

MBT366 HANDRING MAZE - METAL BT366 HANDRING MAZE - WOOD

MBT366 Parts List		
DESCRIPTION	MBT366	PART NUMBER
END CAP	4	G010
HANDRING RAIL 122 1/16"	3	G490
PLATFORM BALCONY/ACCESS WIDE - M	2	M491
COLUMN END FITTING, METAL	4	M600
11'-0" ALUMINUM COLUMN RIGHT	2	A011C
11'-0" ALUMINUM COLUMN LEFT	2	A011D
BUMPER PLATE, 12 BOARD	2	401426
3 RAIL BRACKET	2	402018
PLATFORM BUMPER, 12 BOARD	2	402322
---HARDWARE COMPLETE---	1	404713
12MM DO-NUT BASE	20	G034
12MM DO-NUT CAP	20	G036
Plug 7/16" Hole Black	20	H381
1/2" THREADED INSERT	16	M000
S-HOOK	10	1
TRAPEZE RING	10	109
U-NUT HANGER	10	0104
PIPE CRADLE, 1"	4	401394
STAINLESS CURVED WASHER	8	401428
ACCESS HANDRAIL, STAND ALONE	4	401499
RECEPTACLE CONN	4	401628
3/8" GALV CHAIN	10	404721
#10 x 1/2" SHEET METAL SCREW	12	810062
#12 x 1 1/4" WOOD SCREW, PAN HEAD SQ.	16	815513
1/4" x 13/32" DRIVE RIVET	8	805304
3/8" x 2" B.H.C.S.	8	811055
3/8" x 2 1/4" B.H.C.S.	4	811056
3/8" x 4" B.H.C.S.	20	811076
3/8" FLAT WASHER	40	817410
3/8" S.S. FLAT WASHER	4	817460
3/8" LOCK NUT	4	804353
1/2" x 1 1/2" SET SCREW	4	816081
1/2" x 1 3/4" HEX HEAD BOLT	12	801206
1/2" x 2 1/2" B.H.C.S.	4	811065
1/2" x 2 3/4" HEX HEAD BOLT	6	801210
1/2" FLAT WASHER	8	817412
1/2" LOCKNUT	6	804355
ASSY MATERIALS 5-12 ONLY	1	12004E

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BT366 Parts List		
DESCRIPTION	BT366	PART NUMBER
END CAP	4	G010
HANDRING RAIL 122 1/16"	3	G490
11' COLUMN, G-LAM	4	Z011
COLUMN END FITTING - WOOD	4	Z600
PLATFORM BALCONY/ACCESS WIDE - WOOD	2	Z491
BUMPER PLATE, 12 BOARD	2	401426
3 RAIL BRACKET	2	402018
PLATFORM BUMPER, 12 BOARD	2	402322
---HARDWARE COMPLETE---	1	404714
EAGLE FASTENER	16	G000
HOLE PLUG	108	G005G
12MM DO-NUT BASE	20	G034
12MM DO-NUT CAP	20	G036
Plug 7/16" Hole Black	20	H381
S-HOOK	10	1
TRAPEZE RING	10	109
U-NUT HANGER	10	0104
PIPE CRADLE, 1"	4	401394
STAINLESS CURVED WASHER	8	401428
ACCESS HANDRAIL, STAND ALONE	4	401499
RECEPTACLE CONN	4	401628
10" PIPE	4	401991
3/8" GALV CHAIN	10	404721
#10 x 2" WOOD SCREW	12	815507
#12 x 1 1/4" WOOD SCREW, PAN HEAD SQ.	16	815513
3/8" x 2" B.H.C.S.	8	811055
3/8" x 2 1/4" B.H.C.S.	4	811056
3/8" x 4" B.H.C.S.	20	811076
3/8" FLAT WASHER	40	817410
3/8" S.S. FLAT WASHER	4	817460
3/8" LOCK NUT	4	804353
1/2" x 1 1/2" SET SCREW	4	816081
1/2" x 1 3/4" HEX HEAD BOLT	12	801206
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ASSY MATERIALS 5-12 ONLY	1	12004C

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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.

SPECIFICATIONS:

NOTE: THIS SPECIFICATION BOOKLET SHOULD BE KEPT IN CUSTOMERS FILE FOR FUTURE REFERENCE.

NOTE: All weights are based on average comparisons of each part.

Polyester Powder-Coating - 11'-0" Aluminum Column -Steel and aluminum Powder coated components have a super-tough electrostatically-applied custom formula of TGIC polyester powder which is heat-cured to the surface of the metal, and has superior adhesion and exterior durability. All components have sharp edges and weld-spatter removed, and are cleaned in a 6-stage bath system, which includes an iron phosphate wash, as a rust inhibitor, and a sealer to prevent flash rusting before coating. Typical characteristics are: 3.0 - 5.0 mil thickness and oven cured between 375 to 425 degrees Fahrenheit. Pencil Hardness H (ASTM D-3363), Impact (ASTM D-2794-69), Wedge Bend (ASTM D-522-68), Adhesion (Cross Hatch ASTM D-3359 & Knife Scratch ASTM D-2197), Environmental (Stain Resistance ASTM D-1308, Humidity ASTM D 2247 - 87, Salt Spray ASTM B-117 & Fadometer 300 hrs. with no loss of gloss), Oven-bake Stability 100% at 400 degrees Fahrenheit.

Sand Cast aluminum Parts - Trapeze Ring - Sand cast aluminum parts are made from 356, 535 or 713 aluminum alloys, which are heated to melting temperatures, and then poured into sand molds which have been prepared using metallic boxes filled with special "green sand" having an impression of the components to be cast imprinted in it using a "pattern". The molds are destroyed with each casting, but the patterns are reused.

Fasteners - All fasteners are either zinc-plated or stainless steel based on application. All connections using threaded fasteners include a method for securing the fasteners after assembly. These include: locknuts with deformed threads, nylon rings, factory-applied patch-lock compound, or a thread-locking product placed on the threads during field assembly.

Eagle Fastener - (U. S. Pat. No. 3,814,416) The Eagle Fastener is a proprietary expansion fastener that is die-cast from zinc/aluminum alloy (ZA3) and is used to secure to columns. The Eagle Fastener has been designed to securely attach a variety of components to a wood column by expanding within a column's Eagle Hole using fins and teeth to prevent rotation and extraction from the column. The Eagle Fastener contains a ½-13 nut having a nylon locking ring to prevent loosening after assembly.

Do-Nut - Do-Nuts are bolt covers that are injection-molded from Nylon (PA6) in two parts, a base and a cap, which are always used together. Two sizes of Do-Nuts are available to cover either ½ inch bolts or 3/8 inch bolts. Do-Nuts designed to cover ½ bolts have a maximum diameter of 1 7/8 inches while Do-Nuts designed to cover 3/8 inch bolts have a maximum diameter of 1 3/8 inches. Do-Nut caps are self-locking when driven into the base after final bolt tightening. Do-Nuts provide protection against bolt head, bolt end, and nut protrusions to meet the protrusion criteria established by applicable ASTM and CSA standards and CPSC guidelines.

COLUMN, G-LAM -11' - Wood Columns are manufactured using glue-laminated Scots Pine, with an outside diameter of 6". 6" from each end, and at every 12" increment, there are four 1-1/8" holes drilled 90 apart. The columns are cut in lengths ranging from two feet though 12 feet in one-foot increments. In the field, an aluminum/zinc (Eagle) fastener may be installed into the holes wherever another component is attached to the column. Polypropylene (PP) Hole Plugs may be installed into all holes that are not used for other component attachments, and a polypropylene (PP) column end fitting and color scheme appropriate plastic end cap are attached to the top end of the column.

11' - 0" ALUMINUM COLUMN - The posts shall be 6" outside diameter tubing with an 1/8" minimum wall thickness. The material shall be extruded from 6005-T5 seamless aluminum alloy conforming to ASTM-B-221. Minimum yield strength shall be 35,000 psi and minimum tensile strength shall be 38,000 psi. All upright posts shall be coated with a custom formula TGIC polyester powder coating in conformance with the specifications outlined herein the top end of the column.

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Hole Plug - Holes Plugs for wood and metal columns are injection-molded of high-impact polypropylene (PP) plastic, with colorant and UV inhibitor. The Hole Plugs are used to fill unused holes in columns following field assembly. When installed, the Hole Plug for Wood Columns expands to secure the Hole Plug into the hole using teeth and fins similar to those on the Eagle Fastener. The hole Plug for Metal Columns secures in place using a simple snap feature.

Column End Caps - Column End Caps are injection-molded from high-impact polypropylene (PP) with colorant and UV inhibitor. The caps are used at the top end of Standard Columns and attach in the field to the Column End Fitting using #10 stainless steel screws.

Bumper Plate - Bumper Plate will be manufactured from Santoprene Rubber.

Hardware - All nuts, bolts, screws, inserts, and lock washers used in the assembly of all play equipment, 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 300 series stainless steel. Fasteners with yellow dichromate treatment have an electro deposited, 99.9% pure zinc substrate applied from a specially formulated solution sealed with a yellow dichromate top coat designed to work in conjunction with the zinc plating. Yellow dichromate has a 320% longer life to white corrosion and 275% longer to red corrosion than does hot-dip galvanizing. Galvanizing coverage shall demonstrate the ability to exceed 1000 hours salt spray corrosion exposure in accordance with ASTM B-117. Internal surface zinc rich 81% minimum zinc dust content in organic resin, as per ASTM F-1234, Section 5.2.4, Type D. All upright post shall have a finished surface line mark, to indicate proper burial depth.

Conditioned Wood - All wood components used in platforms, enclosures and stairs are manufactured from kiln-dried Southern Yellow Pine. They are conditioned with Copper Azole - a wood preservative - after fabrication, and prior to assembly of the wood components.

Platform Balcony - Wood - Platforms are factory assembled from components made from Southern Yellow Pine. Platforms are constructed from the following wood components: nominal 2x6 platform floor boards and nominal 2x4 skirting boards. All platforms are constructed using #10 stainless steel wood screws. All platform wood components are conditioned with Copper Azole after fabrication, but prior to assembly.

Recycled Plastic Lumber - All plastic lumber components are made from 98% post-consumer (primarily recycled milk jugs and bleach bottles) high-density polyethylene (HDPE). The remaining 2% is pigment and UV inhibitors. All load-bearing components are also fiberglass reinforced for rigidity.

Platform Balcony - Plastic Lumber - Recycled plastic platforms are factory assembled from recycled high density polyethylene. Platforms are constructed from the following components: 5/4 platform floor and doubler boards, nominal 2x4 support boards, and nominal 2x6 skirting boards. All platforms are constructed using #10 stainless steel screws. All support, doubler and skirting components are fiberglass reinforced for rigidity.

Fasteners - All fasteners are either zinc-plated or stainless steel based on application. All connections using threaded fasteners include a method for securing the fasteners after assembly. These include: locknuts with deformed threads, nylon rings, factory-applied patch-lock compound, or a thread-locking product placed on the threads during field assembly.

Handring Traverse and Handring Maze (for use with Soft Edges) -- The *Handrings* are cast aluminum and into a "O" shape with an approximate 4 inch x 4 inch opening and with the hand gripping portion of the ring facing down. *Handring* attachment to ¼ inch *galvanized*, proof coil chain is made with a cast in and a *zinc-plated* shoulder bolt. The *Handring Chain* attaches to an overhead horizontal *Handring beam* with a *U-NutHanger*. The *Handring beam* is supported at each end by *plastisol-coated Handring Beam Fittings*. These fittings are then attached to a pair of *Handring Support Brackets* with two 3/8 inch bolts. The *Handring Support Bracket* is constructed from 1½ inch x 3 inch x .3/16 inch rectangular tube welded to two *Face Plates* that bolt to *columns* with four ½ inch bolts, *Do-Nuts*, and *Eagle Fasteners* or *Threaded Inserts*. Standard *Handring* grip height is 70 inches from the resilient surface with a take-off and landing *platform* height of 18 inches above the resilient surfacing. *Platforms* that serve the *Handring Traverse* and *Handring Maze* include *Soft Edges* along the edges of the *platform*.

MBT366 HANDRING MAZE - METAL BT366 HANDRING MAZE - WOOD

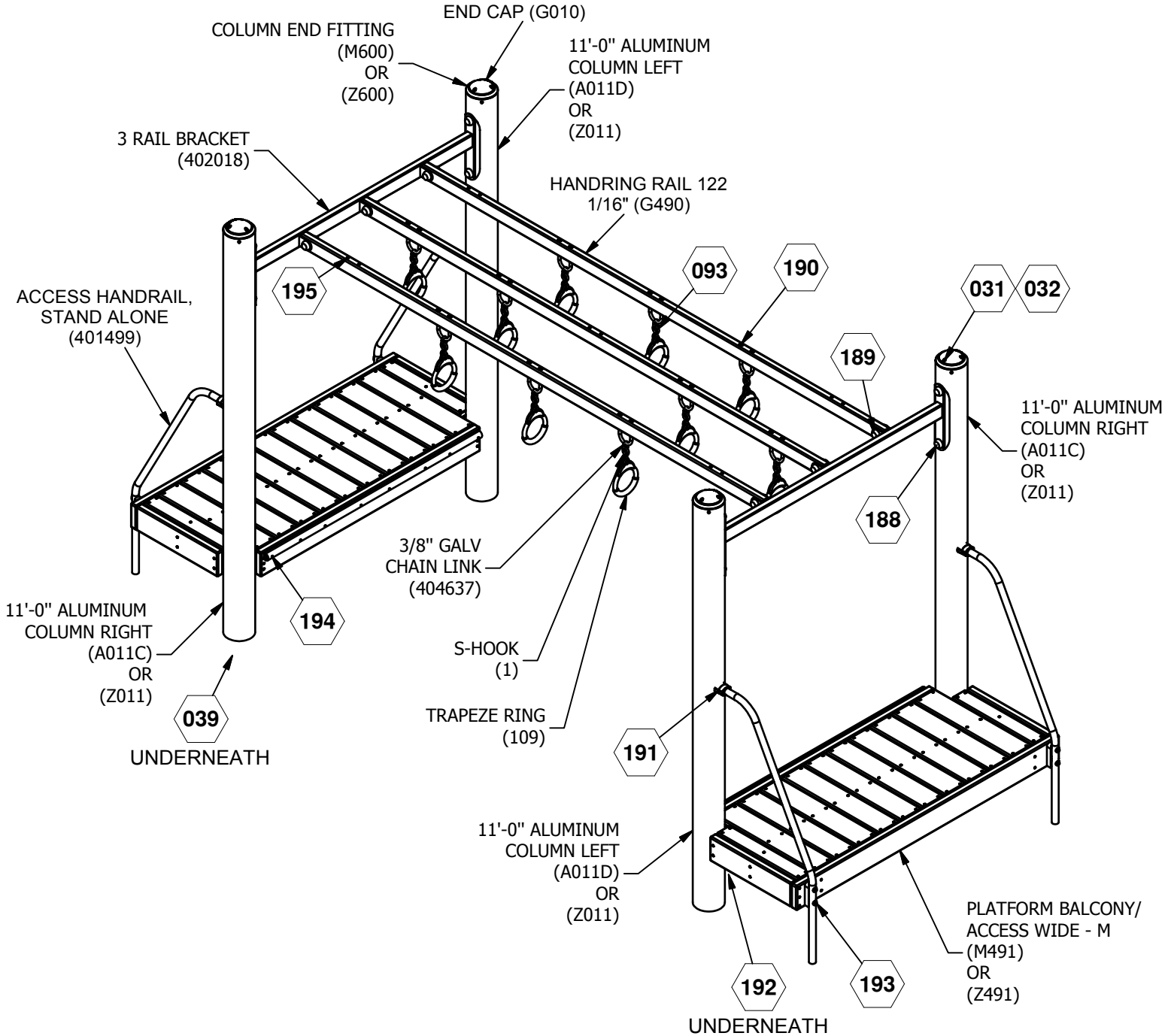
INSTALLATION INSTRUCTIONS:

1. Dig holes according to the Ground Plan. See Ground Plan for dimensions and notes regarding surfacing, etc. NOTE: *Due to extremes in weather and soil conditions, hole sizes may have to be increased to meet local conditions.*
2. Place Columns in holes as shown in Ground Plan. **Note: If installing the wood version insert 10" pipe into bottom hole of Column. See Detail 039.**
3. Attach 3 Rail Brackets to Columns at locations shown in Finished Assembly, using 1/2" Threaded Insert, 12mm Do-Nut Base, 1/2" x 1 3/4" Hex Head Bolt, and 12mm Do-Nut Cap. If installing the wood version, use Eagle Fastener, 12mm Do-Nut Base, 1/2" x 1 3/4" Hex Head Bolt, and 12mm Do-Nut Cap. See Detail 188. Refer to Typical Threaded Insert or Eagle Fastener Installation.
4. Attach Handring Rails to 3 Rail Brackets using 12mm Do-Nut Base, 1/2" x 2-3/4" Hex Head Bolt, 1/2" LockNut, and 12mm Do-Nut Cap. See Detail 189. Level and fully tighten all Hardware. Do not attach Trapeze Rings until resilient surfacing has been installed.
5. Slide 3/8" Galv Chain Link onto each U-Nut Hanger and attach each in accordance with Finished Assembly Drawing. Attach U-Nut Hangers to handring Rail using 3/8" x 4" B.H.C.S. and 3/8" Flat Washer per U-Nut Hanger. See Detail 190.
6. Attach Trapeze Rings to each S Hook. Attach each S Hook to 3/8" Galv Chain. Crimp shut all 'S' hooks as per specification ASTM F1487 section 6.3 for Entanglement. See Detail 190 and 093.
7. Attach Platform Balconies at locations shown in Finished Assembly Drawing, using 1/2" x 2-1/2" Button Head Cap Screws and 1/2" Flat Washers. See Detail 192.
8. Attach Access Handrail to Columns in locations shown in Finished Drawing. Secure to columns using 1/2" x 1-1/2" Set Screws, 1/2" x 2 1/2" Button Head Cap Screws and 1/2" Flat Washers. See Detail 191.
9. Secure Pipe Cradles to Platforms using 3/8" x 2 1/4" Button Head Cap Screws, 3/8" S.S. Washers. Secure Access Handrails to Pipe Cradles using 3/8" x 2" Button Head Cap Screws and Curved Washer Stainless. See Detail 193.
10. Attach Platform Bumper using Square Recessed Pan Head Tapping Screws. See Detail 194.
11. Attach all 12mm Do-Nut Caps on all 12mm Do-Nut Bases. Attach Black Hole Plug 7/16". See detail 195.
12. For BT366, insert proper Hole Plugs in all open holes in Columns.
13. When the assembly is plumb and level, tighten all fasteners and pour concrete within 4" to the top and taper away from supports to allow drainage. Allow to cure at least 72 hours before use. Important: temporary bracing may be required to support climber until concrete cures.
14. When structure is finished and satisfactory, tighten all fasteners and install Drive Rivets in all Column End Fittings. Also 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.
15. Attach the Manufacturer's I.D. Label to a visible position on upright.

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.

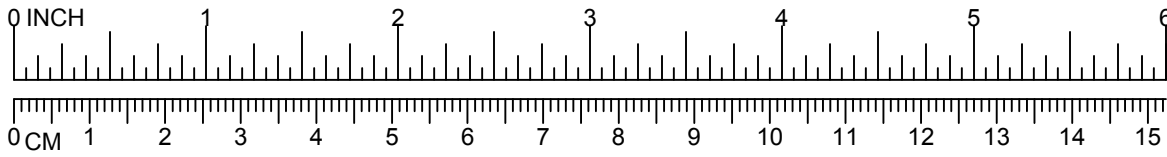
MBT366 HANDRING MAZE - METAL BT366 HANDRING MAZE - WOOD



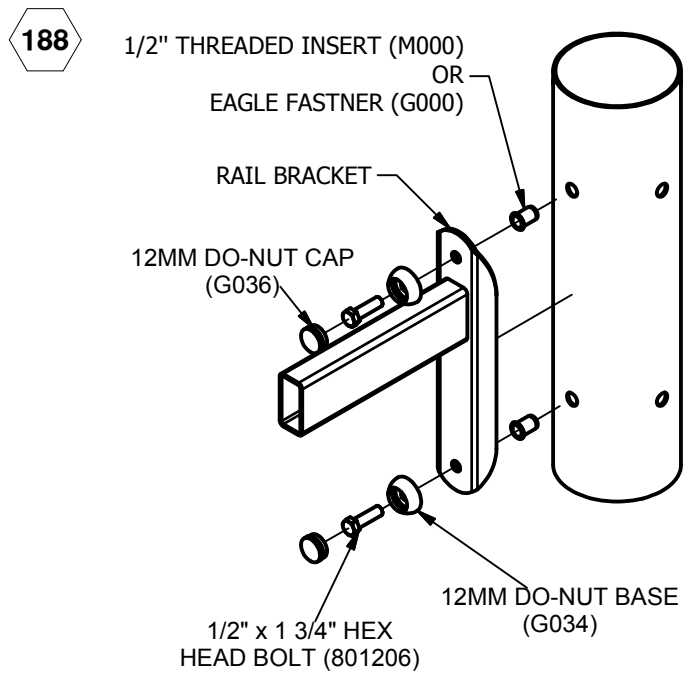
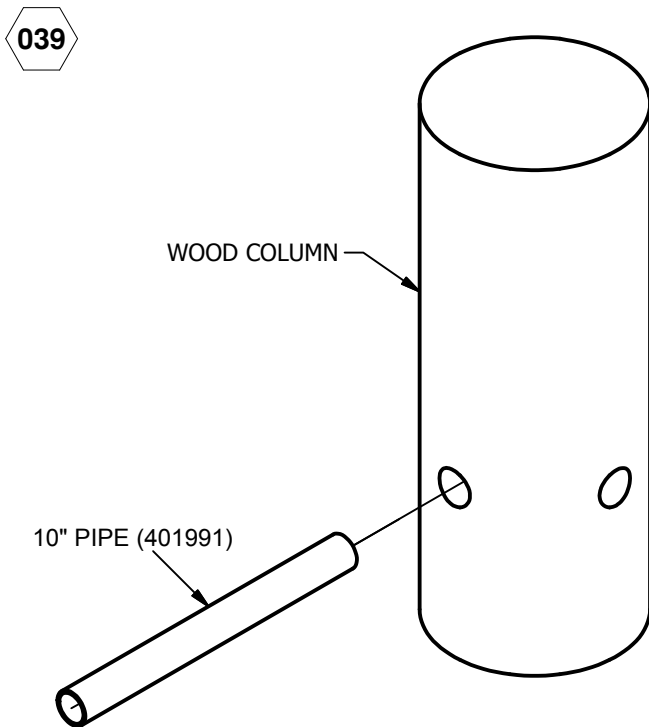
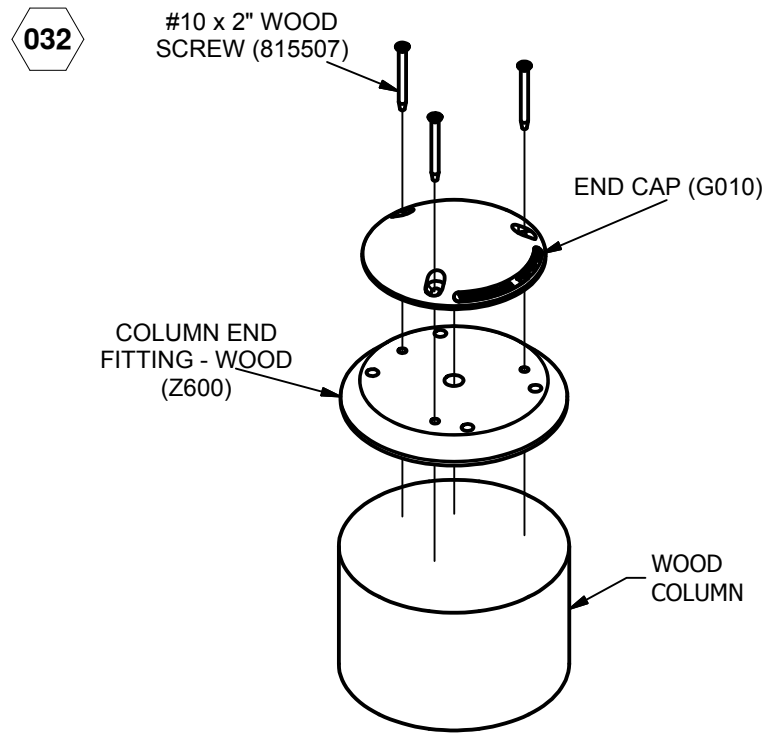
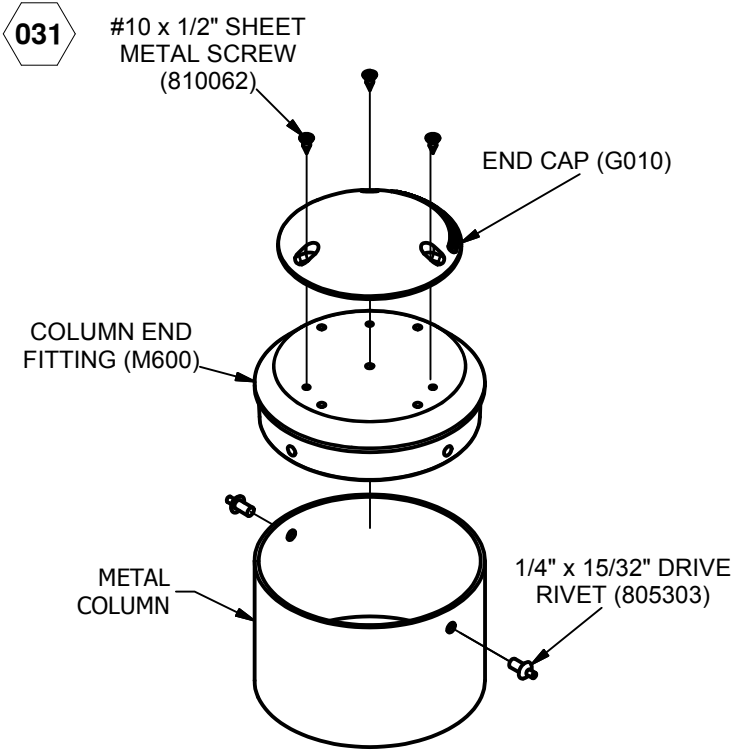
⬡ = INSTALLATION DETAIL

FINISHED ASSEMBLY
MBT366 FRONT VIEW SHOWN

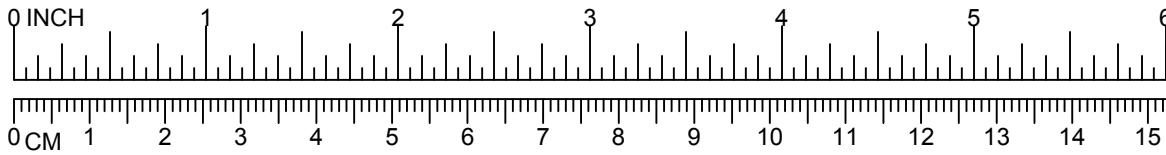
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MBT366 HANDRING MAZE - METAL BT366 HANDRING MAZE - WOOD

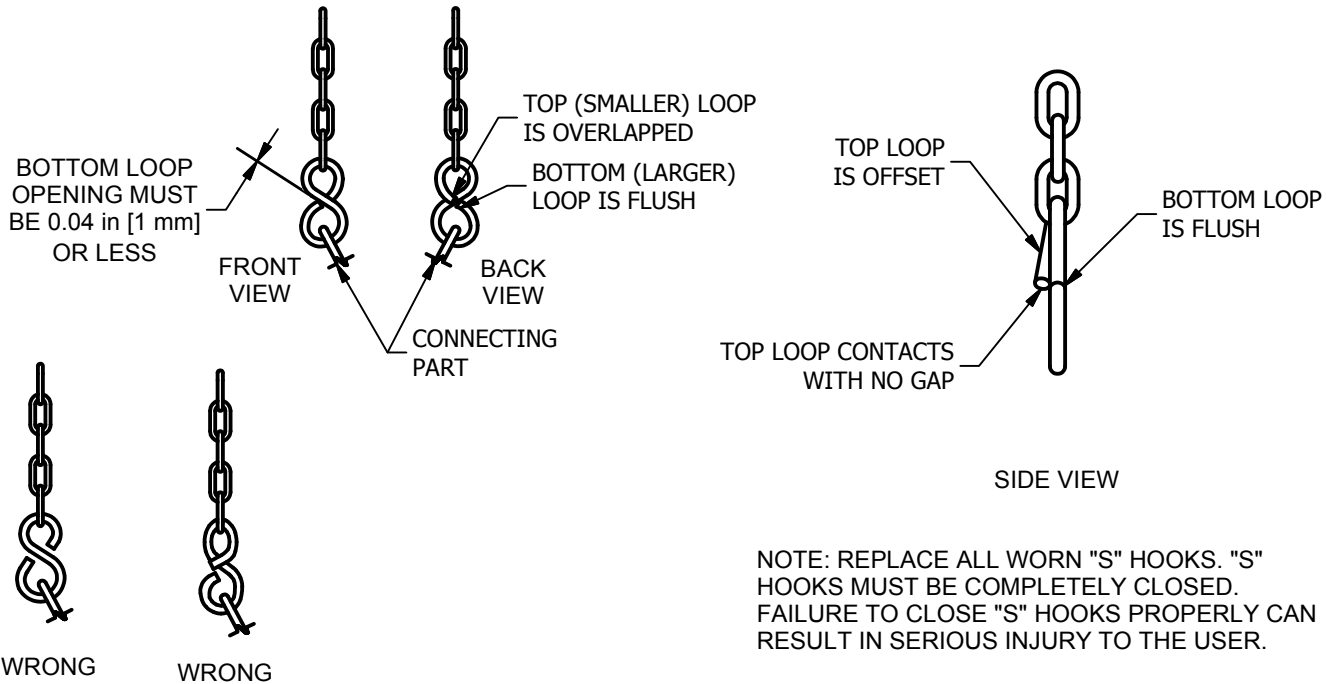


NOTE: REFER TO THE INSTALLATION PROLOG FOR TYPICAL THREADED INSERT AND EAGLE FASTENER INSTALLATION.

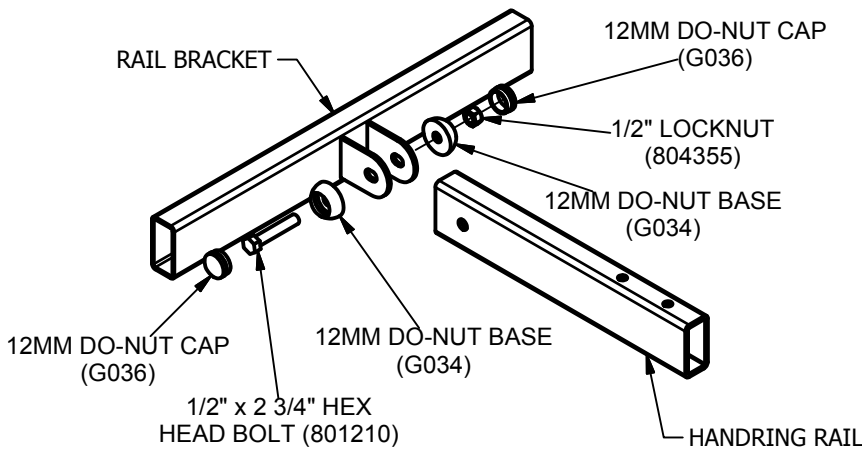


MBT366 HANDRING MAZE - METAL BT366 HANDRING MAZE - WOOD

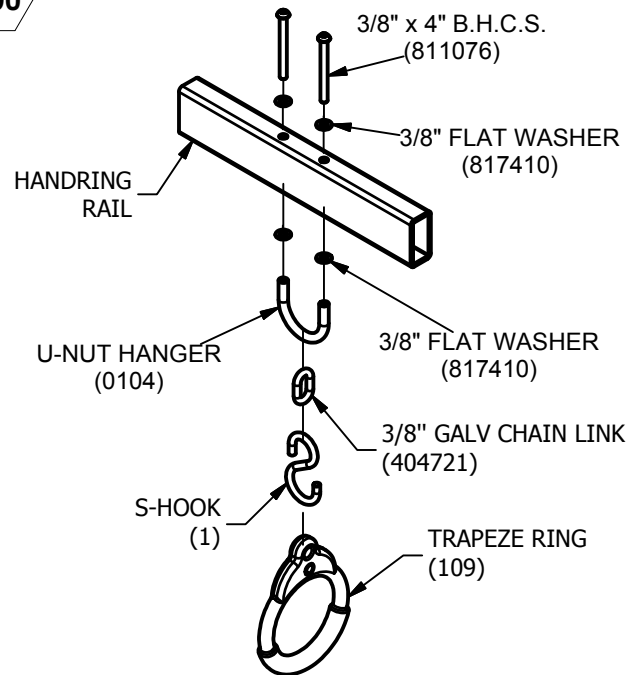
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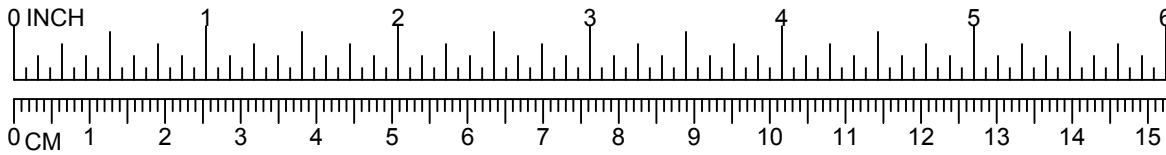


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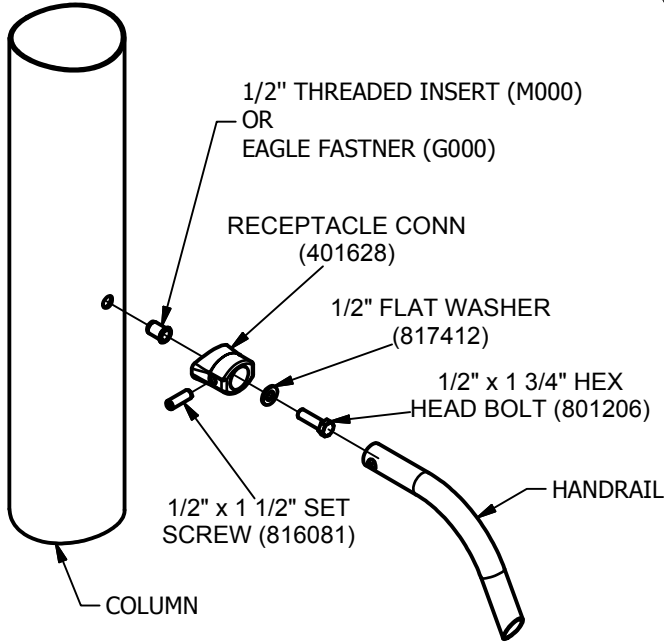
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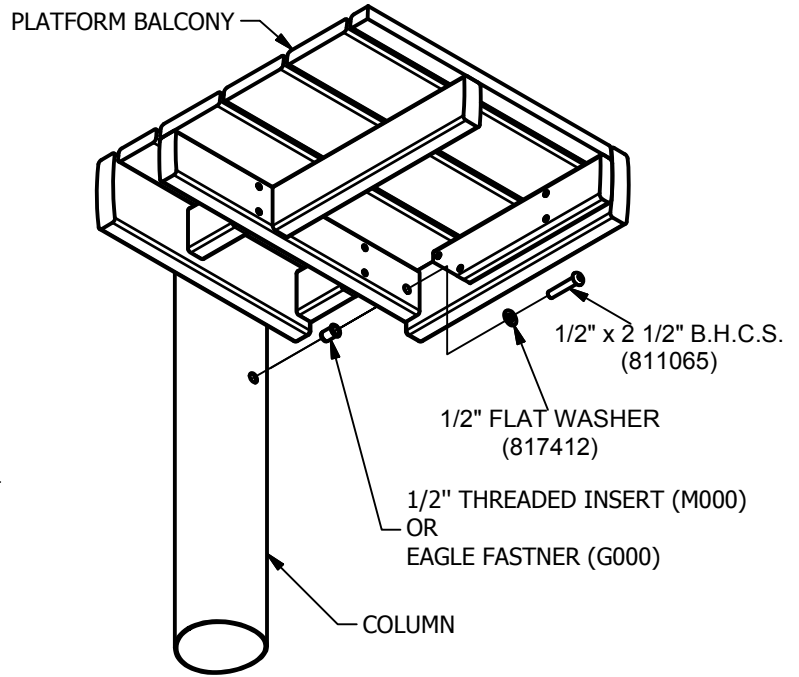


MBT366 HANDRING MAZE - METAL BT366 HANDRING MAZE - WOOD

191

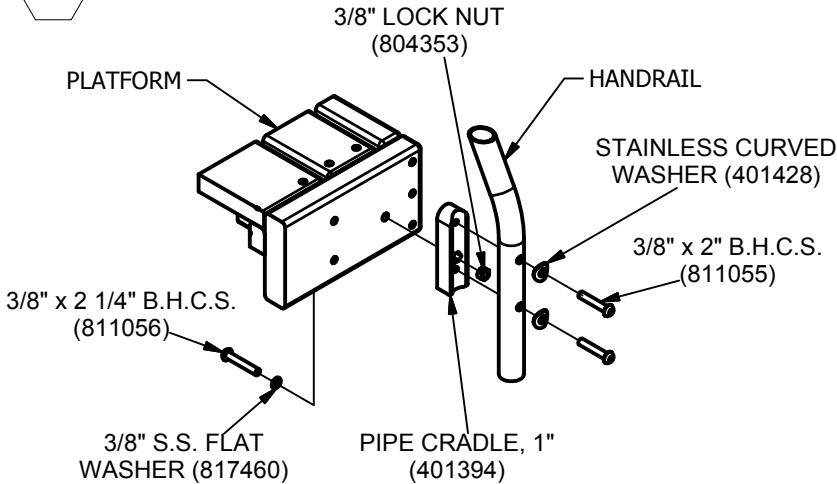


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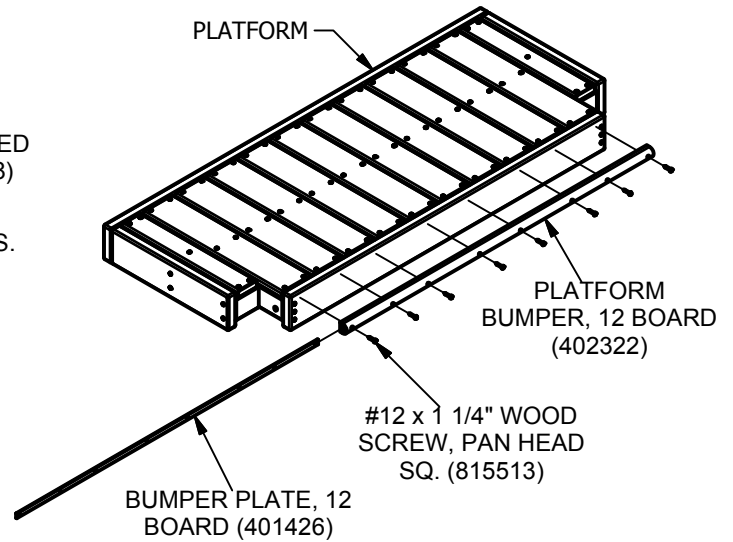


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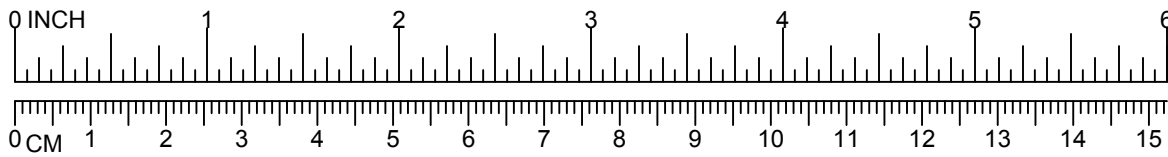
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194



NOTE: OFFSET PLATFORM BUMPER 1/4" (.635 CM) DOWN FROM DECK SURFACE



MBT366 HANDRING MAZE - METAL BT366 HANDRING MAZE - WOOD

195

