

FLEX ABS 140

EN Energy absorbers with or without integrated lanyard.

MADE IN EUROPE
EN 355:2002

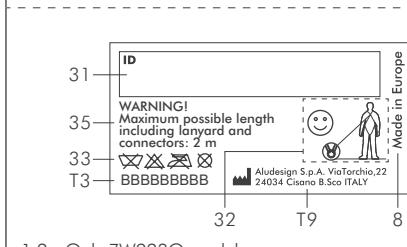
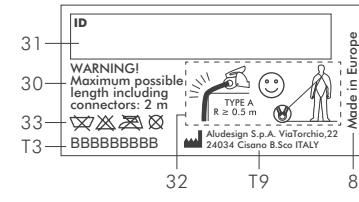
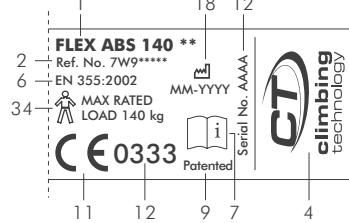


Regulation (EU) 2016/425
Personal Protective Equipment against falls from a height.



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1 MARKING

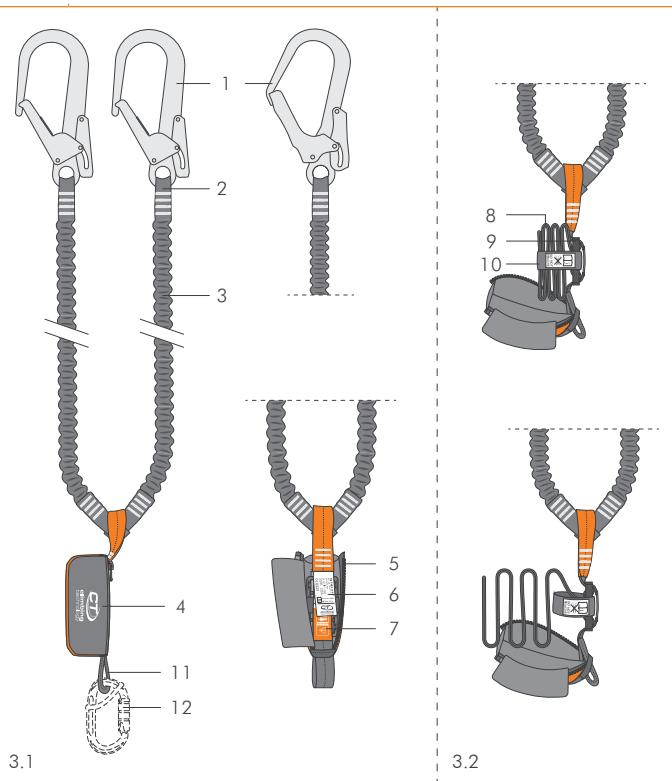


1.2 - Only 7W923O model

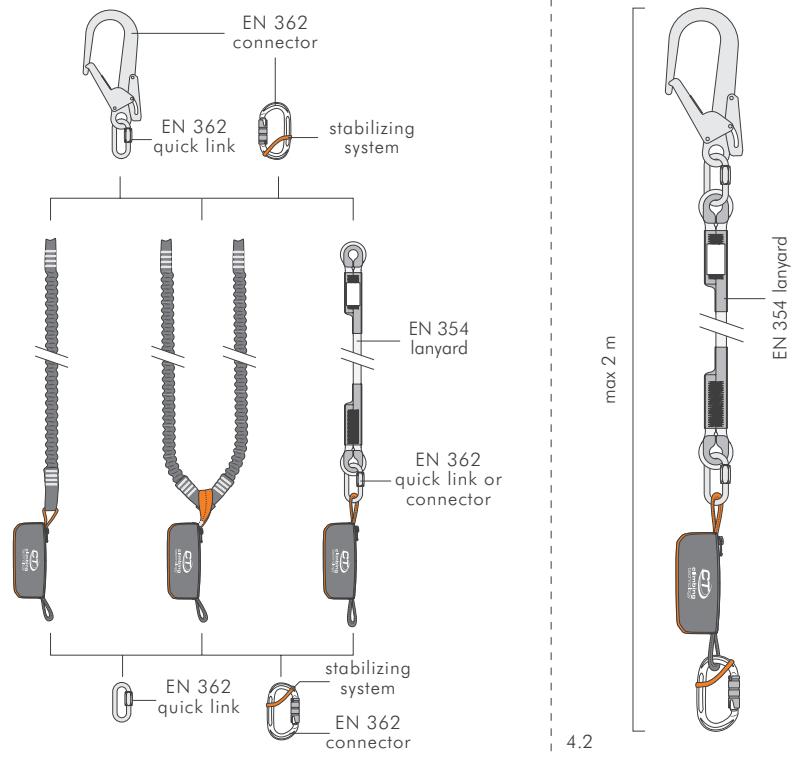
2 MODELS / COMPONENTS

MODEL	REF. NO.	g	LENGTH	HARNESS CONNECTOR	TERMINAL CONNECTOR
FLEX ABS 140	7W923O	195 g	20 cm	-	-
FLEX ABS 140 I-S	7W917090O	253 g	90 cm	-	-
FLEX ABS 140 I-L	7W917170O	303 g	170 cm	-	-
FLEX ABS 140 Y-S	7W918090O	310 g	90 cm	-	-
FLEX ABS 140 Y-L	7W918170O	410 g	170 cm	-	-
FLEX ABS 140 COMBI I-S	7W919115O	708 g	115 cm	-	2C353
FLEX ABS 140 COMBI I-L	7W919180O	758 g	180 cm	-	2C353
FLEX ABS 140 COMBI Y-S	7W920115O	1220 g	115 cm	-	2C353
FLEX ABS 140 COMBI Y-L	7W920180O	1320 g	180 cm	-	2C353
FLEX ABS 140 STEEL I-S	7W921110O	693 g	110 cm	-	3C351
FLEX ABS 140 STEEL I-L	7W921180O	743 g	180 cm	-	3C351
FLEX ABS 140 STEEL Y-S	7W922110O	1190 g	110 cm	-	3C351
FLEX ABS 140 STEEL Y-L	7W922180O	1290 g	180 cm	-	3C351
FLEX ABS 140 GIANT Y-L	7W927180O	2365 g	180 cm	2C370	2C355

3 NOMENCLATURE



4 COMPATIBILITY



ENGLISH

The instruction manual for this device consists of general and specific instructions, both must be carefully read and understood before use. **Attention!** This leaflet shows the specific instruction only.

SPECIFIC INSTRUCTIONS FLEX ABS 140.

This note contains the necessary information for a correct use of the following product/s: energy absorbers with or without integrated lanyards. The group of products includes the absorber by itself and the models equipped with I-shaped elastic arms (single lanyard) or Y-shaped elastic arms (two lanyards) with or without terminal connectors.

1) FIELD OF APPLICATION.

EN 355:2002 - Personal protective equipment against falls from a height - Energy absorbers. This product is a personal protective device (P.P.E.). It complies with Regulation (UE) 2016/425. **Attention!** For this product the indications of the standard EN 365 must be respected (general instructions / paragraph 2.5). **Atten-**

tion! For this product a periodic thorough inspection is compulsory (general instructions / paragraph 8). **Attention!** Before using the equipment, read thoroughly, as well, the instructions for use that are specific to any connector provided with the equipment.

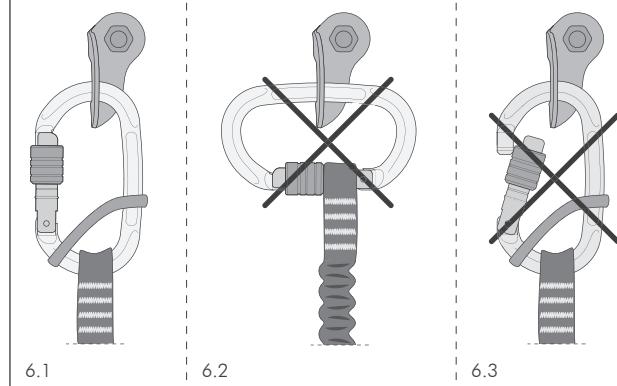
1.1 - Warnings. This device is provided with the innovative progressive fabric energy absorber Slider (Patented), composed of a textile and a metal part. The device has the purpose of gradually absorbing the impact force of a fall that may occur while working, reducing it to values that are tolerated by the human body. **Attention!** As a result of a fall which has involved the energy absorber, the red safety label will be torn apart (Fig. 5); the user must stop using the product and it will need to be replaced immediately. **Attention!** Danger of death: do no use for progression on via ferrata or for mountaineering activities. **Attention!** Do not insert foreign objects inside the protective pouch.

4.1 - General (Fig. 1). Indications: 1; 2; 4; 6; 7; 8; 9; 11; 12; 30) Maximum allowed length of the equipment, including elastic arms and terminal connectors, if any; 31) Fillable area for identification of the device; 32*) Pictogram showing the suitability for horizontal use of the device and precautions related to this use; 33) Maintenance symbols; 34) Maximum weight of the user, equipment included; 35*) Maximum length of the device including possible EN 354 lanyards and connectors.

5 RED SAFETY LABEL



6 CONNECTORS CORRECT AND INCORRECT USE.



Protective pouch. 5) Zip fastener. 6) Marking label. 7) Red safety label. 8) Textile part of the energy absorber. 9) Metal part of the energy absorber. 10) Elastic band of the energy absorber. 11) Lower connection loop. 12) Lower terminal connector.

3.1 - Main materials. Refer to the legend in the general instructions (paragraph 2.4): 2-10-13 (energy absorber); 10-13 (elastic arm/arms); 7 (seams).

4) MARKING.

Numbers/letters without caption: refer to the legend in the general instructions (paragraph 5). Numbers/letters with asterisk (*): indication shown depending on the model.

4.1 - General (Fig. 1). Indications: 1; 2; 4; 6; 7; 8; 9; 11; 12; 30) Maximum allowed length of the equipment, including elastic arms and terminal connectors, if any; 31) Fillable area for identification of the device; 32*) Pictogram showing the suitability for horizontal use of the device and precautions related to this use; 33) Maintenance symbols; 34) Maximum weight of the user, equipment included; 35*) Maximum length of the device including possible EN 354 lanyards and connectors.

4.2 - Traceability (Fig. 1). Indications: T2; T3; T8; T9.

5) COMPATIBILITY.

This product can only be used in combination with CE-marked equipment: work equipment such as connectors (EN 362), harnesses (EN 361), ropes (EN 1891), etc. **Attention!** The presence of knots in the equipment can compromise its strength (Fig. 7.14). **Attention!** The total length of a partial system with an energy absorber including lanyard, end connections and connectors must not exceed 2 meters (connector + lanyard + energy absorber + connector) (Fig. 4.2).

5.1 - Anchor points. Only anchor points that comply with the EN 795 standard can be used (minimum strength 12 kN or 18 kN for non-metallic anchors) that do not have sharp edges. **Attention!** Pay attention to the anchors, which may increase the height of the fall (e.g. anchors on slopes or vertical planes, flexible textile anchors, etc.).

5.2 - Connectors. In the connection loops, where necessary, only insert connectors compliant with EN 362, preferably equipped with a stabilizing system along the major axis (e.g. Fix Pro, ACL system, etc.). For a semi-permanent connection to the harness, or for connecting the upper loop to connectors with eyelets, use exclusively EN 362 quick links, closed as indicated in its own user instruction manual. **Attention!** The energy absorber by itself (mod. 7W923O) can be used in conjunction with EN 354 lanyards and EN 362 connectors without exceeding the total length of 2 m.

6) CHECKS.

Further to the checks listed below, comply with what indicated in the general instructions (paragraph 3).

6.1 - Inspection of the energy absorber. To proceed with the inspection it is necessary to open the protective pouch and check what is inside it. **Attention!** Be careful on the way the textile and/or metallic part of the energy absorber is inserted inside the case, in order to put it back correctly once the check has been done (Fig. 3.2). **Attention!** When repositioning the textile part inside the pouch, pay attention not to create knots on the webbing. Before each use check that: the protective pouch is intact (e.g. no holes, cuts and excessive wear) and the zip works correctly; the safety label is intact; there are no tears in the stitching due to having arrested a fall or to a mishandling of the system. **During each use:** make sure that the zip fastener is closed.

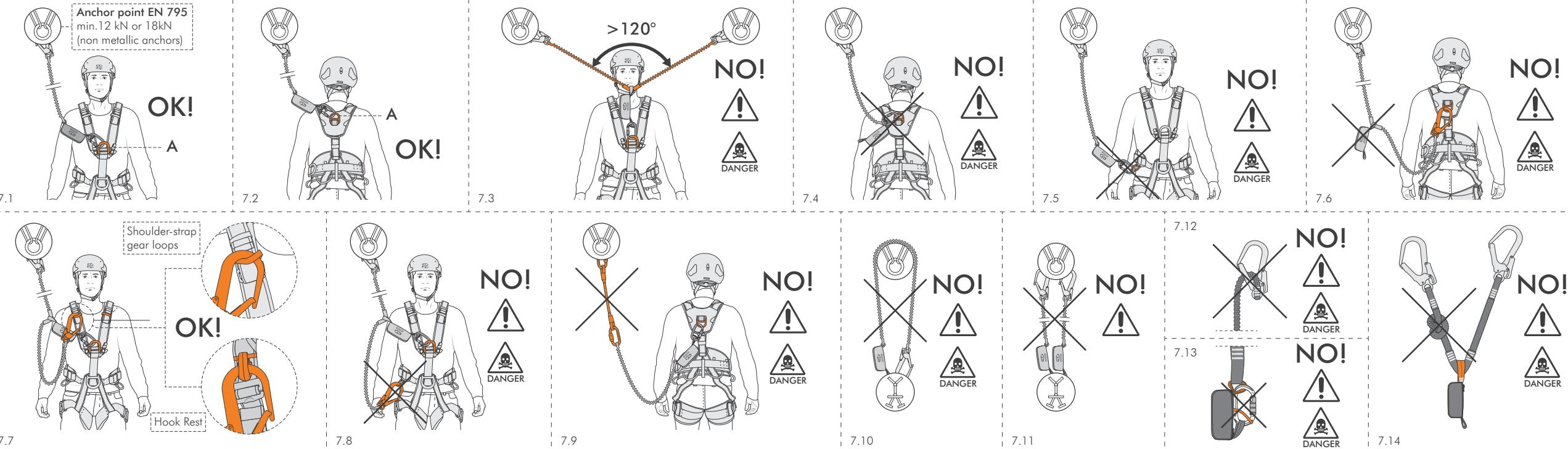
6.2 - Inspection of the elastic arms (if present). Extend the elastic arm/arms in order to inspect, along their full length, the textile parts (general instructions / paragraph 3). Thoroughly inspect the end loops as well, as they are subject to greater wear.

7) INSTRUCTIONS FOR USE.

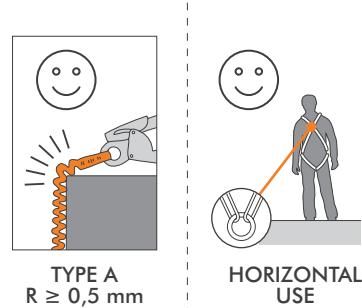
The product is intended for use by people with a maximum weight of 140 kg, equipment included. Within this limit the deceleration experienced by the user remains within 6 g. Connect the bottom terminal connector of the equipment to the EN 361 attachment point on the harness. Secure the upper terminal connector/connectors to an anchor point compliant with EN 795, preferably positioned over the head of the user. Where possible, when using Y-shaped equipment, both elastic arms should be secured to the anchor point. **Attention!** If only one arm of the lanyard is connected to the anchor point, the other arm should not be connected to the harness (Fig. 7.8), unless otherwise indicated in the instructions for use of the same harness (e.g. presence of loops or supports for the same purpose, e.g. Hook Rest - Fig. 7.7); in this case the energy absorber may not work.

7.1 - Precautions for use. During the use, make sure that all operating connectors have been properly closed and secured and

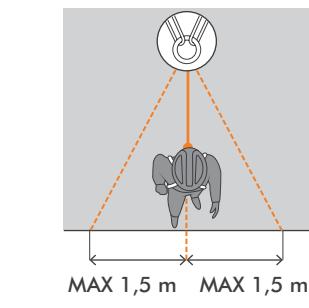
7 INSTALLATION



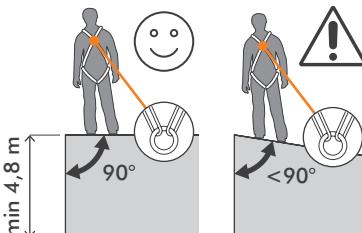
8 FEATURES / WARNINGS



8.1 8.2



8.3



8.4

9 CLEARANCE HEIGHT

9.1 - FALL FACTOR 0,5
(not applicable for model 7W923O)

A - Length of the product including connectors and extended lanyard if applicable.

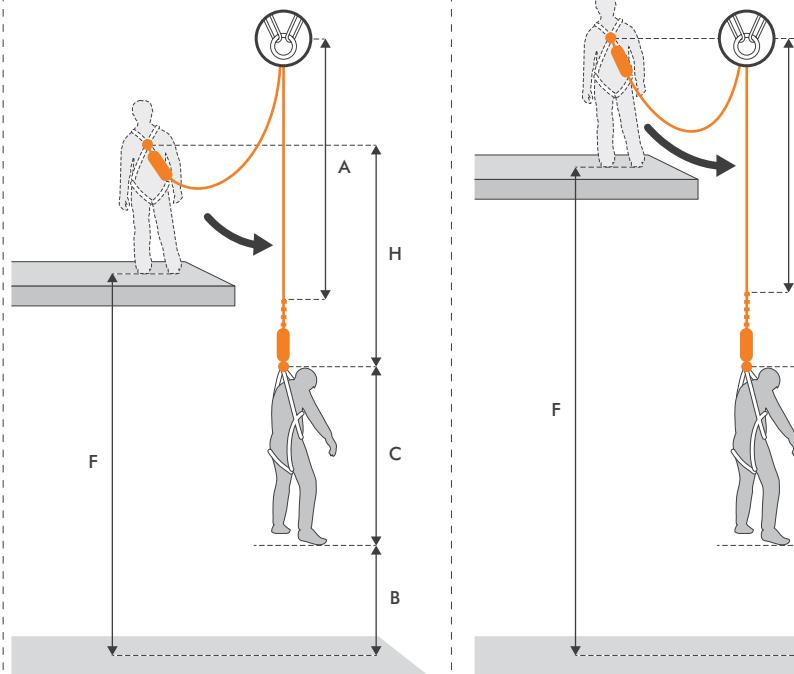
B - Minimum required stopping distance above the ground.

C - Conventional distance between dorsal/sternal attachment of the harness and the feet of the user.

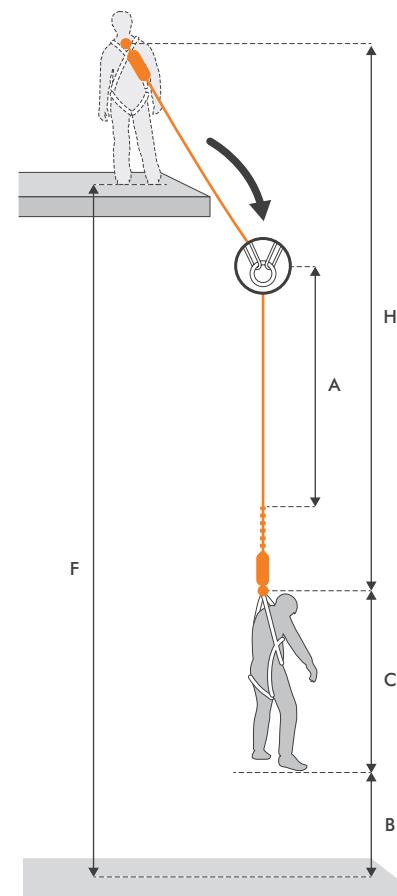
H - Fall arrest distance.

F - Minimum clearance distance above the ground required to grant a safe use.

9.2 - FALL FACTOR 1
(not applicable for model 7W923O)



9.3 - FALL FACTOR 2



are not subject to unapproved loads (e.g. lateral load, load on sharp edges, etc.) that might considerably reduce their breaking load (Fig. 6). **Attention!** Avoid a pendulum fall by choosing an appropriate anchor point.

7.2 - Clearance (Fig. 9). The fall clearance distance is the minimum distance needed under the feet of the operator in order to avoid the collision with the structure, the ground, or other obstacles, in case of a fall from a height. The fall clearance distance (F) is given by the fall arrest distance (H) plus a further distance of 1 m (B). The table shows the values for 100 and 140 kg masses, considering a length of the device equal to 2 m (A). The distance between the harness attachment point and the user's feet is conventionally equal to 1,5 m (C). **Attention!** Before and during each use it is essential to consider the clearance value required by the equipment in use. **Attention!** The values shown in the table are based on theoretical estimates and drop tests with a rigid weight. **Attention!** Clearance height values calculated with fall factors 0,5 and 1 are not applicable to the model 7W923O.

8) USE RFU 11.074

This equipment, with the exception of the energy absorber by itself (Ref. No. 7W923O), is compliant with the requirement of RFU PPE-R/11-074 for horizontal and inclined use over an edge ($r \geq 0,5$ mm) (Fig. 8.1). The tests have been carried out using a steel bar with a 0,5 mm fillet radius without burs. Consequently, the equipment can be used over horizontal or inclined structures whose perimeters have edges with a radius greater than 0,5 mm (e.g. wooden beams, rounded guard rails etc.). This equipment can hence be used over horizontal or inclined structures whose perimeter has edges with a radius greater than 0,5 mm. **Attention!** Where possible the use over an edge should be kept to a minimum; use over sharp edges poses greater risks compared to normal use.

8.1 - Warnings. 1) If the risk assessment has shown that the fall edge is a particularly sharp edge and/or not free from burs (e.g. an unclad proof parapet or a sharp concrete edge), before the start of the work at height you will need to: take all corresponding precautions to rule out the risk of falling over the edge, install an edge protection or contact the manufacturer for further advice. 2) The anchor point of the lanyard with energy absorber must not be below the user's stand level (e.g. platform, flat roof). 3) The angle in between the vertical edge of the structure and the work plan must be at least 90° (Fig. 8.4). 4) Calculating the clearance space necessary beneath the edge (min. 4,8 m). 5) The lanyard with energy absorber must always be used in such a way that there is no slack in the webbing. 6) To prevent a fall pendulum effect, the working area and the lateral movements from the axis perpendicular to the edge and passing through the anchor point of the device, on both sides, should be limited in each case to a maximum of 1,5 m (Fig. 8.3). In all other cases, no individual anchor point should be used but rather a Class C or D anchor device pursuant to EN 795:2012. 7) If the lanyard with energy absorber is used with a Class C anchor device pursuant to EN 795:2012 with a horizontal flexible anchor line, the deflection of the anchor device must also be taken into account when determining the necessary fall clearance distance beneath the user. Pay attention to the details in the instructions of use of the anchor device. 8) Consider the trajectory of a possible fall in order to avoid dangerous impacts against obstacles of any kind. 9) Special rescue measures are to be determined and trained in the event of a fall over an edge.

9) SYMBOLS. Refer to the legend in the general instructions (paragraph 16): F1.

FALL FACTOR 0,5 (not applicable for model 7W923O)

FALL FACTOR 1 (not applicable for model 7W923O)

FALL FACTOR 2 (Covered by EN 355 standard)

	A	B	C	H	F=B+H Clearance height
100 kg	200 cm	100 cm	150 cm	110 cm	210 cm
140 kg	200 cm	100 cm	150 cm	140 cm	240 cm

	A	B	C	H	F=B+H Clearance height
100 kg	200 cm	100 cm	150 cm	245 cm	345 cm
140 kg	200 cm	100 cm	150 cm	280 cm	380 cm

	A	B	C	H	F=B+H Clearance height
100 kg	200 cm	100 cm	150 cm	510 cm	610 cm
140 kg	200 cm	100 cm	150 cm	570 cm	670 cm

