Lesson nr 1 of 7

1° Fall arrest system
2° Anchor points
3° Confined Space
4° Rope Access
5° Rescue
6° Lifeline
7° Inspection
To work at a height more than 2 meters in a place without collective protection, you need a **FALL ARREST SYSTEM**.
A FALL ARREST SYSTEM is composed by at least 3 ELEMENTS

A  HARNESS

B  FALL ARREST DEVICE

C  ANCHOR POINTS
FALL ARREST SYSTEM
Choose the right SIZE
S-M-L
or
XL-XXL
WEAR IT CORRECTLY
3

BE AWARE OF THE DIFFERENCE BETWEEN

ANCHOR POINTS  
Indicated with «A»

POSITIONNING POINTS  
Without marking on the belt
<table>
<thead>
<tr>
<th>HAR...</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>PREMIUM</td>
<td>WAILY</td>
<td>GALAGO</td>
<td>EOLIEN</td>
<td>ANATOM</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>36TC</td>
<td>35TC</td>
<td>35</td>
<td>32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EVOLUTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>24</td>
<td>23</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>ESSENTIAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>14</td>
<td>12</td>
<td>11</td>
<td></td>
</tr>
</tbody>
</table>
### ZOOM ON HARNESS RANGE

#### IDENTIFICATION CODES

<table>
<thead>
<tr>
<th>HAR</th>
<th>0</th>
<th>0</th>
<th>XXX</th>
<th>YY</th>
</tr>
</thead>
</table>

- **HAR**: For all our harnesses
- **0**: 1 = ESS, 2 = EVO, 3 = PRE
- **0**: Anchor and positionning points, from 1 to 6
- **XXX**: **GIL** if with vest, **TC** if for rope access
- **YY**: Colour code for vest, **OR** orange, **JA** yellow, **NO** black
COLOURS to help choice and use

ESSENTIAL: one side orange, one side black

EVOLUTION: black/orange for brest
black/grey for legs

PREMIUM: black/orange for brest
black/grey for legs

TC: black and orange (for rope access harnesses)

ANSI: black/yellow (for Africa & America only)
FOR ALL

2 sizes: \( GT \) = S-M-L and \( XX \) = XL-XXL

Protected plastic LABEL for complete traceability:
- production date mm/yy
- batch number
- single serial number
- additional tissue label for annual inspections)

Optionally TESTED at 140 Kg (ESS) or 150 kg (EVO/PRE)
HARNESS RANGE FEATURES

FOR EVOLUTION + PREMIUM

Fall indicator (not on TC range)

Tools holders on belt

Belt with 120° rotation

RIPLIGHT SYSTEM for better confort (EVO only)
FOR PREMIUM

Comfortable PAD removable

Phone pocket

Available with automatic buckles
FALL ARREST DEVICES

FALL IMPACT

6 kN  maximum tolerance for the body

10 kN  irreversible injuries, death

A dummy of 100 kg in free fall reaches a force of
- 6 kN in < 2 mt
- 10 kN in 4 mt

The FALL ARREST SYSTEM must **ABSORB THE IMPACT** and **STOP** the 100 kg dummy without exceeding the force of 6kN
ENERGY ABSORBER
ENERGY ABSORBER

TO ABSORB THE IMPACT AND STOP THE PERSON, THE SYSTEM NEEDS A FREE FALL SPACE, WITHOUT OBSTACLES, CALLED «CLEARANCE»
ENERGY ABSORBER

CLEARANCE

ACCORDING TO ANCHOR POSITIONNING:

F0  CLEARANCE = 2m

F1  CLEARANCE = 4 m

F2  CLEARANCE = 6 m
<table>
<thead>
<tr>
<th>AN...</th>
<th>C +</th>
<th>C</th>
<th>D</th>
<th>CC</th>
<th>DD</th>
</tr>
</thead>
<tbody>
<tr>
<td>PREMIUM</td>
<td></td>
<td>230 CD</td>
<td></td>
<td>240 CDD</td>
<td></td>
</tr>
<tr>
<td>EVOLUTION</td>
<td></td>
<td>208</td>
<td>208</td>
<td>218</td>
<td>218</td>
</tr>
<tr>
<td></td>
<td>150 CC</td>
<td>R CD</td>
<td>150 CCC</td>
<td>R CDD</td>
<td></td>
</tr>
<tr>
<td>ESSENTIAL</td>
<td></td>
<td>201</td>
<td>201</td>
<td>211</td>
<td>211</td>
</tr>
<tr>
<td></td>
<td>200 CC</td>
<td>200 CD</td>
<td>200 CCC</td>
<td>200 CDD</td>
<td></td>
</tr>
<tr>
<td></td>
<td>203</td>
<td>203</td>
<td>213</td>
<td>213</td>
<td></td>
</tr>
<tr>
<td></td>
<td>200 CC</td>
<td>200 CD</td>
<td>200 CCC</td>
<td>200 CDD</td>
<td></td>
</tr>
</tbody>
</table>
For all FALL ARREST DEVICES

Item code, exemple 230 or 203

150 or 200 length in centimeters, «R» for adjustable, nothing for elastic

Codes for 2 or 3 connectors (according to the type of energy absorber, simple or double Y)

C= AM002
D= AM022
ENERGY ABSORBERS FEATURES

MATERIALS
PREMIUM : ELASTIC WEBBING
BLACK/ORANGE
EVOLUTION : BRAIDED ROPE
ESSENTIAL : TWISTED ROPE
ESSENTIAL : ORANGE WEBBING

LENGTHS
- Basically 200 cm in total, maximum for CE standard
- Some items in 150 cm
- Adjustable from 150 to 200 cm
- Elastic is from 140 to 200 cm
RETRACTABLE FALL ARRESTERS

RETRACTABLE
EN355 EN355

ABSORBER

FALL ARREST

RETRACTABLE
EN360 EN360

SLIDING
EN353-2
RETRACTABLE FALL ARRESTERS
RETRACTABLE FALL ARRESTERS

VERTICAL USE

HORIZONTAL USE
RETRACTABLE FALL ARRESTERS

VERTICAL USE

CLEARANCE

3 m
RETRACTABLE FALL ARRESTERS

HORIZONTAL USE

CLEARANCE

4.5 m
# ZOOM ON RETRACTABLE

<table>
<thead>
<tr>
<th></th>
<th>FIXBLOC</th>
<th>MINIBLOC</th>
<th>MEDBLOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length (m)</td>
<td>1,9</td>
<td>2,5</td>
<td>6</td>
</tr>
<tr>
<td>Part Number</td>
<td>AN105</td>
<td>AN102</td>
<td>AN130 06 C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Protector Tetra</th>
<th>Ø 4 mm</th>
<th>Ø 4 mm</th>
<th>Ø 5 mm INOX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length (m)</td>
<td>6</td>
<td>10</td>
<td>23</td>
</tr>
<tr>
<td>Part Number</td>
<td>AN152</td>
<td>AN153</td>
<td>AN110 23</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Protector Metal</th>
<th>Ø 4 mm</th>
<th>Ø 5 mm INOX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length (m)</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>Part Number</td>
<td>AN115</td>
<td>AN116</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Protector Elevator</th>
<th>Ø 4 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length (m)</td>
<td>20</td>
</tr>
<tr>
<td>Part Number</td>
<td>TR 007</td>
</tr>
</tbody>
</table>
ZOOM ON SMALL RETRACTABLE

SMALL : 2 ÷ 8 meters
(All with webbing)

<table>
<thead>
<tr>
<th>AN</th>
<th>device</th>
<th>AN</th>
<th>AN</th>
<th>AN</th>
<th>AN</th>
<th>AN</th>
</tr>
</thead>
<tbody>
<tr>
<td>105</td>
<td>102</td>
<td>130</td>
<td>141</td>
<td>142</td>
<td></td>
<td></td>
</tr>
<tr>
<td>000</td>
<td>000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>code</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>( C )</td>
<td>( C )</td>
<td>C</td>
<td>F/T</td>
<td>F/T</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1,9</td>
<td>2,5</td>
<td>6</td>
<td>6</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>
SMALL RETRACTABLE FEATURES

**FIXBLOC**
- 1,9 m
- AN105
- 0,9 Kg
- FALL INDICATOR
- VERY COMPACT

**MINIBLOC**
- 2,5 m
- AN102
- 1,1 Kg
- COMPACT

**MEDBLOC**
- 6 m
- AN130 06 C
- 1,8 Kg
- 150 KG TESTED
- VERY COMPACT
### ZOOM ON LARGE RETRACTABLE

**LARGE : 6 ÷ 30 meters**  
*(All with 4mm cable)*

<table>
<thead>
<tr>
<th>AN</th>
<th>device</th>
<th>code</th>
<th>length</th>
<th>connector</th>
<th>meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>122</td>
<td>123</td>
<td>124</td>
<td>152</td>
<td>153</td>
<td>154</td>
</tr>
</tbody>
</table>

For Africa & America only

8mm INOX cable
LARGE RETRACTABLE FEATURES

- 2 HANDLES
- INTENSIVE USE
- INTEGRATED ENERGY ABSORBER
- SHOCK RESISTANT
- FALL INDICATOR

• VERY RESISTANT
• INTEGRATED ENERGY ABSORBER
• FALL INDICATOR
• AVAILABLE WITH INOX CABLE
• PROTECTOR ELEVATOR, for tripod, on lesson 3
SLIDING FALL ARRESTER ON ITS SUPPORT

FLEXIBLE

RIGID/CABLE
CLEARANCE

SLIDING FALL ARRESTER ON ITS SUPPORT
# ZOOM ON SLIDING FALL ARRESTERS

<table>
<thead>
<tr>
<th>Premium</th>
<th>10 m</th>
<th>20 m</th>
<th>30 m</th>
<th>&gt;30 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cameleon®</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AN066</td>
<td>AN410</td>
<td>AN420</td>
<td>AN430</td>
<td>AN401</td>
</tr>
<tr>
<td>ASCAB3®</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AN070</td>
<td>AN025</td>
<td>AN024</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Evolution</th>
<th>10 m</th>
<th>20 m</th>
<th>30 m</th>
<th>&gt;30 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASCORD®</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AN060</td>
<td>AN315</td>
<td>AN317</td>
<td>AN319</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Essential</th>
<th>10 m</th>
<th>20 m</th>
<th>30 m</th>
<th>&gt;30 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fennec®</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AN063</td>
<td>AN063</td>
<td>AN063</td>
<td>AN063</td>
<td></td>
</tr>
</tbody>
</table>

- Cameleon®: Ø 10.5 mm
- ASCAB3®: Ø 8 mm INOX
- ASCORD®: Ø 14 mm
- Fennec®: Ø 12 mm

*DELTAPLUS* YOUR SAFETY AT WORK
10, 20 or 30 meters are available

- More than 30 meters on demand for CAMELEON and ASCAB2
- FENNEC is assembled on the rope
- All others are opening type sliding devices and are sold separately from rope or cable
- Non inverting devices

<table>
<thead>
<tr>
<th></th>
<th>PREMIUM</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AN066</td>
<td>AN410</td>
<td>AN420</td>
<td>AN430</td>
</tr>
<tr>
<td></td>
<td>AN070</td>
<td>AN025</td>
<td>AN024</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AN060</td>
<td>AN315</td>
<td>AN317</td>
<td>AN319</td>
</tr>
<tr>
<td></td>
<td>FENNEC</td>
<td>AN063</td>
<td>AN063</td>
<td>AN063</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>20</td>
<td>30</td>
</tr>
</tbody>
</table>

- ZOOM ON SLIDING FALL ARRESTERS

- 8 mm INOX
- 10,5 mm
- 14 mm
- 12 mm

DELTA PLUS
YOUR SAFETY AT WORK
FOCUS ON CAMELEON

CAMELEON®
A new generation of fall arrester!

3 PRODUCTS IN 1, MULTIPURPOSE
- Fall arrester on rope
- Rope blocker
- Work positioning lanyard

GUIDED TYPE FALL ARRESTER ON ANCHORAGE LINE

RECOMMENDED FOR
- Temporary work at height
- Work on fishing, scaffolding, tower, roof,...
- Work suspended on ropes
- Work positioning

USES
- Opening with one hand
- Automatic closure and locking
- Safety: Insulation without deforming form
- Fall indicator
- Not suitable for use in fixed position
- Dynamic load: 1 kN and sliding freely on the other way
- EN361/EN361/EN361/EN361

MAIN FEATURES
- Enables the individual or team to work in a safer way
- Ensures that the user is always in a safe position
- Provides a secure connection to the anchorage point
- Ensures compliance with all relevant safety regulations
CABLE SLIDING FEATURES

Upper ANCHOR POINT EN795-A. Can be used ALONE or in a vertical LINE

Support every 8 meters. It is not a PPE

ASCAB, sliding on cable

Ending FIXING POINT, it’s compulsory combined to upper anchor point to have a vertical sliding LINE
STARTING from an ANCHOR POINT (see Lesson n 2), how create the right combination of

- **A** HARNESS
- **B** FALL ARREST DEVICE
9 SOLUTIONS using ESSENTIAL range

ELARA 320
ELARA 280
ELARA 270
ELARA 320
ELARA 280
ELARA 270
ELARA 140
ELARA 170
ELARA 150
ELARA 140
ELARA 170
ELARA 150
ELARA 190
ELARA 130
ELARA 160
ELARA 190
ELARA 130
ELARA 160
ADAPTED SOLUTIONS

To select correct COMPONENTS to your WORK AT HEIGHT SYSTEM, take care of the WORKING SITUATIONS and MOVEMENTS.

Check first the work environment, then compare with product presentation, on Catalogue or web, and add your experience.
EXEMPLE/TEST

Peter, the electrician, is equipped with Fall arrest to climb the tower, but he also needs the adapted solution:

Adapted solution:

- **ANCHOR POINT** = it’s the TOWER STRUCTURE

- **ENERGY ABSORBER + RESTRAINT DEVICE** = to avoid the FALL see all products on page 324

- **HARNESS** having belt (WAILY, GALAGO, EOLIEN, HAR24, HAR14)

Otherwise Peter can use the kit ELARA320 (there’s a mistake in the catalogue cause situation number 10 is missing)
The correct solution and the use on FALL ARREST SYSTEM must take care of a lot of WARNING
WARNING

DO NOT ANCHOR ON POSITIONNING POINTS

USE ALL REGULATION OF THE HARNESSSES IN ORDER TO ADJUST IT TO YOUR BODY
WARNING

CHECK AND EVALUATE THE CLEARANCE (THERE MUST BE NO OBSTACLES)

NEVER UNDO THE FALL ARREST SYSTEM

NEVER UNLOCK THE CONNECTOR WITHOUT BEING IN A SAFE POSITION (MINIMUM 1 POINT TO THE STRUCTURE)
WARNING

PENDULUM EFFECT
Always check the presence of obstacle, even in case of lateral fall.

HORIZONTAL USE
Only some SRL are tested for horizontal use.
**WARNING**

**VERTICAL USE**
In vertical use do not go over the inclination of max 40°

**VERTICAL USE**
Slidings on rope are for vertical use only
WARNING

EXTREMITY ANCHORAGE can be dangerous due to potential pendulum effect

The ending part of the rope on a sliding fall arrester must have the stopping knot
VIDEOS on this matter

DELTA PLUS Essential Harness

DELTA PLUS Evolution Harness

DELTA PLUS Eolien Premium Harness

DELTA PLUS Self retractable fall arrest

DELTA PLUS Energy absorbers

DELTA PLUS Rescue

DELTA PLUS Fall arrest kits

DELTA PLUS Rope Access

DELTA PLUS Vertical Lifeline

DELTA PLUS telescopic rod

DELTA PLUS FALL PROTECTION EQUIPMENT
ANCHOR POINTS