



USER INSTRUCTIONS

The Rotor is a constant rate descender which will automatically control the speed of descent without intervention from the user. If required, the speed may be controlled manually by holding the tail rope and using the additional friction. At loads of greater than 140kg more friction can be obtained by using both friction points. It functions in either direction and may be used in any orientation, e.g. passive (device to anchor) active (device to user/casualty).

It is approved to EN12841:2006 (C) for loads up to 140kg, including wet and cold conditioning to -4°C. It can be used for loads greater than this (see below) but this is not part of the approval. Also conforms to EN1496(A) and EN341(1A) see limitation for rescue descent performance. NOTE: Rescue is outside the scope of EN12841 and the CE / UKCA marks.

The maximum rope length (and therefore single descent) is 500m. The maximum total distance for a given load is shown below, this can be achieved with multiple smaller descents up to the maximum shown.

Maximum descent performance

Load (kg)	Total distance (m)	Speed (m/s)
30 (min rated load)	21,000	0.52
100	6,300	0.66
140 (max rated load)	4,500	0.75
200	500 (single descent)	0.91
250 (max rescue load)	220 (single descent)	1.69

If your application does not fall within the parameters above, contact heightec.

EN1496 / EN341: For rescue use only, not for lifting or lowering loads.

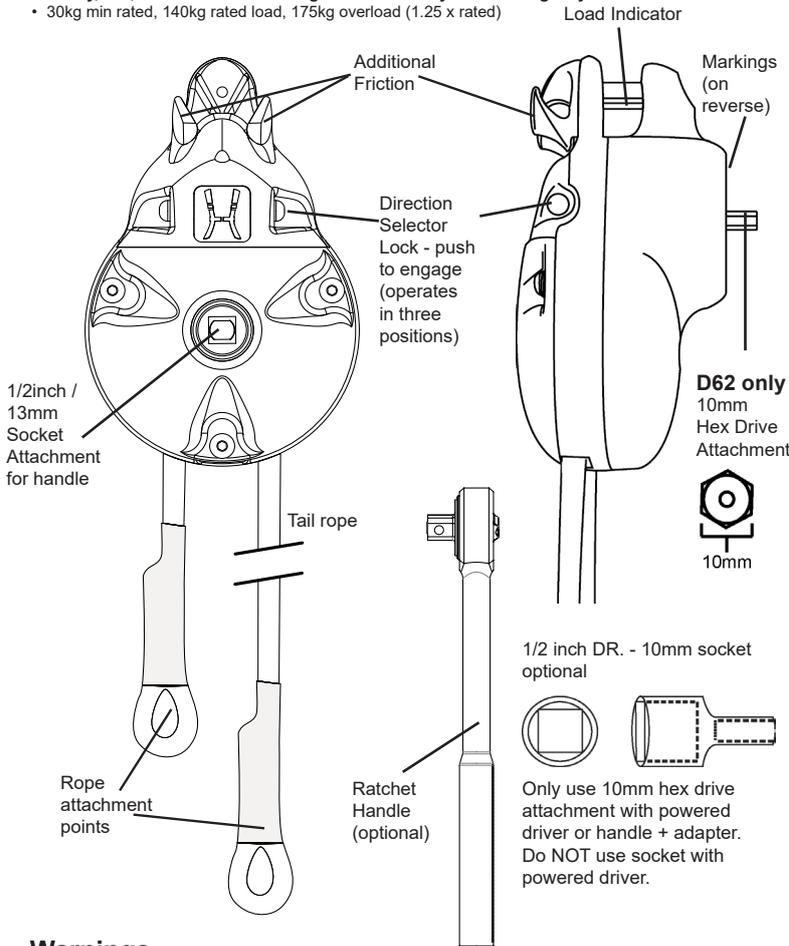
Rescue Lifting Performance, demonstrated for conformity. (*including wet conditioning)

- 30kg min rated load*, 140kg rated load, 215kg overload* (1.5 x rated)
- 300kg max rescue load (D62 only)
- Distance of lift limited by user (manual lift) or driver / batteries specified (eg. 78m @ 215kg using 2 x 5ah batteries)

Rescue Descent Performance

D61: dry, wet, wet + cold conditioning to -4°C. D62: dry conditioning only

- 30kg min rated, 140kg rated load, 175kg overload (1.25 x rated)



Only use 10mm hex drive attachment with powered driver or handle + adapter. Do NOT use socket with powered driver.

Warnings

- When the device is used for lowering, the handle / powered driver will rotate if left attached. Always remove the powered driver when lowering / descending. Switch the ratchet direction on handle to prevent rotation, or remove.
- The device may become hot during use and could damage the rope or other textile items if left in prolonged contact.
- If left installed or stored at the point of use it should be protected from the environment.
- The Rotor is not suitable for fall arrest.
- Beware hazards below and above.
- Secure separate items to prevent drop objects e.g. ratchet handle / powered driver

Use

Evacuation

- Attach the device or rope end to a suitable anchor point - see 2a overleaf, above the chosen descent path. Suitable lanyards conforming to EN358, EN354, and EN362 may be used to allow separation of users / space for life vest inflation when used.
- Attach the rope end or device, to the harness (a full body or sit harness is recommended, an emergency harness/rescue strop may be used for evacuation purposes).
- Throw the rope to the ground – (check it reaches) or ensure rope is long enough and in a container attached to user.
- Remove any slack rope between the harness and the device/anchor point by pulling the tail rope.
- Load the system and descend – it is not necessary to hold or operate any part of the rotor or rope during descent.
- For additional descents connect to the other end of the rope and repeat as above (only passive mode).

Descending / Rescue down

- Attach the rope to a suitable anchor point.
- Attach the device to the harness - suitable lanyards may be used to allow separation of users.
- Remove any slack rope between the harness and the device / anchor point.
- Place the tail rope through the additional friction, both friction points may be needed for loads greater than 140kg.
- Load the system and descend controlling the speed with the tail rope.
- If a hands-free stop is required during descent, apply tension to tail rope until descent stops and engage lock. To release lock, lift slightly using handle (or powered driver) as detailed in lifting.

Lifting

- Attach the device or rope end to a suitable anchor point.
- Place direction selector lock in neutral (centre position) and extend rope.
- Attach rope end or device to the casualty harness.
- Engage the direction selector lock. To lift left hand rope, push left hand lock button in.
- Pull rope through device to verify lock direction and remove slack between device and load.
- Fit the handle to front face socket (for D62 use rear hex driver attachment via 10mm socket or powered driver).
- Test operation direction of ratchet handle / driver results in rope progression. Change ratchet handle / driver direction switch to ensure operation in same direction as direction selector lock.
- Operate the handle (or powered driver) until the desired height has been reached.
- Maintain tension on tail rope and communication with rescuee while lifting.

Ascending / Rescue up (D62 only when used with powered driver option)

- Choose Ascent path - Consider prior descent. Attach the rope to a suitable anchor point above.
- Attach the device to the harness - suitable lanyards may be used to allow separation of users.
- Operate ratchet handle / powered driver as directed in lifting use section, ensure direction selector lock is engaged
- Tail rope must be kept under tension whilst ascending. Ensure the rope exits the device efficiently
- Lifting / ascending puts much greater strain on the rope and device than descent, and may cause rope damage with high loads or repeated use.

Changing from Lift to Lower / Ascent to Descent

Place tail rope through one or more additional friction points. Apply load on handle / powered driver and disengage Direction Selector lock (to neutral position). Whilst holding tail rope firmly release handle / powered driver until load is held by the device/tail rope. **DISENGAGE THE HANDLE** (remove powered driver) and then lower, controlling the speed manually with the tail rope.

Note

Always use suitable locking connectors. The Rotor may be used on its own for evacuation or rescue. However, a suitable backup system (e.g. EN 12841 type A device) should always be used during training or other non-emergency use (either evacuation or descent). Users should be competent (see 1 and 5a overleaf) or, for evacuation use, following clear emergency protocols.

Only use the rope supplied fitted to the Rotor. Thorough examination, servicing, repair or rope replacement may only be carried out by heightec. If the Rotor is retired from use ensure it cannot be re-used, e.g. by cutting the rope. The small load indicator pin in the attachment point will bend at a load of approximately 70kg, indicating the device has been used.

The Polyamide rope supplied with the Rotor has the following properties (as defined by EN1891):
Sheath slippage <40mm
Elongation <5%
Mass of outer sheath 39%
Mass of core 61%
Total Mass per m 61g

Powered Driver

- Suitable units should have a minimum torque of 25Nm. Do NOT use impact driver.
- Angled driver recommended to reduce the risk of wrist injury.
- Powered driver may be used in any operation where the handle is stated.

Product Markings Example



Beware hazards below
Only use this rope xxxm heightec **

xxxm - rope length in metres
** - year of rope manufacture

In USA - refer to ANSI/ASSE Z359.1 and ANSI/ASSE Z359.4 and applicable regulations for safe rescue.

