Personal protective equipment

2016
Application information

Fall arrest systems are only approved for ascending and descending. The user must use additional securing mechanisms for other activities, also when in a rest position, where the position of the body differs from the one when ascending and descending.

Per fall arrester only 1 person may be attached. Only a safety harness according to EN 361 with front attachment point may be used attaching the person to the fall arrester. The HACA fall arrester may only be used with original HACA fall arrest rails. Other combinations are not allowed. Combining and using a fall arrester or fall arrest rails from different manufacturers may influence their function. The leads to a malfunction of the fall arrest system and hence endangers the user. In such cases the Lorenz Hasenbach GmbH u. Co. KG denies liability.

A risk assessment according to the national rules and laws of the country of application has to be done. The choice of the harness depends on the work to be done. HACA fall arrest systems are made for ascending and descending.

The safety harness must be equipped with the attachment points required for the intended use. These are marked with a capital A. The manufacturer’s instruction for use of the harness has to be observed.

Only safety harnesses without flexible webbing may be used.

This applies both to using the chest attachment point and the abdominal attachment point for climbing.
Fall arrester
Model 0529.74

**HACA MultiSafe**

**Benefits**
- Has 3 catching functions:
  1. Catching function: In case of vertical fall the catching function responds.
  2. Catching function: In case of falling backwards (fall-back and sit-back) the device catches due to an automatic draught limiter.
  3. Catching function: A centrifugal brake releases a braking impulse at high speed and brings catching function 1 into action.
- Approved for persons up to 150 kg.
- The value of 5 kN is 17% below the maximum impact force with a 100 kg steel dummy, claimed in EN 353-1.
- Extreme safety is provided as the guided type fall arrester can be used right after a fall. Consequently a second fall is also safe.
- The snap-hook has a swivel.
- Fulfils all additional claims according to RFU.CNB/P/11.073.
- Very smooth-running, hence no exhaustion and only low level of strain when climbing.
- Very good running properties due to roll guides at each side and long axis distance.
- Contact to the guiding rail via ball-bearing rolls.
- Correct insertion into the fall arrest rail is compulsory and therefore guaranteed.
- Arms and legs are relieved when climbing.
- Can be used up to 15° layback and 20° lateral position.
- Can additionally be used for horizontal fall arrest rails.

**Use**
- Can be used on all kind of HACA fall protection profiles.
- For radius min. 750 mm.
- As fall arrester according to DIN EN 353-1.

<table>
<thead>
<tr>
<th>Material</th>
<th>Order No.</th>
<th>€ p. unit</th>
</tr>
</thead>
</table>
| Aluminium, stainless steel| 0529 7400 00| 760,-     

**Triple safety due to 3 different catching functions**
Handling and function

The guided type fall arrester has three independently working catching functions (triple redundant). Each reacts to different triggers, which are caused by a potential danger for the user and makes the guided type fall arrester stop. If the horizontal or speed-dependent catching function is primary activated the vertical catching function will always be activated as second redundancy!

1. Catching function: vertical catching function

In case of a fall the user, being attached to the harness by the snap-hook, moves the brake eccentric within the guided type fall arrester. This makes the guided type fall arrester jam like a tong to the rail within few millimetres. Activation and stop of the guided type fall arrester do not happen abruptly, as e.g. in case of fall arrest systems having safety crimping or safety rungs at certain intervals on the fall arrest rail. This guided type fall arrester activates and stops delayed. This reduces the impact load on the falling person. This function is again available without limitation immediately after relieving the guided type fall arrester and the “opening of the tong”.

In this moment the guided type fall arrester is again ready for use with all protective systems without any delay.

2. Catching function: horizontal draught limiter

The draught limiter activates automatically and makes the arrester speed down when the user is in danger of falling backwards; this keeps the user from rolling over. The harness for this application must have the properties being described on page E.01. From this position the user can come back to the climbing position at any time. After relieving the guided type fall arrester all safety devices tighten again and are immediately again available without limitation.

In this moment the guided type fall arrester is again ready for use with all protective systems without any delay.

3. Catching function: speed-dependent catching function

With the help of a friction wheel the speed of the guided type fall arrester is checked constantly during its use. If the guided type fall arrester operates at a speed higher than normal climbing speed, the guided type fall arrester is decelerated automatically. This deceleration activates the vertical catching function. After relieving the guided type fall arrester all safety devices tighten again and are immediately again available without limitation.

In this moment the guided type fall arrester is again ready for use with all protective systems without any delay.

DIN EN 353-1 · CE 0158 · RFU.CNB/P/11.073
Further properties

Guided type fall arrester:
The friction wheel of the speed-dependent catching function has two redundant contact surfaces (see detail ①). Furthermore there is an integrated marking for wear and tear becoming visible due to a second surface colour (see detail ②). This makes the degree of wear and tear and hence the moment for exchange clearly visible.

The strain on arms and legs is relieved when climbing with this guided type fall arrester. The user leans into the harness and creates like this the necessary horizontal tensile force for a free run of the guided type fall arrester.

The guided type fall arrester even can run in bends (rad. min. 750 mm). Backwards movements must be activated manually.

HACA snap-hook with TRI SAFE lock:
The snap-hook of the guided type fall arrester is secured with a HACA TRI SAFE lock (see detail ③). This opening mechanism closes independently and has to be opened for reasons of the user’s safety by three intended axial rotary and pushing motions.

The polyamide shock absorbing element (see detail ④) forms back into its original shape after having been exposed to the shock load. It does not tear apart for absorbing the load impact as a textile shock absorber or a deforming element would. The advantage of this fact is that the connection from the user to the guided type fall arrester does not extend inappropriately.

In this moment the guided type fall arrester is again ready for use with all protective systems without any delay.

The swivel (see detail ⑤) makes it easier to change direction from vertical to horizontal and makes it possible to use harnesses with horizontal and vertical attachment points.

Accessories:
A protection case for the guided type fall arrester can be found on page E.07.

---

<table>
<thead>
<tr>
<th>Material</th>
<th>order-no.</th>
<th>€ p. unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium, stainless steel</td>
<td>0529 7400 00</td>
<td>760,–</td>
</tr>
</tbody>
</table>

According to DIN 18 799: 2009 there must be at least two guided type fall arresters at site. Before opening the guided type fall arrester the user must protect himself against falling with the help of a rope.

---

**Details**

① Redundant friction wheel
② Marking for wear and tear on the friction wheel red = exchange necessary
③ TRISAFE lock
④ Shock absorber device
⑤ Swivel
**Benefits**

- Can be removed from any position on the fall arrest rail
- One-hand operation
- It is possible to save removal flap and notches
- Has 3 catching functions:
  1. Catching function: In case of vertical fall the first catching function responds
  2. Catching function: In case of falling backwards (fall-back and sit-back) the device catches due to an automatic draught limiter
  3. Catching function: A centrifugal brake releases a braking impulse at high speed and brings catching function 1 into action
- Approved for persons up to 150 kg
- The value of 5 kN is 17% below the maximum impact force with a 100 kg steel dummy, claimed in EN 353-1
- Extreme safety is provided as the guided type fall arrester can be used right after a fall. Consequently a second fall is also safe
- The snap-hook has a swivel
- Fulfils all additional claims according to RfU.CNB/P/11.073
- Very smooth-running, hence no exhaustion and only low level of strain when climbing
- Very good running properties due to roll guides at each side and long axis distance
- Contact to the guiding rail via ball-bearing rolls
- Correct insertion into the fall arrest rail is compulsory and therefore guaranteed
- Arms and legs are relieved when climbing
- Can be used up to 15° layback and 20° lateral position
- Can additionally be used for horizontal fall arrest rails

**Use**

- Can be used on all HACA fall arrest rails
- For minimum radius of 750 mm
- As fall arrester in accordance with DIN EN 353-1

**Handling and function**

The fall arrester may be removed from any position of the ladder section. The arrester is designed so that a logical sequence must be run through for one-handed opening of the arrester. An internal safety system ensures that the arrester can only be attached in the running direction. In the event of a fall the fall arrester jams on the rail after just a few centimetres. There is a delay when the arrester is engaged and stopped so this does not occur abruptly as, for example, is the case with fall arrest systems whose guide rails have safety crimping or safety rungs at certain intervals. This reduces the impact load on the person falling. Ascending and descending using this arrester relieves the load on arms and legs. The user leans into the belt, thereby achieving the horizontal tensile force necessary for the arrester to run freely.

<table>
<thead>
<tr>
<th>Material</th>
<th>Order No.</th>
<th>€ per unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium, stainless steel</td>
<td>0529 7450 00</td>
<td>on enquiry</td>
</tr>
</tbody>
</table>

**DIN EN 353-1 · CE0158 · RfU.CNB/P/11.073**
Fall arrester
Model 0529.60

Benefits
- Excellent running properties
- For use where space is very restricted (e.g. in shafts)
- Can be used up to 5° layback and 3° lateral position
- No horizontal release force required. Therefore approved for ladders in accordance with DIN 18 799 Part 3 and for retrofitting step irons and manhole steps in accordance with BGI 691
- Correct insertion in the fall arrest rail is compulsory and therefore guaranteed
- Contact to the guide rail takes place using rollers
- Approved for persons up to 150 kg

Use
- For fall arrest rails made of □ profile
- For single rail fall arrest ladders made of □ profiles and special equipment from this programme
- For minimum radius of 700 mm
- As fall arrester in accordance with DIN EN 353-1

Design
Made from steel. One-hand karabiner hook EN 363 made from electro-galvanised steel. Plastic rollers.
Approx. weight 1.65 kg.
Outer dimensions (H x B x D) approx. 150 x 85 x 90 mm.

Handling and function
The fall arrester is connected to the applied safety belt using the one-hand karabiner hook and simply carried with it when ascending. In the event of a fall the fall arrester jams on the rail after just a few centimetres. There is a delay when the arrester is engaged and stopped so this does not occur abruptly as, for example, is the case with fall arrest systems whose guide rails have safety crimping or safety rungs at certain intervals. This reduces the high impact load on the person falling. There is no need for special behaviour on the part of the user to ensure that the arrester can run freely, e.g. by leaning back with the upper body to maintain tensile force and thus the free running of the arrester. This is a great advantage where space is restricted.

It is also possible to move round bends with the fall arrester. Backward movements must be actuated manually.

Protective case for fall arrester Page E.07.

<table>
<thead>
<tr>
<th>Material</th>
<th>Order No.</th>
<th>€ per unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel, electrogalvanised</td>
<td>0529 6001 00</td>
<td>560,–</td>
</tr>
</tbody>
</table>

In accordance with DIN 18 799: 2009 at least two fall arresters must be provided on site. Before opening the fall arrester the user must secure himself against falling using a safety rope.
Guided type fall arresters as PPE must be inspected by a qualified person.

We recommend that these are checked at the HACA factory as trained personnel and the requisite test facilities are available there. Furthermore necessary repair can be done directly.

<table>
<thead>
<tr>
<th>Inspection for fall arrester model</th>
<th>Order No.</th>
<th>€ p. unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>0529.60</td>
<td>0529 6020 00</td>
<td>120,–*</td>
</tr>
<tr>
<td>0529.71.03</td>
<td>0529 7115 00</td>
<td>120,–*</td>
</tr>
<tr>
<td>0529.72.01</td>
<td>0529 7213 00</td>
<td>120,–*</td>
</tr>
<tr>
<td>0529.73</td>
<td>0529 7310 00</td>
<td>120,–*</td>
</tr>
<tr>
<td>0529.74</td>
<td>0529 7410 00</td>
<td>135,–*</td>
</tr>
<tr>
<td>0529.74.50</td>
<td>0529 7450 10</td>
<td>135,–*</td>
</tr>
</tbody>
</table>

* Inspection costs specified are net prices. Required spare parts will be charged separately. You will receive an extra estimation of costs for additional costs higher than 25,– € for approval.

<table>
<thead>
<tr>
<th>Replacement log book</th>
<th>Order No.</th>
<th>€ p. unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>0529.70 – .73</td>
<td>0529 7101 12</td>
<td>35,–</td>
</tr>
<tr>
<td>0529.60</td>
<td>0529 6011 00</td>
<td>20,–</td>
</tr>
<tr>
<td>0529.74</td>
<td>0529 7411 00</td>
<td>20,–</td>
</tr>
<tr>
<td>0529.74.50</td>
<td>0529 7450 11</td>
<td>20,–</td>
</tr>
</tbody>
</table>

**Inspection using the example of 0529 7115 00:**
- visual control after receipt at our site
- control of completeness (log book and check list)
- removal of the safety sealing for the screws and disassembly of the adjusting screw
- cleaning of the guided type fall arrester
- assembly of new adjusting screws and setting of the guided type fall arrester with the help of the test gauge
- running test on the fall arrest rail
- sealing the adjustment screw
- new inspection plate, update log book

**Informationen concerning instructions for experts for Qualified persons according to TRBS 1203 for the inspection of HACA fall arresters see page S.01 and on www.haca.com.**

**Safety harness**

**Annual inspection**

The safety harnesses, ropes and fasteners we sell have to be checked once a year by a qualified person as they are PPE.

Inspection of safety harness, ropes and fasteners:

<table>
<thead>
<tr>
<th>Inspection of harness</th>
<th>Order No.</th>
<th>€ p. inspection</th>
</tr>
</thead>
<tbody>
<tr>
<td>First article for inspection</td>
<td>0529 3500 01</td>
<td>69,–</td>
</tr>
<tr>
<td>any following article</td>
<td>0529 3500 02</td>
<td>29,–</td>
</tr>
</tbody>
</table>
New aluminium connector for exchange

From the middle of 2016 on the guided type fall arresters of serie MultiSafe (0529.74 and 0529.74.50) will be equipped as standard with the new aluminium connector.

**Innovations**
- weight reduction of up to 10% of the total weight
- bigger opening of the connector makes it easier for the use of harnesses with loops.

It is possible to exchange the connector on guided type fall arresters which have been bought before the change. Exchange is only possible in combination with the annual inspection.

<table>
<thead>
<tr>
<th>Exchange of connector</th>
<th>Order No.</th>
<th>€ per unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>guided type fall arrester type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0529.74 and 0529.74.50 in combination with inspection</td>
<td>0529 7425 00</td>
<td>109,–</td>
</tr>
<tr>
<td>0529.74</td>
<td>0529 7410 00</td>
<td>135,–</td>
</tr>
<tr>
<td>0529.74.50</td>
<td>0529 7450 10</td>
<td>135,–</td>
</tr>
</tbody>
</table>

Exchange of the cushing element for guided type fall arresters of the MultiSafe seri

The replacement state of wear (max allowed age) of the cushing element of connector is 6 years. After this period of time the cushing element can be exchanged for keeping the permission to use the fall arrester. Exchange is only possible in combination with the annual inspection.

<table>
<thead>
<tr>
<th>Exchange of cushing element</th>
<th>Order No.</th>
<th>€ per unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>guided type fall arrester type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0529.74 and 0529.74.50 in combination with inspection</td>
<td>0529 7426 00</td>
<td>45–</td>
</tr>
<tr>
<td>0529.74</td>
<td>0529 7410 00</td>
<td>135,–</td>
</tr>
<tr>
<td>0529.74.50</td>
<td>0529 7450 10</td>
<td>135,–</td>
</tr>
</tbody>
</table>
Test gauge for fall arrester
For fall arrester model series 0529.72, 0529.73, 0529.74 and starting from 0529.71.02

The test gauge is used to check the catch properties according to the label.
Use of the test gauge by the user does not obviate the need to have an annual inspection carried out by a qualified person.

<table>
<thead>
<tr>
<th>Material</th>
<th>Order No.</th>
<th>€ per unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stainless steel</td>
<td>0529 7102 18</td>
<td>23,–</td>
</tr>
</tbody>
</table>

Inspection equipment for fall arresters of model series

Type 0529.74 and 0529.74.50
The annual inspection of fall arrester type 0529.74 and 0529.74.50 requires a functional test of the speed-dependent catching function.
It is necessary to apply the fall arrester to a fall arrest station. We recommend using the inspection equipment which has been designed especially for this purpose.

<table>
<thead>
<tr>
<th>Material</th>
<th>Order No.</th>
<th>€ per unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel, hot-dip</td>
<td>0529 7420 00</td>
<td>132,–</td>
</tr>
</tbody>
</table>

for users

Protective case for PPE
Aluminium box for weather proof storage of fall arresters, harnesses, helmets, etc.

<table>
<thead>
<tr>
<th>outer dimensions mm</th>
<th>inner dimensions mm</th>
<th>weight</th>
<th>volume</th>
<th>Order No.</th>
<th>€ p. unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>432 x 335 x 277</td>
<td>400 x 300 x 245</td>
<td>3,2</td>
<td>29</td>
<td>0529 4210 01</td>
<td>83,–</td>
</tr>
<tr>
<td>592 x 388 x 409</td>
<td>560 x 353 x 380</td>
<td>5,3</td>
<td>76</td>
<td>0529 4210 03</td>
<td>117,–</td>
</tr>
</tbody>
</table>
Safety harness
Full body harness

Belt selection
A risk assessment must be carried out according to the respective applicable national provisions and laws in the country of use. The selection of belt depends on the requirements of the assignment. HACA fall arrest systems are intended for climbing purposes or use as a horizontal attachment point.

The belt to be used must be designed so that the maximum stretch occurring when the user exercises the maximum horizontal force precludes the risk of accident for the intended assignment. The belt must have suitable attachment points for the intended assignment.

HACA Model 0529.37.04
ARG 30 HRS
made from polyamide/polyester fabric with quick fasteners (slot buckle)
Weight 1.7 kg
with back support, dorsal eyelet, with thoral eyelet, with ventral eyelet (arrester loop), with 2 lateral attachment points (to hook onto the device bag or safety rope)

Benefits
- For greatest safety requirements
- Can be adjusted to all body sizes
- For fall arresters with and without horizontal release force
- We recommend use of a thoral attachment point.

<table>
<thead>
<tr>
<th>Order No.</th>
<th>€ per unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>0529 3704 00</td>
<td>177,–</td>
</tr>
</tbody>
</table>

Accident prevention regulations (UVV)
DIN EN 361 · DIN EN 358 · €0158

Model 0529.38.05
Ergonomic padding for full freedom of movement and maximum comfort.
Ventral fall arrest eyelet with innovative indicator stitching for combining with fall arrest system according to EN 353. Weight 2 kg.
With dorsal eyelet, with thoral eyelet, with ventral eyelt (arrester loop), with 4 lateral attachment point (for attaching the tool bag or rope).

Benefits
- For greatest safety requirements
- For sizes L - XL
- Maximum wearing comfort considering latest production technology and ergonomic criteria
- For fall arresters with and without horizontal release force

<table>
<thead>
<tr>
<th>Order No.</th>
<th>€ per unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>0529 3805 00</td>
<td>447,–</td>
</tr>
</tbody>
</table>

UVV · DIN EN 361 · DIN EN 358 · €0123
Safety harness
Full body harness

HACA Model 0529.37.02
HT 110
With dorsal eyelet,
with ventral eyelet (arrestor loop),
with thoral eyelet,
with 2 lateral attachment points and back support
attachment point in the shoulder area

Benefits
- Very comfortable to wear
- Adjustable shoulder and leg belts (width 100 mm)
- Can be adjusted to sizes 38 to 56
- For fall arrester with and without horizontal release force
- We recommend the use of a thoral attachment point

Order No. € per unit
0529 3702 00 336,–

Accident prevention regulations (UVV)
DIN EN 361 · DIN EN 358 · Ė0158

HACA Model 0529.37.06
ARG 51 Wind
The universal full body harness for use with wind turbines
With dorsal eyelet,
with thoral eyelet
with ventral eyelet (arrestor loop)

Benefits
- Quick fasteners enable the belt to be put on and taken off easily
- Perfect fit and very comfortable to wear
- Setting options enable ideal adjustment of the thoral attachment point to body shape
- Individual size adjustment, sizes L – XXL
- Plastic slide plate at the back to protect the belt
- Even power distribution through crossed belt straps
- We recommend the use of a thoral attachment point.

Order No. € per unit
0529 3706 00 474,–

Accident prevention regulations (UVV)
DIN EN 361 · Ė0123

This belt Model 0529.37.06 has been checked with fall arrester model series 0529.74 by TUVNEL Glasgow for use with thoral attachment point and abdominal attachment point; see test report PPE150 (request if required).
# Ropes and accessories

## Safety rope

### DIN EN 358
Connecting element in accordance with EN 354, Polyamide rope Ø 12 mm, single strand, lengths infinitely adjustable through clasp (EN 358). Length 0.75 – 1.50 m. With 2 M 10 karabiner hooks

<table>
<thead>
<tr>
<th>Order No.</th>
<th>€ per unit</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0644 0201 01</td>
<td>71,–</td>
<td></td>
</tr>
</tbody>
</table>

## Safety rope with pipe hook

### DIN EN 353-2
Horizontal and vertical approval. With rope shortener and shock absorber.

<table>
<thead>
<tr>
<th>Rope length approx. m</th>
<th>Order No.</th>
<th>€ per unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>0644 0301 01</td>
<td>229,–</td>
</tr>
<tr>
<td>10</td>
<td>0644 0401 01</td>
<td>235,–</td>
</tr>
<tr>
<td>15</td>
<td>0644 0501 01</td>
<td>241,–</td>
</tr>
<tr>
<td>20</td>
<td>0644 0701 01</td>
<td>249,–</td>
</tr>
</tbody>
</table>

## Equipment bag for ropes

Made from plastic fabric with cord tie and 2 karabiner hooks. Where applicable the equipment bag can also be hooked into the attachment points of safety belt Model 0529.3701 and Model 0529.3803 as tool or materials bag. Approx. dimensions (B x D x H): 190 x 150 x 350 mm.

<table>
<thead>
<tr>
<th>Order No.</th>
<th>€ per unit</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0529 4100 00</td>
<td>39,–</td>
<td></td>
</tr>
</tbody>
</table>

## Connecting elements

### DIN EN 354/358
Rope diameter 16 mm, with 2 aluminium karabiner hooks and with 2 lock nuts. Rope shortener with mountain climbing karabiner hooks. Hook opening 20 mm. Rope shortener with one-handed operation permits adjustment to 1.50 m.

<table>
<thead>
<tr>
<th>Order No.</th>
<th>€ per unit</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0529 3501 00</td>
<td>153–</td>
<td></td>
</tr>
</tbody>
</table>

### DIN EN 354/358
Connecting element with integrated shock absorber. Length 2 m. With M 51 karabiner hook.

<table>
<thead>
<tr>
<th>Order No.</th>
<th>€ per unit</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0529 3503 00</td>
<td>156,–</td>
<td></td>
</tr>
</tbody>
</table>

## Loop sling

### DIN EN 795 B
Loop sling to create an attachment point to pipes, beams etc. for 1 person. 19 mm strong belt strap with reinforced attachment grommet. Length 1 m.

<table>
<thead>
<tr>
<th>Order No.</th>
<th>€ per unit</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0644 3000 00</td>
<td>20,–</td>
<td></td>
</tr>
</tbody>
</table>

---

Pursuant to Section 1.3 of the German Workplaces Ordinance (Arbeitsstättenverordnung) the operator of a fall arrest system must take the results of the risk assessment into consideration. It is mandatory that this clarifies the question of rescuing casualties. Rescue equipment must be kept ready to use and within direct reach when climbing ladders so that the injured person can be rescued within an appropriate period of time.