THE VORTEX

An Industrial Rope Access Sharp Edge Management System

www.ropesedge.ca

Patent Pending
Part # AATV - 1001
Size – 87mm x 71mm
Weight – 148g
Conformity – Non PPE

TECHNICAL DATA SHEET

The Vortex Rope Protector is designed for use on varying sizes & depths of Walkway Grating found on industrial & commercial work sites.

(aka: Kennedy grating & Grid Mesh)

The Vortex has been designed for use with Ropes as a physical barrier to assist in the protection of Rope from coming into contact with the sharp/serrated edges of steel & composite walkway grating during normal use.

In Industrial Rope Access, all Ropes shall be rigged in such a way so as to avoid contact with potential hot, sharp or abrasive surfaces that threaten the integrity of the life supporting Rope Access system.

The Vortex may be used with Rope diameters up to 13mm (The Vortex "Rope Channel" dia. is 15mm x 16mm). ***The Vortex is not designed for use with the wire rope or steel cable of any kind. Other natural fiber ropes are acceptable.***

The Vortex should not be used if the expected "load" exceeds 250kg regardless of the entry angle of entry and exit of the device.

The Vortex, and all of its parts is never to be considered, or used as, an anchoring device or an anchorage itself, and therefore, does not hold a certification or rating.

Suggested Life Span of ***The Vortex*** is the earlier of 10yrs from manufacture, and 5yrs from first use. And entirely dependent on passing regular inspections.

The Vortex does not protect Rope from hot surfaces. Normal avoidance practices of hot surfaces during Rope Access work shall be observed whilst using ***The Vortex***.

Material – PA12 Nylon.
PA12 Nylon properties;

- Melting point 175°C (347°F)
- Tensile Strength 48Mba (Approx. 6962PSI)
- Elongation approx. 15-20%
- Impact resistant to 1247flbs

PA12 Nylon holds excellent chemical resistance to oils, greases, aliphatic hydrocarbons & alkalis, however, should be inspected and removed from service in the event of contamination.

Actual properties of the material may vary slightly from those listed above based on processing parameters, operating conditions, and material usage. The manufacturer makes no warranties of materials for any particular application, nor does it make a warranty of any type, expressed or implied, including, but not limited to, the warranties of merchantability for a particular purpose.

USER INSTRUCTIONS

Always read the user instructions before the use of any new device. Proper training should take place before ***The Vortex*** is used in a life supporting scenario. If you are unsure of the safe condition of the device, replace it immediately.

Pre-Use Check. Always ensure that the grating being used to insert ***The Vortex*** and life supporting Rope Access system is in proper working order, secured correctly & fit-for-use in conjunction with ***The Vortex.***

The Vortex should be installed with care, ensuring that the "Thread-Lock" placement system is tight to the surfaces of the walkway grating with a minimum 2.2Nm of clamping force onto the channels of the grating.

Placement of ***The Vortex*** when used in pairs and in a 2 Rope system is completely reliant on the available space upon the grating in which it is being installed.

Rope entering the top of the device should not exceed an angle of 90°.

*** Always inspect and confirm that the walkway grating is unquestionably sound before installing The Vortex.****

The Vortex has been designed to provide an increased bend radius for the rope to run through it in the event that lowering a casualty or load is required. Minimum rope deflection is recommended when lowering.

The increased "bend radius" of ***The Vortex*** helps in the strength retention of the rope used and therefore maintaining a full-strength rope system.

*** A thorough Risk Assessment & well thought out rigging plan shall be completed when considering angles.****

Rope exiting the bottom of ***The Vortex*** should not exceed an angle of 45°.

Once installed, if other hazards remain below ***The Vortex,*** common "Velcro enclosure" type Rope Protection may be connected under ***The Vortex*** on the accessory cord loop to protect against potential abrasive surfaces under the grating.

A full visual inspection & "Bump check" should be done once the Vortex installation is complete. Be sure that ***The Vortex*** is "unquestionably secure" and free from unintentional movement before inserting rope into the device.

Do not alter ***The Vortex*** in any way. Engrave the Vortex to no more than .5mm with your companies unique marking system.

Prevent ***The Vortex*** from coming into contact with chemicals. If it is suspected to have been contaminated, remove it from service immediately.

Avoid direct contact with hot surfaces & heat sources. Melting point is 175°C (347°F). The manufacturer makes no warranties regarding material. Suggested short term low temperature usage is -40°C (-40°F).

MAINTENANCE OF THE VORTEX

- **Always keep the "Thread-Lock" collar free & clear of dust and debris.**
- **Only use warm water and a mild detergent to clean the device.**
- **DO NOT immerse *The Vortex* in water for long periods of time.**
- **DO NOT lubricate the "Thread-Lock" collar.**
- **Visually inspect for "wear & tear" of the device material on a "per-use" basis.**
- **Inspect the accessory cord knots are secure and fit-for-use.**
- **We recommend a minimum 6-month inspection of the device as well as before each use.**

INSTALLATION

1. **Before installing *The Vortex*, fully inspect the device to ensure there is no damage.**
2. **Before inserting *The Vortex*, be sure that the "Thread Lock" collar is dialed back all the way toward the upper main body of the device. (counter clock-wise)**
3. **Thoroughly inspect the fastening components and the integrity of the selected section of grating to be used.**
4. **Insert *The Vortex* into the walkway grating until the base of the "Thread-Lock" collar rests on the top surface of the grating.**
5. **Rotate the main body of *The Vortex* clockwise (to the right) until it stops.**
6. **Once the device stops in place, continue to rotate the "Thread-Lock" collar clockwise until the collar & main body bite the upper & lower surfaces of the walkway grating. Ensure that *The Vortex* is sufficiently tightened so that at least 4mm of thread is exposed.**
7. **By hand, apply approx. 2.2Nm of force on the "Thread-Lock" collar to ensure security to the grating material.**

REMOVAL

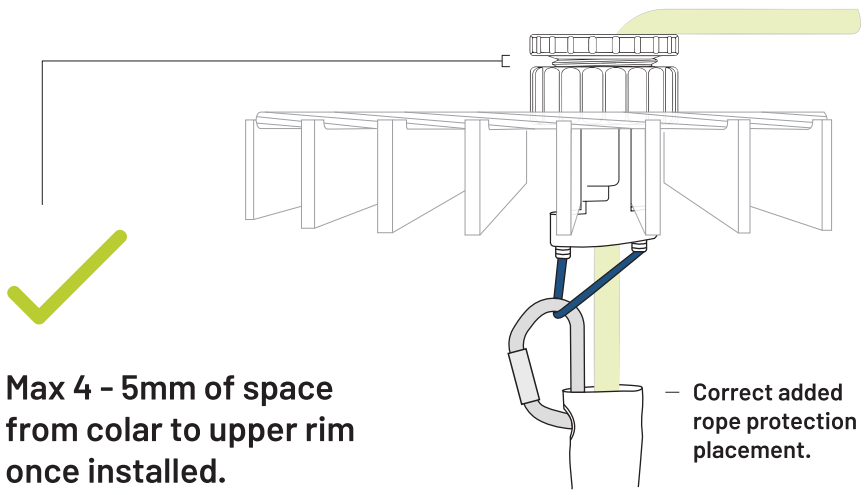
1. **Grip & rotate the entirety of *The Vortex* body & collar counter clockwise (to the left) until it becomes free.**
2. **Lift and remove the device from the grating**
3. **After a full inspection, avoid dropping *The Vortex* by immediately securing the device to your harness equipment-loop, using a carabiner & the accessory cord provided at the base of the device.**

WARNING

Working at height and related activities are inherently dangerous and involve risks & hazards that are a common and ordinary occurrence, some of which include; equipment failure or malfunction, natural hazards, and changing weather that may result in property damage, personal injury and/or death. It is the sole responsibility of any individual using this equipment to learn, practice & understand the proper techniques for use of its designated purpose and to be able to foresee and take appropriate action in situations where rescue may be necessary. Even the correct use of ***The Vortex*** and techniques may result in fatal consequences. ***The Vortex*** is intended for use by competent persons only. Any individual or organization using this equipment accepts and assumes all risks and takes full responsibility for all damages, injury or death which may result from its use. The following User Instructions and images show some of the common correct, and incorrect methods of use; it is impossible to predict them all. There is no substitute for proper training of any device by a competent person. Risk Assess everything.

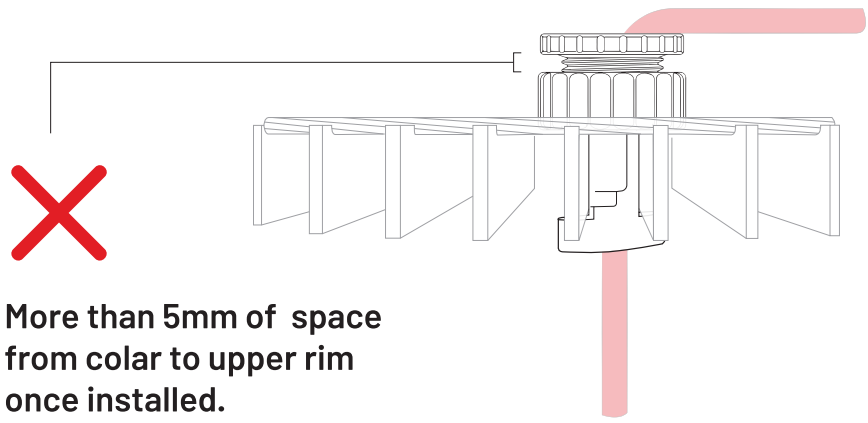
Safety is everyone's responsibility!

This information is to be read and retained in conjunction with the User Instructions supplied with this device. If ***The Vortex*** is to be used by someone other than the original purchaser, this document and warnings must be provided to the ultimate user. Pass on the knowledge!



Max 4 - 5mm of space from colar to upper rim once installed.

Correct added rope protection placement.



More than 5mm of space from colar to upper rim once installed.