rock exotica
GEAR FOR THE Z AXIS

Instructions for Use

DownRigger

Aerial Friction Brake
AB1

WARNING!
EXPERT USE ONLY

Made in the **USA** using foreign and domestic materials

Register your product at:
www.rockexotica.com/register

- These activities are inherently dangerous and carry a significant risk of injury or death that cannot be eliminated.
- These instructions DO NOT tell you everything you need to know.
- Do not use unless you can and will understand and assume all risks and responsibilities for all damage/injury/death that may result from use of this equipment or the activities undertaken with it.
- Everyone using this equipment must be given and thoroughly understand the instructions and refer to them before each use.
- You must always have a backup-never trust a life to a single tool.
- You must have a rescue plan and the means to implement it. Inert suspension in a harness can quickly result in death!
- Do not use around electrical hazards, moving machinery or near sharp edges or abrasive surfaces.
- We are not responsible for any direct, indirect or accidental consequences or damage resulting from the use of our products.
- Stay up to date! Regularly go to our website and read the latest user instructions.

WARNING: This product can expose you to chemicals including nickel acetate, which is known to the State of California to cause cancer. For information go to WWW.P65Warnings.ca.gov

rockexotica.com
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(EN) ENGLISH

Fig. 7: For orientation only. Not for high speed or multi-rotation. See fig. 7. (A) Verify swivels rotate freely. Swivel-type devices must NEVER be used with steel cable or wire rope unless the wire rope manufacturer verifies such use is approved and that the cable/rope will not unwind when used with a swivel. (B) Verify spring pin is in place and has not been removed. (C,D) Ensure swivel axle has not loosened by checking axle head with your fingers and making sure swivel top does not move up or down.

WARNING

CAUTION! Tree work is inherently dangerous and carries a significant risk of injury or death that cannot be eliminated. These instructions DO NOT tell you everything you need to know. Do not use unless you can and will understand and assume all risks and responsibilities for all damage/injury/death that may result from use of this equipment or the activities undertaken with it.

Not for lifting or lowering live loads! This is NOT a life support rated device.

The Downrigger does NOT hold a load unattended–you must hold or tie off the control end.

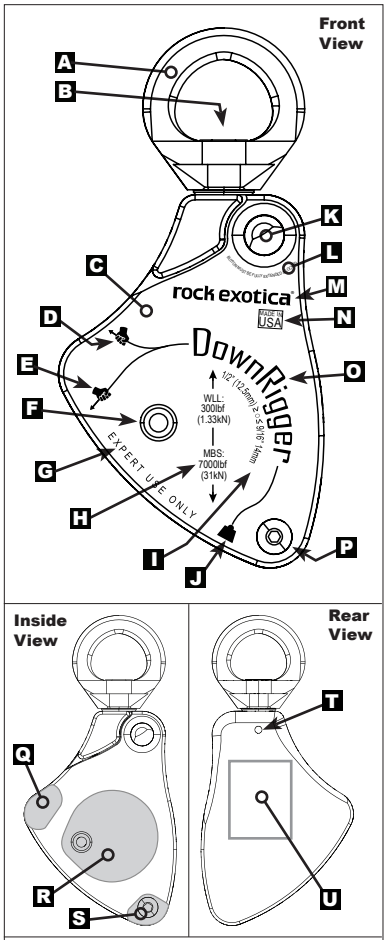
Do not use the Downrigger for negative rigging.

The Downrigger is intended to be operated by two people.

Use with light load mass until you are familiar with controlling the load.

Ensure that the drop zone is clear of people or property before lowering load.

	AB1 DownRigger
	Approx 2"
Rope Size	1/2" - 9/16" (12.5mm - 14mm)
Strength/MBS	7000 lbf / 31 kN
WLL	300 lbf / 1.33 kN
Height	6.6" (168 mm)
Width	3.25" (83 mm)
Weight	16 oz (453 gm)



Front View - A. Swivel top, B. Swivel Axle, C. Sideplate, D. Rope path for lower friction, E. Rope path for higher friction, F. Pivoting Bollard Axle, G. Product branding, H. Ratings for Minimum Breaking Strength (MBS), and Working Load Limit (WLL), I. Rope size, J. Rope path toward load, K. Sideplate release button, L. Button must be fully extended and locked, M. Manufacturer, N. Country of manufacture, O. Product name, P. Fixed-Bollard Axle
Inside View - Q. Fairlead, R. Pivoting Bollard, S. Fixed Bollard
Rear View - T. Swivel axle spring pin, U. Product warnings

INTRODUCTION

The DownRigger is an aerial friction control device. It generates friction on the rigging rope by way of a pivoting bollard. It can be placed aloft at the point of rigging or it can be used as a friction device at the base of a rigging system. When placed aloft, the swivel allows the person controlling the load to move about freely without causing the rope to twist. When unloaded, the bollard spring returns the bollard to the "open" position to greatly reduce friction generated when hauling slack line.

DEVICE STRENGTH AND CAPACITY

The **Minimum Breaking Strength** (MBS) is the mininmum force at which breakage of the device occurs.

The **Working Load Limit** (WLL) is the maximum force the product is intended to support during typical, repeated operation.

Install Rope According to Desired Friction Setting

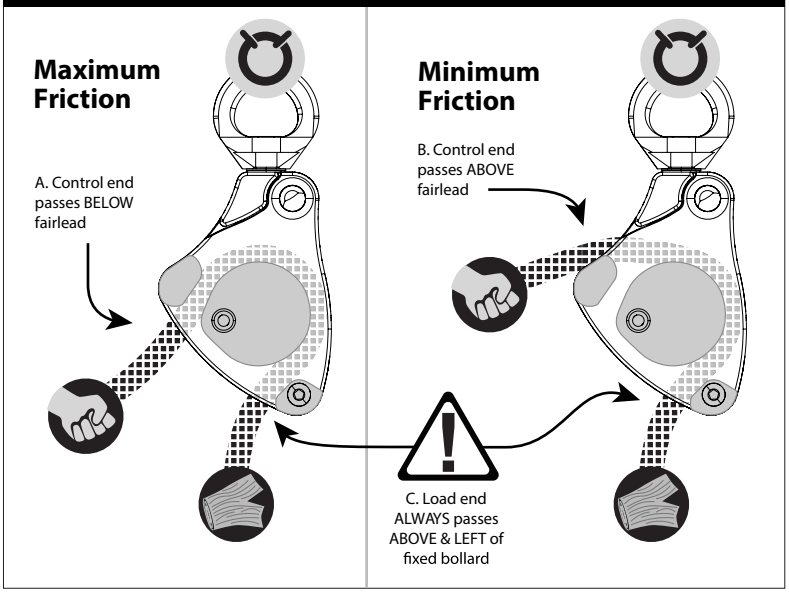
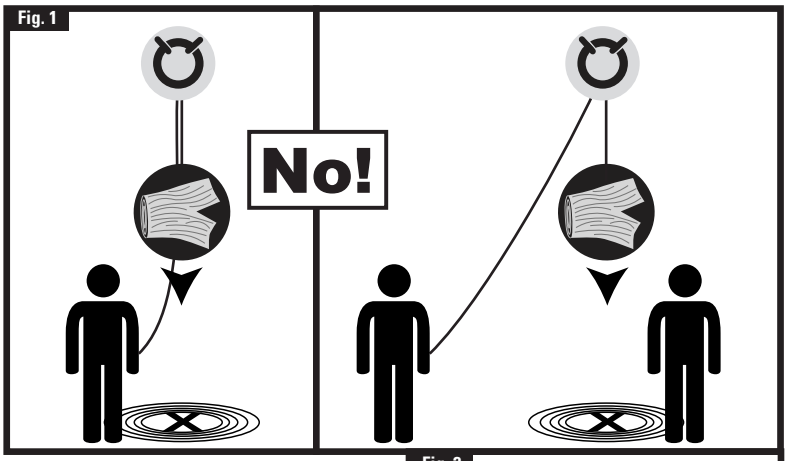


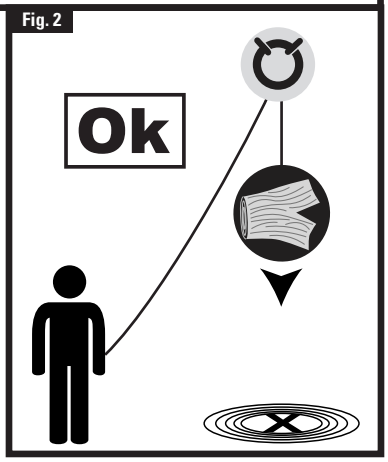
Fig. 1



! MANDATORY SIDEPLATE LOCKING PROCEDURE!

The sideplate must be closed and locked with the button fully extended, or strength will be greatly reduced and the rope may fall out with catastrophic results. You must understand how the sideplate & locking button work & must faithfully do the following every time you use it:
1. Visually confirm the sideplate is fully closed and the locking button is fully extended.
2. Test the sideplate by attempting to rotate it to confirm by touch that it is locked.
Do not allow anything to contact the button in use. Regularly check that the sideplate is locked and the pulley is positioned properly. Keep the DownRigger in sight at all times.

Fig. 2



The **Design Factor** is the ratio of the MBS to WLL. The default ratio calculated for the DownRigger is 23:1, however you must decide if this **Design Factor** is sufficient for: the amount of wear on the device; the ability of the device to appropriately apply friction; the conditions of use; and any other factor affecting the force acting on the device.

Be aware that the WLL for your system may be lower than the WLL for the DownRigger. Always follow manufacturer WLL recommendations for components in your system.

MANAGING THE CONTROL END

The **Control End** of the rope is the portion of the rope opposite from the **Load End**, and is the primary way to manage the descent of the load. It is critical to manage the Control End of the rope at all times.

Prior to capturing the load, do the following:

1. Make sure that a sufficient length of rope exists on the Control End to lower a load all the way to the ground without the end potentially slipping through your hands and the device.

2. Make sure that the trailing rope on the Control End: a) will not entagle your feet or legs; b) has no knots, or is not tangled; and c) is not wrapped around your wrist or forearm.

3. Grasp the Control End of the rope with both hands, using gloves sufficient to apply friction to the rope passing into the device and dissipate the heat generated. Position yourself so that any force pulling you forward does not cause you to lose control of the rope, pull your hands into the device, or pull you into the drop zone of the load.

4. If you choose to tie off the control end of the rope when capturing the load, remove all of the slack from the system beforehand. You may use a separate friction or belay device, such as a porta-wrap or rigging ring. Do not tie off the control end of the rope to yourself, or any device attached to you.

If you are not able to maintain your balance and position while managing the Control End of the rope, then you must decrease the weight of the load you are attempting to control, or increase

the friction created by the DownRigger by using a larger diameter rope, and/or utilizing the High Friction Rope Path on the device.

MANAGING FRICTION

The factors affecting the amount of friction created by the DownRigger are: age, condition and diameter of rope; amount of wear on the control surfaces of the device; selected rope path through device; amount of force applied by the user on the control end of the rope; and ultimately, environmental factors that can change daily, such as temperature and humidity.

Applying too much friction will cause loads to lower too slowly, while applying too little friction will cause loads to drop too quickly, or create too much force on the control end of the rope for you to adequately manage.

Start with a lighter load and gradually increase the mass until you are able to adequately judge your ability to control the load.

If the load drops too quickly, or the Control End of the rope is difficult to manage, immediatley increase friction by following the steps below, or reduce the weight of the load! Do not continue using if the Control End of the rope cannot be adequately managed.

INCREASE the amount of friction created by the DownRigger by: a) Increasing the size of the rope, b) installing rope according the High Friction setting of the device, and c) applying increased force on the control end of the rope.

DECREASE the amount of friction created by the DownRigger by: a) Decreasing the size of the rope, b) installing the rope according to the Low Friction Rope Path on the device, and c) applying less force on the control end of the rope.

MANAGING FORCE

The force generated by a falling mass increases significantly with any amound of drop, and you must limit the drop distance as much as possible. This includes eliminating slack from the system prior to loading onto the DownRigger, and pulling on the control end of the rope to provide a slight lifting force onto the load.

The DownRigger must never be used for negative rigging. Always position the Downrigger at or above the height of the load.

USE

The DownRigger must be free to align with the load, any restraint is dangerous.

Breakage Hazard: Do not let an object in between the sideplate and never rig your system so that the DownRigger is forced against something that could break or open the sideplate, allowing the rope to fall out. See fig. 6.

To Open Sideplate: Depress the button & rotate sideplate counterclockwise. It should stop at the 2nd button detent. In this position the strength is severely reduced, but the rope will not fall out as easily as it can in the fully open position. To fully open, just depress the button again & rotate.

To Close Sideplate: Rotate sideplate past the 2nd detent to the fully closed position. Verify the button extends fully through the hole & test that the sideplate is really locked & secure. You should be able to close it one-handed, but the components will last longer if you depress the button a little to help it when closing.

Compatibility: Verify compatiblity with other components of your system. An incompatible connection can cause accidental disconnection, breakage, or affect the safety function of another piece of equipment. The downrigger attachment holes are compatible with rope, slings or connectors. Inspect connection points for sharp edges begore using a textile connection such as a sling or rope. You must verify the suitability of this equipment for use in your application with regard to applicable governmental regulations and other standards on occupational safety.

Pinching Hazard: Rope travelling through the DownRigger can suck in hair, fingers, clothing, etc., causing injury & jamming the device. Guard against this.

The DownRigger must only be used in a straight pull. It must NEVER be subjected to a bending force.

Limitations On Use: It is impossible to imagine all the ways this equipment can be misused. It must be used only for the specific purpose it was designed for; it must not be used for any other. Only loading shown in the "OK" box is allowed.

Inspection Before & After Each Use: Check all parts for cracks, deformation, corrosion, wear, legibility of product markings, etc. Verify that the swivel top rotates normally & the axle screw has not loosened. Verify smooth rotation of the sheave, and the security and rigidity of the axle. Verify that the sideplate rotates normally & the button operates properly. The button must not be impaired by dirt, ice, corrosion, etc. Verify smooth rotation of the sheave. Addionally, see fig. 7.

Inspection During Use: Regularly inspect and monitor your system, confirming your carabiners are locked and positioned properly, with respect to the DownRigger. Visually confirm the sideplate is fully closed and the locking button is fully extended. Addionally, see fig. 7.

Thorough and specific training is absolutely essential before use. Being at height is dangerous and it is up to you to reduce the risks as much as possible - but the risks can never be eliminated. There are many ways to misuse this equipment, too many to list or imagine. You must personally understand and assume all risks and responsibilities of using this equipment. If you cannot or do not want to do this, do not use this equipment.

The integrity of this equipment is essential to your safety. Retire from Service & Destroy if the Equipment:

1. Is overloaded
2. Does not pass inspection or there is any doubt about its safety.
3. Is misused, altered, damaged, exposed to harmful chemicals, etc.
4. The button does not extend completely.

Do not return to service until the unit in question has been inspected and approved for use in writing by a competent person that is authorized to do so. Contact the manufacturer if you have any doubts or concerns.

Lifetime: Unlimited for metal products, but will often be much less depending on conditions and frequency of use; it could even be a single use in some cases.

Environmental Factors: Moisture, ice, salt, sand, snow, chemicals and other factors can prevent proper operation or can greatly accelerate wear.

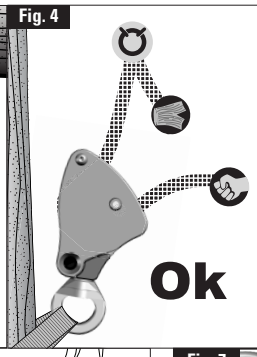
Maintenance & Storage: Clean if necessary with fresh water, then dry, or allow to dry away from direct heat. Light surface corrosion may be removed with a wire brush (no power tools). Retire if corrosion is heavy. A light lubricant may be applied. Store and transport in a dry place away from extremes of heat and cold and avoid exposure to chemicals. The button may be cleaned by holding it upside down & spraying a light lubricant into it while operating it.

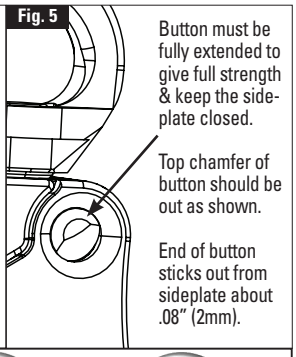
Principal Material: Aluminum Alloy & Stainless Steel

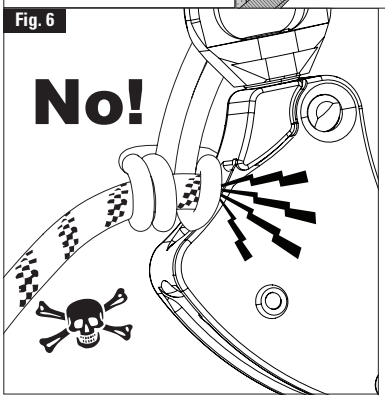
Repairs or Modifications to Equipment Are only allowed by the manufacturer or those authorized in writing by the manufacturer.

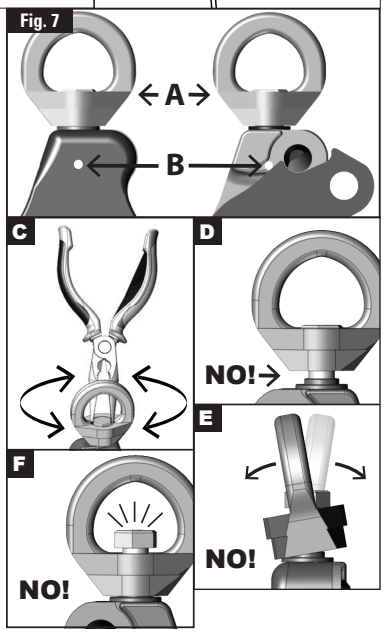
Detailed Inspection: In addition to inspection before, during and after each use, a detailed inspection by a competent inspector must be done at least every 12 months or more frequently depending on amount and type of use. Make a copy of these instructions and use one as the permanent inspection record and keep the other with the equipment. It is best to issue new gear to each user so they know its entire history.

Rock Exotica 3-year guarantee: If your Rock Exotica product has a defect due to workmanship or materials please contact us for warranty service. This warranty does not cover damages caused by improper care, improper use, alterations and modifications, accidental damage or the natural breakdown of material over extended use and time.









If re-sold outside the original country of destination, the re-seller must provide instructions for use, maintenance, periodic examination and for repair in the language of the country in which this product is to be used.

USER-REPLACEABLE BOLLARD

The fixed bollard, located along the bottom of the rope path, is replaceable by the user and available directly from Rock Exotica or an authorized reseller. Once the original bollard has worn down to the point of revealing the horizontal screw hole holding the bollard to the device, then it must be replaced. Since the device as a whole continues to wear, routine inspections as described in this tech notice must continue to insure its integrity, and the device must be retired if it does not pass these inpections.

USER REPLACEABLE PARTS

The fixed bollard, located at the bottom of the DownRigger is replaceable by the user. Contact an authorized Rock Exotica dealer, or visit www.RockExotica.com/downrigger to order a bollard replacement kit.

DATE	CONDITION	INSPECTOR	DATE (next inspection)