Objects hung from the hall ceiling

Technical guidelines – supplement

This bulletin governs the technical specifications and requirements on ceiling suspensions from the roof supporting structure of exhibition halls Hanover that are subject to declaration and approval. This information makes no claim to be exhaustive. Suspensions are largely possible on the provided technical fittings, but require the approval of Deutsche Messe. Ceiling suspensions are exclusively realised by the contracting partner of Deutsche Messe. For clarifying the feasibility and for ordering the required suspension points, please submit your planning documentation with the corresponding mandatory declarations (point loads, position, implements, etc.) in due time. In order to comply with the order deadlines, please note that it may take up to two working days to process the documents submitted to compile a quote if planning has been completed, and even longer if a static test is required. If an order is placed less than ten days before the date the exhibitor will start set-up, as defined in the order, a surcharge of 25 % will apply for all services (excluding statics costs, assembly time and waiting times).

The provided suspension points must not be altered or converted by the exhibitor or by the company commissioned by the exhibitor, and the weights applied to them must correspond to the weights declared and approved by a Deutsche Messe service partner. Any deviations must be communicated in writing and may only be implemented after approval by the service partner.

In case of questions, contact the service partner.

With regard to the application of crossbeams, mobile event technology, working, carrying and connecting equipment, lifting/hoisting equipment, rope end connections and the protective-equipotential bonding for the structure parts to be suspended, the pertinent safety regulations and accepted rules of technology - the following must be observed in particular:

- DGUV regulation 1,
- DGUV regulation 3,
- DGUV regulation 17,
- DGUV regulation 54,
- DGUV information 215-313,
- DGUV information 215-314,
- IGVW SQ P1 (crossbeams) and
- IGVW SQ P2 (electric chain hoists)

Ceiling suspensions

- In halls 2–7, 11–25 and 27 and in the pavilions, objects may be hung from the ceiling on request and subject to tests.
- For all loads that are to be applied, a request must be made and coordination is required with the contracting parties. Any costs for necessary static tests will be charged to the client.
- The provided steel ropes may only be strained vertically.
- It is generally not permitted to use objects hung from the hall ceiling to secure erected structures.
- Applying continuously dynamic loads is fundamentally not permitted.
- Suspended Structures may only be located within the boundaries of the booth.

Construction notes

- All required documents (inspection log books, documentary records, etc.) must be submitted on demand.
- Crossbeams and wooden structures must always be used in accordance with the specific type static (manufacturer's instructions) and the static stress analysis. Structural analysis may be demanded for structures and loads that are not defined in the manufacturer’s user information.
- Crossbeam components may only be installed expertly and not in worn state.
  The following information must be permanently attached:
  - Manufacturer
  - Year and month of construction
  - ID no.
  - Inherent weight in kg
- Floodlights, loudspeakers, monitors, etc. must be additionally fitted with a second, independent safety rope (secondary safeguard).
- Suspended objects are exclusively supplied with power from the booth connection. A separate power supply from the hall ceiling is not possible.
- An additional potential equalisation (earthing) must be provided for conductive structures with electrical equipment by the entity setting up the system.

Working materials

The manufacturers of working materials used as securing elements or rigging/load lifting equipment state their load-bearing capacity or minimum breaking force.

The following applies for suspending loads above persons:

- If the load-bearing capacity (WLL) is stated, this working material may only be stressed with at most half of this value.
- If the minimum breaking force is stated, this value must be divided by the required operational coefficient to obtain the maximum permissible load-bearing capacity.

The cord connection provided by the exhibition hall must be used.

Allowed

- Wire ropes consisting of round strand rope in accordance with DIN EN 12385-4
- Short-link round steel chains with approved accessories of Grade 8 in accordance with DIN 685 and DIN EN 818-4
- Rigging chain, single-strand, shortenable with multi-shortening claw in accordance with DIN EN 818-1
- Quick link in accordance with DIN 56927
- Shackle in accordance with DIN EN 13889
- Rope locks in accordance with DIN 15315 and DIN 4314
- Suspension links (O-ring) in accordance with DIN 5688-3
- Wire rope gliders (black) with BGV C1 certificate, six balls, steel metal parts and ring nut bonded with housing
- Textile round sling in accordance with DIN EN 1492-2 and using a sufficiently dimensioned metal safeguard
- Wire rope round sling with statement of load-bearing capacity, hose sleeve made of chemical fibres ("Steelflex")
- Aluminium or steel clamps approved for use on crossbeam systems

Lifting equipment

The use of lifting equipment must be stated in the order process and coordinated with the responsible servicepartner of Deutsche Messe.

Manual chain hoists

- Load movements with manual chain hoists above persons are prohibited.
- Manual chain hoists must be removed from the load after set-up and adjustment has been completed.
- At most **four** manual chain hoists may be used simultaneously with distributed loads and surface loads. However, this use is only permitted if the load between two manual chain hoists does not exceed half the permissible maximum load (as specified by the manufacturer of the manual chain hoists, or as arrived at by a statics calculation).
- The nominal load-bearing capacity stated by the manufacturer must not be exceeded at any time during application.
- The maximum permitted load for the applied span must be calculated and verified on request.
- All manual chain hoists must be staffed simultaneously when lifting loads; the load must be moved as synchronously as possible.
- A chain box that is approved for the chain hoist must be available.
- The load chain may not be used for rigging loads.

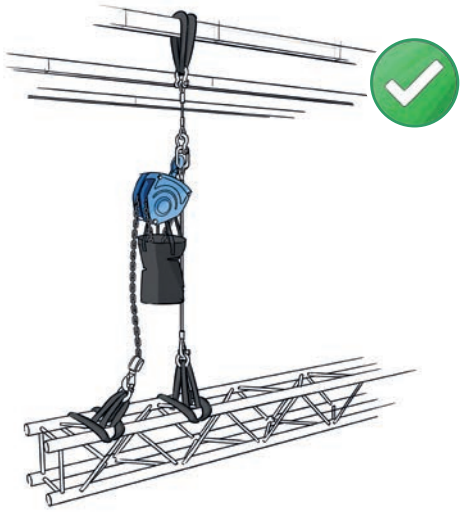
Electric chain hoists

- The nominal load-bearing capacity stated by the manufacturer must not be exceeded at any time during application.
- Electric chain hoists may only be used in tested state and marked with a corresponding test label.
- Electric chain hoists must be suspended so that the chain does not come into contact with anything and cannot retract diagonally.
- With climbing hoists, the chain must be able to safely retract into the chain box. Make sure that the chain can also safely extend and retract without attached load. Only qualified persons may operate electric chain hoists. The operator has to monitor the movement procedure of the electric chain hoists and the load.
- The **electric chain hoist D8** is not approved for suspending and moving loads above persons in accordance with DGUV regulation 54. A D8 chain hoist may only be used in event and production technology for assembly and disassembly and for lifting loads. After terminating the load movement, a secondary safeguard must be installed and the power supply to the chain hoist must be cut off. The applied secondary safeguards may not allow any drop.
- The **electric chain hoist D8 Plus** is not approved for moving loads above persons. Stationary loads may be suspended above persons without secondary safeguard. The power supply to the electric chain hoist must be cut off. The chain hoist D8 Plus must be visibly labelled as such.

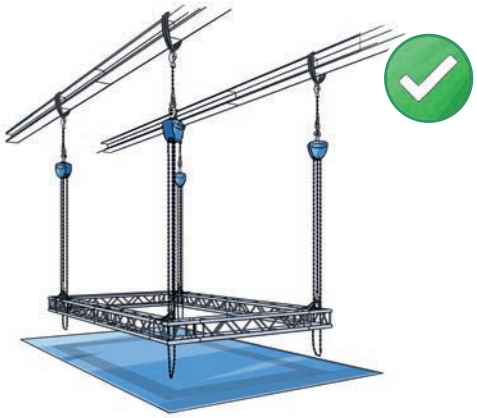
Technical information

Allowed

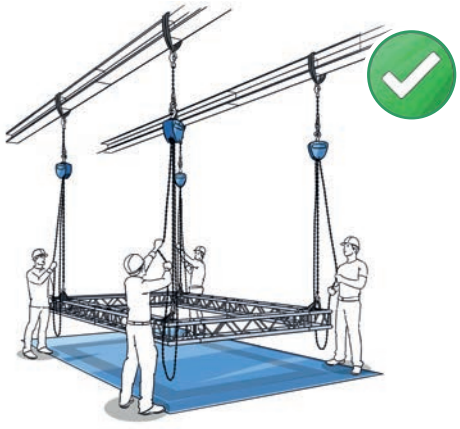
FINAL HEIGHT – manual chain hoist without load



Maximum four in linked system

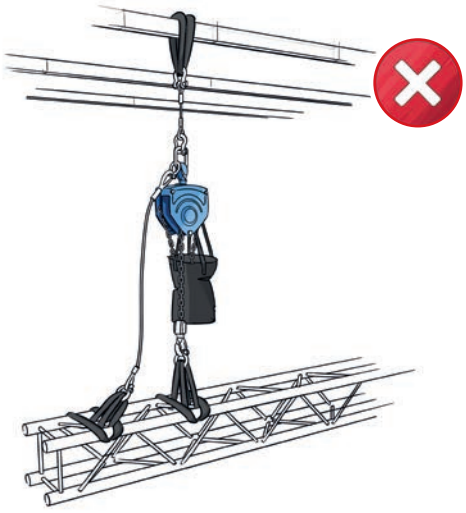


Synchronicity manual chain hoist

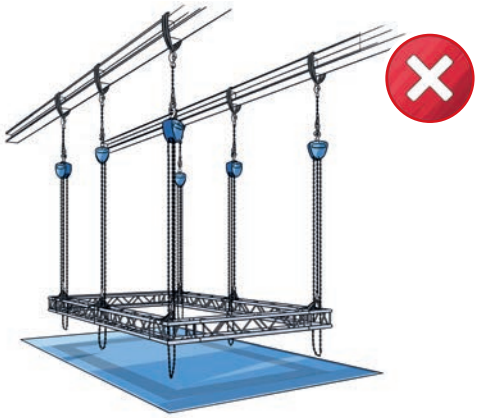


Not allowed

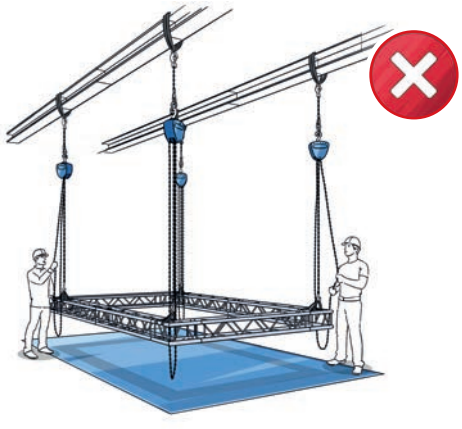
FINAL HEIGHT – load in manual chain hoist



More than four in linked system

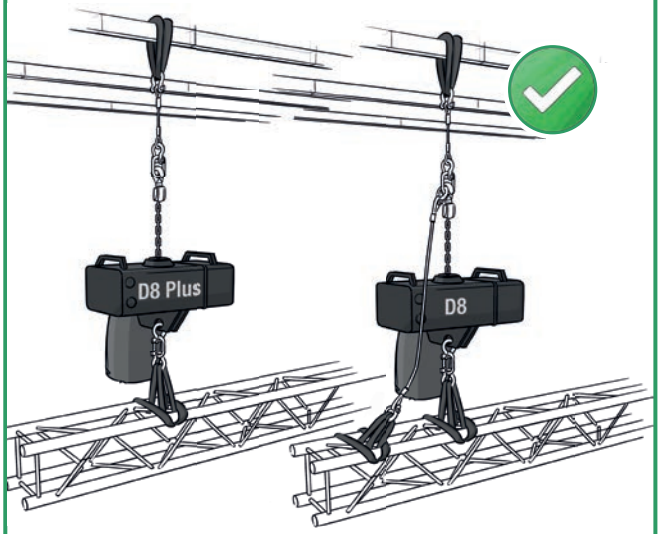


Asynchronicity manual chain hoist

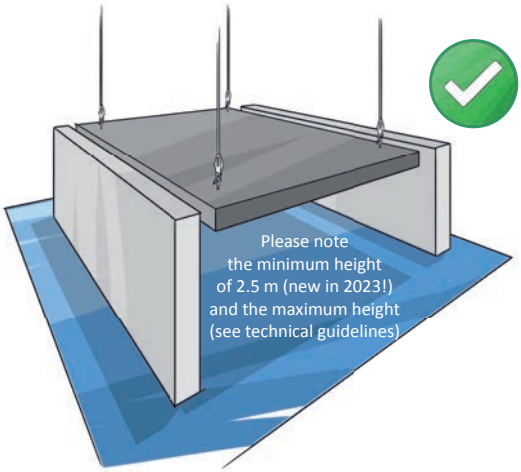


Allowed

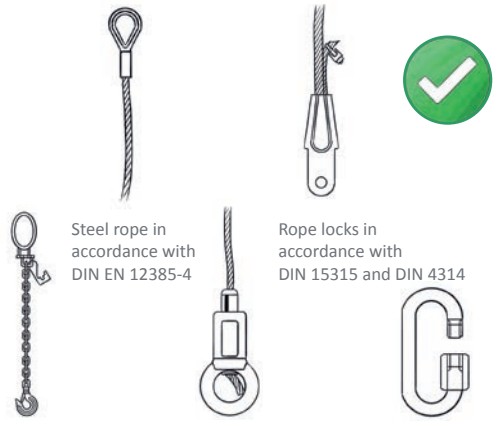
Safety electrical chain hoist (D8 Plus and D8)



Uncoupled suspended structure



Working materials



Steel rope in accordance with DIN EN 12385-4

Rope locks in accordance with DIN 15315 and DIN 4314

Rigging chain; shortenable – with statement of load-bearing capacity (WLL) in accordance with DIN EN 818-1

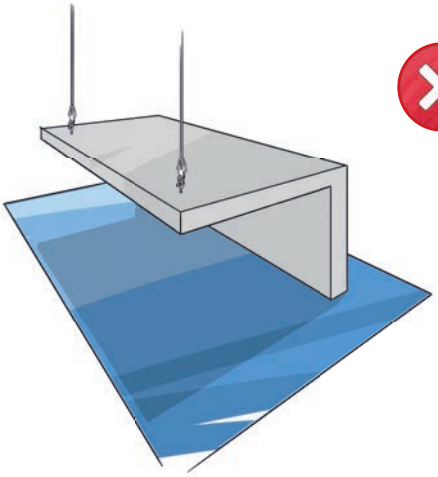
Wire rope holder with 6 balls and "DGUV Test" certificate, bonded, black

Quick link with cap nut and WLL in accordance with DIN 56927

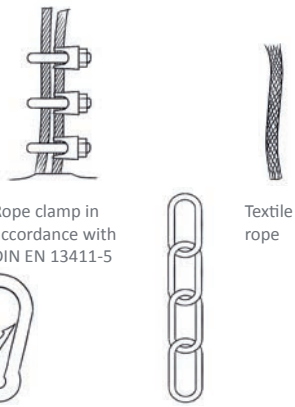
Not allowed

Unsecured electrical chain hoist (D8)

Suspended upright prohibited



Unauthorized working materials



Rope clamp in accordance with DIN EN 13411-5

Textile rope

Carabiner screwed/not screwed

Long-link chains