

## 1.18 Safety Nets

## Safety Net Installation Information



### Applicable standards and regulations

Personal safety nets must meet the technical safety requirements of EN 1263-1. When erecting or installing safety nets, it is important to comply with EN 1263-2 and BGR 179.

**HUCK safety nets comply with EN 1263-1.**

#### ① Use

Safety nets are used to protect people who fall. Typically, they are used for building work at great heights, e.g. the construction of indoor facilities (see photo 1) and overhead cables or as a safety feature on scaffolding. They allow workers to move around freely.

#### ② Labelling

Every safety net must be labelled clearly in accordance with EN 1263-1 (see photo 2). The label must include the following information:

- Date of manufacture and name of manufacturer
- Net class in accordance with EN 1263-1
- Precise item designation (item number)
- Minimum energy absorption capacity or minimum tensile load of test mesh in accordance with ISO 1806
- Number of the inspection authority that certified the net.



Front of Label ②



Back of Label ②

#### ③ Annual inspection

On every HUCK safety net, there are lead seals with the same identity number on the safety net label and test mesh (see photo 3). This ensures that the safety net and test mesh belong together.

No more than 1 year after the date of manufacture, the first test mesh must be sent to an authorised tester (e.g. the manufacturer). This tester verifies whether the net still has the necessary strength/energy absorption capacity and produces documentary evidence of the results.

**No. 9700:** Inspection cost per test mesh per each

④ If the test results are positive, you will receive a new test badge bearing the identity number, which you then attach to the relevant net (see photo 4). The net can then be used for another year. Please also refer to the section on “when to discard nets”.

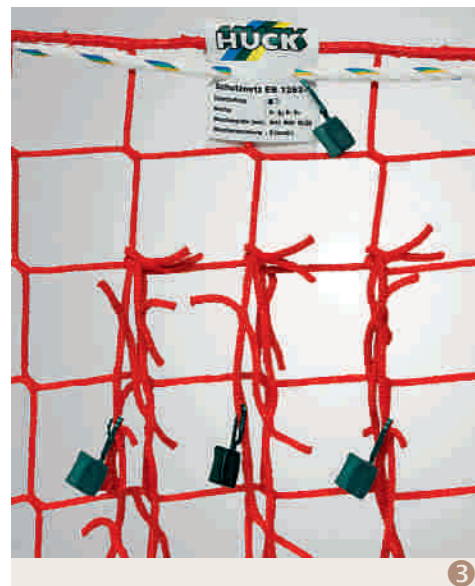
### Installing and dismantling personal safety nets

Nets may only be installed by workers who have been trained to FASET standards. Protection must be provided for those undertaking installation (safety harness, platform lift).

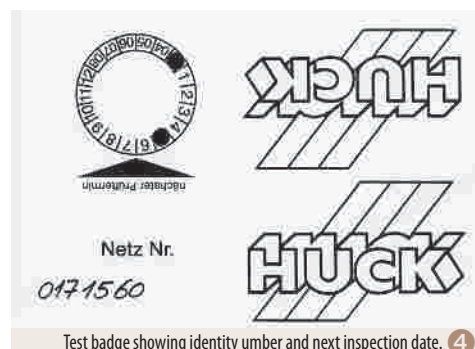
#### Anchoring strength requirements

Safety nets should be secured to constructions with appropriate load-bearing capacity. Each suspension point must be designed for a characteristic load of at least 6 kN.

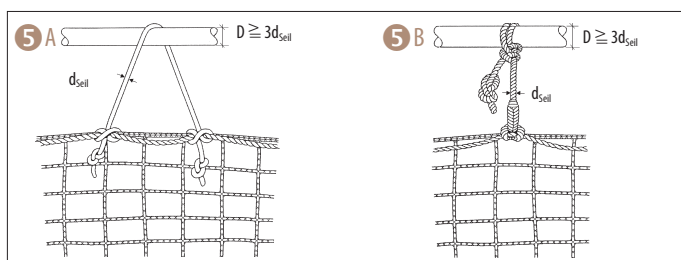
The distance between suspension points must not exceed 2.50 m.



③



Test badge showing identity number and next inspection date. ④



A): Double-strand suspension rope Z (breaking strength  $\geq 15$  kN)  
B): Single-strand suspension rope L (breaking strength  $\geq 30$  kN)

## 5 Suspension

Nets are suspended with ropes, snap hooks, straps or clips. If single-strand suspension ropes are used (**photo 5B**), the breaking strength of the rope must be at least 30 kN. If double-strand suspension is used (**photo 5A**), 15 kN ropes will suffice. Further safety information can be found in BGR 179.

## Dimensions/minimum size

The values given below assume a minimum size of 35 m<sup>2</sup>, whereby the shortest side must be at least 5 m long.

## 6 Height of fall/minimum net width

Safety nets should be suspended as close as possible to the underside of the working area. The height of the fall ( $H_{fz}$  = difference between the height of the surface from which the person falls and the point of impact on the safety net) must not exceed 6 m. Up to 2 m from the edge of the net ( $H_{f1}$ ), the maximum permissible height of fall is 3 m.

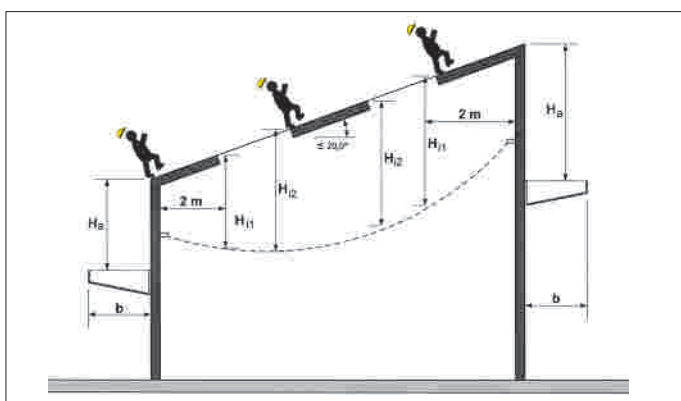
## 7 Space underneath the safety net

Safety nets should be suspended in such a way as to prevent those who fall from banging into solid objects. The size of the deformation depends on the length of the shortest edge of the net and the height of the fall (**see table 7 and photo 7**). In addition to the size of the deformation, a safety zone of  $S > 0$  must be observed for traffic, etc.

With a suitable certification from the manufacturer and a fall height of up to 2 m, nets can also be installed in a space of 3 – 5 m under the surface from which a fall could take place. We would rig the net ourselves, and this would be done by qualified specialists.

## Connecting safety nets

When connecting two or more safety nets, joining ropes should be used in such a way that the space between the join does not exceed 100 mm and the safety nets cannot move more than 100 mm away from each other. Safety nets can also be overlapped but the overlap must measure at least 2.00 m.



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## When to discard nets

Nets must be withdrawn from use in the following circumstances:

- Nets that have already been used to break a fall
- Nets that no longer meet minimum breaking strength requirements (please also refer to the section on “annual inspections”)
- Faulty nets (= very worn nets, defective mesh, damage to the rope edge or clips)

## Storage

Store in a dry place, never store near a source of heat and avoid contact with aggressive substances such as acids, bases, etc. Do not expose to UV radiation.

## Storage/warning

Store in a dry place. Never store near a heat source. Do not allow contact with abrasive substances such as acids or bases. Do not expose to direct UV radiation.

Nets and ropes should not be dragged over sharp edges.

Objects that fall into the net are to be removed immediately as they could injure people who fall onto them and impair the net’s load-bearing capacity.

## Repairs/defects

Damaged nets may only be repaired by suitably qualified staff at the manufacturer’s plant. If defects are found, protective nets may only continue to be used if a qualified person agrees or they must be correctly repaired. To use the nets in extreme temperatures below -20° C or above 50° C, please consult the manufacturer.

## Statement from manufacturer:

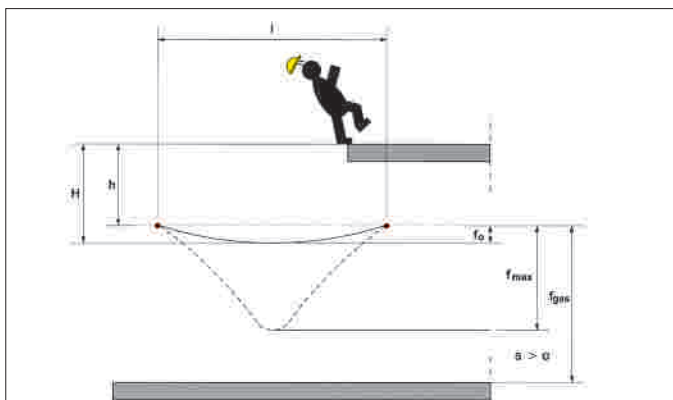
HUCK personal safety nets conform to DIN EN 1263-1.

| Height of fall h (m)                       | 1 m  | 2 m  | 3 m  | 4 m  | 5 m  | 6 m  |
|--|------|------|------|------|------|------|
| Deformation $f_{max}$ (m)<br>if $l = 5$ m  | 2.65 | 2.85 | 2.95 | 3.00 | 3.05 | 3.10 |
| Deformation $f_{max}$ (m)<br>if $l = 9$ m  | 3.35 | 3.55 | 3.75 | 3.85 | 3.95 | 4.00 |
| Deformation $f_{max}$ (m)<br>if $l = 12$ m | 4.20 | 4.40 | 4.55 | 4.75 | 4.90 | 5.00 |

**l = width of safety net (shortest side)**

The width of the net is directly related to the height of the fall:

|                        |       |       |       |        |
|------------------------|-------|-------|-------|--------|
| Height of fall $H_a$ : | < 1.0 | < 3.0 | < 6.0 | metres |
| Minimum net width b:   | > 2.0 | > 2.5 | > 3.0 | metres |



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