PLAYSTEEL

INSTALLATION INSTRUCTIONS

ONGROUND METHOD

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INFORMATION PROVIDED BY HENDERSON:

- Packing slip / customer countsheet
- Installation instructions
- Layout and 3-D drawings

TOOLS TO LAYOUT SITE:

- Plastic cover and plywood or cardboard sheet to affix layout and 3-d drawings
- Butchers cord (50' minimum)
- Spray paint
- Spikes to mark channel locations

TOOLS REQUIRED FOR INSTALLATION:

- 9" and 12" power auger
- Vise grips
- shovels and wheelbarrows
- 24" & 48" levels
- Sledge hammer
- Hammers
- 1/2" variable speed, heavy duty drill
- drill bits 5/16" & 13/32"
- round file
- Imperial socket set
- tape measures - 20' & 25' & 100' long
- 2" x 4" x 3' long wood
- utility knife
- hack saw
- jackall jack
- pipe cuter & reamer
- black Robertson screw bits
- chop saw
- pry bar
- rakes & broom
- bucket and clean rags for concrete cleanup
- trowel
- welder & welding equipment
- 5" wide channel

READING AND UNDERSTANDING THE LAYOUT AND 3-D DRAWINGS:

Before starting the installation of your playstructure, study your layout and 3-d drawings and all the installation instructions carefully for locations of posts , deck heights, component locations. Also check your drawings for the lengths and locations of the required channel. Your layout and 3-d drawing will be marked with the appropriate scales. The overall bordered area required which is marked on the layout drawing should be compared to the actual area you have available for your playstructure, to ensure that it will fit. This overall bordered area includes the actual playstructure area plus a minimum protective surface area that extends around the playstructure to cover the zone of use. Also, notice any no-encroachment zones on your layout drawing. These zones ensure that the equipment is a minimum distance, as required by your local standards or guidelines, away from other equipment, fences, and other obstructions. Next, notice on your layout drawings, the numbers at the post base, these numbers coincide with the

numbers on the bottom of the actual playstructure posts.

TO LAYOUT SITE:

Try to pick a level and dry area if possible ensuring that the actual area dimensions coincides with the layout drawings overall bordered dimensions required. When the area is selected always check for underground utilities (hydro, telephone, water, etc.), then you can proceed further.
Unless otherwise specified on the layout drawings, try to face your playstructure so that any stainless steel slides face north or east to avoid heating by the sun.
First, check your layout drawing for the longest channel section. Use that channel section as your starting channel for further measurements. Determining the placement of this row is as follows:

1) Select an end post on that channel, supporting the highest deck. This will be your starting point.
2) The placement of this starting point in the actual playstructure area should be determined next, by measuring the actual ground space from the starting point to any existing fences, or other obstructions. This measured distance must allow for the zones required, as shown on the layout drawing and discussed earlier. Placement of this point in the actual playstructure area is very important because all other points depend on the accuracy of this starting point.
3) Once the starting point is located in the actual playstructure area, ensure that there is enough area for the entire playstructure and border (with protective surface material) shown on the layout drawing. Using a spike to mark the starting point measure out in all directions to confirm the location is correct.
4) Now that you have your starting point located, you can proceed to layout the channel sections locations.

ONGROUND INSTALLATION -

STEPS FOR ONGROUND INSTALLATION:

1) laying out and levelling channel sections for main body of playstrucure
2) assembly of playstructure posts and decks
3) laying out and levelling channel sections for components
4) installation of components
5) checking
6) installing protective surface

1) LAYING OUT AND LEVELLING CHANNEL SECTIONS FOR MAIN BODY OF PLAYSTRUCTURE:

Now that the starting point is located, lay the longest channel section in the proper location. This long channel section should be located below the main body of the playstrucure in the appropriate location, (with the channel flanges downward) according to the layout drawing. Next, level this long channel section (SEE FIG. 1) in both directions end to end and side to side. Do this by digging down (with a shovel) or driving down (with a sledge hammer) making the channel level in both directions. If using a sledgehammer, be sure only to hit the channel on the edges and not in the middle, do so could cause bending of the channel.

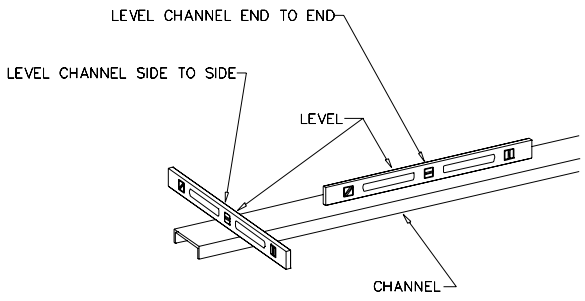


FIG.1

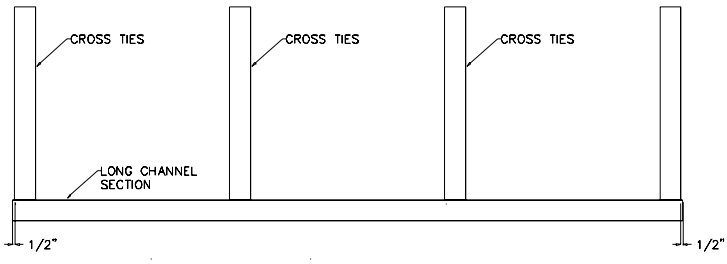


FIG.2

When the first channel section is properly positioned and level, begin to set the cross ties in the proper locations (at a right angle to the first channel) according to the layout drawing provided. Next, using the first channel section as a level guide, ensure that the cross ties are also level in both directions.

Ensure that the cross ties located at the ends of the first channel section is 1/2" in from the end. This 1/2" will allow space for the welds at these corners. When the cross ties are properly positioned and level lay the next long channel section into position at the end of the cross ties. Again ensure that this channel section is level both ways. When these 2 long channel sections and the cross ties are properly positioned and level, check (SEE FIG. 3) that they are square. Do this by measuring the diagonal distance from corner to corner. This measurement must be equal before proceeding.

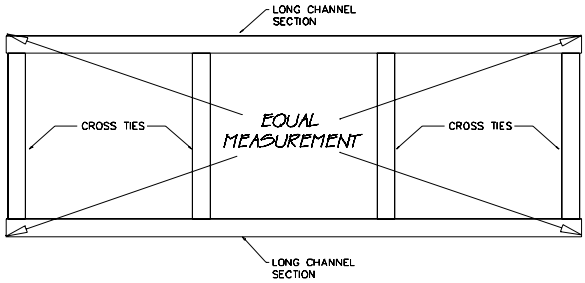


FIG.3

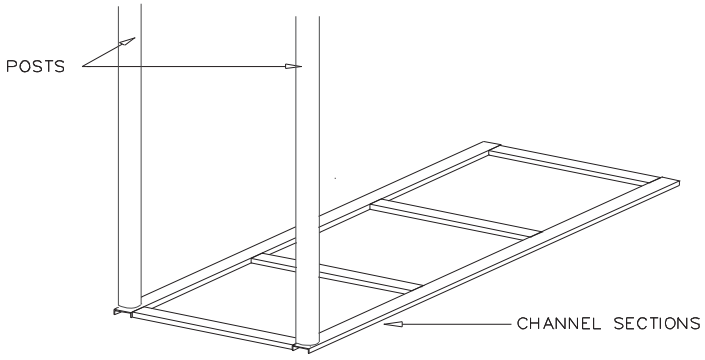
The next step is to place tack welds at the joints of the laid out channel sections. A tack weld is a small temporary 1/4" to 3/8" weld, that could be broken if adjustments are required. Place 1 tack weld on the 4 corners of the channel at each channel section joint. Next, mark with a pencil or marker, the playstructure posts locations on the channel, as per your layout drawings.

2) ASSEMBLY OF PLAYSTRUCTURE POSTS AND DECKS:

Now that the locations have been marked on the channel, locate the numbered posts for the appropriate locations according to the layout and 3-d drawing. Next, select the end corner post on the highest deck and stand this post upright in the appropriate location on the channel. Ensure that the post is positioned with the pre drilled holes in the same direction as shown on the 3-d drawing. Next, with the post sitting squarely on the channel and in the proper place, check to see that the post is plumb on two sides.

If the post is plumb on both sides, tack weld in an “x” pattern. This “x” pattern must be tack welded quickly because cooling of welds causes shrinkage and will cause post to tilt out of plumb. If the post is not plumb in either direction, determine which way it is leaning. You will than tack weld on the opposite side to which it is leaning. Then hold the post level and place the 3 other tack welds. Before continuing ensure that the post is plumb and welded squarely onto the channel.

FIG.4



Now, use the same procedure (as for the first post) to plumb, the second post.

Ensuring that the posts sit squarely on the channel helps to keep the posts aligned on the long channel sections.

Next, lift the appropriate deck or deckframe into position and connect to the posts with two 3/8" x 1" buttonhead cap screws. While holding the deck level, stand the next 2 posts in place and attach to the deck with two 3/8" x 1" buttonhead cap screws. Do not allow excessive movement during this procedure because the tack welds may break. Next, plumb these posts and set squarely on the channel and tack weld as explained previously.
When the plastisol deck or deckframe has been secure at both ends, the posts should be raised or lowered, in order to achieve proper deck height. Remember, that the deck heights shown on the layout drawing are measured from the finish grade. All posts must be plumb and deck must be level. Next if any of these posts supports a slide pole or wavy slide pole or tower climber or corkscrew or roof, install it now according to component installations. This will help to maintain a constant measurement between the posts and make more sturdy.

Now that you have assembled your first four posts and plastisol deck or deckframe you may proceed to assemble the remainder of the posts with either plastisol decks or deckframes. Do this by physically placing the adjacent plastisol decks or deckframes on the channel and marking the next posts locations on the channel. Remove the plastisol deck or deckframe from this area and prepare the next post installation and assemble deck and post as previously described. Continue this process until all decks and posts are in the appropriate place.

Where a connecting component such as a bridge or crawl tunnel is used, refer to the layout drawing for measurements to locate the next post holes. Place the plastisol deck or deckframe on the channel to complete locating the posts positions. Remove the plastisol deck or deckframe and prepare the post installation as previously described.

After all decks and connecting components are levelled and tack welded to the channel sections place continuous welds on all joints where to this point only tack welds are located. Please chip of any weld scale and paint (dark brown metal rust paint) all welded joints to prevent rusting.

3) LAYING OUT AND LEVELLING CHANNEL SECTIONS FOR COMPONENTS:
See the layout drawing regarding layout of the appropriate length channel sections for the installation of each component. Complete the marking and levelling and tack welding of all channel for all the components, before continuing.

4) INSTALLATION OF COMPONENTS:
See the attached pages for further information on the installation instruction for each component. All component installation instructions ask you to set the component in the appropriate location and alternatively prepare the sub-grade . This means - At the base of the each individual component, place a channel section where the ground attachment (examples - ground legs, ground pipes) would have entered the ground (if this where in-ground installed). Again ensure that this channel section is level both ways and tack weld channel sections together. Next determine the finish height of the components (ensure that slide exit allow water to shed off of the slide bedway). Using a metal cut-off saw cut the ground attachment to the proper length. Attach the component to the deck and attach the ground attachment as described on the component installation instruction and tack weld the it to the channel section. Continue this process for all components. Lastly, place continuous welds on all joints where to this point only tack welds are located. Please chip off any weld scale and paint (dark brown metal rust paint) all welded joints to prevent rusting.

5) CHECKING:
Ensure that all posts are plum on all sides. Make sure all decks are level and to the exact deck

height as shown on layout drawings. Ensure that all components attach to decks as per instructions, no gaps exist due to looseness or misalignment of parts. Next, ensure that all fasteners used throughout the process are firmly secured. Finally, ensure that all joints which require a weld has a good, solid, continuous weld.

6) INSTALL PROTECTIVE SURFACING:

Install protective surface material when the installation of all equipment is completed. The protective surfacing should be evenly distributed and raked level. The playground should not be opened until this step is completed.

FINAL NOTES

INSTALLATION:

While installing any playground equipment, if the site must be left unattended, make sure the area is left safe. Clean-up all tools, cover all open ground holes and erect a snow fence or other barrier to keep children out of the area.
Installation of playground equipment should be carried out strictly in accordance with the manufactures/designers recommendations.

RECYCLING:

Many of our packaging materials can be recycled. Please take the time to separate and deliver them to a recycle centre. THANK-YOU.

TECHNICAL SERVICES:

If you have any questions or concerns regarding the installation of your PLAYSTEEL playstructure, call Henderson Recreation Equipment Limited at:

PHONE: 1-800-265-5462 toll-free

FAX: 1-519-426-8142

MAIL: Henderson Recreation Equipment Limited
11 Gilbertson Drive,
P.O. Box 68,
Simcoe, Ontario,
Canada, N3Y 4K8

PLEASE NOTE, THE FOLLOWING ATTACHED PAGES ARE YOUR COMPONENT INSTALLATION INSTRUCTIONS, AS REQUIRED FOR YOUR PLAYSTRUCTURE.

Torque Requirements

The following are target torque values for typical fasteners. The actual values should be determined by means of a torque wrench. The torque values given are (unless otherwise noted) typical for all lengths of the given fastener size.

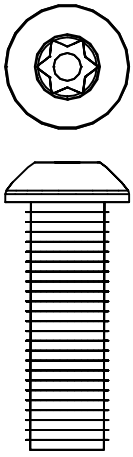
Size	Description	Torque in*lbs
1/4"	Carriage Bolt	66
5/16"	Carriage Bolt	132
3/8"	Carriage Bolt	240
7/16"	Carriage Bolt	600
1/2"	Carriage Bolt	600
3/8"	Eye Bolt	240
3/8"	Machine Bolt	240
7/16" x 2 1/2"	Machine Bolt	600
7/16"	Machine Bolt	384
1/2"	Machine Bolt	600
5/16"	Truss Bolt	132
3/8" x 3/4"	Button head Cap Screw	540
3/8"	Button head Cap Screw	240
3/8"	Flat Head Hex Socket Cap Screw	240
5/16"	Hex Head Lag Screw	132
3/8"	Hex Head Lag Screw	240
3/8" x 1/4"	Set Screw	130
3/8" x 3/8"	Set Screw	240
1/2" x 1/2"	Set Screw	316

11 Gilbertson Drive P.O. Box 68 Simcoe, Ontario, Canada N3Y 4K8 1-800-265-5462 Fax (519) 426-1132

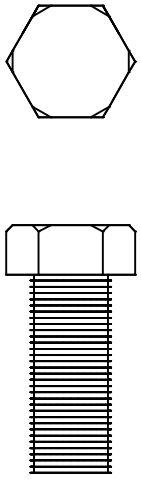
Typical Hardware Key

(For Identification of Parts)

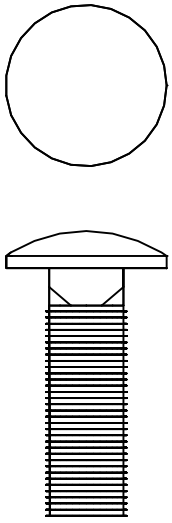
3/8 " Set Screw



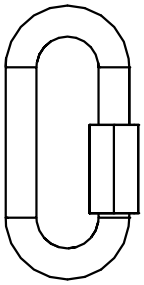
3/8" Button Cap Torx w/Pin



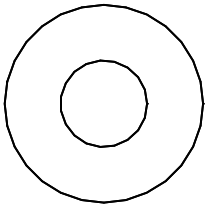
3/8" Machine Bolts



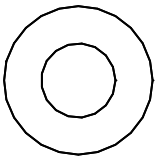
3/8" Carriage Bolt



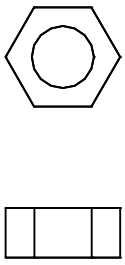
5/16" Quick Link



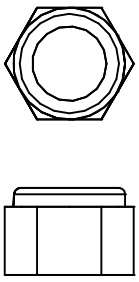
3/8" Flat Washer



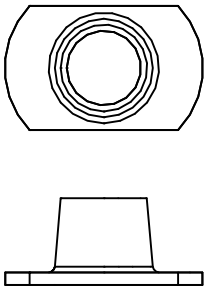
5/16" Flat Washer



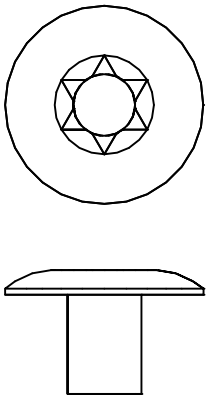
Hex Nut



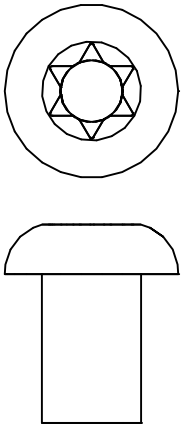
Lock Nut w/ Nylon Locking



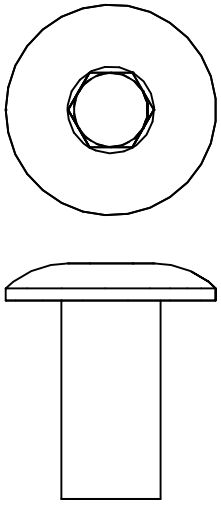
T-Nut



Camtainer Nut



Barrel Nut



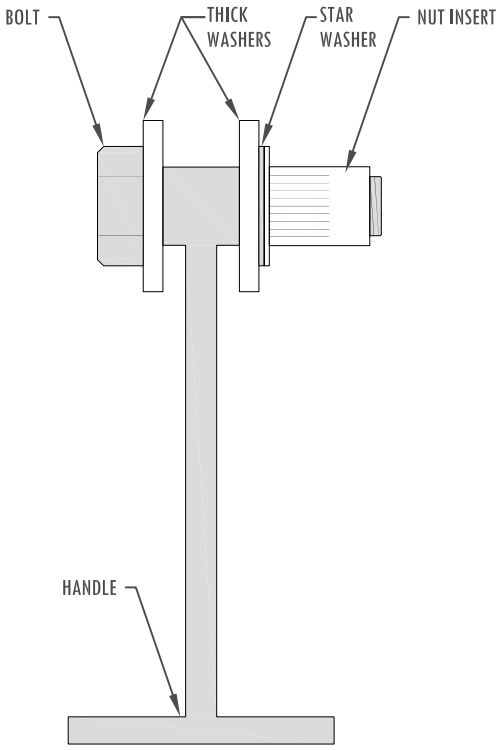
Spenco Nut

Henderson
recreation equipment limited

Nut Insert Tool

Tools Required
Impact Gun or Imperial socket set

Parts Included
Nut Insert Tool & extra nut inserts



Step One: Locate Parts
Determine location of either the missing nut insert (go to step 2) or loose nut insert (go to Step 3).

Step Two: Installing A Missing Nut Insert
Ensure that the nut insert tool looks as per the figure shown. Fully insert the nut insert into the 13.6 mm diameter hole. While holding handle, tighten down the bolt with an Impact Gun. Remove the tool by unscrewing it from the secured nut insert.

Step Three: Tightening A Loose Nut Insert
Ensure that the nut insert tool looks as per figure shown but without the nut insert. Fully screw the bolt into the nut insert which is in the 13.6 mm diameter hole. While holding handle, tighten down the bolt with an Impact Gun. Remove the tool by unscrewing it from the secured nut insert.

Final Step: Check
Do a final check to make sure that the Nut Inserts are tightened securely.

Last Updated - 03/04/2015
11 Gilbertson Drive P.O. Box 68 Simcoe, Ontario, Canada N3Y 4K8 1-800-265-5462 Fax (519) 426-1132

Lay

Due to hardware shortages, we have replaced the locking flange nut with a 5/16 flatwasher and lock nut 3/8”-16 UNC.

Wherever you see this locking flange nut in the installation instructions, please substitute with a washer and locknut.