ass'y. See Detail 001.
- 3. Attach 14 15/16" Cable to Playshell. See Detail 003. NOTE: See Finished View for correct cable location.
- 4. On other side of Playshell attach 20 15/16" Cable to Playshell. See Detail 003. NOTE: See Finished View for correct cable location.
- 5. Attach 14 15/16" Cable to Tabs located on Uprights. See Detail 355. NOTE: See Finished View for correct cable location.
- 6. Attach 20 15/16" Cable to Tabs located on Uprights. See Detail 355. NOTE: See Finished View for correct cable location.
- 7. Plumb and level the entire assembly and tighten all fasteners.
- 8. After entire unit is assembled pour concrete footings within 4" to the top and taper away from post for water drainage. Allow to cure at least 48 hours before use. Temporary bracing may be required until concrete cures.
- 9. When the structure is finished and satisfactory, eliminate sharp points and sharp edges (burring) on installed hardware like bolts, nuts, etc. Install resilent surfacing material within the use zone of play structure in accordance with ASTM specifications F1292 appropriate for the fall height of each structure. Refer to the safety guidelines.

#### MAINTENANCE PROCEDURE:

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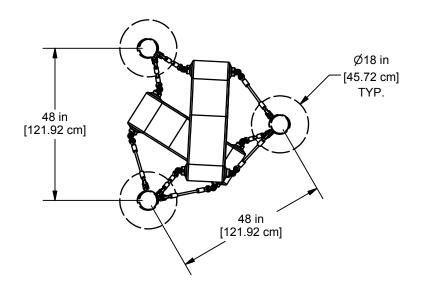
FINISHED ASSEMBLY



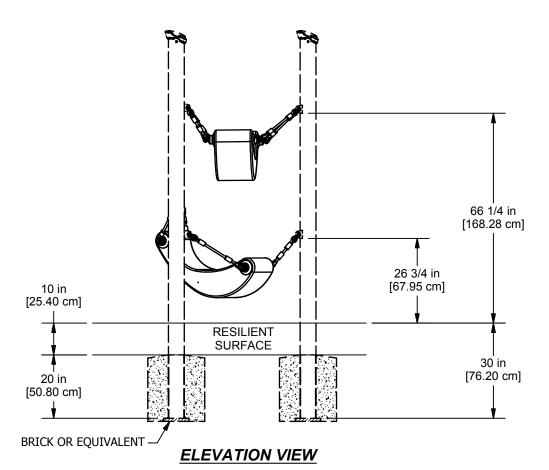
COMPONENTS SHOWN IN HIDDEN LINES ARE SOLD SEPARATELY

SHEET 2 OF 4





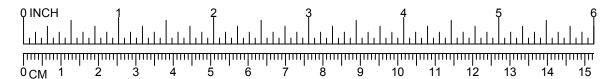
#### **PLAN VIEW**

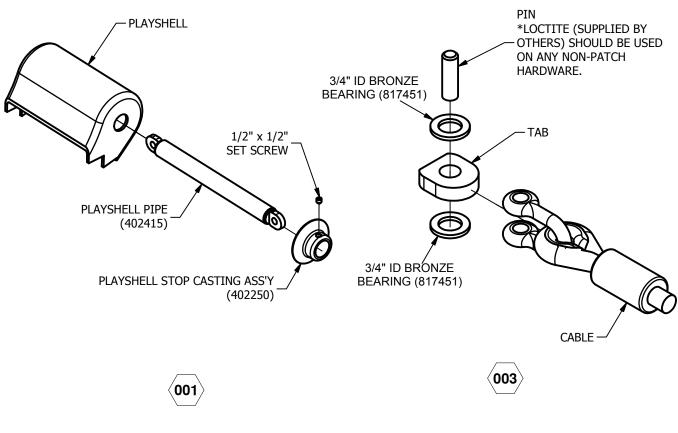


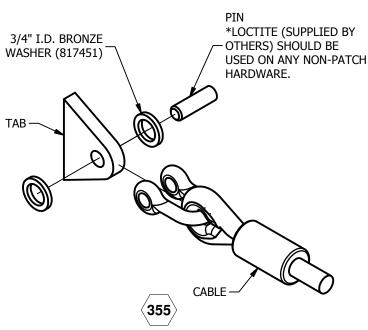
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Issued/Revised: 2/28/2012

1-866-814-8697





Issued/Revised: 8/28/2017

# Play Systems

#### BT477 HELIX SPINNER

Parts List			
DESCRIPTION	QTY	PART NUMBER	
BOTTOM PIPE	1	309657	
CAGE	1	314487	
BEARING ASSEMBLY	1	309673	
LOCK PLATE	1	309836	
SHROUD	4	311350	
TOP FRAME ASSEMBLY	1	314432	
HARDWARE COMPLETE	1	314489	
UHMW HALF CUP	2	212587	
1/4" x 1 1/4" P.B.H.C.S.	8	812083	
1/4" FLAT WASHER (5/8" O.D.)	8	817408	
3/8" x 1" P.B.H.C.S. w/PATCH	6	812050	
3/8" x 2 3/4" B.H.C.S.	1	811058	
3/8" x 5 3/4" HEX HEAD BOLT	4	801051	
3/8" LOCK NUT	8	804353	
3/8" BARREL NUT	1	804804	
3/8" LOCK WASHER	3	817334	
3/8" FLAT WASHER	16	817410	
1/2" ANCHOR ROD	1	135038	

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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.



SHEET 1 OF 6

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### BT477 HELIX SPINNER

#### **INSTALLATION INSTRUCTIONS:**

- 1. Dig footing holes as shown in Elevation and Plan Views. Refer to Top View for correct Upright and orientation.
- 2. Attach Top Frame Assembly to Upright using 3/8" x 5 3/4" Hex Head Bolt, 3/8" Flat Washer, and 3/8" Lock Nut. See Detail 601.
- 3. Attach Shroud to Upright using 1/4" x 1 1/4" P.B.H.C.S. and 1/4" Flat Washer (5/8" O.D.). See Detail 603.
- 4. Attach UHMW Half Cups to Cage using 3/8" x 2 3/4" B.H.C.S., 3/8" Lock Washer, and 3/8" Barrel Nut. See Detail 697.
- 5. Attach Bottom Pipe to Bearing Assembly using 3/8" x 1" P.B.H.C.S. w/Patch, 3/8" Lock Washer, and Lock Plate. See Detail 425.
- 6. Attach Bearing Assembly to Cage using 3/8" x 1" P.B.H.C.S. w/Patch, 3/8" Flat Washer, and 3/8" Lock Nut. See Detail 426.
- 7. Attach the Anchor Rod to the Bottom Pipe and place in footing hole. See Detail 231. *Important; Make sure the cage is tilted*3 degrees as shown in the elevation view. Before concrete is poured check angle of cage by spinning it. The top curved pipe socket will be aligned with bottom pipe.
- 8. Plumb and level the entire assembly and tighten all fasteners.
- 9. After entire unit is assembled, pour concrete footings within 4" to the top and taper awat from post for water damage. Allow to cure at least 48 hours before use. Temporary bracing may be required until concrete cures.
- 10. When the structure is finished and satisfactory, eliminate sharp points and sharp edges (burring) on installed hardware like bolts, nutc, etc.. Install resilient surfacing material within the use zone of play structure in accordance with ASTM specifications F1292 appropriate for the fall height of each structure. Refer to safety guidelines.

#### **MAINTENANCE PROCEDURE:**

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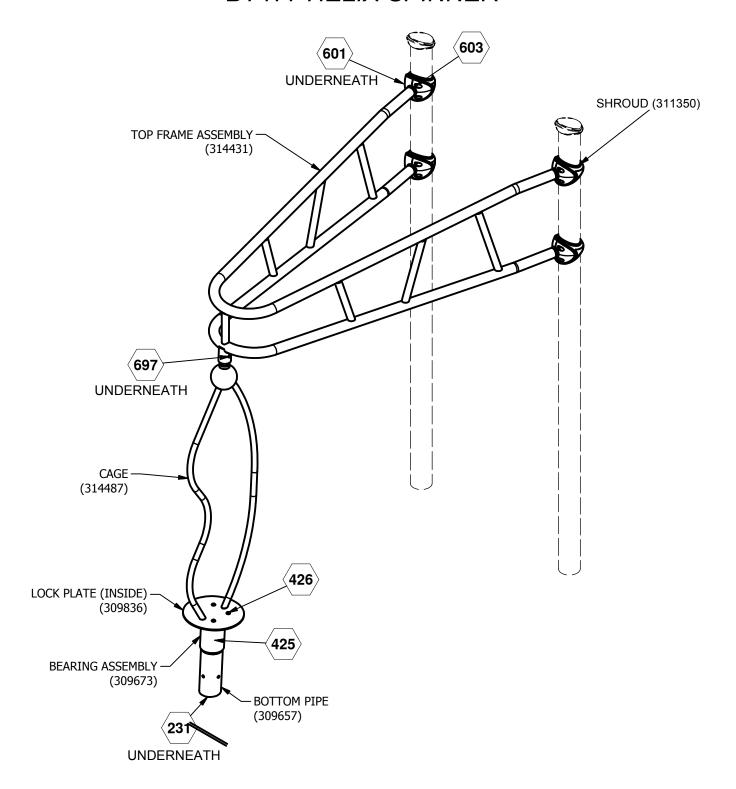
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# **BT477 HELIX SPINNER**





FINISHED ASSEMBLY

COMPONENTS SHOWN IN HIDDEN LINES ARE SOLD SEPARATELY

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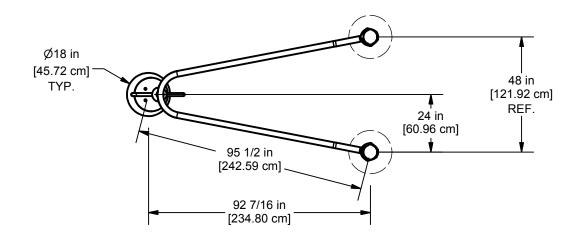
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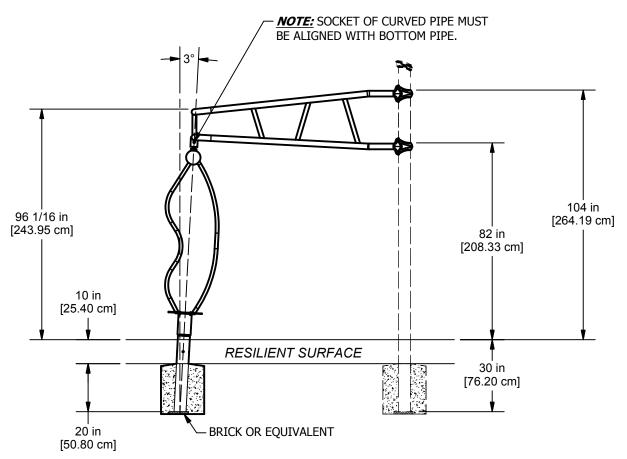
## **BT477 HELIX SPINNER**



#### **PLAN VIEW**

#### **CONCRETE REQUIRED**

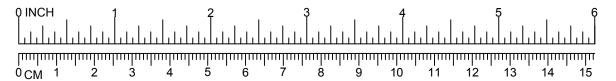
0.109 CUBIC YARDS 0.083 [CUBIC METERS]



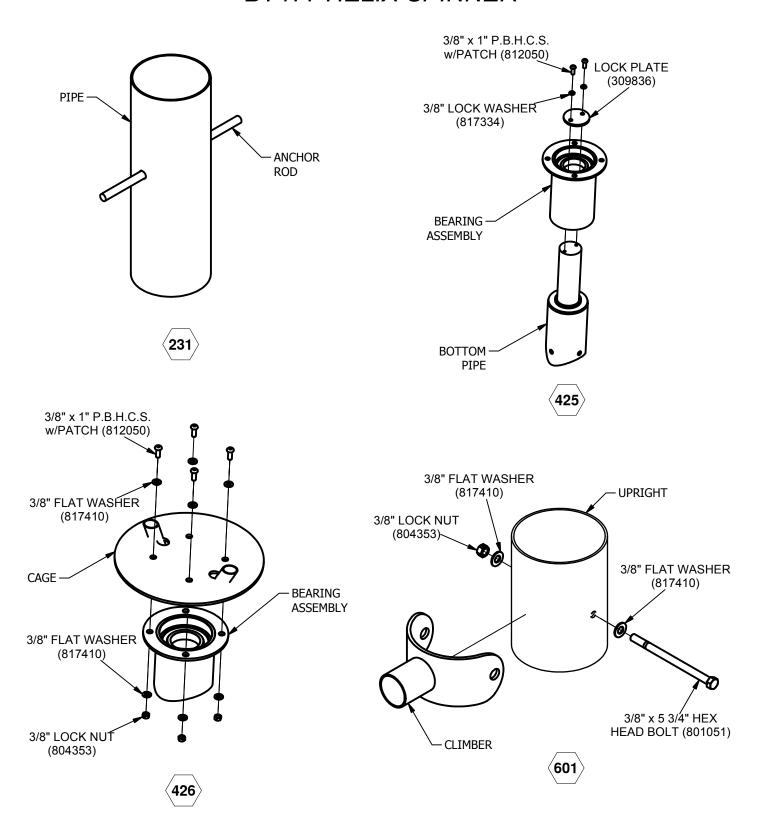
**ELEVATION VIEW** 

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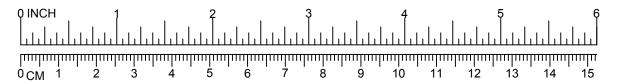
1-866-814-8697 higtoys.com



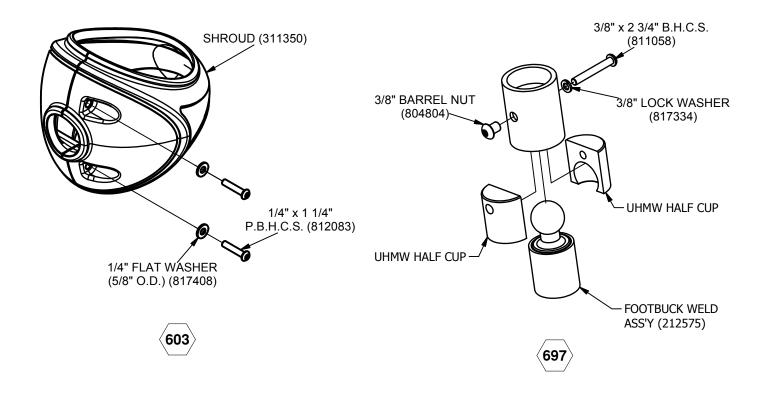
# **BT477 HELIX SPINNER**



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# **BT477 HELIX SPINNER**



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