

- 11.1 Regulations
The Employer's Liability Insurance Association regulation DGUV 52 / 53 (previously BGV D6 / GUV-V D6) applies.
- 11.2 Personnel requirements
The ASP may only be operated by authorised persons.
Each operator must have at least read and understood this documentation.
- 11.3 Operational and visual check prior to each use
The ASP must be subjected to a visual inspection and functional check prior to each use. Especially load-bearing parts and weld seams must be checked for damage. Do not operate in case of fault. Any fault must be eliminated by a qualified expert.
- 11.4 Stability
Before assembling, please check that the ground (on which the crane is to stand) is able to withstand the loads to be carried.
- 11.5 Unauthorised Modifications
Unauthorised modifications of the ASP or self-constructed additional equipment are prohibited.

12 List of hazards as per DIN EN ISO 12100

Pos.	Hazards	Body parts	Solution / Warning
1	Mechanical hazards		
1	- Location - Mass and stability - Mass and acceleration - Insufficient mechanical stability	Persons Operator and third persons Operator and third persons Operator and third persons	Warning label on the crane Briefing/instruction Briefing/instruction Comply with user and maintenance manuals
1.1	Contusion	By load/ operator and third persons	Adhere to safety clearances Observe load oscillation and stopping distances
	Contusion	Operator	Keep safety clearances
	Contusion	Limit stop/Operator	Keep safety clearances
	Contusion	By load on environment / operator/foot	Adhere to safety clearances

Pos.	Hazards	Body parts	Solution / Warning
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1.2	Shearing	Trolley / path / wall / support / operator, hand	Adhere to safety clearances/ observe load oscillation/ensure means of escape and retreat
1.6	Shock	Load oscillation/operator	Adhere to safety clearances
1.10	Ejection of parts	Load/Operator	Adhere to safety clearances
1.11	Stability	Ground, floor/ operator	Leave danger zone If possible, lower load immediately, stop the crane Place crane and load only on sufficiently load-bearing ground
1.12	Slipping, stumbling, falling	Insufficient stability/ operator	Keep gangways free, ensure sufficient stability
2	Electrical hazards		
2.1	Electrical contact	Damaged insulation of elec. conductors, supply cables/operator	Halt operation, cut off power supply, replace elec. conductors Move supply cables securely. Operator contact prohibited
2.4	External effect	E.g. on supply cables by other means of transportation/ operator and third persons	Observe crane, load and environment closely
3	Temperature-related hazards		
3.1	Burns	Elec. operated crane/operator	Observe regulations in particular in potentially explosive area
7	Hazards caused by materials and substances		
7	Materials (oils, greases, lubricants)	Swivel drive, hoist Operator/third persons/environment	Refer to special user manual for hoists and drives
7.2	Fire and explosion	Elec. operated crane/ operator and third persons	Not suitable for potentially explosive areas
8	Hazards caused by neglecting ergonomic principles		
8.4	Inappropriate localised lighting	Operator/third persons	Ensure sufficient visibility and light
8.6	Human error	Operator	Training

Pos.	Hazards	Body parts	Solution / Warning
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10	Hazards caused by unexpected starting, unexpected racing/overrun		
10+ 10.3	Disruption of energy supply Malfunction of control system	Operator/third persons	Activate emergency stop and initiate troubleshooting measures by a qualified expert
10.4	Incorrect assembly	Operator	Halt operation, troubleshoot
10.5	Racing, unexpected loss of machine stability	Operator	Lower load, secure crane
11	No means to take the machine out of operation under optimal conditions		
11	Failure/wrong arrangement of protective measures	Operator / third persons	Take all necessary measures to reduce the risk potential
11.1+ 11.2	Protection devices	Operator / third persons	Check protection devices
11.3	Starting and braking systems	Wheel + steering stop/Operator	Before starting, press wheel + steering stop
	Starting and braking systems	Control panel/Operator	In case of faulty control button activate emergency stop. Replace parts
11.4+ 11.5	Safety symbols/signals Information device and alarm.	Main switch, emergency stop/operator	Before starting operation, check functionality
11.6	Energy supply cut-off device	Main switch, emergency stop/operator	Before starting operation check functionality
11.7	Emergency measures	Working area/Operator	Activate emergency stop if this reduces the danger
11.9	Equipment for safe adjustment and/or maintenance	Operator	Before performing any work on the crane lock the main switch to the "OFF" position.

13 Hazard areas:

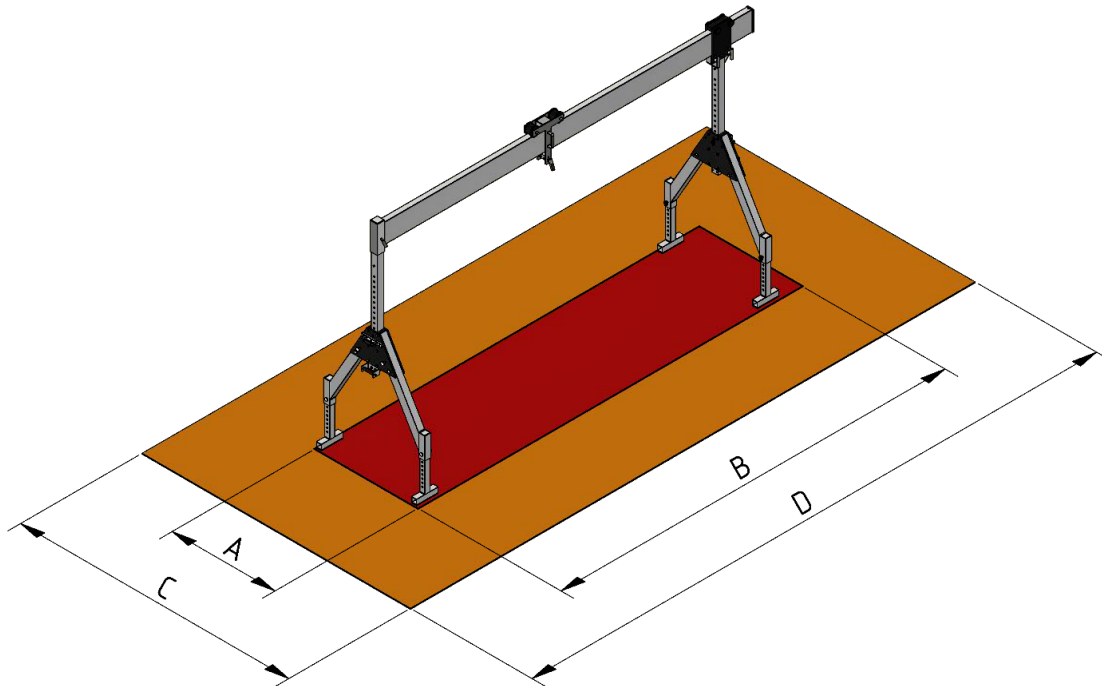


Fig. Crane foldable model Mini 4m carrier



Red area – Risk of death!

In this area there is risk of death! No access to this area as this is where loads are lifted and moved.



Orange area – Danger!

In this area there is risk of injury should the crane tip over. For *dimensions please refer to the following table.*

	A	B	C	D
Mini	1200	2217 - 8097 (carrier length)	4970	4217 - 10217 (carrier length + 1 m on each side)
Standard	1720		6770	
Maxi	2295		8770	

14 Safety instructions

14.1 Warnings and Symbols

The following designations and symbols are employed in the user manual for particularly important information:

Note Special information on economic use of the equipment/machine

Caution Special instructions, dos and don'ts to avoid damage

Danger Information, dos and don'ts for prevention of extensive property damage and personal injuries

14.2 Non-observance of safety instructions

Failure to observe the safety instructions can lead to severe or even deadly injuries. Always observe the following safety instructions:

- Observe and follow this user manual.
- Always wear the required personnel protection equipment, see Personnel protection equipment - PPE.
- Operate the crane only, when the aluminium carrier is exactly aligned in horizontal and vertical direction.
- Do not operate the crane on slippery surfaces like for example on frozen surfaces.
- Secure the trolley against unnoticed movement with or without load due to an inclined position.
- Do not operate the crane in potentially explosive environments.
- Do not operate the crane if it is obviously damaged.
- Do not operate the crane if unauthorised persons are staying in the hazard area.
- Do not step or reach out under loads, which are suspended on the crane.
- Use only approved ladders or similar equipment to work on the crane. Never use components of the crane, e.g. side panels, to climb on to the crane.
- Always observe the generally applicable safety standards.

14.3 Personnel protection equipment – PPE

The personnel protection equipment depends on the loads to be moved. It must be provided by the operating company and must be worn by the operator. The personnel protection equipment may include:

- **Safety helmet**
- **Safety gloves**
- **Safety shoes**

All parts of the personnel protection equipment must comply with all legal directives. The personnel protection equipment must be appropriate for the loads to be moved, according to the operating company's guidelines.

14.4 Fundamentals, intended use

14.4.1 The machine/equipment has been built using cutting-edge technology and according to approved safety regulations. However, operating the machine can present risk to life and limb of the operator or third persons or damage to the machine or other material assets.

14.4.2 Use the machine/equipment only in perfect technical condition and according to intended use, with an awareness of safety and risk and taking the user manual into account! In particular any faults arising that may impair safety must be repaired immediately!

14.4.3 The machine/equipment should only be used for lifting and moving loads. Any other use or any use beyond that, e.g. pulling loads, is