

Technical bulletin – rigging

This bulletin governs the technical specifications and requirements on ceiling suspensions from the roof supporting structure of exhibition halls Berlin that are subject to declaration and approval. Suspensions are largely possible on the provided technical fittings, but require the approval of Messe Berlin GmbH. Ceiling suspensions are exclusively realised by the contracting partner of Messe Berlin. 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, meaning at latest 2 weeks before the first official mounting date or before the first mounting date in the case of approved early installations. Orders which are placed within the last 4 weeks prior to first day of the official construction are subject to a 20 % surcharge. For orders received within the last two weeks prior to the first day of the official construction (or prior to the first set-up day if the construction period starts earlier) are subject to a late charge of 30 % on listed prices.

Orders will only be considered as complete when they are accompanied by a sketch including measurements, weights and installation heights.

The provided suspension points may not be altered or converted by the contracted company, and may only be stressed with the weights previously registered with and approved by the service partner of Messe Berlin beforehand. Any deviations must be communicated in writing and may only be implemented after approval by the service partner. To ensure the construction quality and to check the previously communicated load details, Messe Berlin retains the right to check the provided loads with suitable load measurement systems.

In case of questions, contact the service partner.

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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:

- DGV regulation 1,
- DGV regulation 3,
- DGV regulation 17,

- DGV regulation 54,
- DGV information 215-313,
- DGV information 215-314,
- IGW SQ P1 (crossbeams) and
- IGW SQ P2 (electric chain hoists)

Ceiling suspensions

- The permissible maximum load on all ceiling suspensions provided in the halls is 200 kg (rated load).

Exception: Jordal® channels in halls 14.1 and 15.1.

Their maximum load capacity is only 35 kg each.

- Heavier loads require separate enquiry and coordination as well as static approval by Messe Berlin. To monitor the load details and to protect the roof structure, it may be necessary to permanently monitor these suspension points with suitable load measurement systems in case of heavier point loads. Any costs for a required static evaluation as well as for the installation of the load measurement system and permanent load monitoring will be charged to the client.
- The provided steel ropes must only be strained vertically.
- Structures to be suspended may only be located within the boundaries of the booth.

Construction notes

- Suspensions that are used to secure erected structures (rigid and/or force-locked connections to hall floor) are generally not permitted.
- Crossbeams and wooden structures must always be used in accordance with the specific type static (manufacturer's instructions) and the static stress analysis. Static analyses are required for structures and loads/strains that are not defined in the manufacturer's instructions.
- 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.
- Crossbeams with lighting installations must be fitted with an additional protective-equipotential bonding.

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.

Working materials for which the load-bearing capacity values for suspending loads above persons have been verified may be used in accordance with the manufacturer's instructions.

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")
Utilization is only permitted if a confirmation of the correct test in line with the valid regulations and manufacturer's information is presented to the service partner.
- 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 contracting company of Messe Berlin.

Manual chain hoists

- Load movements with manual chain hoists above persons are strictly prohibited.
- Due to the high asynchronism only point loads with a maximum weight of 50 kg may be moved manually.

- Manual chain hoists must be moved out of the load after installation and set-up work.
- At most **four** manual chain hoists may be used simultaneously with distributed loads and surface loads. The use of four manual chain hoists is only permitted if the strain on the system between two manual chain hoists amounts to at most half of the permitted maximum strain specified by the manufacturer or a static analysis.
- 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.

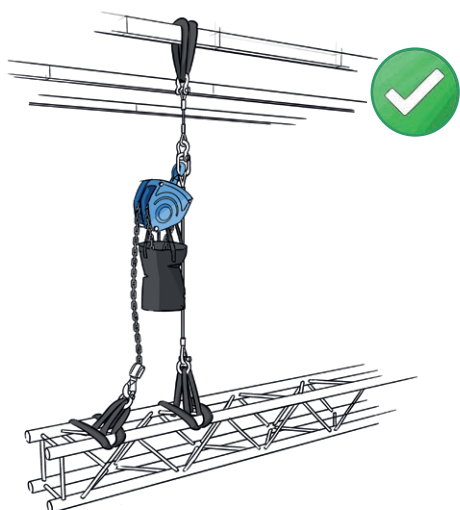
Electric chain hoists

- 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.

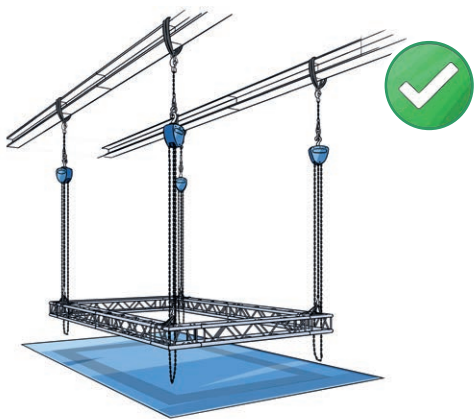
Technical information

Allowed

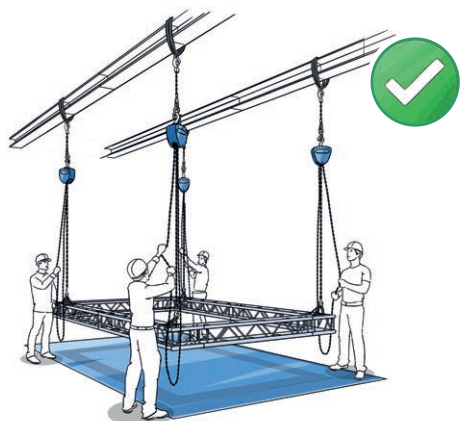
FINAL HEIGHT – manual chain hoist without load



Maximum four in linked system

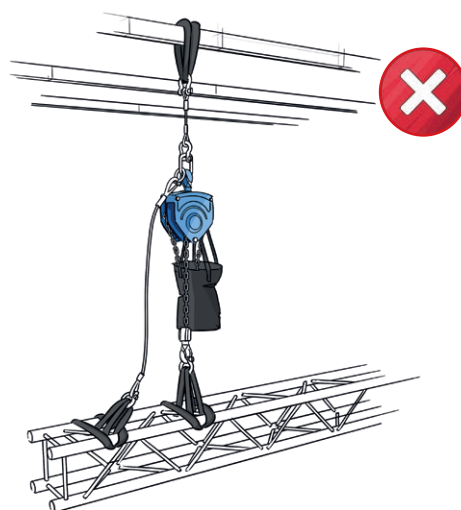


Synchronicity manual chain hoist

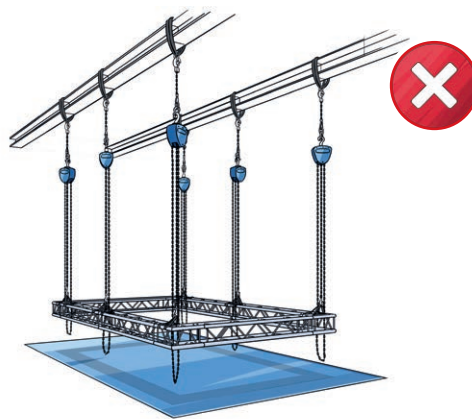


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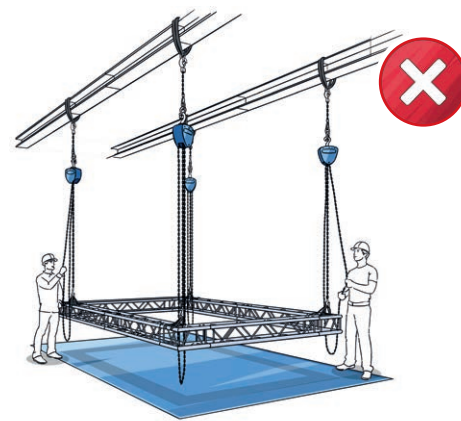
FINAL HEIGHT – load in manual chain hoist



More than four in linked system

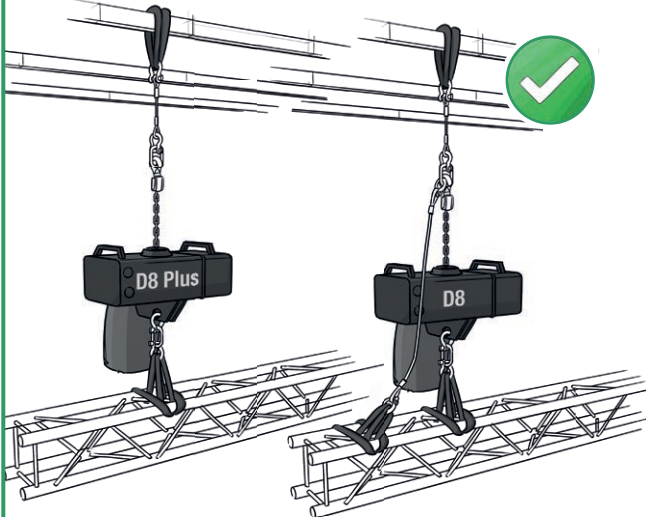


Asynchronicity manual chain hoist

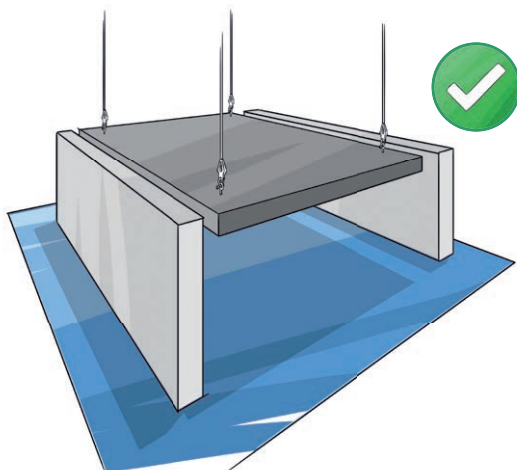


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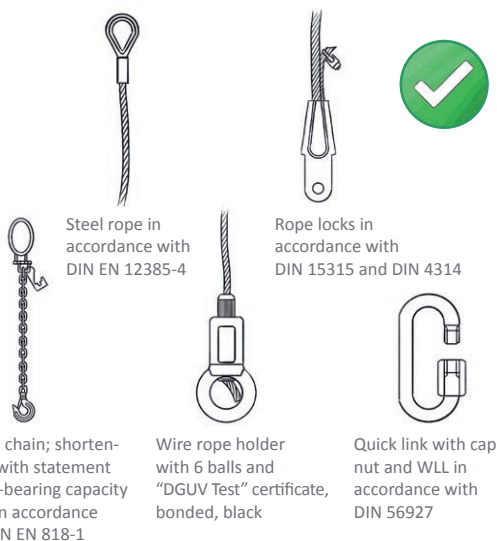
Safety electrical chain hoist (D8 Plus and D8)



Uncoupled suspended structure

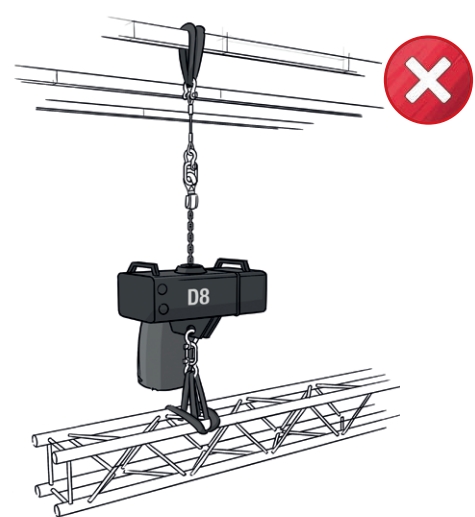


Working materials

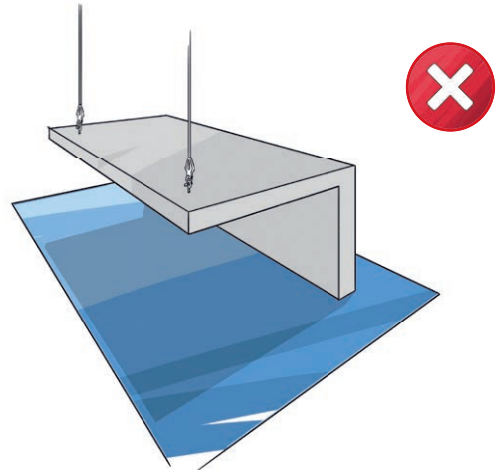


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Unsecured electrical chain hoist (D8)



Without approval by Messe Berlin



Unauthorized working materials

