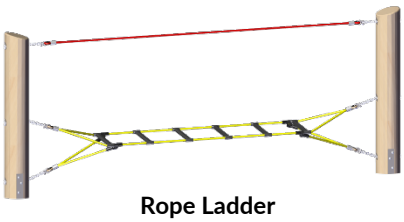
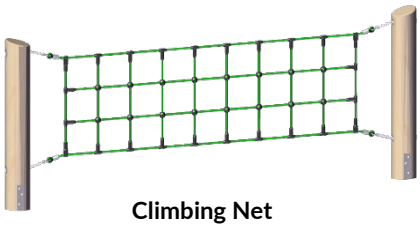
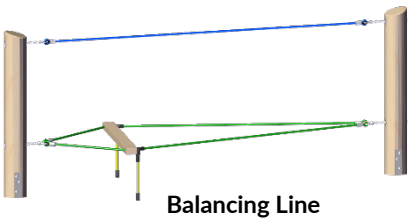
Installation Instructions



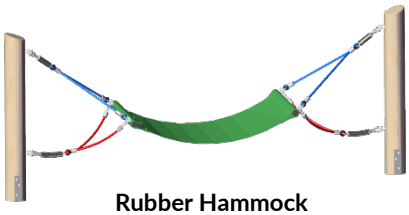
Rope Ladder
Model No. 4591-2 R



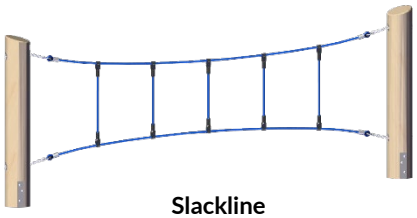
Climbing Net
Model No. 4591-3 R



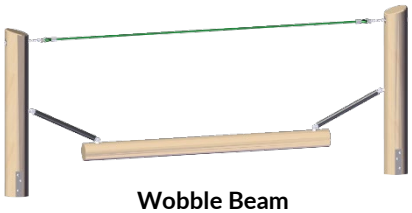
Balancing Line
Model No. 4591-4 R



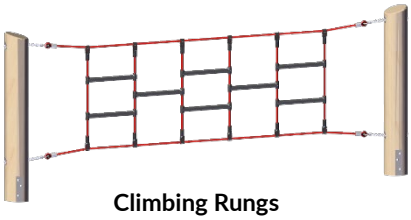
Rubber Hammock
Model No. 4591-5 R



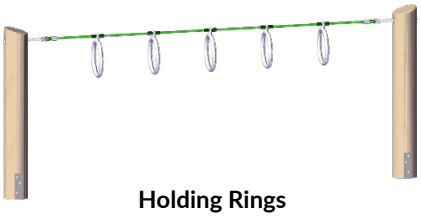
Slackline
Model No. 4591-7 R



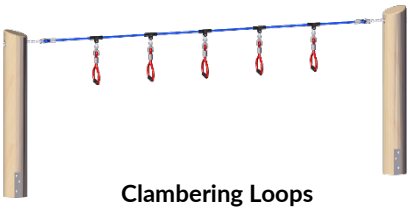
Wobble Beam
Model No. 4591-9 R



Climbing Rungs
Model No. 4591-12 R



Holding Rings
Model No. 4591-13 R



Clambering Loops
Model No. 4591-14 R

Haiger Adventure Course

Model No. 4591
with Robinia Posts

Revision History

Initial Release: 4/27/2021

Printed in USA

NetPlay™ USA LLC
3-D Adventure Play & Innovation

Contents

Please read through the entire installation instructions upon receipt to ensure that all parts have been received and that all customer-supplied materials are procured prior to the start of installation.

Introduction

Thank you for purchasing the Haiger Adventure Course! Before we begin, please take some time to familiarize yourself with the components, tools, and installation steps to ensure adequate preparation for a smooth installation.

General Information

This equipment should be installed, inspected, maintained, and operated in accordance with ASTM F1487-17 or CSA-Z614 guidelines.

The installation site shall have a flat and level surface with a maximum slope of 3%.

For product support, including questions regarding installation, or to obtain replacement parts, please contact your equipment dealer.

Following installation, the complete assembly instructions, maintenance instructions, and maintenance records must be sent to the operator who must confirm receipt in writing. See the last page of this document.

We hereby confirm that this play equipment has been tested and certified in accordance with the play equipment standards ASTM F1487-17 and CSA-Z614.

Drawings/Views

The manufacturer reserves the right to make reasonable changes to technical details of our products for enhanced safety and assurance for users and operators.

Measurement Tolerances

Due to the properties and characteristics of the components above surfacing level, actual measurements may vary from those indicated in the diagrams. The manufacturer has established safe tolerances for these components.

Specifications

Assembly Time..... 7.5 hours (entire system)
(after posts and concrete are set)

Personnel Required 2

Equipment

Height..... 55.25 in (1,400 mm)

Footprint..... Variable – See element specifications

Use Zone..... Variable – See pages 5-6

Fall Height ..... Variable – 55.12 in (1,397 mm) max

Age Group ..... 5 to 12 years

Capacity ..... 5 per element

Foundation

Concrete Mix C25/C30

Required Concrete:..... 8.65 ft^3 (0.25 m^3) per foundation

Foundation Dimensions..... 27.55 x 27.55 x 19.68 inches
(700 x 700 x 500 mm)

Drainage Stone..... 1.75 ft^3 (0.05 m^3) per foundation
(4 inches of stone required beneath the foundation)

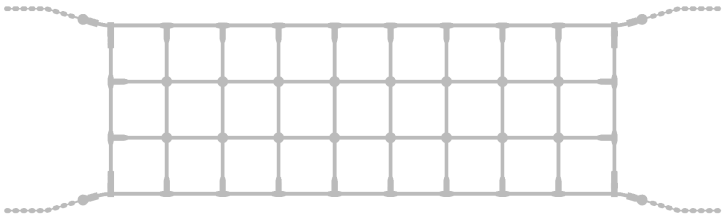
Concrete Slab..... approx. 12 x 12 inches
(1 for each post) (300 x 300 mm)

In the case of sandy and soft soils, the size of the foundation must be enlarged by 50%.

Tools Required

- Drill
- 1/2 in Wood Drill Bit
- 7/8 in Wood Drill Bit
- 2-3/8 in Forstner Bit
- Level
- Bolt Cutter
- Measuring Tape
- 19 mm Wrench

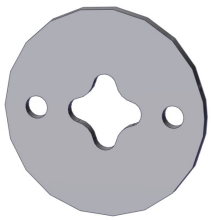
Parts List

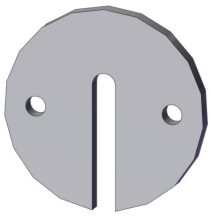


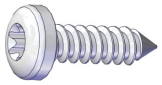
Net Elements (A) vary by model and may include one or two assemblies of multiple components. Each assembly is finished with chain or threaded rod attachment points.

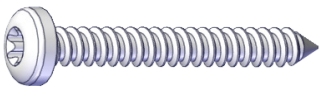
Part	Description
A	Net Element(s)
B	Robinia Post
C	Cross Tension Plate
D	Slotted Tension Plate
E	Torx Screw - 3/4 in
F	Torx Screw - 1-5/8 in
G	Nut Cap
H	Locknut
I	Washer
J	Screw Pile
K	Compliance Stickers

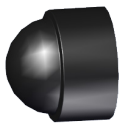
Your course configuration may use some or all of these components. Please see the following page for specific hardware quantities.

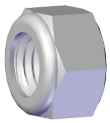


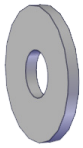


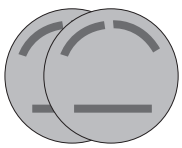












Hardware Quantities

Below are the included quantities of the hardware specific to each element. The Net Element (A) may consist of one or two assemblies of multiple components. The number of posts (B) will depend on your total course configuration.

4591-02 R
Horizontal Ladder

Part	Ship	Rec
C	6	
D	6	
E	24	
F	6	
K	2	

4591-03 R
Climbing Net

Part	Ship	Rec
C	4	
D	4	
E	16	
F	4	
K	2	

4591-04 R
Balancing Line

Part	Ship	Rec
C	4	
D	4	
E	16	
F	4	
J	2	
K	2	

4591-05 R
Rubber Hammock

Part	Ship	Rec
G	4	
H	4	
I	4	
K	2	

4591-07 R
Slackline

Part	Ship	Rec
C	4	
D	4	
E	16	
F	4	
K	2	

4591-09 R
Wobble Beam

Part	Ship	Rec
C	2	
D	2	
E	8	
F	2	
G	2	
H	2	
I	2	
K	2	

4591-12 R
Climbing Rungs

Part	Ship	Rec
C	4	
D	4	
E	16	
F	4	
K	2	

4591-13 R
Holding Rings

Part	Ship	Rec
C	2	
D	2	
E	8	
F	2	
K	2	

4591-14 R
Clambering Loops

Part	Ship	Rec
C	2	
D	2	
E	8	
F	2	
K	2	

Installation

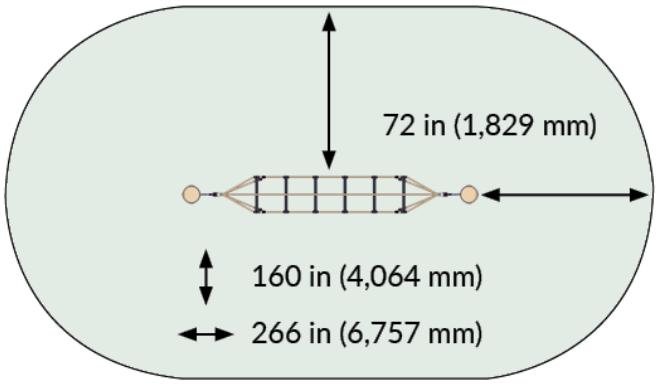
Part A: Site Prep and Use Zone

Be sure that the chosen site is well drained and level, with a 3% maximum slope.

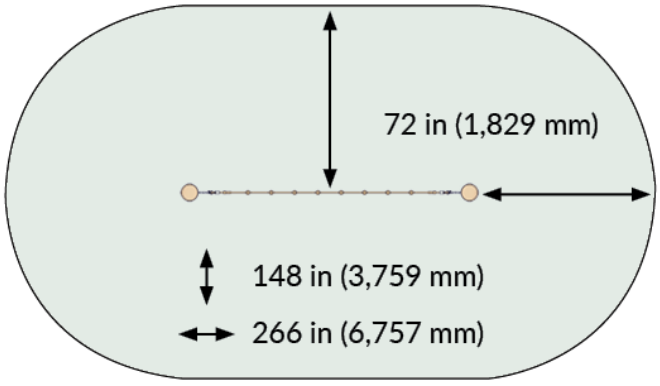
A clear path and adequate protective surfacing are required at least 72 inches (1,829 mm) from the outer edge of each element as shown below.

> The use zone will change depending on your selected elements and chosen configuration. This equipment must be installed to comply with ASTM F1487 or CSA-Z614.

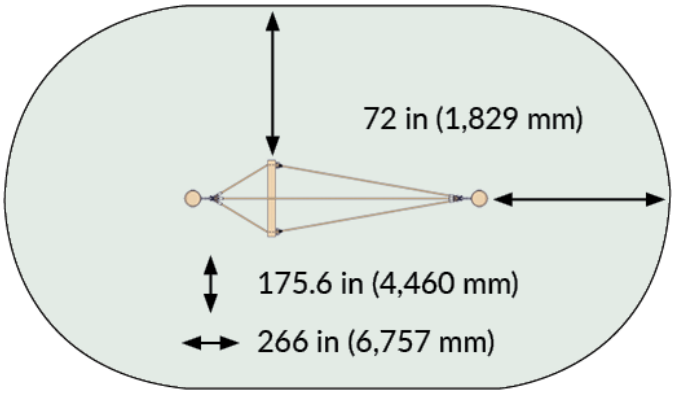
Horizontal Ladder
Model No. 4591-2 R



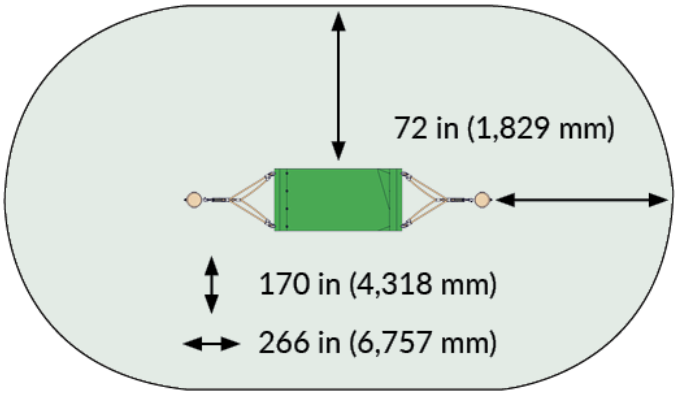
Climbing Net
Model No. 4591-3 R



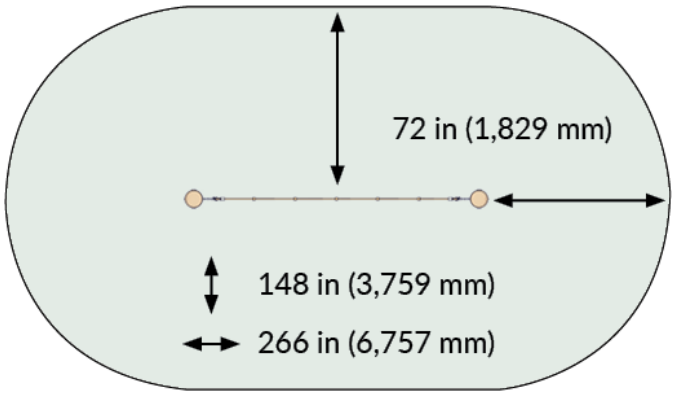
Balancing Line
Model No. 4591-4 R



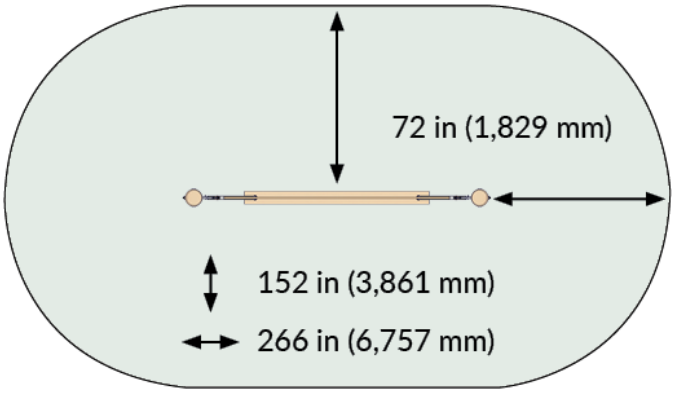
Hammock
Model No. 4591-5 R



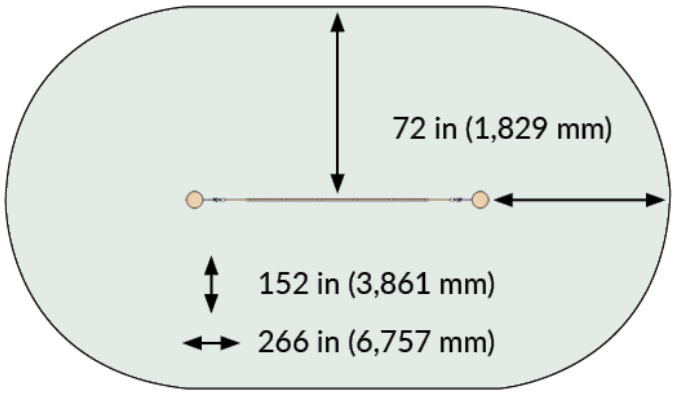
Slackline Net
Model No. 4591-7 R



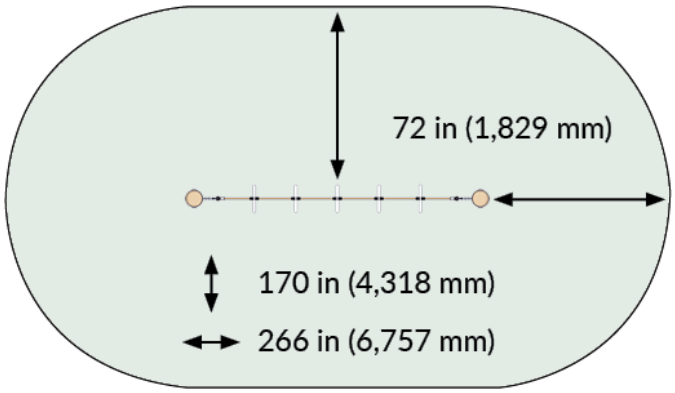
Wobble Beam
Model No. 4591-9 R



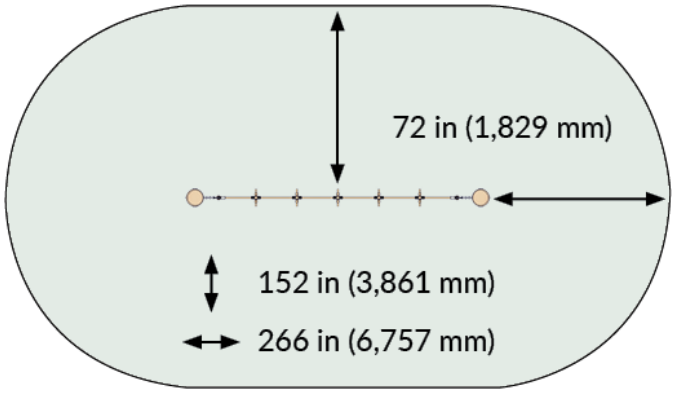
Climbing Rungs
Model No. 4591-12 R



Holding Rings
Model No. 4591-13 R



Clambering Loops
Model No. 4591-14 R

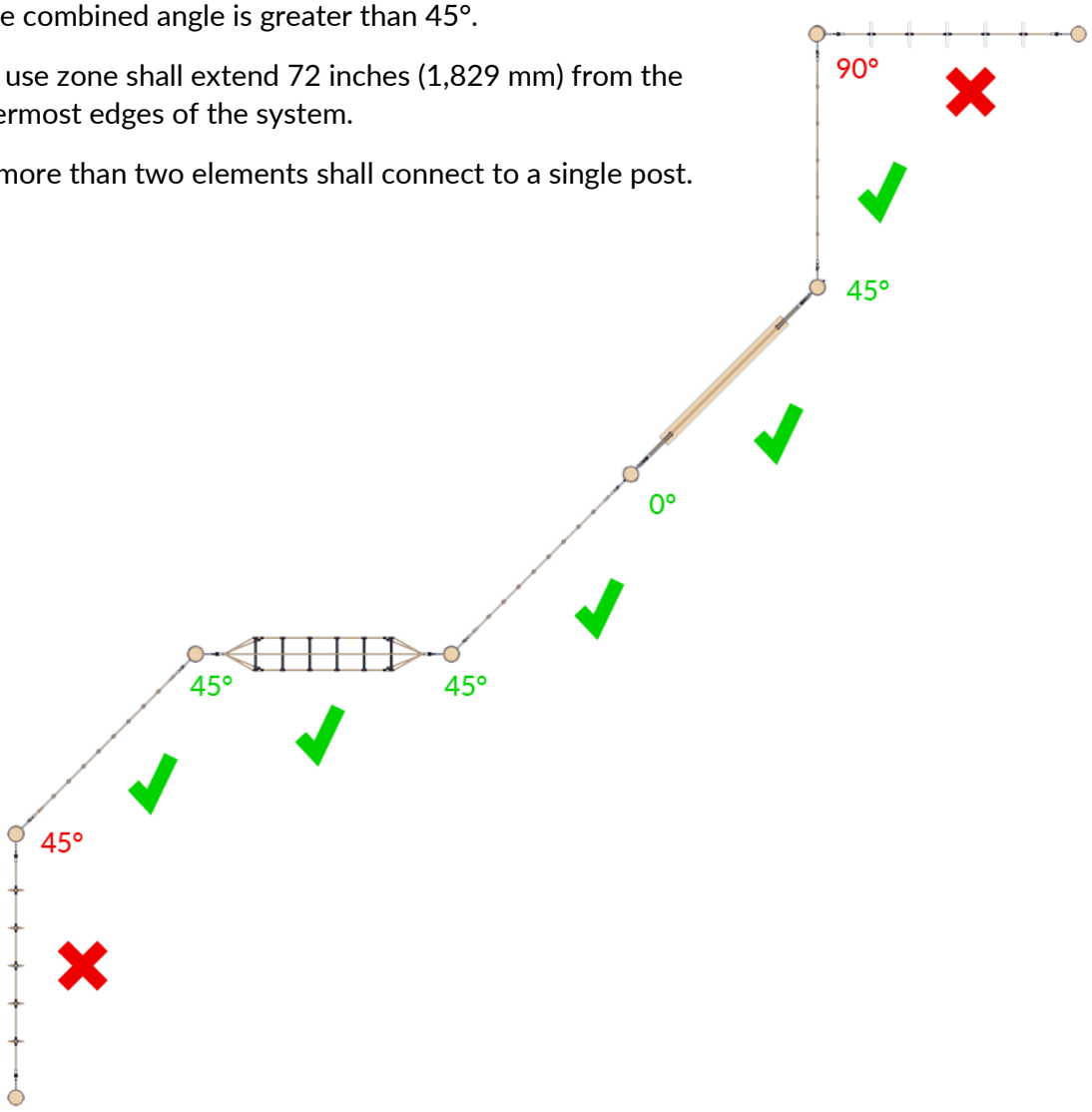


Arranging Multiple Elements

When connecting multiple elements to form one composite system, it is vitally important to use best judgement in determining a safe configuration per ASTM F1487 or CSA-Z614 standards. Be mindful of circulation around the Haiger course and its proximity to other play equipment or obstructions.

Below are manufacturer-recommended best practices when configuring your Haiger Adventure Course. In most cases, following these guidelines will help reduce the risk of injury and foster a fun and exciting play experience. There may be additional considerations or exceptions to these recommendations unique to your site or plan, which is why it is also important to check your design against ASTM F1487 or CSA-Z614 before proceeding with installation.

- Angles shall not exceed 45°.
- Do not repeat two angles of the same direction consecutively if the combined angle is greater than 45°.
- The use zone shall extend 72 inches (1,829 mm) from the outermost edges of the system.
- No more than two elements shall connect to a single post.



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Installation

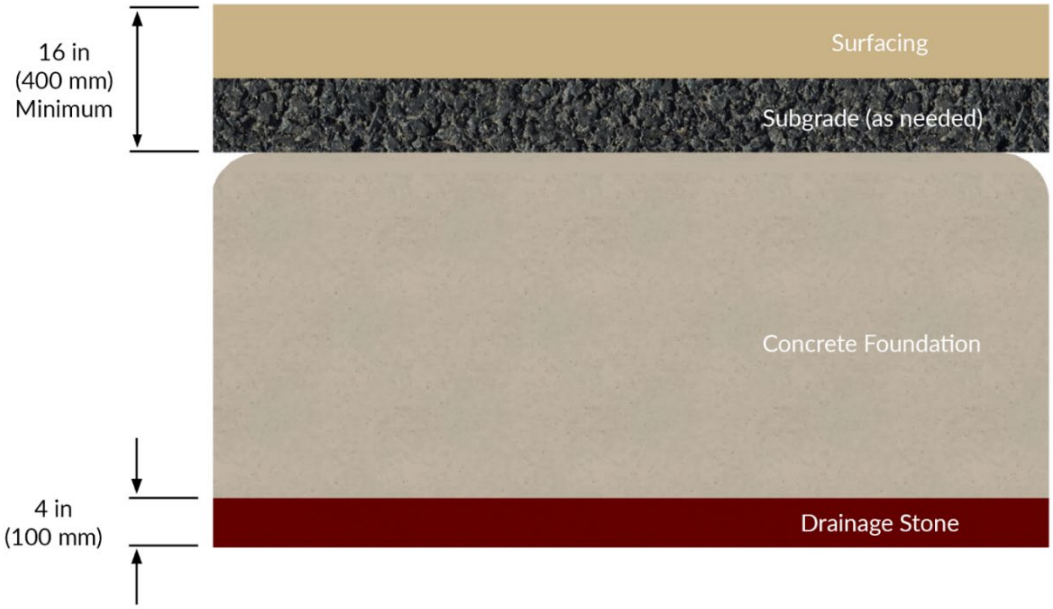
Part B: Foundation and Posts

- The Haiger Adventure Course requires two foundations for the first element plus one foundation for each additional connecting element. The finished foundations and posts must be 118.11 in (3,000 mm) apart on center per element. Each post may be shared by no more than one other connecting element.
- Dig all foundation holes to the following dimensions. Account for a required 16 inches (400 mm) of material (subgrade + surfacing) over the foundations and 4 inches (100 mm) for drainage stone under the concrete.

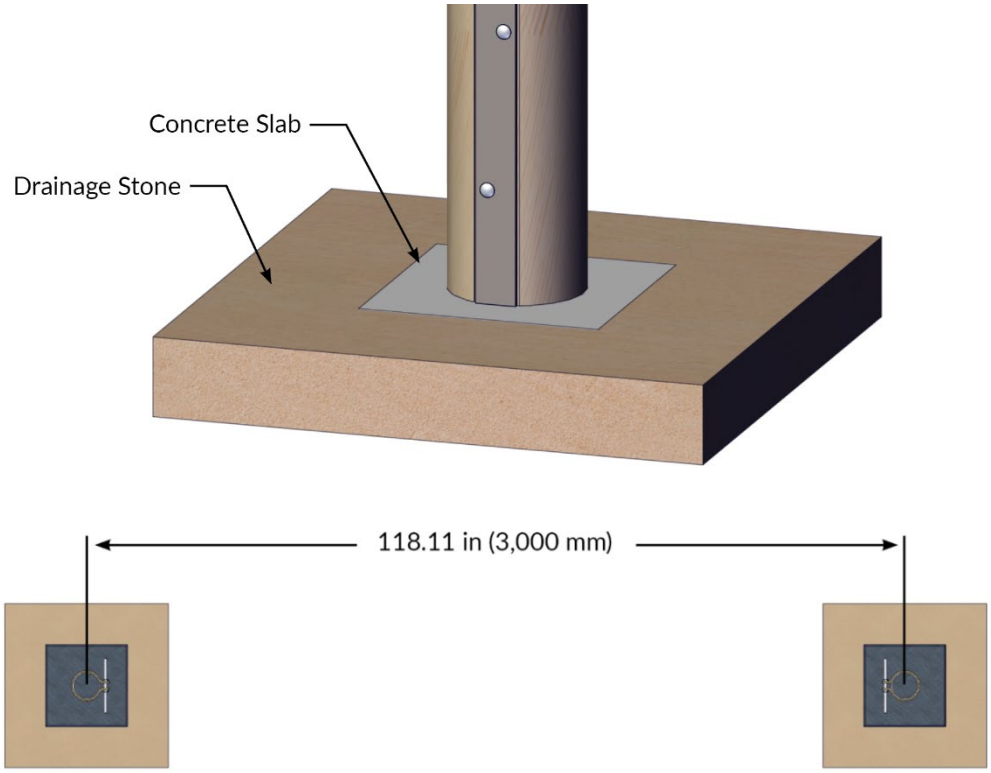
Foundations: 27.55 x 27.55 in W and 19.62 in H (700 x 700 W and 500 mm H)
Overall depth with surfacing and drainage stone: 39.62 inches (1,000 mm)

The required material depth (subgrade + surfacing) of 16 inches (400 mm) is critical to meet the manufacturer's specifications for safe use and compliance.

Please refer to ASTM F1292, ASTM F1951, ADA, and ABA standards when choosing the type and thickness of surfacing material.

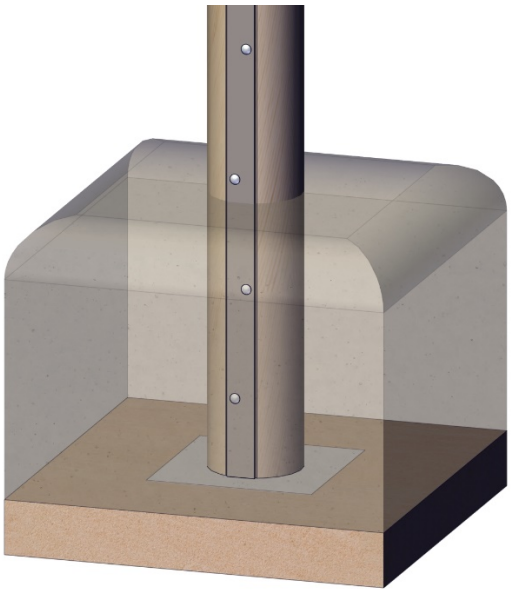


- Place 4 inches (100 mm) of drainage stone evenly on the bottom of each foundation hole.
- Place the concrete slabs flat down onto the drainage stone in each foundation hole and nestle them into the drainage stone so that the top of the slab is flush with the top of the stone. Between each foundation of connecting elements, adjust the slabs until they are 118.11 in (3,000 mm) apart on center.
- Stand each post (B) on-end on the center of the flat concrete slab in each foundation, bracket-end down as shown below. Position the posts so that the post brackets face the sides of the foundation, so they do not interfere with element connections later.
- Using a level, check that each post is straight. If needed, adjust the concrete slab in the stone, until the post sits straight.



- Using a tape measure, check that the dimension between the center of each connecting post is exactly 118.11 in (3,000 mm). Shift the post on the concrete slab until the correct measurement is achieved between all connecting posts.

The 118.11 in (3,000 mm) dimension between posts is critical for the fit of every element. If the dimension is off, the element may not install properly.



- With measurements checked, and all posts in place, straight and level, pour the concrete foundations. Check the post measurements again after pouring each foundation and ensure that they have not moved.
- Round the top edges of the foundations to a 4 in (100 mm) radius.
- Allow to set for the concrete manufacturer's recommended time before proceeding to the next step.

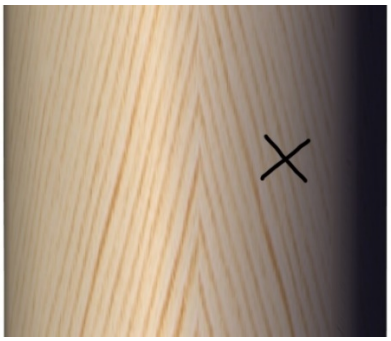
Installation

Part C: Installing Net Elements

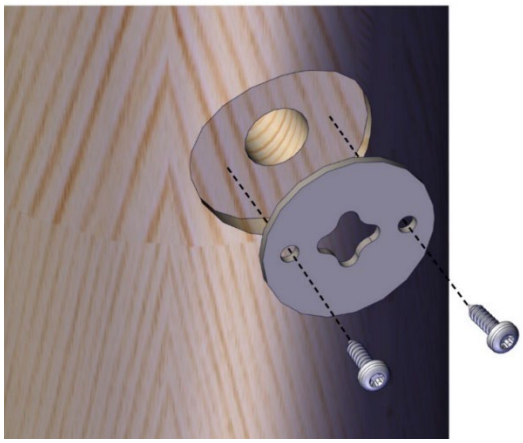
Note: If two connecting elements have the same connection height, stagger the connections above and below each other so that the measured height is between them. Allow 2.5 inches (64 mm) between the center of each hole. Be sure that each element's attachments connect at the same height on both posts.

Chain Connection

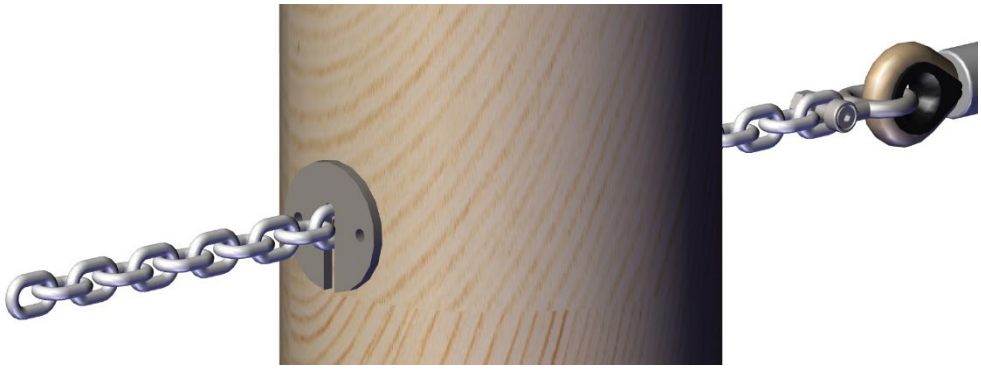
- Use the diagrams in the Vertical Dimensions section starting on page 16 to find the height of each chain connection. Mark those exact points on the inner side of the posts (facing the side where the net element will be installed).
- Using the 7/8 in drill bit, drill a hole straight and level completely through the post, starting at each mark made in the previous step. Holes in corresponding posts of a connecting element must be aligned to each other.
- Switch to the 2-3/8 in Forstner bit to countersink the holes on both sides of the post to a depth of approximately 0.375 in (10 mm).



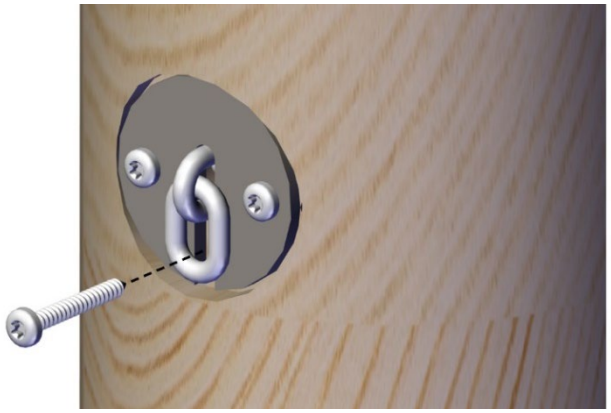
- Install a cross tension plate (C) to the inner side holes of each connection (toward element) using two 3/4 in Torx screws (E) each as shown.



- For each element with a chain connection, find the top connection of one side and pass the chain through its corresponding crossed tension plate, through the post and out the other side. Work the chain through until there are a few links on the outer side.
- Slide a slotted tension plate (D) onto the chain on the outer side, behind the link closest to the post, to lock the chain in place. Do not screw the plate in yet.

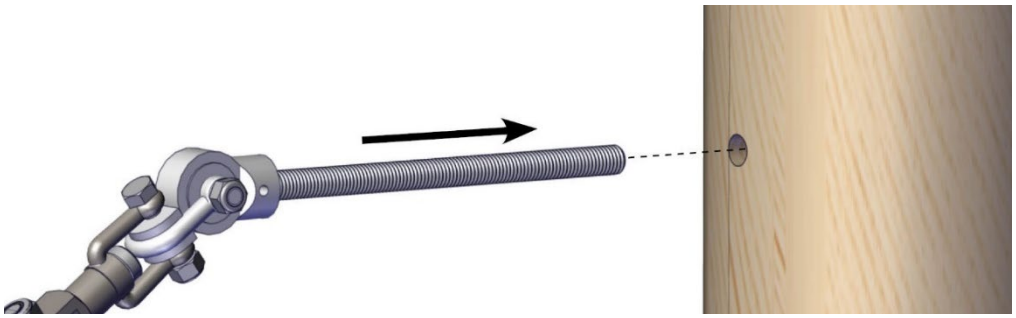


- Repeat the last two steps for the top connection on the other side of the element and corresponding post, then again with the lower connections, if applicable.
- Tension the element evenly by pulling excess chain through the post on all connections with reasonable force until you cannot take in another link, then refit the slotted tension plate onto the chain as close to the post as possible.
- Adjust the chains as needed until the element is tensioned and sits evenly between the posts.
- Once properly tensioned, use bolt cutters to cut the excess chain so that there is one full link on the outside of the slotted tension plate.
- Fasten the slotted plate to the post with two 3/4 inch Torx screws (E).
- Fold the link over flat against the slot and drive a 1-5/8 in Torx screw (F) through the link and slot, into the post until the link is tightened against the plate.

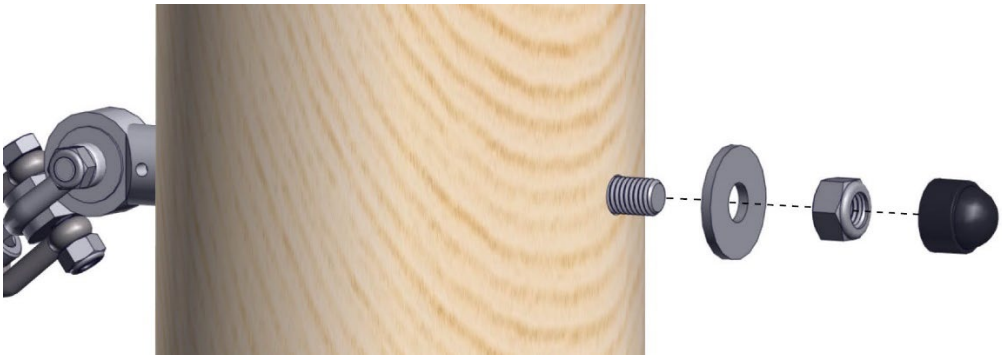


Threaded Connection

- Use the diagrams in the next section to find the height of each threaded connection. Mark those exact points on the inner side of the posts (facing where the element will be).
- Using the 1/2 in drill bit, drill a hole straight and level completely through the post, starting at each mark made in the previous step. Holes in corresponding posts of a connecting element must be aligned to each other.
- For each element with a threaded connection, find the top connection of one side and slide the threaded rod fitting into the post from the inner side.



- Slide a washer (I) onto the threaded rod protruding from the outer side of the post, then thread on a lock nut (H) about three turns.
- Repeat the last two steps for the lower connections if applicable.
- Tighten the lock nuts evenly on all sides until the element's fittings are tensioned against the posts.
- Install nut caps (G) over the lock nuts on all threaded connections.



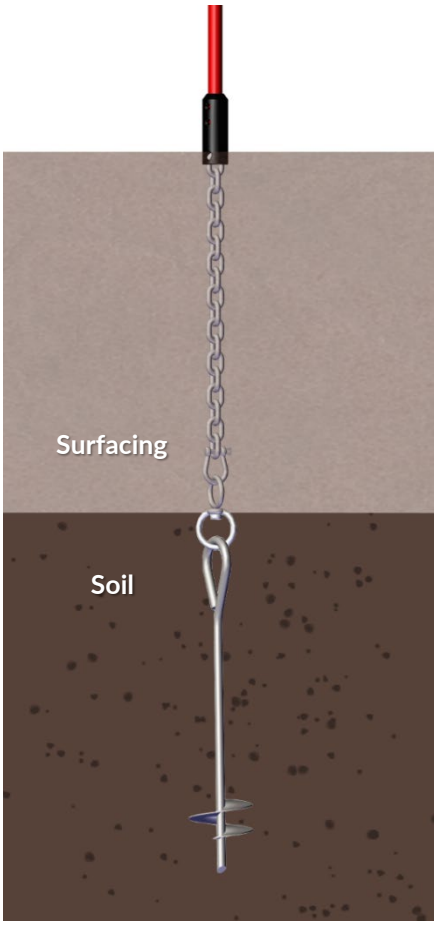
Screw Pile installation for:

Balancing Line – Model #4591-4

For the Balancing Line element only, installation of two screw piles (J) as ground anchors are required. Located near each end of the wood bar, two vertical ropes are terminated with chain to attach to each anchor.

The location of each anchor must be directly below each vertical rope so that when taught, the vertical ropes will be 90° to the horizontal ropes.

- Connect the corresponding chain and drive each screw pile into the ground until the ropes are taught, and the element rests level. Adjust if needed.
- Ensure that the eye of the screw pile is sufficiently covered with surfacing to prevent access or accidental loosening.



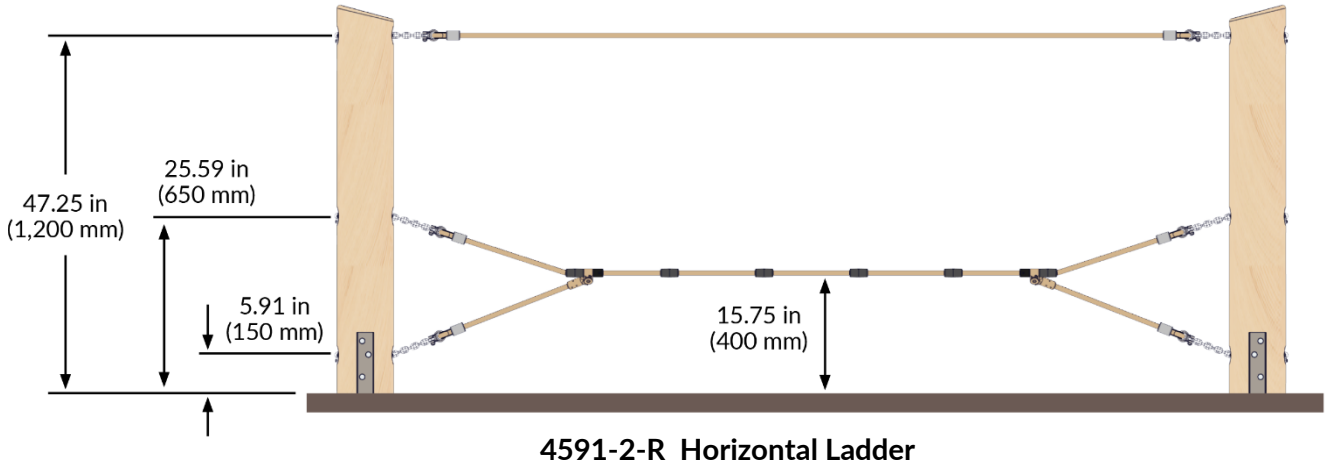
Finishing

- Add and grade 16 in (400 mm) surfacing per ASTM F1292 to the use zone of the system.
- With surfacing, the final height of the posts should be about 55 inches (1,400 mm). Please see the individual element drawings for specific measurements to check on each element after surfacing is installed.
- If using loose fill surfacing material, mark the posts at the final level of the surfacing so that the proper level can be maintained.
- Place a compliance sticker on each post. When more than one connected element is installed, place the stickers on the side of each post that corresponds to the element.
- Clean up the area and remove all tools, extra materials, or other assembly aids before opening the equipment for use.

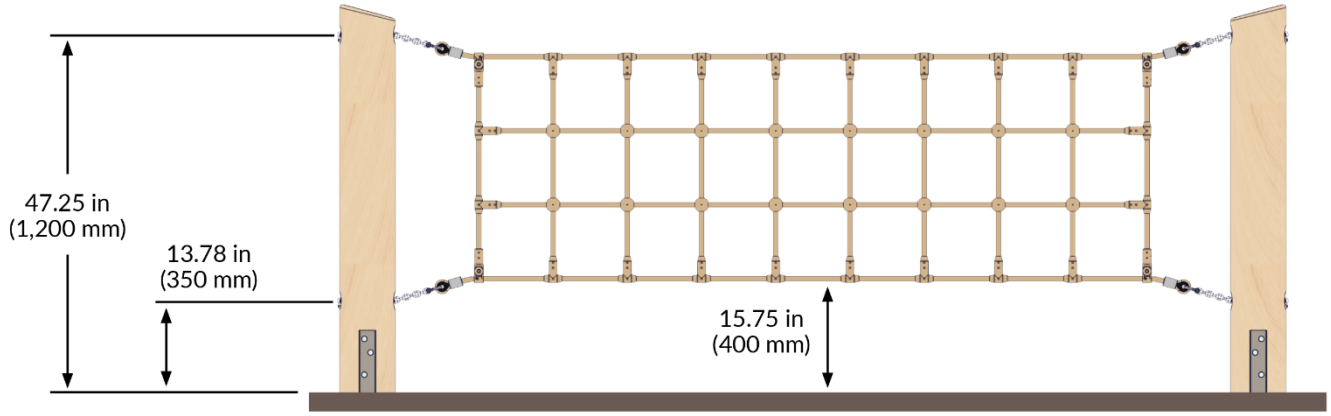
Final Checklist

- ☐ The Haiger Adventure Course was installed according to the instructions without modification, except if instructed by the equipment supplier.
- ☐ Check foundation stability.
- ☐ Proper surfacing has been added and fall heights checked.
- ☐ Compliance stickers have been adhered and are visible.
- ☐ Recheck all measurements for ASTM F1487 or CSA-Z614 conformity.

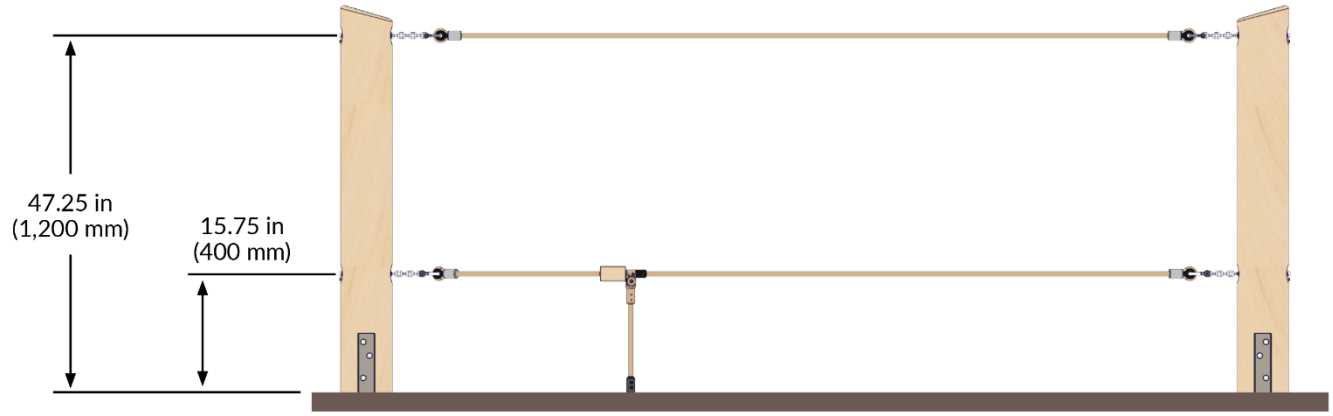
Vertical Dimensions



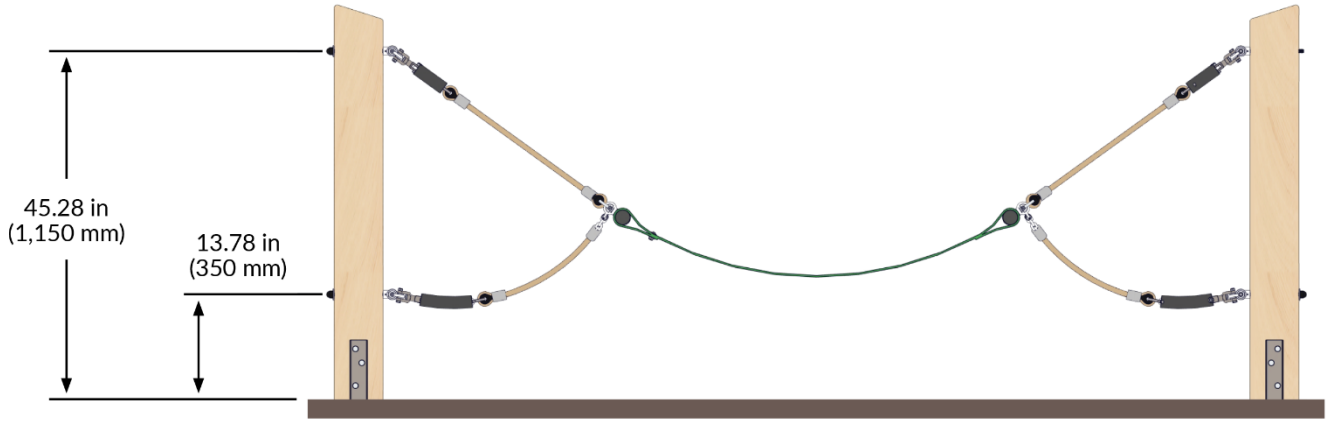
4591-2-R Horizontal Ladder



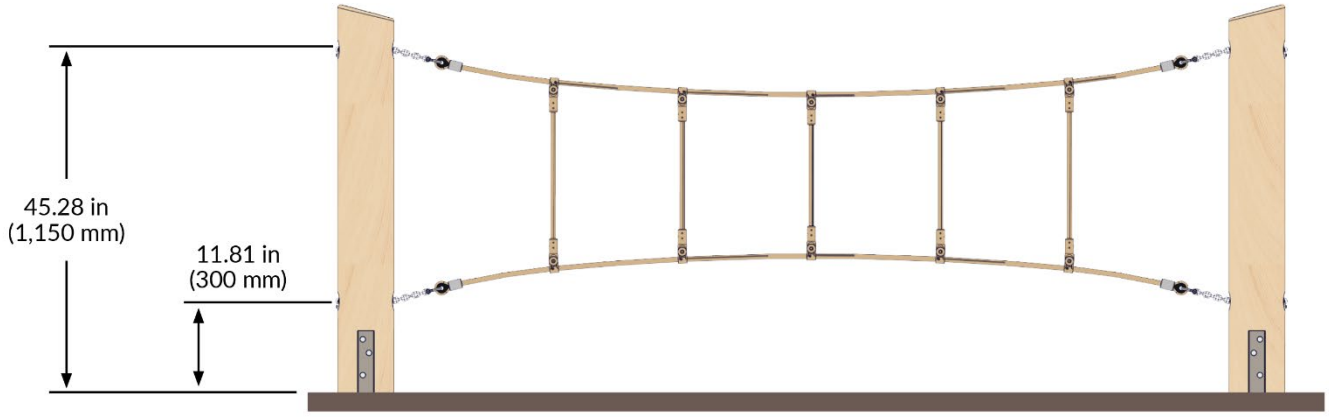
4591-3-R Climbing Net



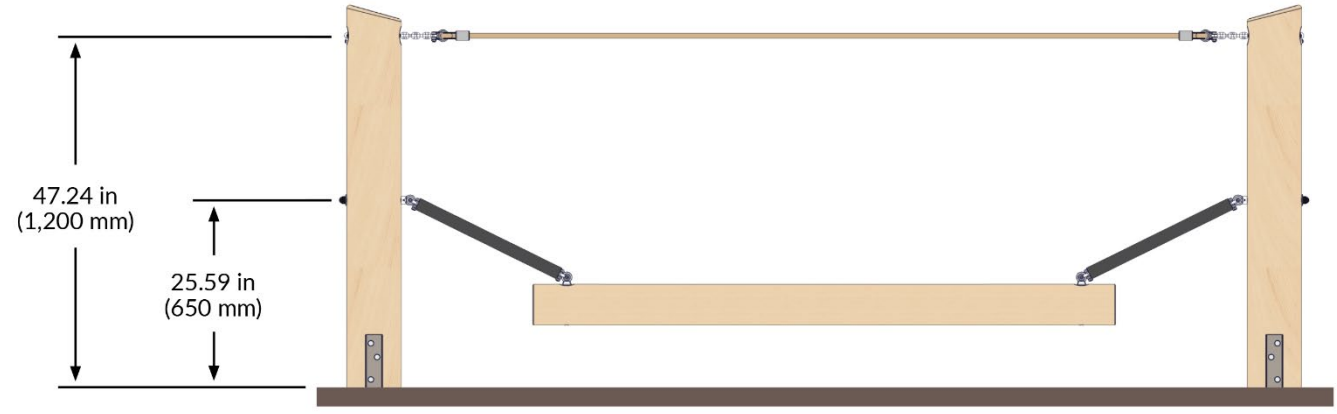
4591-4-R Balancing Line



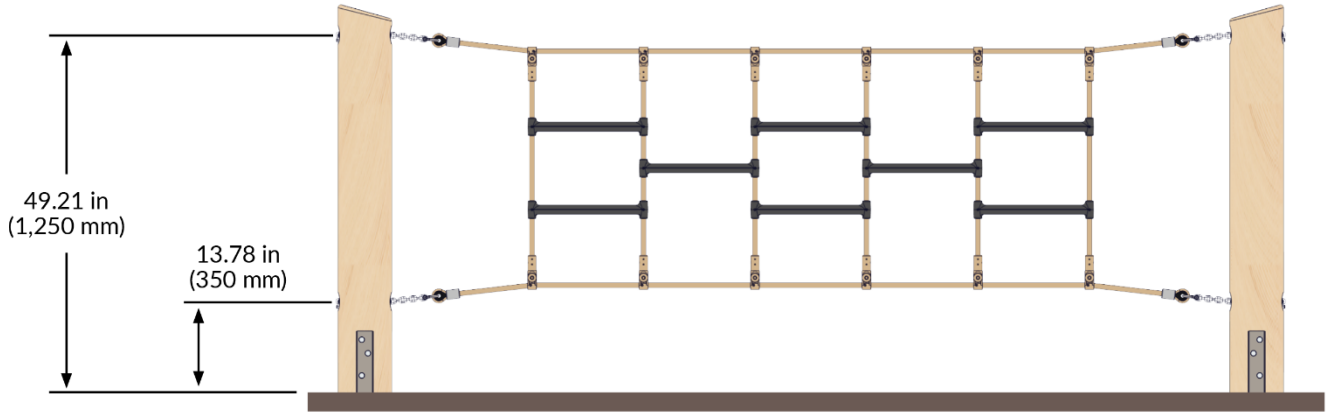
4591-5-R Rubber Hammock



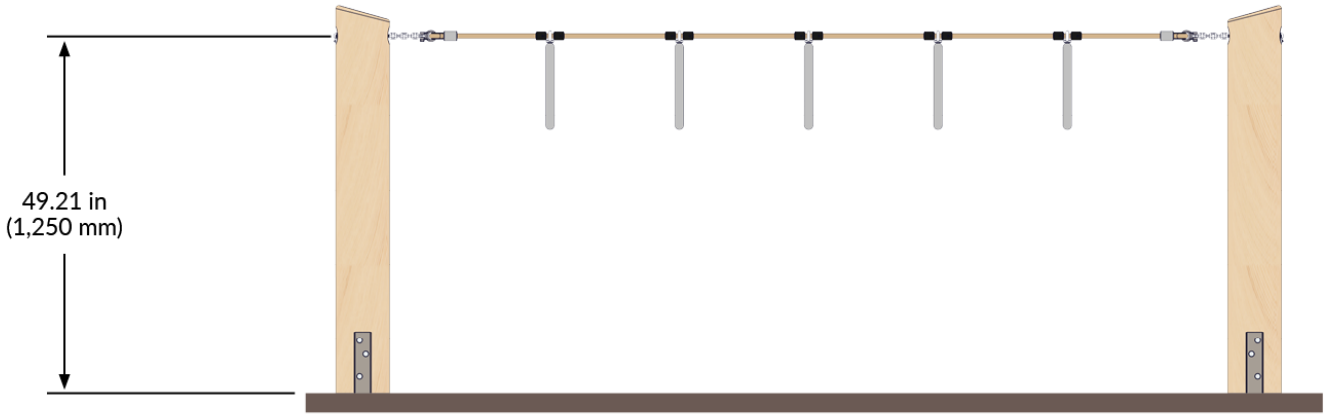
4591-7-R Slackline



4591-9-R Wobble Beam



4591-12-R Climbing Rungs



4591-13-R Holding Rings

4591-14-R Clambering Loops

Maintenance

To maintain safety, the operator must ensure that proper inspection and maintenance is carried out by a competent person in accordance with ASTM F1487-17 or CSA-Z614, and the following manufacturer recommendations.

Damage which may compromise safety must be repaired immediately. If repairs cannot be immediately carried out, the operator must close the equipment to prevent use.

Replacement Parts

Replacement parts may be obtained through your equipment dealer. Parts not obtained through a dealer must conform to the manufacturer's specifications.

Break-in Period

Between 1-2 weeks after installation (equipment break-in period), check all threaded connections and tighten if necessary.

Inspection Frequency

We strongly advise you to carry out inspections and maintenance work within the specified periods as use of the equipment, the weather and malicious vandalism cause wear and tear that compromises the safety and function of the equipment.

With average use and environmental conditions, check the following at or before the recommended frequency. If the equipment is exposed to high-use or harsh environments, the inspections should be performed at a shorter frequency. Inspections should also be completed per ASTM 1487-17 or CSA-Z614 guidelines.

<u>Monthly</u>

- Check all connecting elements and fittings for wear and tear and tighten if necessary. Repair or replace damaged or missing parts.
- Check ropes for excessive wear. If ropes are worn through to the steel wire core, the equipment should be closed to prevent use until the rope is repaired or replaced.
- Check surfacing for adequate depth and fill in as necessary.
- Check the ground surface of fall protection for hard objects and loose foundations.
- Check that moving metal parts (joints, springs, etc.) move smoothly and are not worn. Repair or replace if necessary. It is not necessary to lubricate joints as we only use maintenance-free metal roller bearings.

- Check all attachments such as chains, ropes, nets, etc. for damage and repair or replace if necessary.

Quarterly

- Detailed inspection of the operation and stability of the equipment paying particular attention to any wear and tear.
- Check the stability of the foundations and posts.
- Tighten all forms of attachment.

Yearly

- Check for corrosion on metal components. It may be necessary to dig out subterranean components to inspect them. Apply zinc paint to any corroded or scratched areas.

New Product Handover

If new elements are added to an existing installation, this document must be completed again for the additional elements.

NetPlay USA LLC
3-D Adventure Play & Innovation

Model Name: Haiger Adventure Course **Model Number:** 4591-R

Elements Installed:

- ☐ 4591-2-R Rope Ladder
- ☐ 4591-3-R Climbing Net
- ☐ 4591-4-R Balancing Line
- ☐ 4591-5-R Rubber Hammock
- ☐ 4591-7-R Slackline
- ☐ 4591-9-R Wobble Beam
- ☐ 4591-12-R Climbing Rungs
- ☐ 4591-13-R Holding Rings
- ☐ 4591-14-R Clambering Loops

Operator

Name of operator (town, school, business, etc.): _____

Street: _____ City: _____ State: _____ Zip: _____

Representative in charge: _____

Installer

Name of installation company: _____

Street: _____ City: _____ State: _____ Zip: _____

Representative in charge: _____

Installer Checklist:

- ☐ Adequate concrete foundations poured per instructions.
- ☐ Elements assembled per the instructions without modification (unless approved by the manufacturer.)
- ☐ Final inspection conducted and passed per instructions.

Operator received the complete assembly instructions, inspection & maintenance instructions, and maintenance log. Installer completed work to the manufacturer's specifications.

Operator Signature: _____ Date: _____

Installer Signature: _____ Date: _____

Maintenance Log

Copy and return to the owner/operator annually following initial inspection.

Name of operator
(town, school, business, etc.): _____

Equipment Location: _____

Model Name: Haiger Adventure Course

Model Number: 4591-R

Number of Elements: _____

Date of Inspection	Inspector	Fault? Yes/No	Details	Repaired By	Repair Date

Course Elements

Model Number	Element Name	Serial Number	Date Installed
4591-2-R	Rope Ladder		
4591-3-R	Climbing Net		
4591-4-R	Balancing Line		
4591-5-R	Rubber Hammock		
4591-7-R	Slackline		
4591-9-R	Wobble Beam		
4591-12-R	Climbing Rungs		
4591-13-R	Holding Rings		
4591-14-R	Clambering Loops		