

H5下降器使用说明

H5 SELF-BRAKING DESCENDER

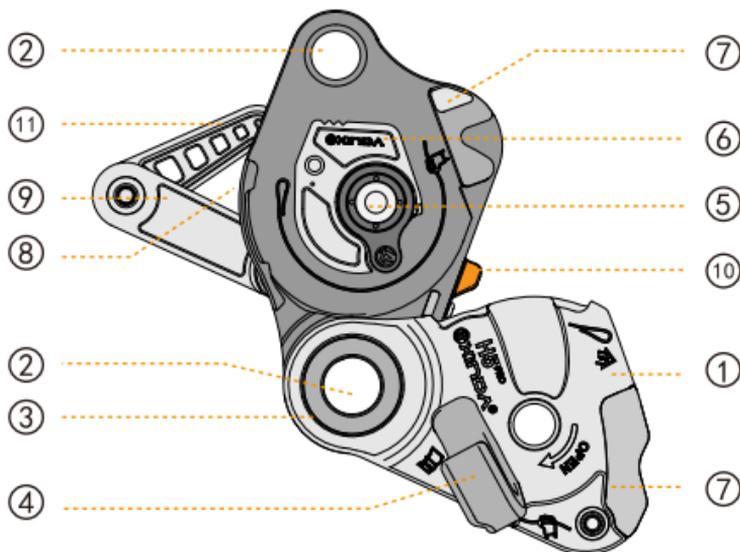
Safety precautions

Warning

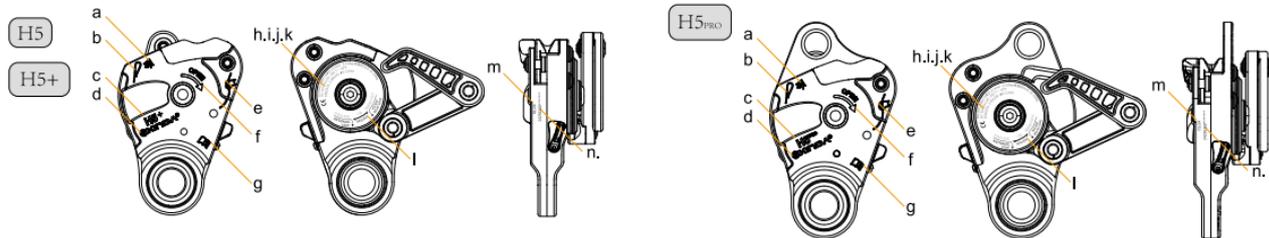
This manual explains how to use the equipment and only appropriate techniques and uses are described. Warning signs tell the potential risks but they don't cover everything. Please read every each warning carefully and use your equipment properly. Any misuse might lead to danger. If you are in doubt, please contact XINDA.

	Risk of severe injury or death
	Risk of accident or harm
OK!	Appropriate way of use
	Incorrect way of use

Nomenclature

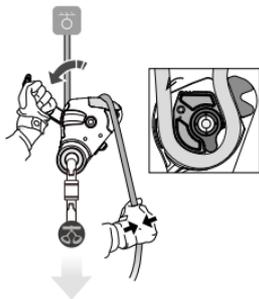


Marking

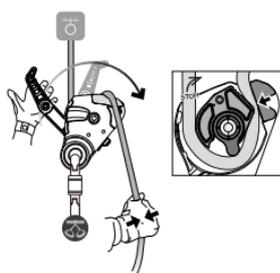


Function principle

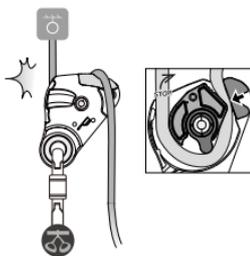
(1)Descent



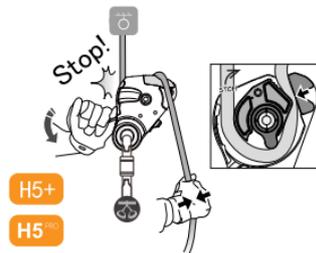
(2)Auto-locking



(3) Locking



(4) Anti-panic function



(fig.6)

ISO9001 Standards Complied

 **XINDA**®

PICC 

Connection to a harness

(1)



(2)



(3)



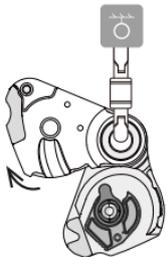
(4)



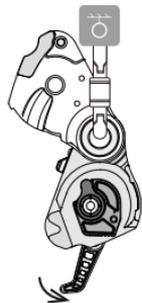
(fig.7)

Connection to an anchor

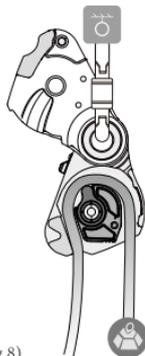
(1)



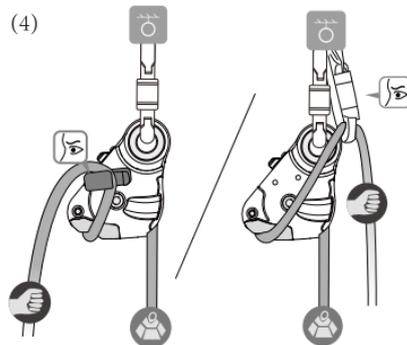
(2)



(3)



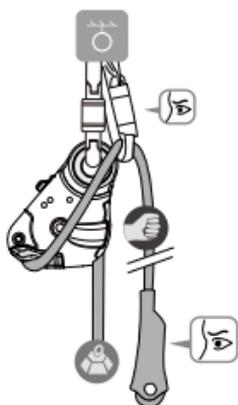
(4)



(fig.8)

Rescue descender

EN 341:2011A



10.5mm 120kg 200m

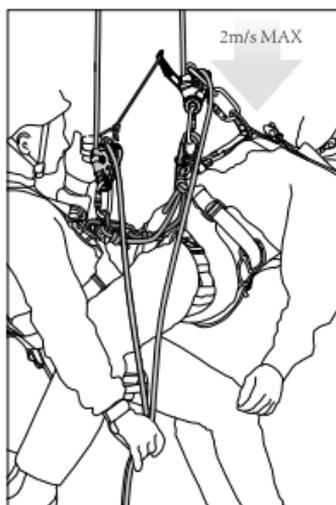
11mm 120kg 200m



(fig.9)

10.5mm 120kg 200m

11mm 150kg 200m



(fig.10)



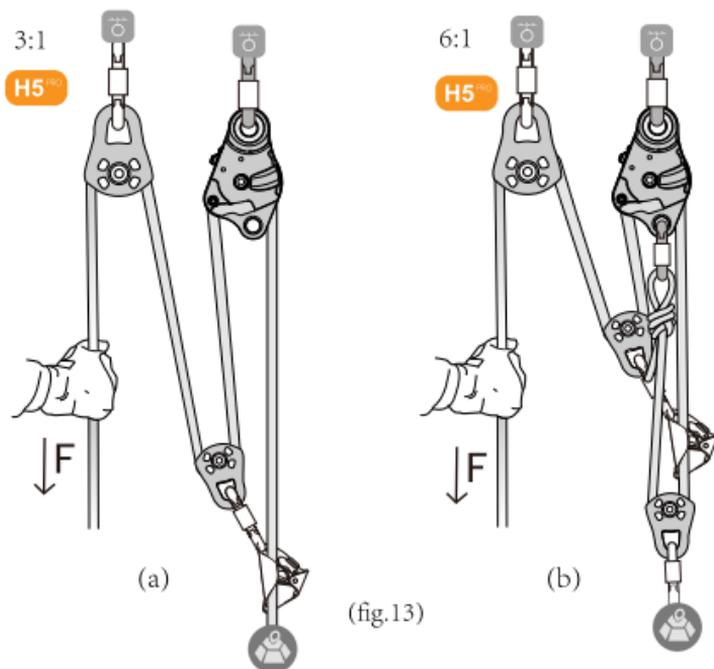
(fig.11)

EN12841:2006typeC

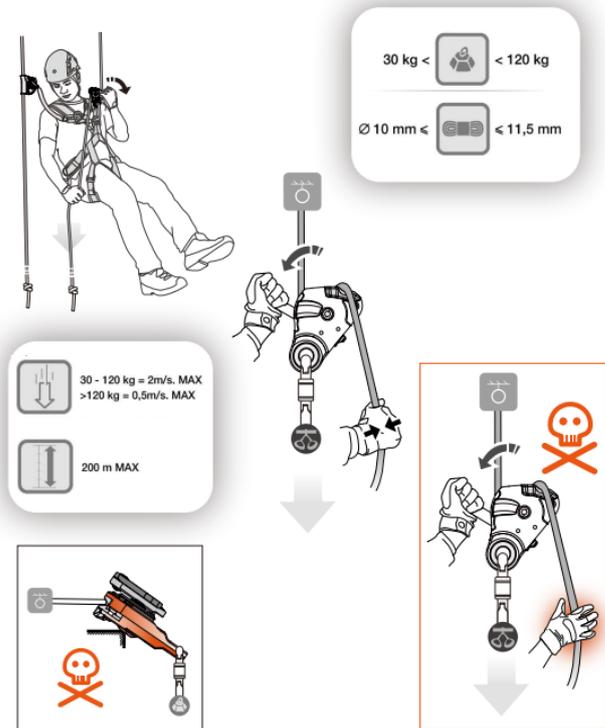


(fig.12)

Hauling and progress capture

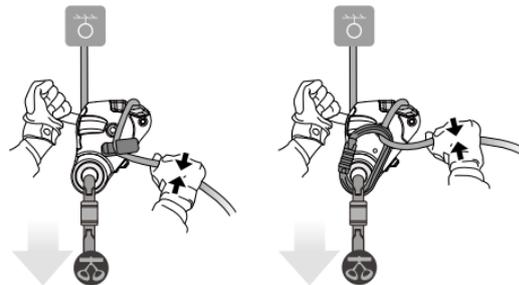


a. Descending



(fig.14)

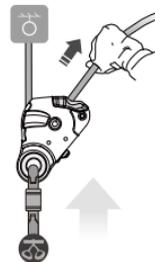
b. Extra friction



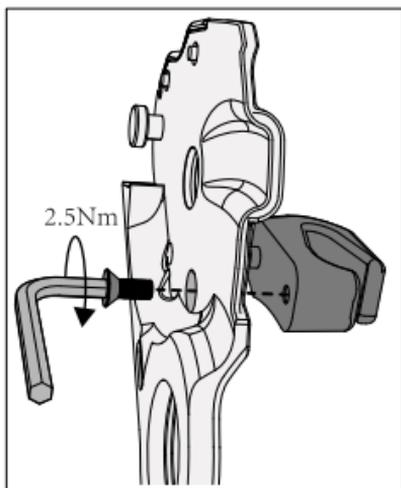
c. Stop position



d. Occasional ascent



(fig.15)



(fig.16)

Description

Field of application

Personal protective equipment used for fall protection.

This product meets the requirements of Regulation (EU) 2016/425 on personal protective.

Self-braking descender/belay device.

This product must not be pushed beyond its limits, nor be used for any purpose other than that for which it is designed.

Use and compatibility

Compatible rope: $10 \leq \phi \leq 12$ mm;

Maximum work load: 200m-200kg;

Verify that this product is compatible with the other elements of the system in your application (compatible = good functional interaction).

Equipment used with your H5 must meet current standards in your country (e.g. EN 1497 or EN 813 harnesses). Safety check

Your safety is related to the integrity of your equipment.

Xinda recommends a detailed inspection by a competent person at least once every 12 months (depending on current regulations in your country, and your conditions of usage). Warning: your intensity of use may cause you to inspect your PPE more frequently. Record the results on your PPE inspection form: type, model, manufacturer contact info, serial number or individual number, dates: manufacture, purchase, first use, next periodic inspection; problems, comments, inspector's name and signature.

Before each use

Verify the absence of any cracks, deformation, marks, wear, corrosion on the product (side plates, axles, rivets, cam, brake plates, attachment hole). Check the condition of the safety gate and verify that it works properly (return spring).

Check the condition of the handle and verify that it works properly (cam drive, return spring, anti-panic function).

Check the cam's mobility.

During use

It is important to regularly monitor the condition of the product and its connections to the other equipment in the system. Make sure that all items of equipment are correctly positioned with respect to each other. Beware of rubbing or contact with any external object that could interfere with device function (free rotation of the device, of the cam, of the handle...). Warning: locking effectiveness can vary depending on the condition of the rope (wear, dirt, moisture, rain, ice...). Braking effectiveness varies depending on the condition of the rope and the conditions of usage (diameter, moisture, rain, ice, dirt...). For every rope, before use, you must familiarize yourself with the braking effectiveness.

Marking

a) Logo to remind the user to read the instructions, b) Diagram for correct orientation, c) Name, d) Place of origin, e) Month and year of production, f) Batch serial number, g) Anti-panic braking gear, h) Rope ascent gear, i) Descent gear, j) Used standard, k) Model number, l) Brand name, m) Used standard, n) Maximum work load, o) Diameter of the compatible rope, p) In compliance with European legislation regulation (EU) 2016/425.

Nomenclature

(1) Moving side plate, (2) Attachment hole, (3) Axle, (4) Auxiliary brake, (5) Button, (6) Cam, (7) Brake plate, (8) U slot, (9) Handle, (10) Safety gate, (11) Connection hole

Function principle and test

The H5 locks the rope in one direction and allows the rope to slide in the other direction. The rope friction in the cam groove causes the cam to rotate, which locks the rope by pinching it against the brake plate. Locking can be gradually released by operating the handle (always hold the brake-side rope).

Warning: any excessive pulling on the handle can cause a loss of control

AUTO-LOCK system

The AUTO-LOCK system locks the load automatically and returns the handle to the stop position.

Anti-panic function

The anti-panic function automatically stops the descent if the user pulls the handle too far (**only the type of H+/H5PRO**). To resume the descent, allow the handle to return to the stop position before operating it again

Installing the H5

Install a locking carabiner on the H5 for attachment to the harness or anchor.

Connection to a harness

Open the moving side plate and raise the handle slightly to allow the cam to move. Install the rope around the cam in the direction indicated by the icons marked on the device. Close the moving side plate, making sure that the gate closes completely. Each time the rope is installed, check that the rope locks in the desired direction. The anti-error catch helps detect a backward installation of the rope.

Connection to an anchor

Open the moving side plate and raise the handle slightly to allow the cam to move. Install the rope around the cam in the direction indicated by the icons marked on the device. Close the moving side plate, making sure that the gate closes completely. Each time the rope is installed, check that the rope locks in the desired direction. Pass the rope through a directional carabiner on the anchor or through the auxiliary brake (sold separately). Warning: the anti-error catch will not work unless the rope passes through a directional carabiner on the anchor..

Rescue descender

EN 341: 2011 class A

- Maximum energy of descent 7.5 MJ.

Energy = user weight x gravity x length of descent x number of descents.

- Ropes tested, maximum working load, maximum descent: see drawings.

- Minimum load: 30 kg.

- To reduce the risk of a fall, do not allow slack in the rope between the H5 and the user.

Double person load on working line (Figure 10): The rescuer fastens the descender to his harness and connects the injured person by means of an additional connecting element.

Simultaneous descent of the rescuer and the victim on separate lines (Figure 11): This technique is only safe with a double stop descender (H5) on victim. The rescuer gradually pulls the victim's handle by means of a cordelette as he/she descends so that the victim's descent is initiated and kept constant. Be mutually secured. For a smooth descent, higher tension of the victim's free rope is recommended.

WARNINGS: Rescue and evacuation manoeuvres may only be practiced by persons specifically trained for the purpose. For all rescue manoeuvres the use of gloves is recommended. To avoid loss of control and rope damage (heat), lower descent speeds are advisable during rescue operations.

Rope access

EN 12841: 2006 type C

Descender for progression on rope.

Maximum working load: 150 kg for a single person; usage up to 200 kg is possible for two people in a rope rescue situation with 10.5 to 11.5 mm ropes only.

To reduce the risk of a fall or pendulum, keep the rope between the H5 and the anchor as tight and as vertical as possible.

Devices of type B and C are designed for progression on rope; they must be used together with a type A belay system. When the full weight of the user is on the safety rope, it becomes a work rope and so must be used with another safety rope.

Hauling and progress capture

Hauling from a fixed position with Sirius as a progress capture device is done by means of a 3:1 pulley system (figure 13a). Ergonomically easier pulling from above may be attained by employing another re-directional pulley on the free end of the rope. As with lowering, higher loads may be controlled by employing the becket and consequently attaining a 6:1 mechanical advantage (figure 13b).

- Protect the H5 from environmental conditions if it is left installed on the anchor between inspections.

- EN 341 testing temperature: -40 °C in dry conditions, -4 °C in wet and cold conditions.

- Install the H5 on the anchor in a way that does not interfere with the descent.

- Control the speed of descent; a loss of control can be difficult to correct.

- The H5 can overheat and damage the rope in a descent that is too long or too fast.

- In the context of the EN 341 standard, the H5 is designed only for rescue use.

- Specifications of ropes tested:

Nylon and polyester ropes.

Maximum descent height: 200 m.

The H5 can be used for multiple successive descents by ensuring that the device does not over heat.

Energy = user weight x gravity x length of descent x number of descents.

Anchors used for work or rescue must have a strength of 3100 pounds (13.8 kN) or at least 5 times the load applied to the system. If the anchor is used for fall arrest, it must have a higher strength .

Connections to anchors must be done in a way that does not reduce the anchor strength, and that avoids any accidental movement of the system during use.

Perform a tension test on the connection before applying the full load.

Usage on a harness

a. Descending

Gradually pull the handle to allow the rope to slide, always holding the brake-side rope.

b. Extra friction

Add friction in case of difficulty controlling speed, if the rope is new or slippery, or for any use with a heavy load or with two people.

To add friction, pass the rope through an extra carabiner connected to the H5' s carabiner, or through the auxiliary brake (sold separately).

c. Stop position

Before letting go of the rope, make sure the handle has properly returned to the top position. Beware of any rubbing, against the structure or equipment, that could prevent the return of the handle. If the handle is not in the stop position, it is exposed to accidental snagging that can cause unlocking.

d. Occasional ascent

The H5 can be moved up the rope at any time, without manipulating the handle.

Limitations on use

These Instructions for Use specify essential parameters to follow when using the descender: mass, height, speed, compatible ropes...

Other factors can come into play, such as the condition of the rope (new ropes are often slippery), or the temperature of use (high heat reduces braking effectiveness).

The descender functions optimally under average use conditions. It reaches its performance limits when all of these parameters approach the maximum.

Under these extreme use conditions, there is a risk of losing control of the descent and/or damaging the rope.

You must be more alert and not hesitate to take special precautions (add anchors...).

Limitations on use in the cold: -40 ° C under normal conditions. -4 ° C under exceptional cold and wet conditions (rain, water spray, condensation...). These conditions can degrade the functioning of your rope/descender assembly.

Additional information

- The H5 is not suitable for use in a fall arrest system.

- Any dynamic overload can damage the rope.

- You must have a rescue plan and the means to rapidly implement it in case of difficulties encountered while using this equipment.

- The anchor point for the system should preferably be located above the user' s position and should meet the requirements of the EN 795 standard (12 kN minimum strength).

- In a fall arrest system, it is essential to check the required clearance below the user before each use, in order to avoid hitting the ground or an obstacle in case of a fall.

- Make sure that the anchor point is correctly positioned, in order to limit the risk and the length of a fall.

- A fall arrest harness is the only device allowable for supporting the body in a fall arrest system.

- When using multiple items of equipment, a dangerous situation can arise in which the safety function of an item of equipment can be affected by the safety function of another item of equipment.

- WARNING - DANGER: make sure that your products do not come into contact with any abrasive materials, sharp objects, moving machinery or sources of electricity.

- Be vigilant in case of usage in areas presenting risks of an electrical, thermal, chemical or any other nature.

- Users must be medically fit for activities at height.

WARNING: inert suspension in a harness can result in serious injury or death.

- The Instructions for Use for each item of equipment used in conjunction with this product must be followed.

- Make sure the markings on the product are legible riction, reduce speed, split the descent into shorter sections using intermediate.

Life span, regular inspection and retirement:

- No storage limit for the metal in the proper environment; the plastic parts of the equipment can be stored up to 10 years.

- The equipment may need to be retired only after one use because of misuse, accidents or compatibility problems.

Storage and transport

Remaining fluid and other stain on metal equipment must be rinsed and dried and then stored in a dry environment, 10 °C -30 °C . The equipment must not come into contact with abrasion, loading, chemicals, sharp edges or heat source etc as those are inherently harmful. Metal equipment must be specially stored in the container and transported in compliance with storage requirements. The use and storage of the product is suggested to be taken care of by accountable people.

Maintenance

Proper maintenance and storage can extend the lifespan of the equipment and also guarantee the user' s safety.

-Cleaning: Use clean water(20 °C) and soft brush to rinse the external and internal of the product. No high-pressure water. No industrial-grade cleansers.

Rinse afterwards and dry it naturally. No heat drying.

-Long time use of the equipment will reduce the lubrication of the parts such pivots. Lubricating oil or grease is suggested to be inuse.

Warning: No modification, alternation or improper maintenance is allowed. It can only be repaired in the XINDA factory.

Limited warranty:

XINDA provides a 10-year warranty against any material or manufacturing defects.

Exclusions: normal wear and tear, deformation, oxidation, modifications or alterations, misuses, incorrect storage, poor maintenance , uses for which this product is not designed.