

Personal Protective Equipment used in rescue situations



ASAP mobile fall arrester



I'D descender

Introduction

- Personal Protective Equipment is subject to the Directive 89/686/EEC
 - « any device designed to be worn or held by an individual for protection against one or more potentially simultaneous risks »
- hence, PPE is not supposed to be used with a two-person load
- however, both rope access and rescue may need to, under exceptional circumstances, use PPE with a two-person load

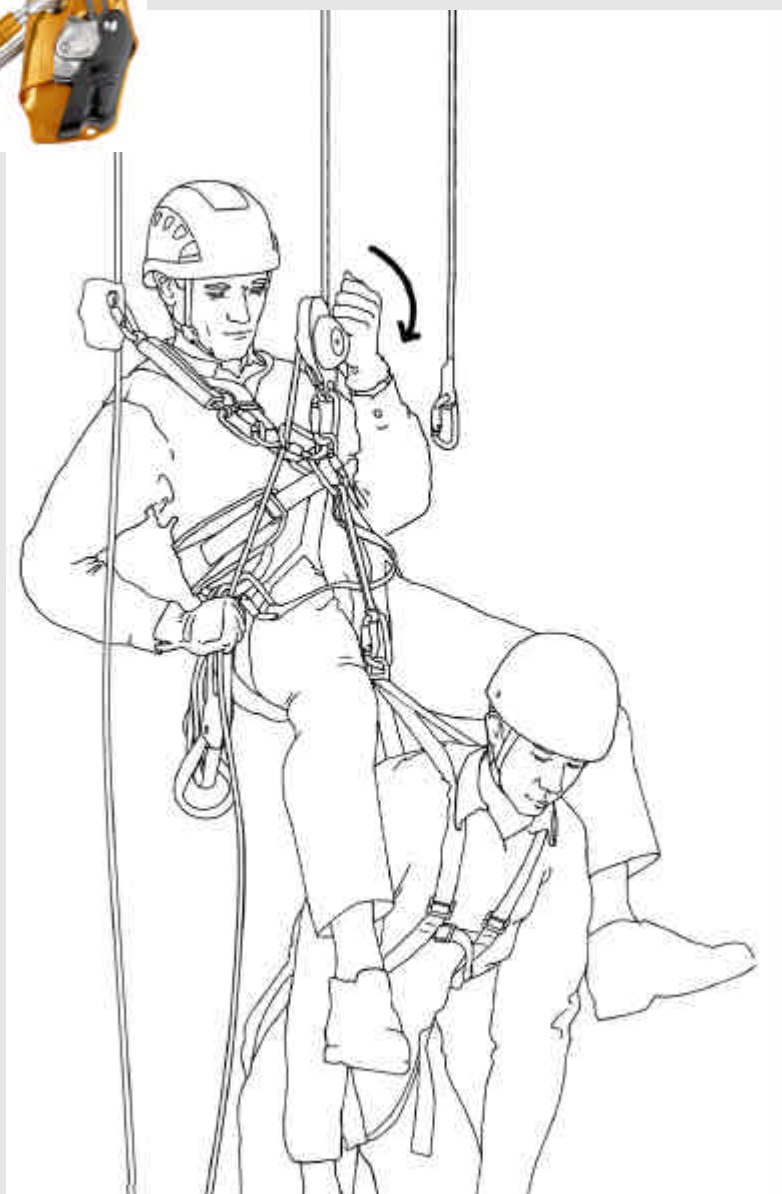
ASAP mobile fall arrester





ASAP - Introduction

- inert suspension in a harness can have serious physiological consequences



ASAP - Introduction

- Personal Protective Equipment CE certified to EN353-2 – Mobile fall arrester on a flexible anchor line
- however, potential use with a two-person load under exceptional circumstances to rescue a victim on ropes





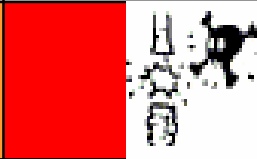



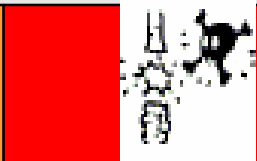




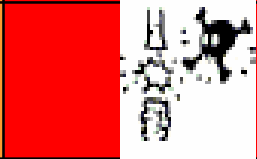




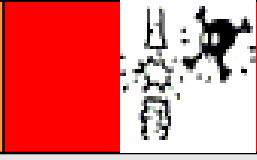


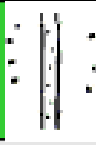

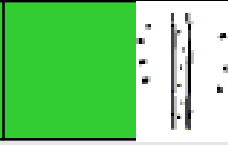


ASAP – Test parameters

- Rope :
 - Béal Antipodes 10,5 mm
 - Figure of eight knot
 - Knot tightened up to 2 kN
- ASAP :
 - Positioned 30 cm below anchor, unlocked
- Test mass :
 - Rigid test mass, 200 kg



ASAP – Test results

| | | Fall Factor = 1 | | Fall Factor 2 | |
|---------------------|--|---|---|---|---|
| OK TRIACT |  |  |  |  |  |
| ASAP'SORBER 20 cm |  |  |  |  |  |
| ASAP'SORBER 40 cm |  |  |  |  |  |
| ABSORBICA I (80 cm) |  |  |  |  |  |
| ABSORBICA |  |  |  |  |  |



ASAP – Conclusion and advice

- The ASAP is not designed to arrest a two-person fall. Each person should have his own fall arrest system.
- The use of a single ASAP to back-up two people must remain exceptional and done only if all of the following conditions are met:
 - for rope rescue work - emergency rappel pick-off of an immobile hanging victim.
 - when all the risks of falling and shock loading (anchor failure, pendulum, sudden loading, etc.) are minimized.
 - when the operation is led by a person experienced with this type of rescue.
 - when using the ABSORBICA L57 absorbing lanyard, without an extension.

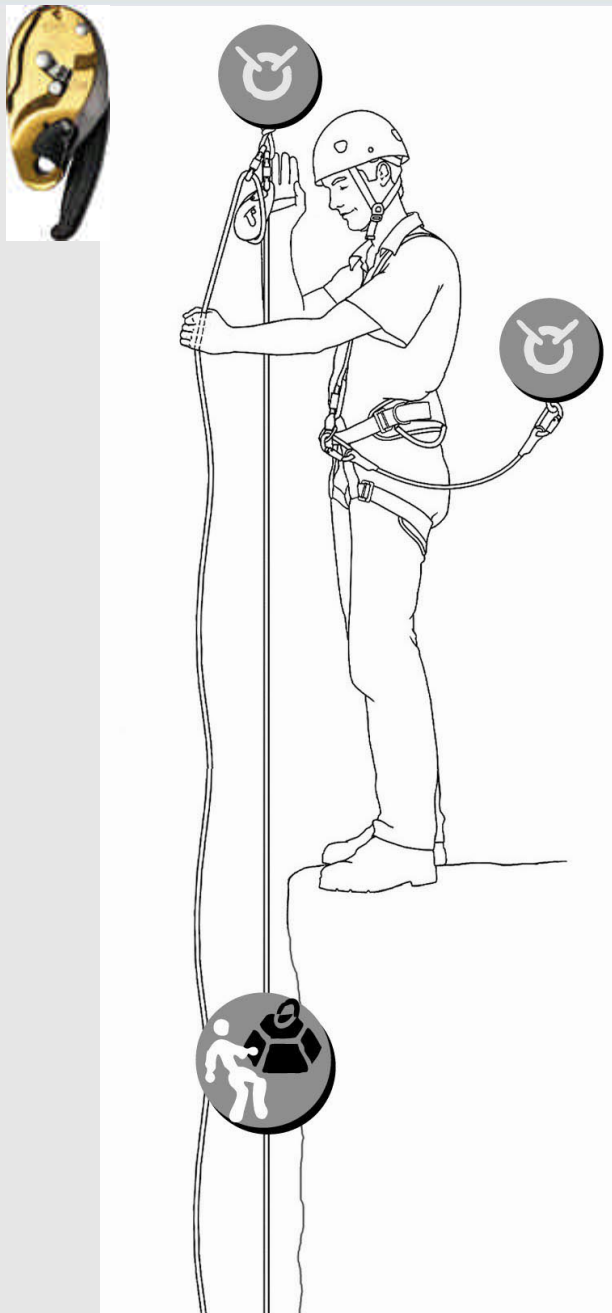
I'D S descender





I'D S - Introduction

- Personal Protective Equipment CE certified to EN341 - Descenders
- However, both rope access and rescue may use the I'D with a two-person load under exceptional circumstances
- Situation of use with a rescue load:
 - Lower a two-person load
 - Belay a two-person load



I'D S as a descent control device

- Extra-friction must be added in order to handle a rescue load on the I'D
- The amount of friction to be added depends on the characteristics of the rope (diameter, construction...) and the rescue system itself (redirection or not)



I'D as a belay device

- Test parameters
 - Fall Factor : 0,3
 - Test mass : 200 kg for 10,5 mm and 11 mm ropes



I'D Small as a belay device

- Test parameters
 - Test mass : 200 kg
 - Fall Factor : 0,3 (0,5 m fall on 1,5 m rope)

| | Impact force | Slide distance |
|---|--------------|----------------|
| Béal Antipodes 10,5 mm (CE, EN1891) | 7,1 kN | 40 cm |
| Béal Antipodes 11 mm (CE, EN1891) | 8,3 kN | 25 cm |
| Petzl VECTOR 11 mm (NFPA 1983, "Light Use") | 9,5 kN | 10 cm |

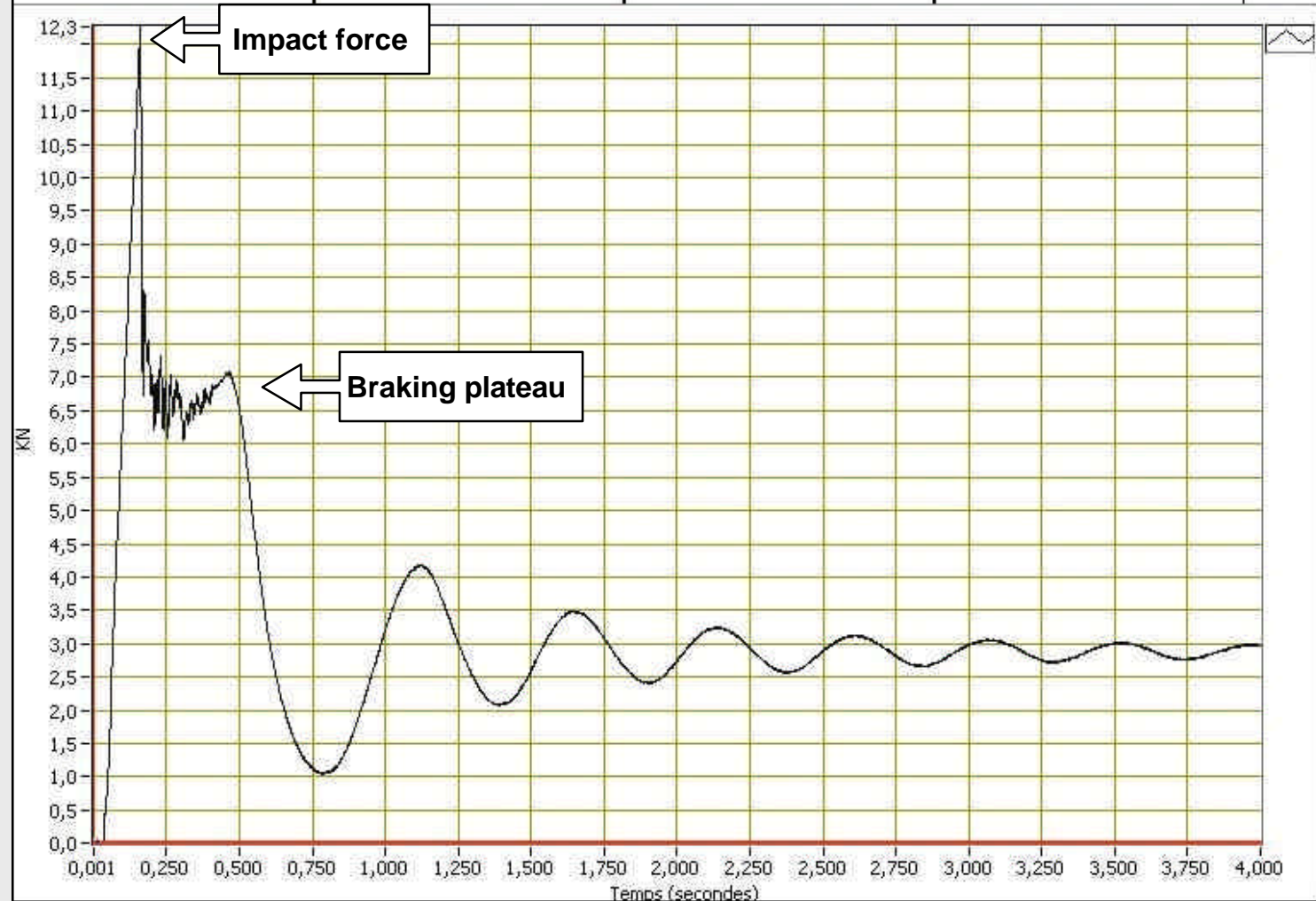
COMPTE-RENDU D'ESSAI

Plafond1



charlet moser

anc : Plafond Capteur(s) : AP-1000-1 Conditionneurs : AP1003-3 Le : jeudi 25 novembre 2004 à 15:15 N°01



Cursor 0 0,00 0,02 Cursor 1 0,00 0,02 Temps KN



Thanks for your attention!