

# ARBOREAL CLIMBING SYSTEM

## Operator Manual

Model: ARB-33



### NOTE TO INSTALLERS

Always Read Instructions Before Use

The Operator Manual contains information relating to the proper use of the Arboreal Climbing System and includes all product information. This document may only be removed by the end user. Ensure user manual is readily available to operators at all times.

Head Rush Technologies Arboreal Climbing System Operator Manual  
P/N 09070057001  
U.S. Pat No's. 8,490,751; 8,851,235; 9,016,435 and D654,412 & corresponding  
patents/applications in the USA and in other countries worldwide.

**Arboreal**  
CLIMBING SYSTEM

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## **IMPORTANT SAFETY NOTICE**

### **Climbing is a Dangerous Activity**

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### **Read Before Installation & Operation**

**Failure by the installer or operator to heed any and all instructions, warnings, and cautions for the correct installation, operation, care, and maintenance of the ARB-33 Arboreal Climbing System and associated equipment may result in serious injury or death.**

The Arboreal Climbing System, model ARB-33, and all associated equipment is designed and specified for use in the recreational climbing industry as a portable route setting and climbing product. Use of the Arboreal System for any purposes other than that intended by the manufacturer is not permitted. The Arboreal System must never be used as part of a belay or anchor system.

Owners and operators of ARB-33 are responsible for the safety and supervision of any person using the equipment and are required to assure that proper installation and operation procedures are followed at all times. Proper installation requires careful design and planning using ARB-33 components. Owners and operators are encouraged to seek the advice of a qualified professional regarding the instructions in this manual.

The Arboreal Climbing System must always be used with an appropriate anchor, rope-belay system and qualified operator. The system may only be used for bouldering (a style of free-climbing without a belay) when operating as a component within an appropriately engineered facility, below a predetermined height and in conjunction with adequate engineered fall attenuation surfaces. No component of the Arboreal Climbing System is appropriate for use as part of an anchor or belay system. An auto belay device must be used for all installations without a designated operator that are not engineered specifically for bouldering. Owners and operators are responsible for the proper installation and use of these systems at all times. Ensure all operations comply with local, federal or other applicable regulations and standards.

These instructions must be made readily available to the operator at all times. Prior to installation and use, all owners, installers, and operators must have read and shown to have understood all instructions, labels, markings, and safety information pertaining to the installation, operation, care, and maintenance of the Arboreal Climbing System, its component parts, and all associated hardware. Failure to do so may result in equipment damage, serious injury, and/or death.

### **Health & Safety**

Owners and operators must abide by all applicable standards, international, federal, state and provincial laws, and any specific health and safety regulations pertaining to the installation and use of this product.

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## Site Rescue Plan

Owners and operators must have devised an emergency rescue plan for any climber in distress at all sites operating Arboreal Climbing System. Operators must inform users of the Arboreal Climbing System of the procedures for rescuing a climber in distress prior to climbing.

# SAFETY INFORMATION

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## Symbols Used in this Manual

The following safety symbols are used throughout this manual to highlight potential dangers. One or more precautions may be associated with practices and procedures described within this manual. Failure to adhere to any precautions highlighted can result in death, serious injury, and equipment damage.

Ensure that you read and understand all safety procedures related to the working environment and the task you are undertaking.



### **DANGER**

Indicates a hazardous situation exists that, if not avoided, will result in serious injury or death.

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### **WARNING**

Indicates a potentially hazardous situation that, if not avoided, could result in serious injury or death.

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### **CAUTION**

Indicates a potentially hazardous situation that, if not avoided, may result in injury or equipment damage.

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### **NOTE**

Indicates an action that must be taken to ensure personal safety and prevent damage to property or equipment.

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### **CARE FOR THE ENVIRONMENT**

Take care to minimize impact on the environment when carrying out this procedure.

# WARRANTY CONDITIONS

The Arboreal Climbing System is warranted against factory defects in materials and workmanship for a period of two (2) years from date of purchase. This warranty applies only to the original purchaser, and is contingent upon the owner/operator using and maintaining the device in accordance with the instructions, including the requirement to maintain regular inspection as described in all applicable manuals.

**THIS WARRANTY IS EXPRESSLY IN LIEU OF OTHER WARRANTIES, EXPRESS OR IMPLIED, AND ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS HEREBY EXPRESSLY EXCLUDED.**

The sole remedy for breach of this warranty, or for any claim in negligence or strict liability in tort, is the replacement of any defective parts at the discretion of the manufacturer. Parts claimed to be defective shall be removed from service.

This warranty is null and void if parts other than genuine parts are used, or if any modifications or services have been performed on the device by anyone other than an authorized Head Rush Technologies servicing agent. This warranty does not cover any damages resulting from abuse to the device, damage in transit, or any other damage beyond the control of Head Rush Technologies. Head Rush Technologies makes no warranties in respect to trade accessories or component parts which are not made by Head Rush Technologies.

No person, agent, or distributor is authorized to give any warranty, other than the one herein expressed, on behalf of Head Rush Technologies, or to assume for it any liability pertaining to such products. Head Rush Technologies expressly disclaims any implied guarantee of merchantability, or claim as to whether the device is suited for a particular purpose. Purchaser agrees that Head Rush Technologies shall not be held liable to purchaser/operator for damages of any kind, including but not limited to, lost or projected profits, equipment down time, or any losses considered to be caused by non-operation or servicing/re-certification down time of the equipment.

## Customer Responsibility

The following items are considered to be the responsibility of the customer and are therefore non-reimbursable under the terms of the warranty.

- Routine maintenance and inspection.
- Removal from service because of abuse, misuse or improper operation of equipment by the installer or operator.
- Normal deterioration due to wear and tear and exposure to the elements.

This warranty is subject to the following of the requirements of the Operator Manual supplied, manufacturer's instructions, and the advice given by authorized Head Rush Technologies service technicians.

## DESCRIPTION

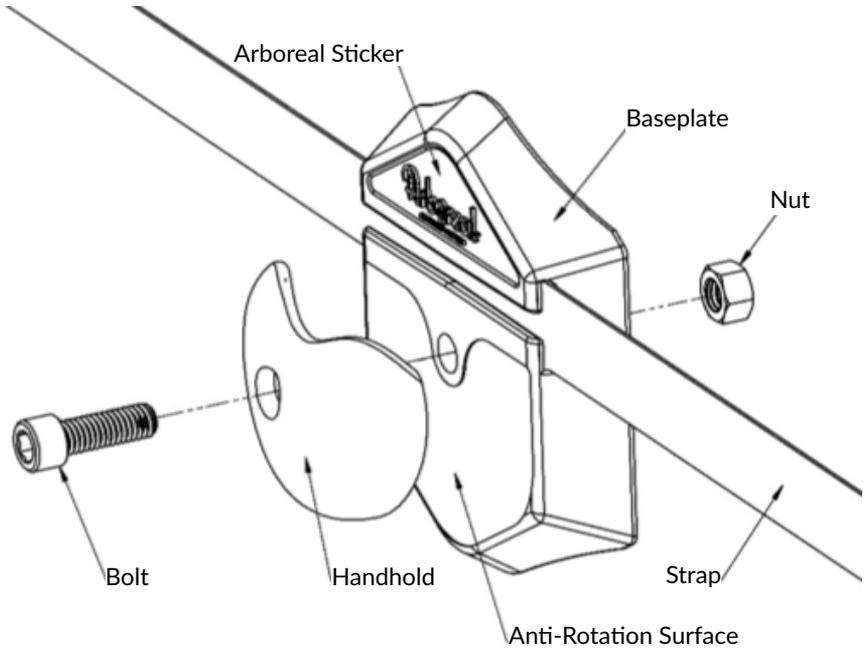
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The Arboreal Climbing System is a product designed for route setting and climbing on any appropriate support that the product and its loading specifications can accommodate, including trees, utility poles, and other cylindrical structures. The Arboreal System has been intentionally designed with features for high performance including a sleek profile to promote use of the attached handhold, robust and impact resistant material for durability, a textured anti-rotation surface to prevent hand holds from spinning, anti-rotation tabs for baseplate stability, an open slot for ease of adding baseplates to in-situ straps and can be used both indoor and outdoors.

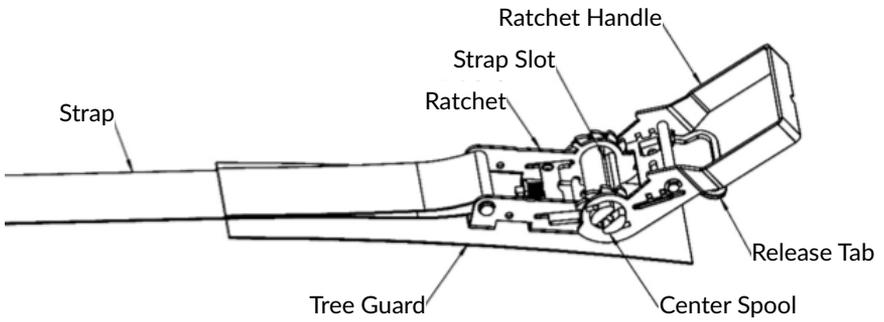
# SPECIFICATIONS

<b>MODEL</b>	ARB-33	
<b>CLASSIFICATION</b>	Climbing Equipment	
<b>DIMENSIONS</b>	BASEPLATE	124 X 140 X 23 mm (4.9 X 5.5 X 0.9 in)
	RATCHET ASSEMBLY	50 X 50 X 130 mm (closed) (2 X 2 X 5.1 in)
	HANDHOLD	Varies
<b>NET BASEPLATE WEIGHT</b>	0.41 kg (.90 lbs)	
<b>NET RATCHET ASSEMBLY WEIGHT</b>	.14 kg (.30 lbs)	
<b>HANDHOLD WEIGHT</b>	Varies	
<b>MATERIALS</b>	BASEPLATE	Reinforced Nylon
	HANDHOLD	Polyurethane
	NUT	Stainless Steel
	BOLT	Stainless Steel
<b>RATCHET ASSEMBLY</b>	RATCHET	Zinc Plated Steel
	WEBBING	Polyester

# ARBOREAL CLIMBING SYSTEM PARTS



*Assembly*



*Ratchet Assembly*

# INSTALLATION

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## WARNING

Climbing is a Dangerous Activity

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Climbing is inherently dangerous and may result in serious injury or death of a participant. The Arboreal Climbing System is designed to be used to establish climbing routes on structures such as trees, utility poles or other appropriate cylindrical structures. Operators of the Arboreal Climbing System are solely responsible for learning, implementing and conveying to participants proper climbing techniques, including belaying, and good judgement. This includes knowing and observing the products capabilities and limitations and ensuring the climbing area is free and clear from all obstructions including, but not limited to: overhead objects which have the potential to loosen, break or fall, tree branches or other protrusions, structures or other objects, climbers, etc. Operators must inform participants of all necessary precautions and dangers and must educate all participants in the proper use of the Arboreal Climbing System as well as all third party equipment.

A proper anchor system and belaying techniques, including correct use of an auto belay device, is required at all times when using the Arboreal Climbing System. The system may only be used for bouldering (a style of free-climbing without a belay) when operating as a component within an appropriately engineered facility, below a predetermined height and in conjunction with adequate engineered fall attenuation surfaces.

No component of the Arboreal Climbing System is appropriate for use as part of an anchor or belay system. All anchors, belay systems and associated components must be suitable for use within a climbing system and must meet all applicable laws, regulations and standards. An auto belay device must be used for all installations without a designated operator that are not engineered specifically for bouldering. Owners and operators are responsible for the proper installation and use of these systems at all times. Ensure all operations comply with local, federal or other applicable regulations.

Seeking the advice of a qualified professional prior to installation and use is strongly recommended.

## Precautions

- The Arboreal Climbing System must be mounted using the provided straps for modular installation and to prevent damage to trees, poles, or other mounting structures. When installing the Arboreal Climbing System, be aware of the following precautions:
- Provided straps must be used for each assembly.
- Tighten the straps to the point where the assembly cannot be slid, twisted

or pulled away from the mounting structure. The assembly should not move under working load.

- The strap should have no twists, significant bends, or be running over sharp edges when installed.
- The mounting structure must have a minimum diameter of 20 cm (8 in).
- Smaller structures may require higher ratchet tension to prevent slipping.
- Ensure an adequate “tail” of webbing through the ratchet.
- The tree protector should always lie in-between the ratchet and the tree.
- Never use any component of the Arboreal Climbing System as an anchor point
- Always use appropriate belay and anchor techniques during use and installation.
- Periodically moving the location of the assembly on a tree mounted system will help prevent damage to the tree.



#### **NEVER USE THE ARBOREAL SYSTEM AS AN ANCHOR**

Do not use any part of the arboreal system as an anchor component, including the ratchet straps. The components are not rated to be used as a personal anchor, belay anchor, lead bolt, etc.

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#### **ALWAYS USE APPROPRIATE BELAY AND ANCHOR SYSTEMS AND A FALL ATTENUATION SURFACE DURING USE AND INSTALLATION.**

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury.

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#### **ALWAYS USE DESIGNATED STRAPPING SLOT, METHODS AND COMPONENTS**

Never install the Arboreal Climbing System using any part of the device other than the designated strap slot. Incorrect methods used to strap the platform to the support may cause equipment failure or damage. Always use genuine Head Rush Technologies' components.

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#### **HARD IMPACTS MAY RESULT IN STRUCTURAL DAMAGE**

Dropping of, or hard impacts to the Arboreal Climbing System may result in serious damage to components and compromise safety of operation. If any component of the Arboreal Climbing System is suspected to be damaged, remove it from service.



## PERIODICALLY MOVE THE ASSEMBLY FOR TREE MOUNTED SYSTEMS

Periodically moving the location of the assembly on a tree mounted system will help prevent damage to the tree.

## Standards

Prior to installation, all operators must be familiar with the requirements of all relevant standards for hardware and equipment used with the Arboreal Climbing System. This includes anchor points, rope, harnesses, connecting hardware, etc. Use of the TRUBLUE Auto Belay in conjunction with an appropriate anchor is the preferred method of fall protection with the Arboreal Climbing System. Utilizing a TRUBLUE or other auto belay eliminates the need for an additional operator, eliminated human belay accidents and maximizes throughput for high use facilities.

## Selecting a Location

The Arboreal Climbing System is to be mounted on a tree, pole, or similar structure. When selecting a location to install the Arboreal Climbing System, always ensure:

- The structure and anchor points have a minimum load capacity of 10kN (2248 lbf), are appropriate for climbing, have a minimum diameter of 20 cm [8in] and conform to all federal and state requirements for such uses.
- Ensure any surfaces that are in contact or in close proximity to the straps are free of sharp edges or protrusions that may damage the strap.
- Ensure the climbing area is free and clear from all obstructions including, but not limited to: overhead objects which have the potential to loosen, break or fall, tree branches or other protrusions, structures or other objects, other climbers, etc.
- All other criteria stated in this manual are met.



## PREVENTING DAMAGE TO TREES AND OTHER MOUNTING STRUCTURES

The Arboreal Climbing System has been designed to provide optimal performance and minimal affect to trees or other structures it is mounted to. Care should always be taken to minimize any damage to the mounting structure. Periodically moving the assemblies on a tree mounted system will help prevent damage to the tree. If in doubt, always consult a qualified professional.



Prolonged exposure to the elements will increase the rate of wear and degradation of any straps and hardware used to mount the Arboreal Climbing System. Always follow the manufacturers' recommendations and instructions for associated equipment.

# ASSEMBLY

## Assembling the Strap, Baseplate, and Handhold

- Remove all parts from the packaging and ensure that all parts are accounted for and undamaged.
- To begin assembling the Arboreal Climbing System, insert the strap through the main slot located on the front of the Baseplate by sliding it through the side of the slot or by pinching the strap and squeezing into the opening in the front of the slot. The latter method may be used to install additional baseplates to in-situ straps. Make sure that the ratchet is oriented so that the tree guard is facing the baseplate. One strap may be fitted with multiple baseplates.
- With the nut fixed in the hexagonal recess, secure the handhold onto the baseplate by inserting the bolt through the handhold, the baseplate and into the nut on the reverse side, as shown on page 9. Ensure the bolt does not protrude such that it may damage the mounting structure.
- Tighten the bolt sufficiently tight so that the hand hold cannot spin on the baseplate, to a minimum of 16 Nm [144 in-lbf] ensuring not to exceed 30 Nm [265 in-lbf]. This step may also be completed after mounting the assembly onto the selected structure.
- Always use Arboreal compatible hand holds, bolts and nuts to ensure correct fitment of all components.



### **ALWAYS USE ARBOREAL COMPATIBLE HAND HOLDS, BOLTS AND NUTS TO ENSURE CORRECT FITMENT OF ALL COMPONENTS**

The Arboreal System has been designed to utilize the same bolt length for all Arboreal Compatible hand holds. Failure to use correct components may result in poor hand hold-baseplate fitment, poor bolt-nut engagement, and/or excessive protrusion of the bolt through the baseplate causing damage to the mounted structure. Replacement components and additional lines of Arboreal compatible hand holds are available through Head Rush Technologies and authorized distribution partners.

## Mounting the Baseplate Assembly

### **MOUNTING THE BASEPLATE ASSEMBLY ONTO THE STRUCTURE**

The Arboreal Climbing System can only be installed using the methods and hardware described in this manual. When installing the Arboreal Climbing System, be aware of the following precautions:

- User applied ratchet tension must be capable of withstanding slip and deflection of all working loads.
- When installed, the Arboreal sticker must be right-side-up and face out.

- There should be no twists in the strap around the mounting structure or within the ratchet upon installation. The strap should not run over any sharp edges or protrusions which may cause excessive wear/damage.
- The structure and anchor points have a minimum load capacity of 10kN (2248 lbf), are appropriate for climbing, have a minimum diameter of 20 cm [8in] and conform to all federal and state requirements for such uses.



### **ALWAYS USE DESIGNATED STRAP SLOT, METHODS & COMPONENTS**

Only install the Arboreal Climbing System using the designated strap slot. Incorrect methods used to strap the platform to the support may cause equipment failure or damage. Always use genuine Head Rush Technologies' components.

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### **CAUTION MUST BE TAKEN WHEN INSTALLING ON SMOOTH STRUCTURES**

Caution must be taken when installing the Arboreal Climbing System on smooth poles or structures. Every assembly must be secured with sufficient strap tension. Ratchets must be tightened sufficiently until the assembly cannot be moved in any direction by the applied weight of the heaviest user.

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### **FAILURE TO INSTALL THE ARBOREAL CLIMBING SYSTEM ACCORDING TO THE PROVIDED SPECIFICATIONS MAY RESULT IN INJURY OR EQUIPMENT DAMAGE.**

Any indication of the Arboreal Climbing System being out of specification or compromised mandates the immediate removal of the device from service.

In order to secure the Arboreal Climbing System to the chosen support structure, start by wrapping the strap around the support, making sure that the Arboreal sticker is in the correct orientation.

Pull the strap through the strap slot in the center spool of the ratchet until the strap is snug around the perimeter of the structure. Ensure that the strap is level, does not run over any sharp edges and there is at least 6 inches of tail sticking out of the ratchet strap slot.

Secure the Arboreal Climbing System by tensioning the ratchet strap so that it cannot slip or be deflected under operational loads. To tension ratchet raise and lower the handle. This will rotate the center spool, winding the strap and tensioning the line. Close the rather handle prior to use. Ensure that any excess strap protruding from the ratchet after tensioning is trimmed or wrapped in such a way as to prevent a snagging or choking hazard when in use.

To release the ratchet, pull and hold the release tab and fully open the ratchet handle. Grab the free side of the webbing and pull to release.

After installing the Arboreal Climbing System and appropriate anchor and belay system, users may climb the routes which are now established. The design of the Arboreal Climbing System enables the owner and operator to move or add baseplates with the ratchet strap already installed. To do so, loosen the ratchet assembly but do not remove the strap from the structure. With the strap loosened, baseplates may be moved along the strap or additional baseplates may be added by pinching the strap and inserting through the front of the strap slot. Handholds may be changed with the system in-situ and tensioned.



**TRIM OR WRAP EXCESS STRAP TAIL TO PREVENT SNAGGING OR CHOKING HAZARD**

Ensure that any excess strap protruding from the ratchet after tensioning is trimmed or wrapped in such a way as to prevent a snagging or choking hazard when in use.



# INSPECTION & MAINTENANCE

## Service Life

The Arboreal Climbing System has been designed for use outside and in harsh environments with a wide range of temperature and weather conditions for up to two (2) years. If any part of the product is found to be damaged or worn during inspection, immediately remove from service. Replacement components and additional Arboreal compatible handholds are available from Head Rush Technologies and Authorized Distributors.

## Product Inspection

### SAFETY PRECAUTIONS

The Arboreal Climbing System must be inspected weekly for overall condition to verify against acceptable wear. The weekly inspection may be completed with the Arboreal Climbing System in place or removed from the structure. Remove, inspect, clean, and reinstall the Arboreal Climbing System at least monthly, ensuring to inspect the fasteners. When reinstalling, ensure the ratchet assembly is in a different position than it was previously to reduce the possibility of tree damage. Installations subject to saline or other harsh environments may need to perform inspections more frequently. Regular inspections must be conducted to ensure appropriate ratchet tension and handhold bolt torque.



#### **PERIODICALLY MOVE THE ASSEMBLY FOR TREE MOUNTED SYSTEMS**

Periodically moving the location of the assembly on a tree mounted system will help prevent damage to the tree.

### BI-ANNUAL COMPREHENSIVE INSPECTION PROCEDURE

Remove the Arboreal Climbing System from the support structure to ensure adequate lighting and unrestricted access is available to permit a thorough inspection of all areas of the Arboreal Climbing System and associated equipment.

1. Clean any dust, dirt, or contamination off of the Arboreal Climbing System and any fasteners with a clean cloth.



#### **DO NOT USE SOLVENTS OR ABRASIVES**

Clean with a cloth only. Do not use any cleaners, solvents, or abrasives on any part of the Arboreal Climbing System or associated equipment.

2. Visually inspect the baseplate, handhold, strap, anti-rotation surface, ratchet assembly, and fasteners for wear, impact damage, cracking, deformation or corrosion. Replace any damaged components or remove the Arboreal Climbing System from service.
3. When complete, return the Arboreal Climbing System to service.

# MANUFACTURER'S DETAILS

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Replacement parts for the Arboreal Climbing System and other related products can be purchased at [store.headrushtech.com](http://store.headrushtech.com) or from an Authorized Head Rush Technologies Distributor.

Head Rush Technologies may be contacted directly at:

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