



## Safety warning: HACA fixed rail vertical fall arrest system type 0529.7102

Manufactured by HACA Leitern, Lorenz Hazenbach GmbH, Bad Camberg, Germany

### BS EN 353-1:2002 Fall Arrest Equipment

#### Warning

1. The fixed rail vertical fall arrest system type 0529.7102 manufactured by the German company HACA Leitern has failed tests under BS EN 353-1:2002, the appropriate standard for such equipment, and a further important test advised by HSE in 2004. HSE advises users to cease use of this particular device as a matter of urgency and consult with your safety adviser and supplier about a safe alternative. ( See paragraph 2 for a description of this type of equipment).

#### Detail

2. This warning concerns tests conducted by HSE on a fixed rail vertical fall arrest system, type 0529.7102, manufactured by HACA Leitern. This sort of device, covered by BS EN 353-1:2002, is used when climbing fixed ladders or rungs attached to fixed structures. Typically, a ladder will be fitted with a rigid anchor line - fixed rail or cable - running up it to which the device is attached. The user is attached to the device via their harness. As the user climbs or descends the ladder the device travels with them along the rail or cable. If the user falls, the device should lock onto the rail or cable thereby safely arresting the fall.

3. HSE carried out tests in accordance with the requirements of BS EN 353-1:2002 on the HACA Leitern Type 0529.7102 fixed rail vertical arrest system. Tests were also carried out using an anthropomorphic dummy to determine whether the fall arrest device would operate in the simulation of a backwards fall. The significance and desirability of such a test (a fall back test) is explained in an HSE Safety Warning issued after some earlier research on this type of device in 2004 [hse.gov.uk/press/2004/e04074.htm](http://hse.gov.uk/press/2004/e04074.htm)

[1]

which may be downloaded. This issue is also discussed in the (UK) National Annex (Informative) to BS EN 353-1:2002

4. The device failed to meet the test requirements stipulated in BS EN 353-1:2002. The device also failed to operate successfully during the additional 'fall back test'. The table of results attached at Annex 1 details the tests carried out. Tests T1 and E1 show the results of the BS EN 353-1:2002 tests. Annex 2 shows photographs of some of the tests.

#### Action on Users

5. All those using or having responsibility for this type of HACA Leitern 0529.7102 fixed rail fall arrest system should immediately cease using them.

6. Users of this HACA Leitern 0529.7102 equipment and users of other fall arrest equipment of the Vertical Rigid Rail type or Vertical Guided Type covered by BS EN 353-1:2002 are advised to consider the safety of their systems of work and the application of hierarchy of precautions in the Work at Height Regulations 2005 and, in particular, to ensure that the important information contained in the 2004 HSE Safety Warning is heeded. HSE tests have shown that the use of an anthropomorphic dummy can provide a useful contribution towards determining a safe system of work.

## Action by HSE

7. Inspectors will be made aware of the information contained within this safety warning and it will contribute towards the enforcement decisions being made by them.

## Suppliers

8. The supply of this device is covered by the Personal Protective Equipment Regulations 2002, which are administered by BERR. HSE has provided information to BERR who are taking action to deal with supplier and EU issues.

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## ANNEX 1

Table of test results

Tests on 26/7/07	Description	Serial Number	Results/Comments
T1	BS EN 353-1:2002 (100 kg steel weight)	700821H	Runner arrested after 2mm Peak load = 9.23 kN Weight drop distance = 0.25m
T2	Fall Back (70 kg dummy) Similar to BS 5062:1:1985	700821H	Runner arrested after 2.43m Dummy dropped 3.3m
T3	Sit Back ( 70 kg dummy)	700821H	Runner failed to arrest fall Dummy landed on head
<b>Tests on 29/8/07</b>			
E1	BS EN 353-1:2002 (100 kg steel weight)	700830H	Runner arrested after 3 mm Peak load = 6.3 kN Weight drop distance = 0.14m
E2	Fall Back (70 kg dummy) Similar to BS 5062:1:1985	700824H	Runner failed to arrest fall Dummy landed on feet/knees
E3	Sit Back (70 kg dummy)	700831H	Runner failed to arrest fall Dummy landed on head
E4	Sit Back (70 kg dummy)	700831H	Runner failed to arrest fall Dummy landed on head

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## ANNEX 2

Photographs of some of the tests

## Test E1: BS EN 353-1:2002



100kg steel mass used for test

## Test E2



Dummy position at start of test



Dummy position after test

## Test E4



**Dummy position at start of test**



**Dummy position after test**

## Link URLs in this page

1. [hse.gov.uk/press/2004/e04074.htm](http://www.hse.gov.uk/press/2004/e04074.htm)  
<http://www.hse.gov.uk/press/2004/e04074.htm>