



## ALU 12

# Contents.

1. <b>Manufacturer</b>	Page	3	11. <b>Intervention - inspections/ maintenance registration form</b>	Page	12
2. <b>Type approval</b>	Page	3	12. <b>Warranties</b>	Pages	14
3. <b>Description</b>	Page	3	12.1 Duration		
4. <b>Characteristics</b>	Page	4	12.2 Exclusions		
5. <b>Assembly</b>	Page	4	12.3 Limitations		
6. <b>Use and minimum operator equipment required</b>	Page	7	12.4 Liability		
7. <b>Users</b>	Page	7	13. <b>References</b>	Page	15
8. <b>Personal Protective Equipment (PPE)</b>	Page	8	13.1 Regulatory framework		
8.1 Harness			13.1.1 Technical standards		
8.2 Double lanyard with energy absorber			13.1.2 National laws		
8.3 Connectors			13.2 Websites		
8.4 Retractable device					
9. <b>Limits to use and general recommendations</b>	Page	10			
10. <b>Maintenance</b>	Page	11			

# 1. Manufacturer.

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24030 - Brembate di Sopra - Bg  
Tel. 035-620380  
Fax 0356220438  
e-mail:acquisti@fisa.it

# 2. Type approval.

The anchor device has been tested and approved by:

**Apave Sudeurope Sas (N°0082)**  
**Cs60193**  
**13322 Marseille Cedex 16 – France**

The device passed the tests required by standards EN795:2012 and CEN/TS 16415:2013 for Type A devices.

# 3. Description.

- ALU12 is an anchor device in aluminium alloy EN AB46100.
- It is used for creating safe conditions on roofs
- It can adapt to all all types of civil and industrial environment
- Suitable both indoors and outdoors, in all dangerous places
- The shape and size do not alter the most common roof laying methods and the anchor point is easily reached by the operator.
- Eyelet size allows the snap ring to be conveniently attached.
- **Two operator may connect to the anchor device simultaneously.**

## 4. Characteristics.

<b>Dimensions:</b>	134x76x63 mm
<b>Fixing wheelbase:</b>	Ø14mm wheelbase 100mm
<b>Material:</b>	diecast aluminium alloy EN AB46500
<b>Finish:</b>	natural
<b>Fixing to concrete:</b>	2 threaded M12 bars in stainless steel and two-component resin
<b>Weight:</b>	0.400 kg

## 5. Assembly.

The anchor device can be mounted on any type of support able to withstand the static loads Of 14kN in all directions shown in picture (the required service load is 7kN with a safety factor of 2).



The installation on steel structures must be executed as described below:

- make two Ø14 mm holes in the supporting surface;
- position the anchor point;
- insert the M12 threaded bars (the design shear and axial resistance is of 7kN);
- insert the flat washers and nuts at the top and bottom of each threaded bar;
- tighten the nuts by applying 70 Nm tightening torque.

After assembly, the installer must issue a duly stamped and signed certificate of installation.

Proceed as described alongside to install the anchor device on concrete or wood structures:

- Make two Ø14 mm holes in the concrete/wood, down to depth of 100 mm;
- clean the holes by turning the relative hole-cleaner around inside them, then blow them clean with a hand pump so as to eliminate all dust residues from the sides (repeat the operation several times);
- dispense bi-component vinylester resin slowly so as to prevent air pockets from forming;
- now insert the M12 threaded bars by exercising a twisting movement (the design shear and axial resistance is of 7kN);
- position the anchor point and allow the resin to harden for the time indicated on the package;
- insert the flat washers and nuts on each threaded bar;
- tighten the nuts by applying 40 Nm tightening torque. (25Nm on wood)

A practical example of a document that could be issued by the installer is illustrated below. The installer can prepare a similar document. However, the schematic installation plan must contain all the information given in the following document.

figura A.1 **Esempio di un piano di installazione**

<b>Piano di installazione schematico</b>			
<b>Edificio/Struttura</b>			
	Indirizzo: Note:	N° d'ordine: Tipo di edificio: Forma del tetto: Dispositivo di ancoraggio:	
<b>Cliente</b>			
	Nome: Indirizzo:	Persona di contatto: Telefono:	
<b>Installatore</b>			
	Nome: Indirizzo:	Installatore capo: Telefono:	
<b>Dispositivo di ancoraggio</b>			
	Fabricante: Identificazione del modello/tipo:		
<b>Componente dell'edificio</b>			
	Componente 1: per esempio soffitto di calcestruzzo Componente 2: per esempio colonna di calcestruzzo Materiale dell'edificio: per esempio cemento armato	Minimo spessore: per esempio 250 mm Minimo spessore: per esempio 500 mm Qualità: per esempio min. C25/30	
<b>Fissaggi/Chiaravande</b>		<b>Fabricante</b>	
<b>Dati dei fissaggi</b>	Diametro del foro: .....mm Profondità del foro: .....mm Coppia: ..... Nm	Tipo: ..... Materiale: .....	
<input type="checkbox"/> dati non richiesti se fissato attraverso		Distanza minima dal bordo (c): .....	
		Spaziatura assiale minima (s): .....	
		Spessore minimo del componente: .....	
		Forza di trazione ammissibile: .....	
<b>Situazione reale:</b>	Distanza dal bordo Cx: ..... Cy: .....	Forza di taglio ammissibile: .....	
	Spaziatura assiale Sx: ..... Sy: .....		
<b>Note:</b>			
Metodo foratura:	<input type="checkbox"/> Martello	<input type="checkbox"/> Pulitura del foro	Sistema d'urto <input type="checkbox"/> SI <input type="checkbox"/> No
Dispositivo di prova:	<input type="checkbox"/> Rotativo	<input type="checkbox"/> Dispositivo di prova del fissaggio	<input type="checkbox"/> Umido <input type="checkbox"/> Secco
	<input type="checkbox"/> Chiave dinamometrica		<input type="checkbox"/> SI <input type="checkbox"/> No
<b>LISTA DI CONTROLLO</b>		<b>Piano del pavimento del tetto:</b>	
<input type="checkbox"/> Substrato come atteso (nessun dubbio sulla capacità) <input type="checkbox"/> Installazione conforme alle istruzioni del fabbricante <input type="checkbox"/> Fissaggi raccomandati utilizzati <input type="checkbox"/> Tutti i fissaggi fotografati con numero di identificazione <input type="checkbox"/> Fissaggi visibili <input type="checkbox"/> Piano di installazione apposto sul sito <input type="checkbox"/> Immobilizzazione delle viti mediante tecnica di fissaggio attraversante il foro <input type="checkbox"/> Informazioni aggiuntive .....			
<b>Forza di estrazione richiesta (kN), coppia richiesta [Nm] ottenuta?</b>			
Punto di ancoraggio 1 .....	Punto di ancoraggio 5 .....	Punto di ancoraggio 9 .....	Punto di ancoraggio 12 .....
Punto di ancoraggio 2 .....	Punto di ancoraggio 6 .....	Punto di ancoraggio 10 .....	
Punto di ancoraggio 3 .....	Punto di ancoraggio 7 .....	Punto di ancoraggio 11 .....	
Punto di ancoraggio 4 .....	Punto di ancoraggio 8 .....	Punto di ancoraggio 12 .....	
Fissaggi aggiuntivi: .....			
Note da parte dell'installatore capo: .....			
Data:		Firma:	

## Cartello identificativo

The installer will complete the installation by fixing the mandatory identification sign Art. CA00. The compulsory sign must be placed at every access to the secured area and must be filled in, in all its parts.

CARTELLO IDENTIFICATIVO OBBLIGATORIO											
<input type="checkbox"/>	Punto d'ancoraggio EN 795:2012 - TS16415 Tipo A										
<input type="checkbox"/>	Linea vita orizzontale EN 795:2012 - TS16415 Tipo C										
<input type="checkbox"/>	Binario orizzontale EN 795:2012 EN 795 - TS16415 Tipo D										
<input type="checkbox"/>	Plinchetto EN 14122-3:2007										
<input type="checkbox"/>	Passerella EN 14122-2:2010										
<input type="checkbox"/>	Binario verticale EN 353-1:2003										
<input type="checkbox"/>	Scala EN 353-1:2003										
<input type="checkbox"/>	Linea vita verticale EN 353-1:2003										
Tipo _____											
N. massimo di lavoratori connessi: _____											
Tirante d'aria _____											
Piombo n. _____											
Data entrata in servizio _____											
<b>Produttori</b>	<b>Installatore</b>										
<input type="checkbox"/> <b>Secomaf</b> <input type="checkbox"/> <b>F.I.S.A.</b> <input type="checkbox"/> <b>FALLPROTEC</b>											
<b>Manutenzioni</b>											
<table border="1"> <tr> <td>__/20__</td> <td>__/20__</td> <td>__/20__</td> <td>__/20__</td> <td>__/20__</td> </tr> <tr> <td>__/20__</td> <td>__/20__</td> <td>__/20__</td> <td>__/20__</td> <td>__/20__</td> </tr> </table>	__/20__	__/20__	__/20__	__/20__	__/20__	__/20__	__/20__	__/20__	__/20__	__/20__	
__/20__	__/20__	__/20__	__/20__	__/20__							
__/20__	__/20__	__/20__	__/20__	__/20__							

### Material:

PVC

### Installation:

with every access

### Contents:

system type, serial number, maximum number of operators that can use the lifeline simultaneously, clearance space, date of entry into service and subsequent maintenance, the obligation to wear a 3rd category protective device equipment (PPE), the name of the manufacturer, the dealer's name, the name of the installer.

## 6. Use and minimum operator equipment required.

The device is equipped with an anchor point to which two operators can connect using a snap ring conforming to EN362.

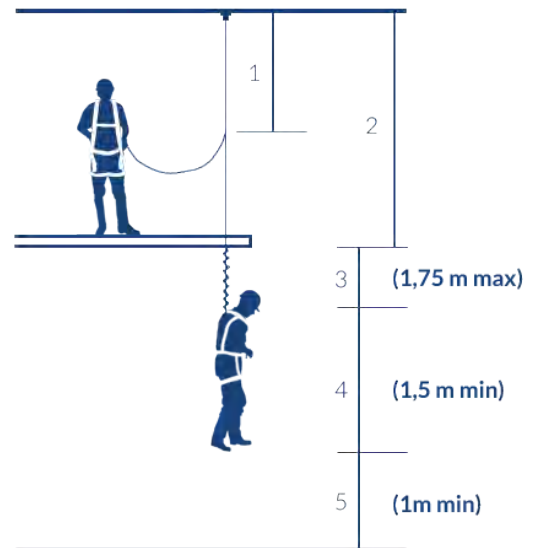
ALU12 can be used for getting on roofs, ascending them and/or for completing an anchor system to prevent the pendulum effect if the operator falls.

Vertical clearance must always be assessed during installation and use.

Vertical clearance must be less than free fall distance so as to prevent the user from colliding with obstacles.

In short:

- 1 Distance between anchor point and connection point on harness.
- 2 Length of lanyard.
- 3 Length of deployed absorber. (1,75 m max)
- 4 Distance between connection on harness and feet. (1,5 m min)
- 5 Minimum distance between feet and ground. (1m min)



## 7. Users.

Since use of category III PPE is required, operators who use this type of system must be specifically trained, as established by Legislative Decree D.lgs 81/2008 - Consolidation Act concerning Safety. Moreover, casualties must only be recovered by specifically trained persons.

# 8. Personal Protective Equipment (PPE).

This anchor device may only be used by an operator equipped with the required Personal Protective Equipment (PPE) able to limit to 6 kN the maximum force imposed on the operator's body when a fall is arrested.

Remember that PPE maintenance is established by the manufacturer according to the method and frequency indicated in the user manual, after filling a form has been filled out with the date on which the device was put into service, the date of successive maintenance work and the expiry date. Carefully read the PPE User manual supplied. The choice of PPE best suited to the work required must be assessed for each individual job. Work performed at heights requires the following equipment at least:



## Harness

8.1

The minimum requirement is:

- equipment conforming to standard EN 361;
- complete with thigh guards and adjustable straps;
- back and/or chest fall-arrest attaching point.

Better, if complete with the following additional equipment:

- padded thigh guards;
- both back and chest fall-arrest attaching points.
- lumbar belt with positioning attachments conforming to standard EN 358;
- central attachment point conforming to standard EN 813.

## Double lanyard with energy absorber

8.2

The maximum length of the lanyard with the absorber compacted should be 2 m, including the connectors. Compliance with the following specifications is also required:

- double elastic lanyard conforming to EN 354, with two connectors for attaching to the line conforming to EN 362;
- energy absorber conforming to EN 355, with connector for attaching to the harness conforming to EN 362;





## Connectors

### 8.3

The connectors are a fundamental part of the system, since they are used for the connections between harness and lanyard or dissipator and between these and the life line. You cannot anchor to the flexible line without using the connector. Connectors must comply with the following specifications:

- they must conform to standard EN 362;
- they must be equipped with double intentional operating device (screw fastening, automatic swivel device or double opening system)



## Retractable device

### 8.4

If work performed at heights requires a lanyard longer than 2 m, one of the retractable devices can be used in conjunction with or instead of the double lanyard with energy absorber.

Before he proceeds with any other action, the operator must always check to make sure that the retractable device:

- conforms to standard EN 360;
- is equipped with internal retractable mechanism, self-locking system and energy dissipator;
- is equipped with two connectors, one for attaching to the line and one for attaching to the harness, conforming to EN 362;
- for use on slopes less than 30%, it is obligatory to use the device in conjunction with a steel lanyard with absorber or some other device recommended by the manufacturer of the retractable device, to allow this to also be used in the horizontal position.



As required by Standard EN 360, the retractable fall arrest device must be subjected to annual inspection by an organization authorized by the manufacturer since it is equipped with a special arresting system that must be checked by competent persons.

## 9. Limitations to use and general recommendations.

- The device must not be used beyond its limits or for purposes differing from those for which it has been designed.
- Rescue procedures must be drawn up so that emergency situations that occur during work can be dealt with.
- Take care when using PPE or any other safety device. You are advised to read the operating instructions of any other safety device used to prevent interference between devices and to comply with all the instructions concerning preliminary inspections before using any device.
- Do not use the device if :
  - You have doubts about how to use it.
  - The devices have already been subjected to stress during a fall and have not been examined by a competent person who has certified their fitness for reuse;
- The structure where the device is positioned must be able to withstand the mechanical stress generated by a fall.
- Carefully read the instructions describing how to connect to the device.
- Always check the free fall distance so as to prevent collision with the ground or with any other obstacle.
- The device can be installed at any latitude and its use is not influenced by the outdoor temperature. However, it is inadvisable to work on roofs in cold

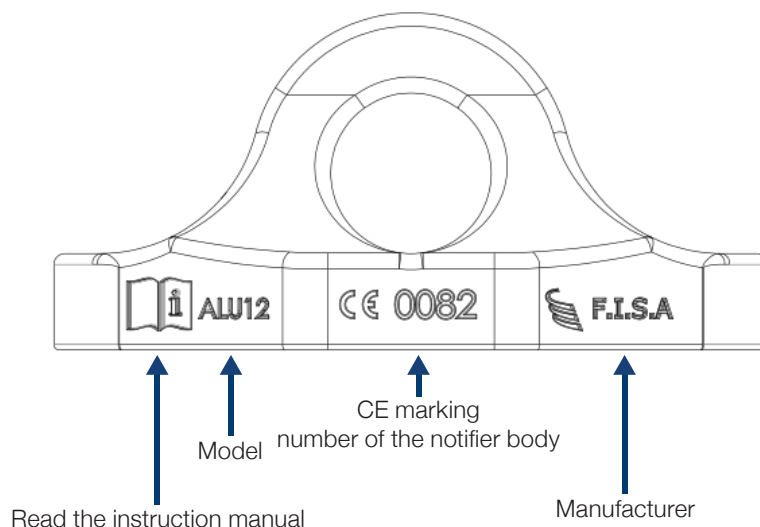
weather: the risk of falling increases if the surface is slippery owing to ice.

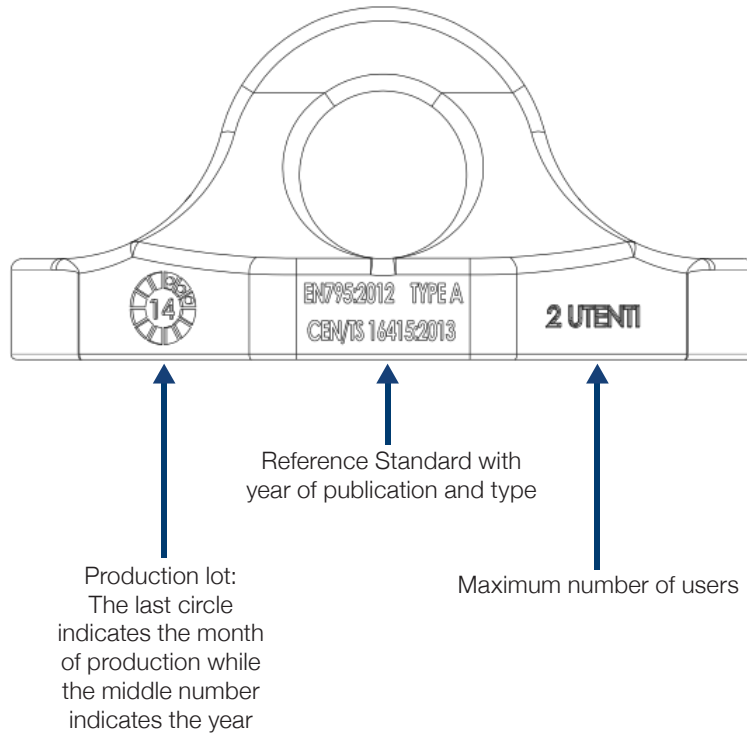
- CE inspection is performed by:

**Apave Sudeurope Sas (N°0082)**  
**Cs60193**  
**13322 Marseille Cedex 16 – France**

- If the product is sold beyond the borders of Italy, the seller must provide instructions for use, maintenance, routine inspections and repairs in the language of the destination country.
- The anchor device must only be used to protect against the risk of falling and not as a means for lifting materials and objects.
- When the operator reaches the point of access, he must check the date of the last inspection as indicated in the obligatory identification notice (art. CA00) and on the “inspection/maintenance registration form”. If the last inspection dates back more than 12 months, the device must not be used until it has been inspected by a competent person.
- A complete harness is the only acceptable body retaining device that can be used with this fall arrest system. The operator must always check to make sure that the product markings are legible before use.

The device has some markings on the sides surfaces. The meaning is explained in the following pictures.





## 10. Maintenance.

The ALU12 device must be subjected to the following inspections once a year:

visual and mechanical inspection: check the condition of the device (absence of permanent deformation, corrosion). Use a torque wrench to make sure that the tightening torque is correct.

**NOTE:** The device must not be used if defects are discovered. Only after it has been repaired by trained, skilled personnel may the device be used again.

The PPE must be serviced after a fall or even when the device has been operated accidentally. Such servicing must be performed by persons who are familiar with the recom-

mendations and instructions provided by the manufacturer and applicable to the components of the system. The operator must be able to identify and assess the entity of the damage and to implement the corrective action required. There is no need to clean the device before, during or after use. Its maximum duration is 20 years. The life cycle of the system runs from the date on which it is put into service.

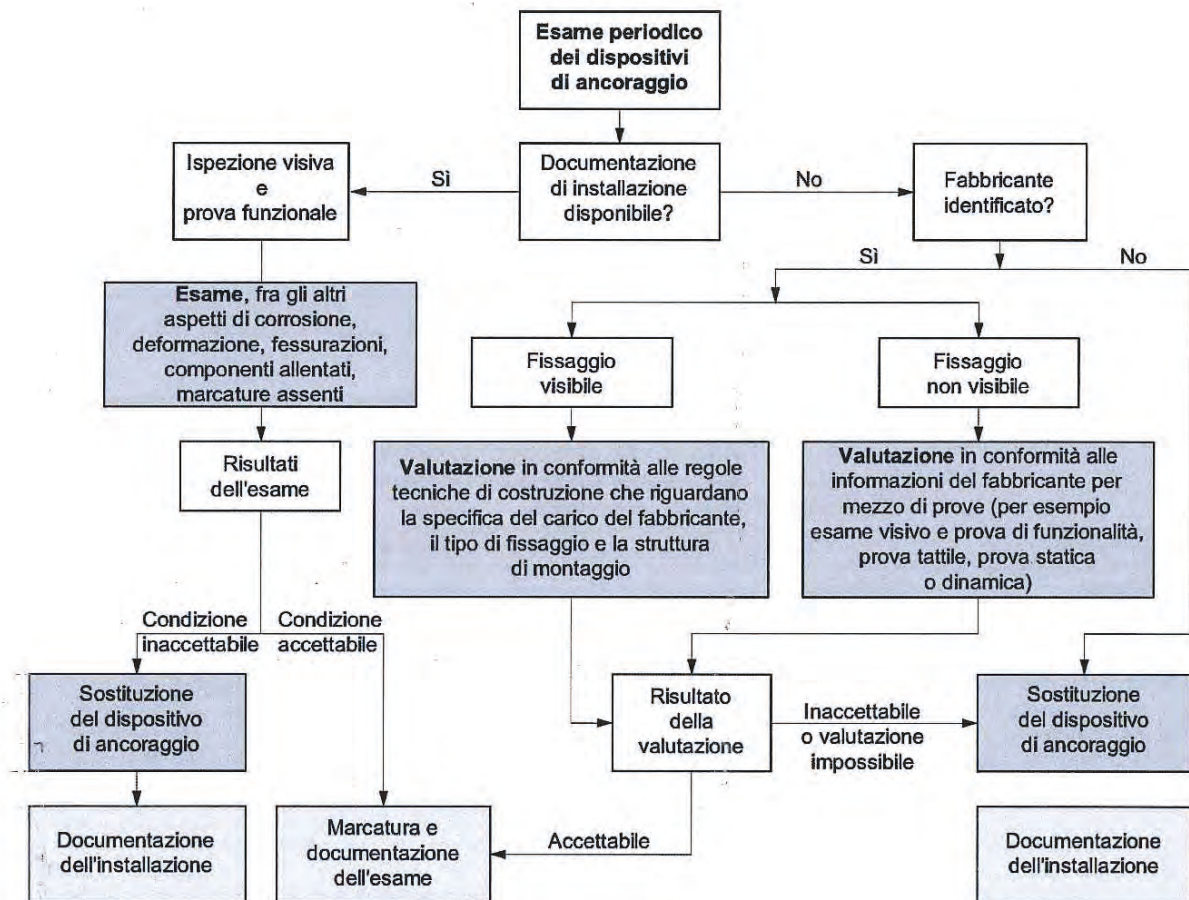
It is obligatory to record annual maintenance/inspection, supplementary maintenance and uses of the device on the registration form provided here; this to assure future users that the system has been used correctly and periodically serviced.

# 11. Inspection / Maintenance Registration Form

System No.:  
 Certification No.:  
 Date of entry into service:  
 Manufacturer: **F.I.S.A. srl - Via Donizetti 109/111 - 24030 Brembate di sopra (BG)**  
 Dealer: **Genesi Italia - Via Donizetti 109/111 - 24030 Brembate di sopra (BG)**  
 Retailer:  
 Installer:  
 Use – Maintenance/Inspection – Supplementary maintenance:

Intervention date	Reason: (Routine inspection/ use/supplementary maintenance)	Result of inspection/ maintenance	Defects noted repairs performed and other pertinent information	Name and signature of competent person	Forecast date of next inspection/ maintenance

Routine inspection/assessment guide:



# 12. Warranties

## Duration

12.1

All parts are covered by a 10-year warranty running from the date on the delivery note.

## Exclusions

12.2

### The warranty will only be provided if:

- the price of the supplied products has been fully paid;
- the product has been installed and used in compliance with the assembly and technical instructions provided by Genesi Italia.

### The warranty will not be provided if:

- our products are made of galvanized or zinc-plated steel;
- our safety products include parts or accessories of out-sourced origin. In this case, the warranty provided will be that of the supplier of such parts.

### The warranty becomes void when defects are caused by:

- interventions or modifications to the original system performed without written authorization from the manufacturer/dealer;
- abnormal use differing from the purpose for which the equipment is intended;
- defective installation that fails to conform to the drawings or has not been performed in a workmanlike manner;
- failure of the customer to notify special conditions (pollution, temperature, number of users, etc.) of use of the equipment;
- breakage of the supporting surface that houses the anchor device;
- by parts produced by the purchaser or obtained from sources other than Genesi Italia added to our systems. All lifelines must be obtained from Genesi or from a manufacturer approved by us, on the basis of our projects;
- by unforeseen circumstances (force majeure) or by any event beyond the seller's control, such as warfare, lightning, etc.

## Limitations

12.3

In all cases, our warranty merely covers the replacement or repair of parts or equipment formally recognized by our technical service as being defective.

If the repairs are entrusted to third parties, they may only be performed after acceptance by Genesi Italia of the cost estimate for the repairs themselves.

Equipment may only be returned after authorization from Genesi Italia.

The warranty only applies to returned items and does not cover the cost of removing or re-installing the equipment from/into the system in which it is built.

Repairs, replacements or modifications to parts or equipment during the warranty period may extend the warranty itself

## Liability

12.4

Genesi Italia shall be liable, under ordinary-law terms, for material damage caused by its equipment or by its personnel.

Repairs of material damage attributable to the seller are expressly limited to a sum that will not exceed the value of the equipment involved, subject of the order.

The seller and the customer expressly agree to reciprocally refrain from requesting compensation for indirect and non-material damages of any nature, such as loss of business, loss of earnings, delay expenses, reminder fees, removal and re-installation of equipment, loss of future contracts, etc.

# 13. References.

## Manuals

13.1

Assembly manual.

## Regulatory framework

13.2

### Technical standards

13.2.1

#### EN 353-1:2002

PPE against falls from a height – Guided type fall arresters including a rigid anchor line (on a rail)

#### EN 353-2:2002

PPE against falls from a height – Guided type fall arresters including a flexible anchor line (on a rope/cable) (implementation of European standard EN 353-2:2002)

#### EN 354:2010

PPE against falls from heights – Lanyards

#### EN 355:2002

PPE against falls from heights – Energy absorbers

#### EN 360:2002

PPE against falls from heights – Retractable fall arresters

#### EN 361:2002

PPE against falls from heights – Full body harnesses

#### EN 362:2004

PPE against falls from heights – Connectors

#### EN 363:2008

PPE against falls from heights – Individual fall arrest systems

#### EN 364:1992

PPE against falls from heights – Test methods

#### EN 365:2004

PPE against falls from heights – General requirements for instructions for use, marking, inspection periods, repairs, marking and packaging

#### EN 795:2012

Personal fall protection – Anchor devices

#### CEN/TS16415:2013

Personal fall protection – Anchor devices – Recommendations for anchor devices for use by more than one person simultaneously

## National laws

13.2.2

### Legislative Decree D.Lgs 81/2008 and successive amendments and integrations

Consolidation Act concerning Safety

## Websites

13.3

#### [www.genesibesafe.com](http://www.genesibesafe.com)

Manufacturer's official website

#### [www.uni.com](http://www.uni.com)

Website of the Italian Standards Organization (UNI)







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[genesibesafe.com](http://genesibesafe.com)

**Genesi Italia, Be Safe**