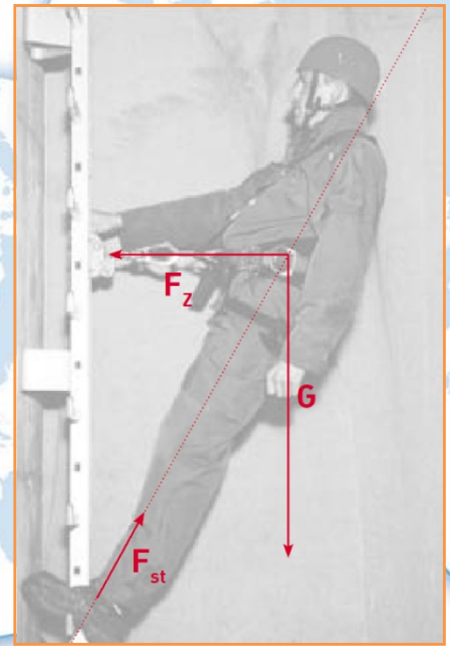


Ardwolf Twinstop - the 3rd Generation Fall Protection System



The effectiveness of established fall protection devices function according to the principle of changed external force application on the fall arrester. For proper functioning of the blocking system, the force application must take place under certain conditions:



In a certain angle

The person climbing must stand in an upright position on the ladder and unlock the fall arrester by back traction (i.e. leaning back during the climb). The ladder can not be over-hanging, bent or curved. When starting from an over-hanging inclination of 1.5°, the systems (based on back traction) can fail.

In a certain position

The distance between the person climbing and the fall arrester is a given and can not be modified. Additional connecting device are not used.

Without external influences

The person climbing must not grab the fall arrester. Dirt, foreign objects and deformities in the fall arrester can greatly affect the functional capability. If the spring breaks, the function is no longer ensured.



The danger of a backwards fall exists mostly if the person must go into a squat position. This can happen unconsciously (i.e. by dizziness), or consciously (i.e. by loosening a rope loop the has gotten caught on the ladder). In the squat position, the fall arrester is knee high and the feet remain on the ladder rung. Unfavourable force conditions exist in this position and may cause person climbing to be pulled, by his own weight, into an upside down position. In this upside down position, the back is forced against the guide rail and the abdomen is clamped between the connecting point of the body harness and the guide rail. This holds the fall arrester in an unlocked position. The wheeled trolley does not lock in a vertical position. ***The person falls.***



The Aardwolf TwinStop system offers double security by two mechanisms separated from each other.

1. Speed dependent locking mechanism

During a fast descent (i.e. slipping), the blocking system is engaged into the rail.

Advantages:

- Guaranteed function with over hanging (bent) ladders of any angle
- Guaranteed function by backward falls
- Guaranteed function by spring breakage
- Guaranteed function by changing position of the fall arrester and the person climbing, regardless of material and design of the body harness or the size and weight of the person climbing

2. Vector dependent locking mechanism

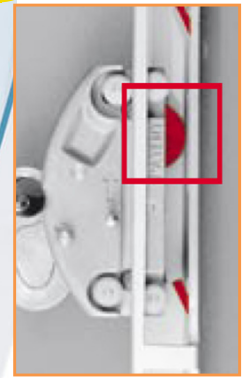
This mechanism ensures the same favourable characteristics as conventional systems, for example, the ability to manually lock the fall arrester into position when performing maintenance.

Functional description

Position 1: The feeler wheel runs along the rail. The claw that is connected to the wheel rests in the housing.

Position 2: When the feeler wheel rolls over a catch, the claw is pushed into the rail. After the feeler wheel passes the catch the claw is pulled back into the housing by the spring.

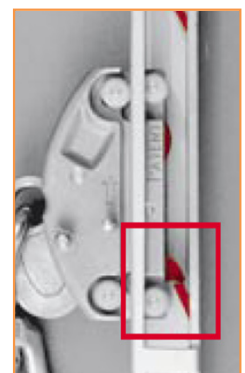
Position 3: If the downward speed is too high, the claw has no time to move back into the housing. The claw is driven against the catch and blocks. The claw is additionally pressed into the rail by the downward motion of the anchorage point. The anchorage point is not directly connected to the claw. Therefore, the claw can not be disengaged through movements of the person climbing. The design of the blocking system guarantees that the block function is not impaired by spring breakage or contamination.



1

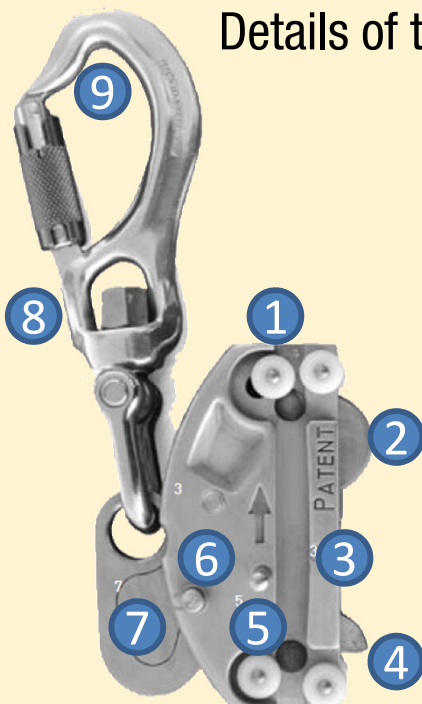


2



3

Details of the Aardwolf TwinStop



1 Wheels made of high strength plastic for smooth movement and long life. The spring loaded guide wheel increases fluidity of movement

2 Feeler wheel transfers the stroke impulses from the catch to the claw

3 Two rotational axes provide an indirect connection between anchorage point and claw

4 Claw for locking the fall arrester at both increased speed and during a change of outside force

5 Ergonomically designed housing with a formed grip for better handling, made from lost-wax cast aluminium for outstanding structural strength and reliable quality

6 Adjustable sliding lever for using fall arresters in different rails

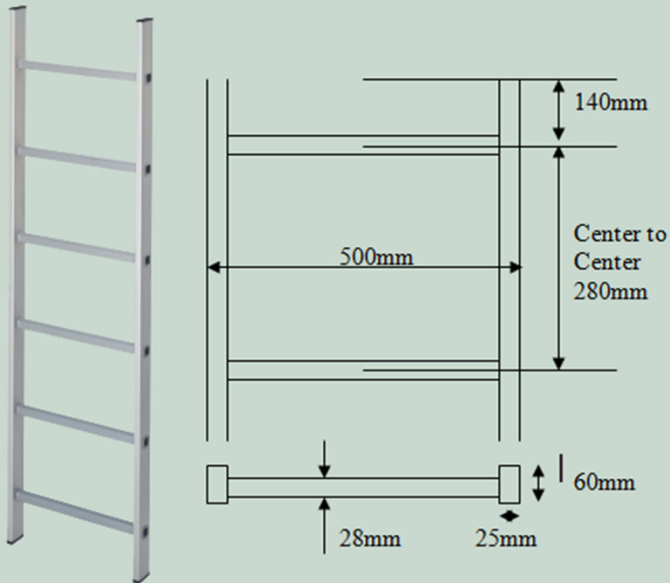
7 Anchorage point made from A4-Stainless steel for maximum strength and comfort, catch impact smaller than 5 kN

8 Fully suspended connection between karabiner and anchorage point for maximum freedom of movement

9 Self-locking aluminium karabiner

Fixed Aluminium Ladder

Material: Aluminium Aardalloy



Guide Rail Vertical

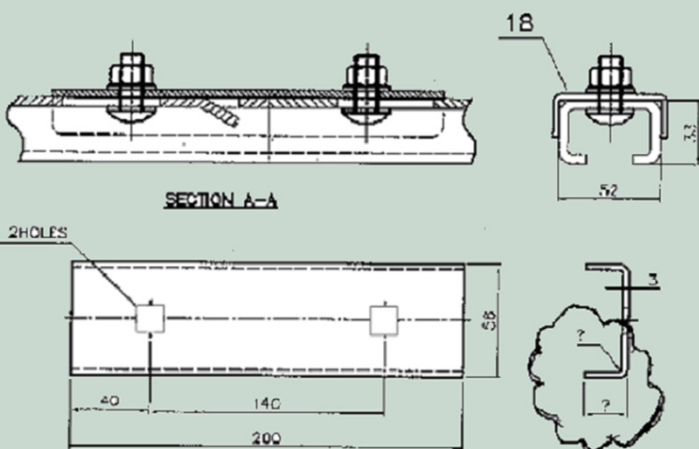
Material: 6063T6 Aluminium Aardalloy



Available upto a single length of 4480mm in multiples of 280mm.
 Rail Profile: 52x33mm
 Standard: EN353-1

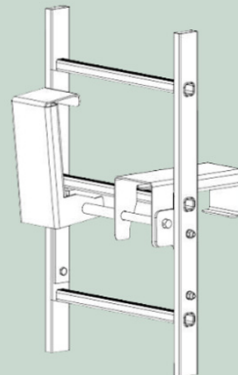
Rail To Rail Clamp

Material: Stainless Steel, Pickled
 Standard: EN353-1, EN 795
 Fastener: SS 316 - M 12 x 25 Mushroom Head
 With Washer and locknut - 2 Nos. per set included



Foldable Rest Platform

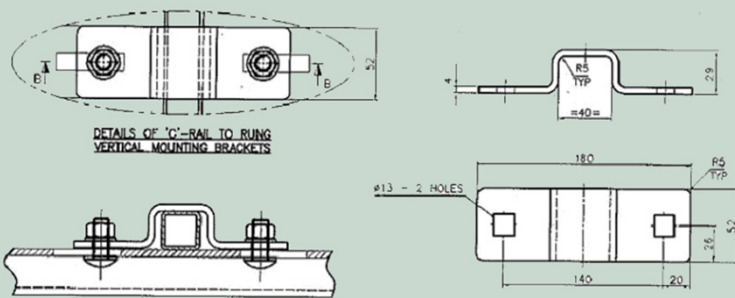
Material: Aluminium Aardalloy



For attachment to fall arrest ladders over 10m high

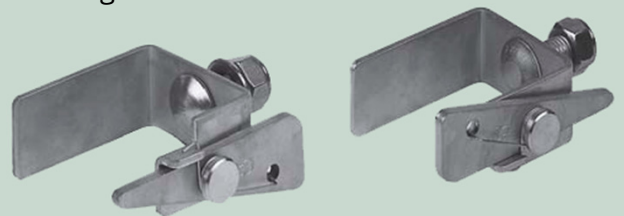
Rail To Ladder Mounting Bracket

Material: Stainless steel, pickled
 Bolt: M12x25 Stainless Steel



Top End Stop, Bottom End Stop

Spring activated end stops prevent the fall arrester from either being inserted incorrectly or accidentally slipping out of the guide-rail. For fitting to the very top and very beginning of the ladder system. Comes with all fixings.



Fall Arrestor - Aardwolf Twinstop

Material: Aluminium Aardalloy
 Weight: 1.2Kg

Gliding Fall Protection Shuttle applies to EN 353-1, with integrated shock absorber. The Shuttle arrests through a speed activated mechanism, that will function even when the user manually or by position pulls the karabiner. Can be used in negative declined ladders up to -25°. Delivered with a Tri-lock Karabiner and swivel eye.

