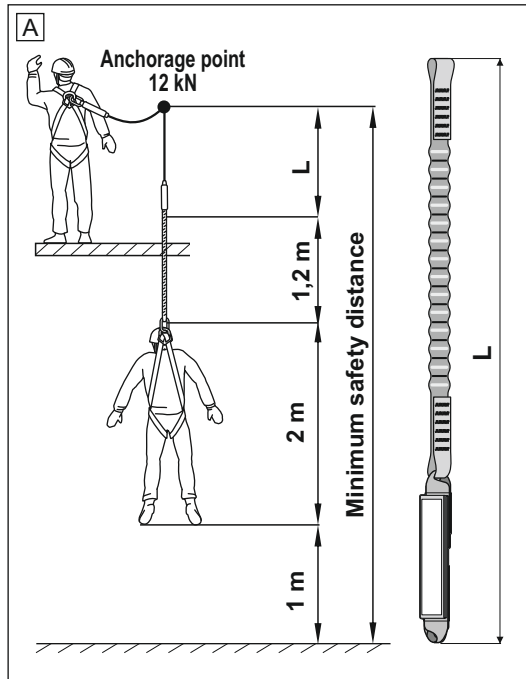


**MAIN RULES WHILE WORKING WITH THE ENERGY ABSORBER**

It is necessary to guarantee the minimum fall clearance below the feet of the user, in order to arrest the fall before collision with the structure or ground. The minimum fall clearance should be ensured taking into consideration the minimum safety distance from the lanyard/absorber anchorage point to the structure or ground. The distance shall be calculated using below scheme and Picture A.

**Minimum safety distance = L + 1,2 m + 2 m + 1 m**

- L** - the total working length of the energy with lanyard including connectors
- 1,2 m** - deployment of the energy absorber,
- 2 m** - the distance between harness attachment point and user's feet + harness stretch.
- 1 m** - safety distance



IT IS THE RESPONSIBILITY OF THE USER ORGANISATION TO PROVIDE THE IDENTITY CARD AND TO FILL IN THE DETAILS REQUIRED. THE IDENTITY CARD SHOULD BE FILLED IN BEFORE THE FIRST USE BY A COMPETENT PERSON, RESPONSIBLE IN THE USER ORGANIZATION FOR PROTECTIVE EQUIPMENT. ANY INFORMATION ABOUT THE EQUIPMENT LIKE PERIODIC INSPECTIONS, REPAIRS, REASONS OF EQUIPMENT'S WITHDRAWN FROM USE SHALL BE NOTED INTO THE IDENTITY CARD BY A COMPETENT PERSON. THE IDENTITY CARD SHOULD BE STORED DURING A WHOLE PERIOD OF EQUIPMENT UTILIZATION. DO NOT USE THE EQUIPMENT WITHOUT THE IDENTITY CARD. ALL RECORDS IN THE IDENTITY CARD CAN BE FILLED IN ONLY BY A COMPETENT PERSON.

**IDENTITY CARD**

MODEL AND TYPE OF EQUIPMENT	REF. NUMBER
SERIAL NUMBER	DATE OF MANUF.
USER NAME	
DATE OF PURCHASE	DATE OF PUTTING INTO OPERATION

PERIODIC EXAMINATION AND REPAIR HISTORY					
No.	DATE	REASON FOR ENTRY PERIODIC EXAMINATION OR REPAIR	DEFECTS NOTED, REPAIRS CARRIED OUT AND OTHER RELEVANT INFORMATIONS	NAME AND SIGNATURE OF COMPETENT PERSON	PERIODIC EXAMINATION NEXT DUE DATE

LANEX a.s., Hlučinská 1/96,  
747 23 Bolatice, Česká republika,  
www.lanex.cz,  
TEL.: +420 553 751 111,  
FAX: +420 553 654 125,

Notified body, at which the European certification was issued and which supervises the production of the equipment:  
APAVE SUDEUROPE SAS - 8 rue Jean-Jacques Vernazza - Z.A.C. Saumaty-Séon  
CS-60193 – 13322 MARSEILLE Cedex 16, France - No. 0082

**Instruction Manual**

**Lanex**



**Read carefully the manual before use the equipment**

**CE 0082**  
EN 355:2002

**ENERGY ABSORBER with lanyard**

**ABM-LE**  
**ABM-2LE**

The energy absorber with lanyard is a component of personal fall arrest equipment and complies with EN355. Fall arrest system consisted of energy absorber with lanyard, attached to the full body harness (complied with EN 361) and connected to the structural anchor point (complied with EN 795) can be used as a basic personal protective equipment against falls from a height. **Caution:** The total length of the energy absorber with lanyard including terminations and connectors shall not exceed 2 m (e.g. connector plus lanyard plus energy absorber plus connector).

**CONSTRUCTION**

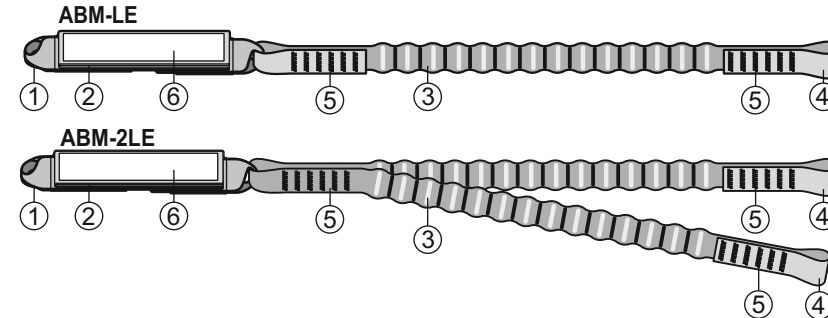
ABM energy absorber is made of 32 mm wide polyamide webbing. The lanyards LE111 and 2LE111 are made of of polyester stretchable webbing width 28 mm. The body of the absorber is protected by a special cover made of a heat shrinkable, polyethylene transparent tube. The length of the lanyard is specified by order.

**TOTAL LENGTHS WITHOUT CONNECTORS**

**ATTENTION!** The energy absorbers can be equipped only with certified (according to EN362) connectors.

Length	ABM-LE	ABM-2LE
<b>Min. [m]</b>	<b>0,7</b>	<b>0,7</b>
<b>Max. [m]</b>	<b>1,8</b>	<b>1,8</b>

1. absorber's attachment loop;
2. energy absorber;
3. lanyard;
4. lanyard's attachment loop;
5. lanyard's seam;
6. identity label.



**Periodic inspections**

The energy absorber with lanyard must be inspected at least once every 12 months from the date of first use. Periodic inspections must **only** be carried out by a competent person who has the knowledge and training required for personal protective equipment periodic inspections. Depending upon the type and environment of work, inspections may be needed to be carried out more frequently than once every 12 months. Every periodic inspection must be recorded in the Identity Card of the equipment.

**Maximum lifespan of the equipment**

The maximum lifespan of the energy absorber with lanyard is 10 years from the date of manufacture. The energy absorber with lanyard must be withdrawn from use immediately and destroyed when it has been used to arrest a fall or it fails to pass inspection or there are any doubt as to its reliability.

**ATTENTION:** The energy absorber with lanyard maximum lifetime depends on the intensity of usage and the environment of usage. Using the lanyard in rough environment, marine environment, contact with sharp edges, exposure to extreme temperatures or aggressive substances, etc. can lead to the withdrawal from use even after one use.

**CONTENT OF THE DEVICE IDENTITY LABEL**

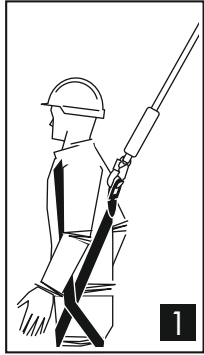
(A) ENERGY ABSORBER WITH LANYARD  
 (B) **ABM-2LE**  
 (C) **XPSA2LE**  
 (D) **EN 355:2002** **CE 0082**  
 (E) **max. 100 kg** (K)

Date of manufacturing: **MM.YYYY** (F)  
 Serial No. **XXX XXX** (G)  
 (H) the total length of the energy absorber with lanyard shall not exceed 2 m  
 (I) **Lanex**

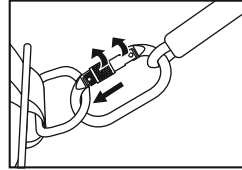
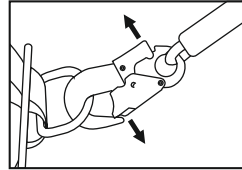
- A. type of the device
- B. model marking
- C. reference number of the device
- D. CE marking with identity number of the notified body controlling manufacturing of the equipment (the article 11)
- E. European standard (number/year)
- F. month/year of the device manufacture
- G. device serial number
- H. caution: read the manual before use
- I. marking of the manufacturer or distributor
- K. maximum user weight

## ASSEMBLING A FALL ARREST SYSTEM

1. Attach the energy absorber's connector to a frontal or dorsal attachment point of full body harness (conformed to EN 361) - [1]
2. Connect the lanyard's connector to the structural anchor point of resistance min. 12 kN (conformed to EN 795) placed above the user:
  - directly [2]
  - with a additional connector [3], [4]



**WARNING!**

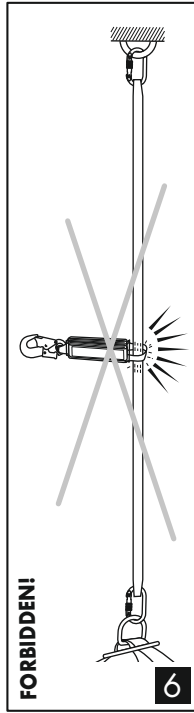
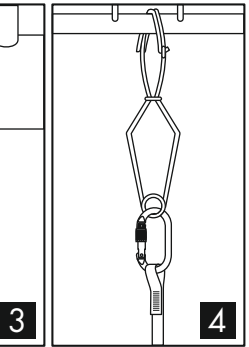
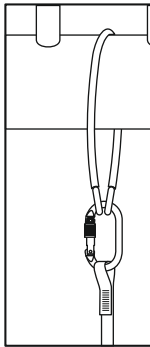
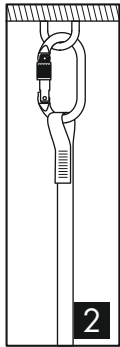


**NECESSARILY PROTECT THE SNAP HOOK GATE WITH THE LOCKING GEAR**

The shape of the structural anchor point shall not let self-acting disconnection of the device.

### WARNING:

It's forbidden to use the lanyard choke hitched [5]. During use the energy absorber with double (twin tale lanyard (ABM/2LE111) it is strictly forbidden to attach the one lanyard's connector to harness attachment element and the second lanyard's connector to structural anchor point [6].



**FORBIDDEN!**

- CAUTION!**
- The user should minimise the amount of slack in the lanyard near a fall hazard.
  - The user should avoid interleaving the lanyard between construction elements or the situation when there is a risk of falling over the sharp edge.
  - In determining the space under the workplace required to arrest the fall, consider the length of lanyard as an additional element that extends the distance for arresting a fall.
  - The total length of the absorber with lanyard and connectors and fasteners shall not exceed 2 m.
  - The energy absorber with lanyard can be used in temperatures from -47°C to 50°C.
  - Two separate lanyards each with an energy absorber should not be used side by side (i.e. parallel).
  - The free lanyard of a double (twin tail) lanyard combined with energy absorber should not be clipped back on the harness.

## FUNDAMENTAL RULES FOR USING PERSONAL PROTECTIVE EQUIPMENT

- personal protective equipment should be used only by people trained in operating it.
- personal protective equipment cannot be used by people whose health condition may influence their safety during everyday use or emergency procedures.
- there must be a rescue operation plan which can be used whenever needed.
- it is forbidden to perform any modifications of the equipment without the written consent of the manufacturer.
- any repairs of the equipment may be performed only by its manufacturer or an authorised representative of the manufacturer.
- personal protective equipment must be used in conformity with its operational purpose.
- personal protective equipment is considered personal equipment and should be used by a single person only.
- make sure that all elements of the equipment that constitute the fall prevention system are properly mated prior to use. Perform periodical inspections of connections and mating of equipment in order to avoid unintentional loosening or disconnecting.
- it is forbidden to use protective equipment if one of its elements is hampered by another during operation.
- all parts of the fall prevention equipment must be in accordance with appropriate regulations and equipment operational instructions and binding standards:
  - EN 361 for full body harnesses
  - EN 353-1, EN 353-2, EN 354, EN 355, EN 360, EN 362 for fall arresting systems
  - EN 795 for equipment anchor points (permanent anchor points)
  - EN 358 for work positioning systems
- carry out a careful inspection of personal protective equipment prior to each separate use in order to check its condition and operation. Inspections must be performed by the user.

- such inspections should check all equipment elements with particular attention paid to: any defects, excessive wear, corrosion, points of tearing, cuts and improper operation. Particular attention must also be paid to each individual device:
  - full body harnesses and work positioning belts: buckles, adjustment elements, fastening points (snap hooks), slings, seams, loops;
  - energy absorbers: hitch loops, slings, seams, body and connectors;
  - lanyards and textile guides: lanyards, thimbles, connectors, adjustment elements, plait;
  - lanyards and steel guides: lanyards, wires, clamps, loops, thimbles, connectors, adjustment elements;
  - retractable type fall arresters: lanyards or slings, correct operation of winding mechanism and locking mechanism, body, shock-absorber, connectors;
  - guided type fall arresters: device body and its correct movement along the guide, operation of locking mechanism, rollers, bolts and rivets, connectors, safety shock-absorber;
  - connectors (snap hooks): load-bearing body, riveting, main catch, operation of locking mechanism.
- personal protective equipment must be withdrawn from use and undergo a complete periodical inspection at least once a year (after 12 months of use). Periodical inspection must be carried out by a qualified person responsible for periodical inspections of safety equipment in a given place of work. Periodical inspections must be also carried out by the equipment manufacturer or an authorised representative of the manufacturer. Such an inspection should check all equipment elements with particular attention paid to: any defects, excessive wear, corrosion, points of tearing, cuts and improper operation (see the previous point).
- If protective equipment has a complex structure, for example retractable type fall arresters, periodical inspections should be carried out only by the equipment manufacturer or its authorised representative. The date of the subsequent inspection shall be specified after the periodical inspection has been completed.
- regular periodical inspections are essential in terms of equipment condition and safety of users only fully operational equipment is able to provide safety.
- make sure that all labels on protective equipment (elements of this equipment) are legible while performing a periodical inspection.
- all information concerning protective equipment (name, serial number, date of purchase and date of first operation, user name, information concerning repairs and inspections and withdrawal from use) must be included in the Operation Sheet for a particular device. The factory where equipment is stored is responsible for making entries in the Operation Sheet. The Sheet should be completed by the person responsible for safety equipment in a given place of work. Equipment without a properly completed Operation Sheet cannot be used.
- if equipment is exported to other countries, the provider must equip it with operational and maintenance instructions as well as information concerning periodical inspections and repairs in the language of the country where the equipment is going to be used.
- personal protective equipment must be immediately withdrawn from use if there are any doubts concerning its condition or operational correctness. Equipment can be reused after it has undergone a complete inspection carried out by the manufacturer and written authorisation for reuse has been issued.
- if personal protective equipment was used to prevent a fall, it must be withdrawn from use and physically destroyed.
- a full body harness in accordance with EN 361 is the only accepted device for keeping a body in the personal protective equipment against falls from a height.
- fall arresting systems can be connected only to full body harness attachment points (buckles, loops) marked with the capital letter "A".
- anchoring points (equipment) of fall personal protective equipment systems should have stable structure and their position should reduce the possibility of falling and minimise the range of a free fall. The equipment anchoring point should be located above the users work position. The shape and structure of the equipment anchoring point must provide a durable connection and prevent any random disconnection. It is recommended to use certified and marked equipment anchoring points in accordance with EN 795.
- it is required to inspect the free space under the work-place on which personal protective equipment against falls from a height is going to be used in order to eliminate the possibility of hitting any objects or lower planes while stopping a fall. The amount of free space under the work-place is specified in the operational instructions of the protective equipment to be used.
- while using the device, pay special attention to hazardous situations which may influence equipment operation and the safety of users, including in particular:
  - kinking and rubbing of lanyards on sharp edges;
  - pendulum (swing) falls;
  - current conductivity;
  - any damage such as cuts, wear, corrosion;
  - extreme temperature impact;
  - negative impact of weather conditions;
  - impact of aggressive substances, chemicals, solvents, acids.
- personal protective equipment must be transported in packaging which protects it against damage or water, for example in bags made of impregnated material or in steel or plastic containers or boxes.
- personal protective equipment must be cleaned and disinfected in order to avoid damaging the material (raw material) it is made of. Clean textile materials (slings, lanyards) with cleaning agents intended for soft materials. It can be cleaned manually or washed in machines. It must be carefully rinsed. Plastic elements can only be cleaned with water. Equipment which becomes wet during cleaning or while in operation must be carefully dried in natural conditions, away from heat sources. Metal parts and mechanisms (springs, hinges, catches etc.) can be periodically greased in order to improve their operation.
- personal protective equipment should be stored in loose packaging in well-ventilated dry rooms and protected against the impact of light, UV radiation, dust, sharp objects, extreme temperatures and caustic substances.