NSC Power Ascender PRO User Manual

(Supplementary Information)

Kentech Systems

Supplementary Note 1: Methods for Attaching the Cordless Driver Drill

- There are two methods to attach the cordless driver drill that powers this device. In either method, the user attaches the cordless driver drill to the device's shaft.

  Method 1. Install the supplied one-way-clutch bit into the cordless driver drill's chuck and insert the device's shaft into the bit.

  Method 2. Attach the cordless driver drill's chuck directly to the device's shaft (without the supplied one-way-clutch bit).

'"How to Attach a Cordless Driver Drill to the NSC Power Ascender PRO" (Instructional video on YouTube)

- In either of the above methods, attaching the one-way-clutch bit or the device's shaft off-centre in the chuck may result in the cordless driver drill spinning out of control and causing injury.

(Caution)

- The one-way-clutch bit is not waterproof. In wet weather, attach the cordless driver drill directly to the device's shaft (without the one-way-clutch bit).
- Clockwise rotation of the cordless driver drill when attached directly to the device's shaft may cause it to spin out of control, twisting the wrist or striking the face, posing a risk of injury.

'"How to Attach the Clockwise-Rotation-Prevention Ring to the Cordless Driver Drill"
(Instructional video on YouTube)

Supplementary Note 2: Grease on the Internal Gears

- When first using the device, the grease on the internal gears is hardened, reducing the descent speed. As the device is used, the grease distributes over the gears, increasing the descent speed. When descending, be sure to always pull the braking side of the rope to the back side of the rope guide, behind carabiner hole two, through the gap at the top of the horn, and over to the front side. While descending, always make sure to firmly grip the rope and apply the brake.

  The maximum descent speed is 1 metre per second. Descending at speeds in excess of 1 metre per second damages the built-in one-way clutch.

  Pre-conditioning the device distributes the grease in the decelerator faster. Pre-condition the device by attaching a cordless driver drill and cycling until one battery is empty.

Supplementary Note 3: Compatible Ropes

- Ropes compliant with; EN1891 Type A standard for semi-static ropes (10.5 mm to 11.0 mm with elongation of less than 3%) and ANSI Z359.15 standard for static ropes (11.0 mm) are compatible with this device.

  Ropes that have a static cover and minimal misalignment between the core and cover are well-suited for use with this device. Two examples of such ropes are Marlow Ropes PROTEC 500 and BlueWater Ropes ArmorTech®, which feature a low-stretch aramid cover to reduce wear.
- Ropes with sagging covers or ropes thickened due to age-related degradation are incompatible with this device.
- To determine if a rope is suitable for use, users can do the following to test its compatibility. First, attach it to an anchor. Then, suspend a weight of 135kg from the rope and measure the diameter of the rope with a caliper. A result of 10.0mm or more is acceptable. Next, remove the weight and measure the diameter of the rope again. A result of 11.0mm (with a tolerance of less than 0.1mm) is acceptable. However, if the rope is too thick or significantly loses diameter under load, it is not compatible with this device.

  Ropes that decrease in diameter under load are less hazardous since the pulley cannot wind up the rope. However, thick ropes can get stuck in the pulley, and winding with inappropriate torque levels on the cordless driver drill may sever the rope's cover. (The cordless driver drill will automatically stop if set at the correct torque level.)

"How to Test a Rope's Compatibility with the NSC Power Ascender PRO"（Instructional video on YouTube）

"Ascent and Descent with the NSC Power Ascender PRO"（Instructional video on YouTube）