

Translation of the original documentation

in accordance with EU Machinery Directive 2006/42/EC

Product: **Stone block lifting device (SBL)**
Model: **Standard – Maxi**
Article no.: **510000 – 520000**
Language: English
As of: 01/01/2018
Revision index: 00



Serial number

Enter the serial number of the device here!

Please read these instructions carefully before use and retain them for further application!

The documentation should stay with the product when transferred to third parties.

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Trademarks of third parties

In this document, trademarks of third parties may be referred to without special identification.

The article number, serial number and load capacity can be found on the identification label.

This is affixed to the forked frame!

The illustrations and drawings in this document may vary slightly from the delivered product.

Please note that the load capacity must not be exceeded.

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1. Area of application

The stone block lifting device (SBL) is used to extract and lower stone blocks sawn out of a vertical concrete wall. As regards key figures please refer to the technical data.

2. Equipment-specific application guidelines

- 2.1 The stone block lifting device (SBL) must be aligned horizontally and vertically.
- 2.2 Before the SBL is used under load, all parts must be connected and (where necessary) secured.
- 2.3 Loads which do not act in the plane should be avoided (diagonal pulls).
- 2.4 The height H of the stone block must be in favourable proportion to its thickness and width so that the stone block remains stable.
Max. stone block height = 4 * wall thickness.
- 2.5 The stone block that is to be unloaded must always be positioned at the centre of the pallet.
- 2.6 The SBL must not be used on icy or slippery ground.
- 2.7 The operating temperature range is from –20 C° to +60 C°.

3. Article description

Stone block lifting device (SBL)

Model: Standard – Maxi

Article no.: 510000 – 520000

Load capacity:

Standard model: 1000 kg

Maxi model: 700 kg

Consisting of:

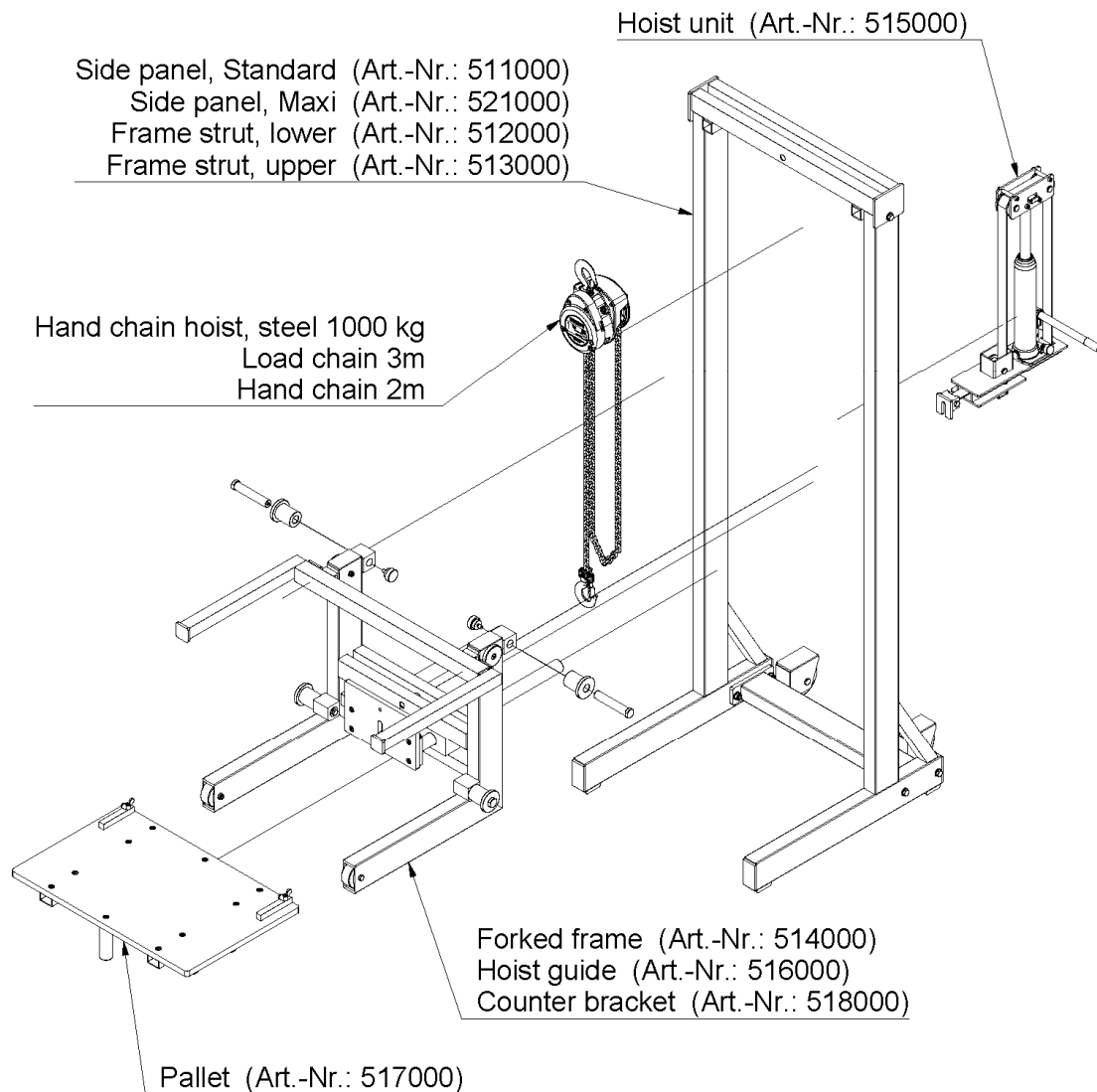


Fig. Stone block lifting device, Standard model - dismantled for transportation

4. Technical Data

The stone block lifting device (SBL) is a highly mobile, flexible and free-standing structure that can be adjusted in both height and length.

The stone block lifting device (SBL) is easily assembled and dismantled in relatively few steps.

No structural changes are necessary (e.g. no dowel fixtures or similar measures).

Customs tariff number (statistic goods number): 84261900, Weight: "see below"

Serial number: *The serial number can be found on the identification label affixed to the device.*

Device: Stone block lifting device (SBL)

Model:Standard

Article no.: 510000

Total height: 2285 mm

Load capacity: max. 1000 kg

Max. height up to underside of stone block: 166 cm

Dead load: 110 kg

Device: Stone block lifting device (SBL)

Model:Maxi

Article no.: 520000

Total height: 2685 mm

Load capacity: max. 700 kg

Max. height up to underside of stone block: 206 cm

Dead load: 115 kg

5. Diagram

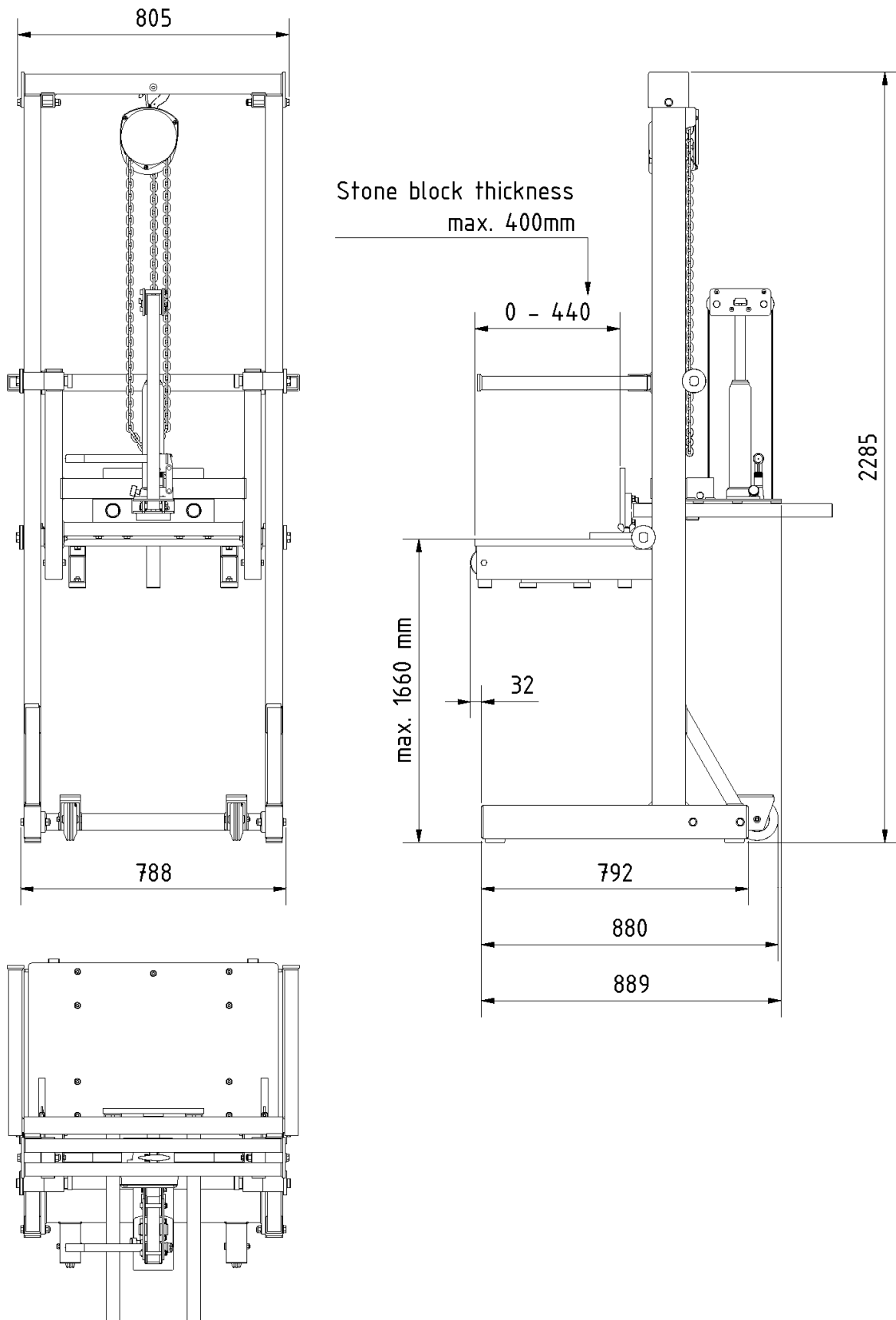


Fig. Stone block lifting device, Standard model

5. Diagram

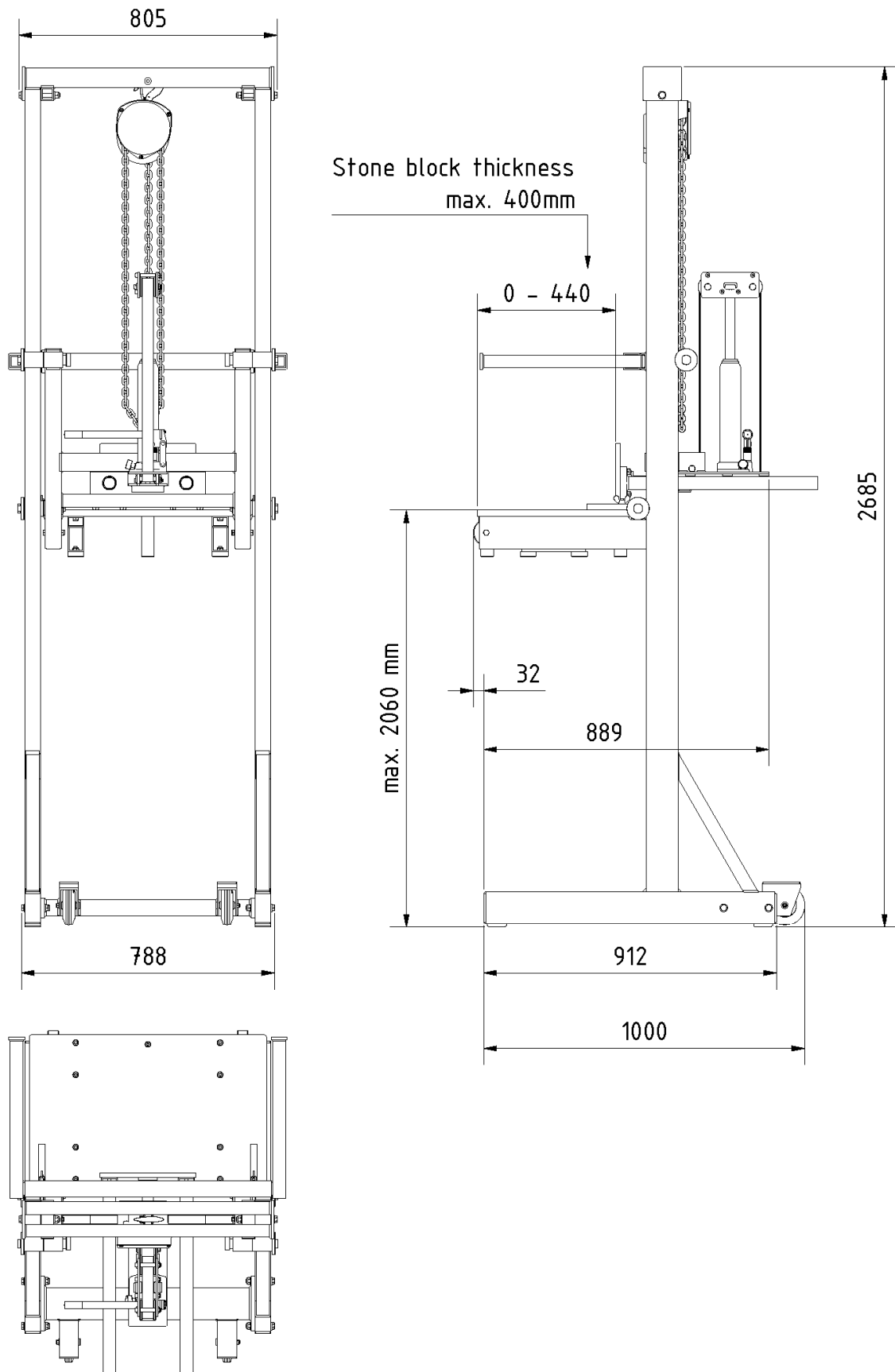


Fig. Stone block lifting device, Maxi model

6. Exploded diagram

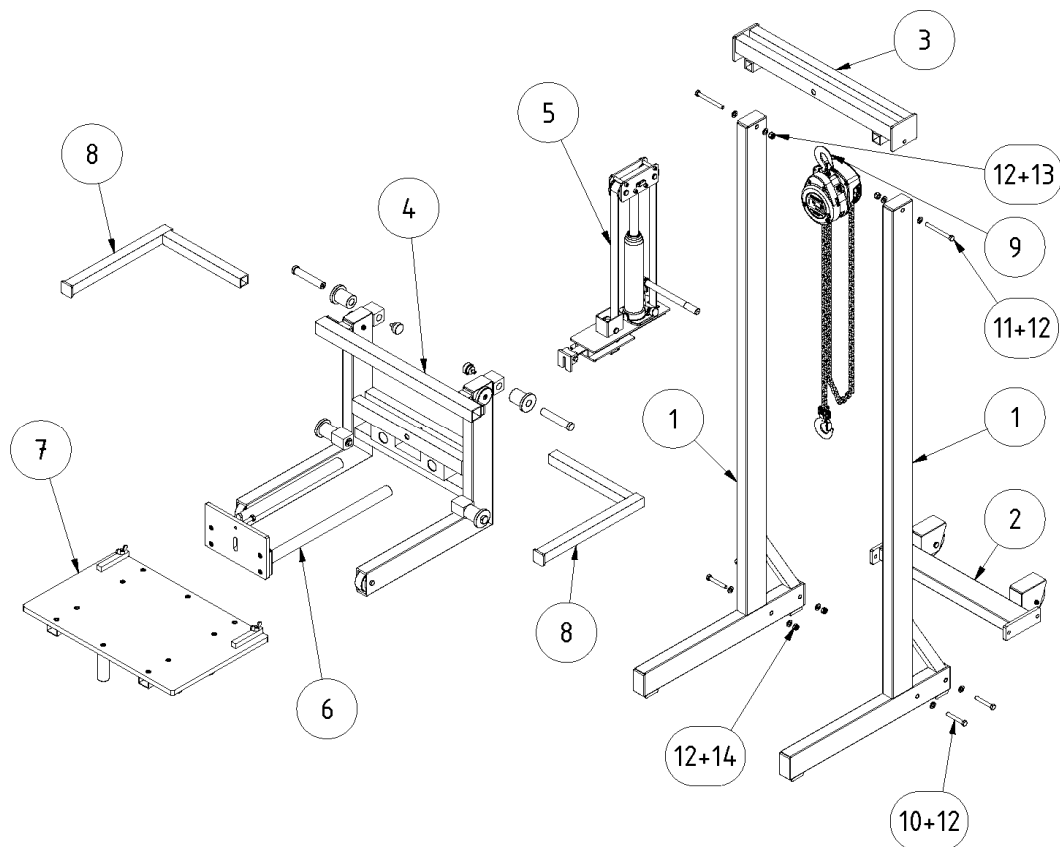
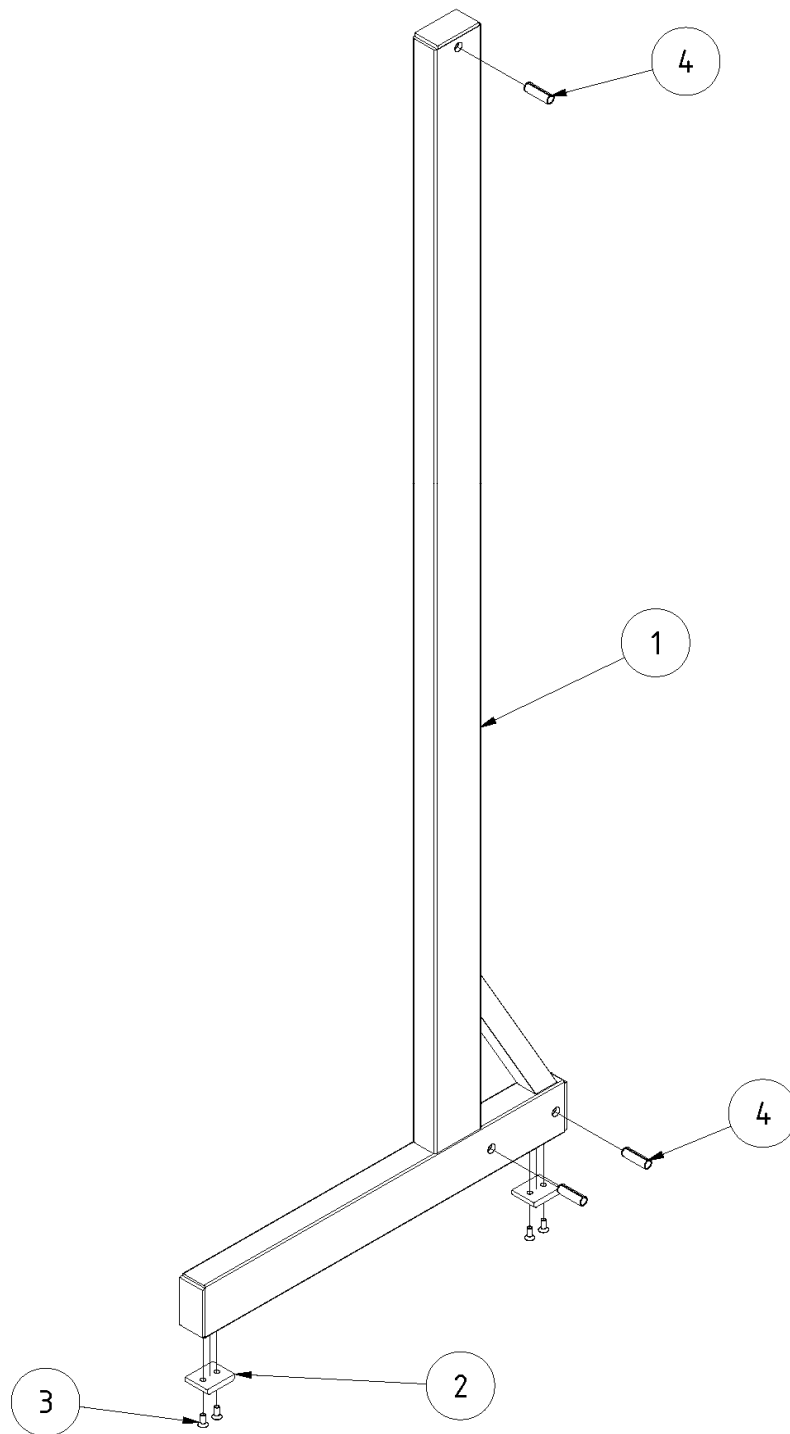


Fig. Stone block lifting device, Standard model

6. List of spare parts

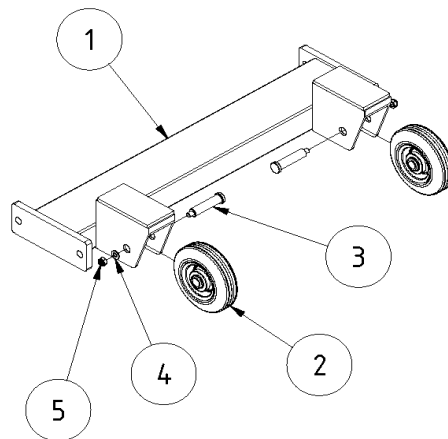
Pos.	Article no.:	Description	Quantity
1	511010	Side panel, Standard	2
1	521010	Side panel, Maxi	2
2	512010	Frame strut, lower	1
3	513010	Frame strut, upper	1
4	514010	Forked frame	1
5	515010	Hoist unit	1
6	516010	Hoist guide	1
7	517010	Pallet	1
8	518010	Counter bracket	2
9		Hand chain hoist 1000kg - Lk2m/Hk1m	1
10		Hexagon bolt, DIN 931 - M12x80	4
11		Hexagon bolt, DIN 931 - M12x120	4
12		Plate, DIN 125 A - D13	16
13		Hexagon nut with clamping part, DIN 982 - M12	4
14		Hexagon nut with clamping part, DIN 985 - M12	4

6. Side panel Standard / Maxi (article no.: 511010 / 521010)



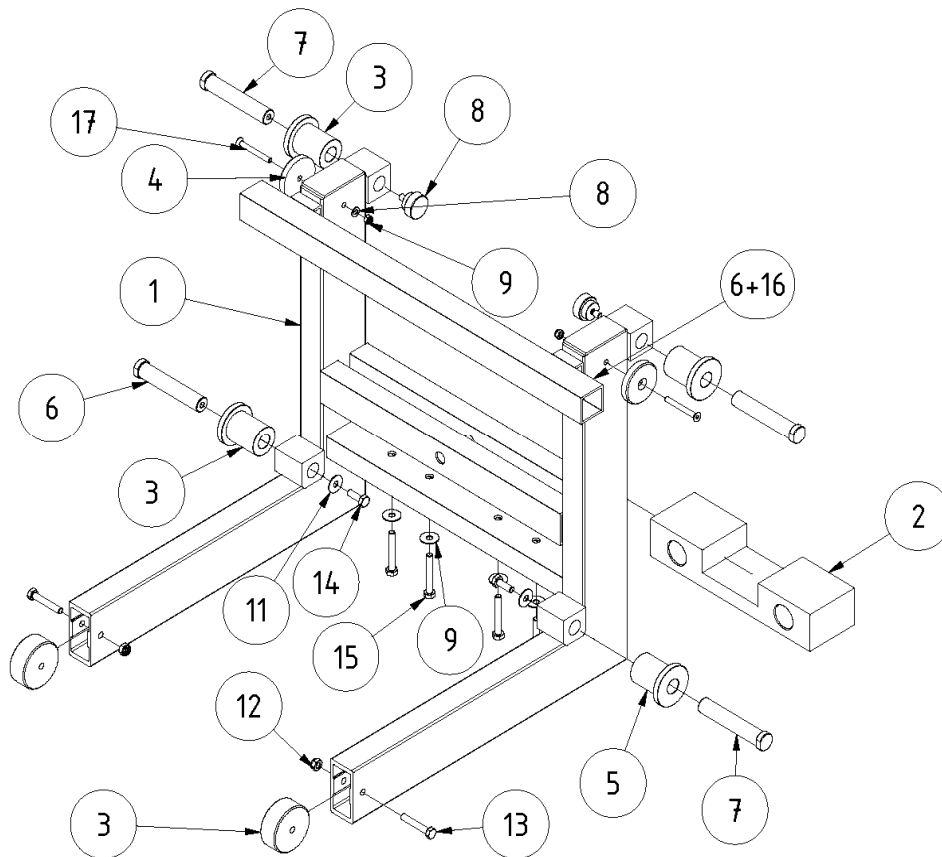
Pos.	Article no.:	Description	Quantity
1	511011	Side panel, Standard, welded	1
2	521011	Side panel, Maxi, welded	1
3	511016	Slip disc	2
4		Clamp sleeve, DIN 7346 16x50	3
5		Countersunk screw, ISO 10642 - M8x20	4

6. Frame strut, lower (article no.: 512010)



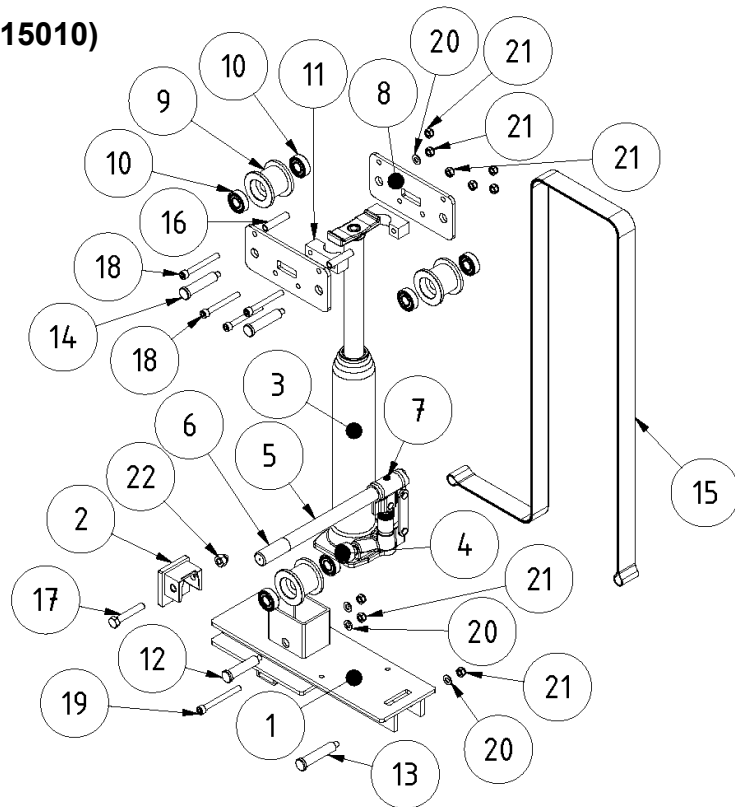
Pos.	Article no.:	Description	Quantity
1	512011	Frame strut, lower, welded	1
2	515023	Plug-in bolt for wheel and belt deflection	2
3		Rubber wheel on steel rim	2
4		Washer, DIN 125 A - D8.4	2
5		Hexagon nut with clamping part, DIN 985 - M8	2

6. Forked frame (Art.-Nr.: 514010)



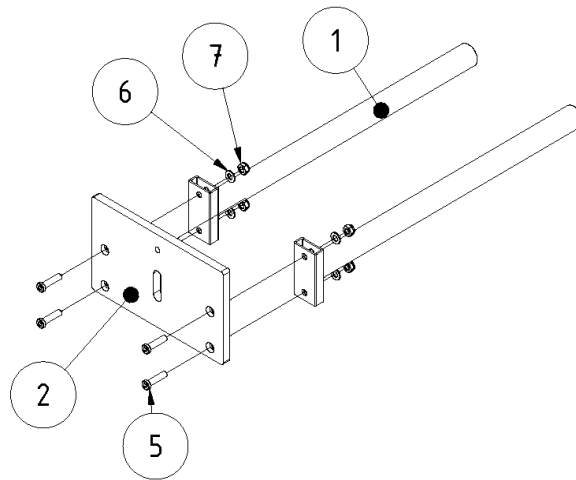
Pos.	Article no.:	Description	Quantity
1	514011	Forked frame, welded	1
2	514023	Guide bearing	1
3	514024	Backup roll	2
4	514025	Guide plate	2
5	514026	Guide roller	2
6	514027	Arrestor	2
7	514028	Bolt	4
8	514029	Knurled screw	2
9		Wing plate, DIN 522 10.5x30x1.5-C	6
10		Washer, DIN 125 A - D8.4	2
11		Hexagon nut with clamping part, DIN 985 - M8	2
12		Hexagon nut with clamping part, DIN 985 - M10	2
13		Hexagon bolt, DIN 931 - M10x60	2
14		Hexagon bolt, DIN 933 - M10x30	2
15		Hexagon bolt, DIN 933 - M10x70	4
16		Countersunk screw, ISO 10642 - M6x16	4
17		Countersunk screw, ISO 10642 - M8x70	2

6. Hoist unit (article no.: 515010)



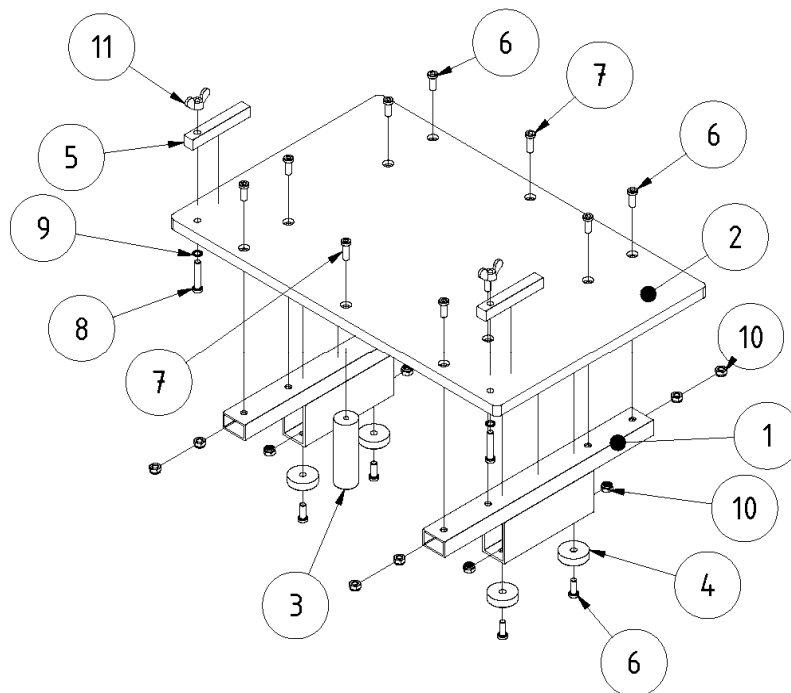
Pos.	Article no.:	Description	Quantity
1	515011	Hoist unit, welded	1
2	515017	Hoist member, welded	1
3		Hydraulic carriage jack - BLK 4-370	1
4	515028	Cylinder bleed screw	1
5	515027	Pump lever	1
6	195910	Cap (d20, l60)	1
7		Blind rivet 5x12	1
8	515020	Top plate	2
9	515021	Belt roll	3
10		Grooved ball bearing - 6202-2RS	6
11	515022	Piston rod fastening	2
12	515023	Plug-in bolt for wheel and belt deflection (l=60 mm)	1
13	515024	Plug-in bolt for upper belt roll (l=62 mm)	1
14	515025	Plug-in bolt for belt mount (l=67 mm)	2
15	515026	Hoist strap (b=35mm / Ø3360mm)	1
16	515027	Belt protector	2
17		Hexagon bolt, DIN 931 - M10x75 - shortened	1
18		Cylinder screw, ISO 4762 - M8x70	4
19		Cylinder screw, ISO 4762 - M8x80	1
20		Washer, DIN 125 A - D8.4	5
21		Hexagon nut with clamping part, DIN 985 - M8	9
22		Cap nut, self-locking, DIN 986 - M10	1

6. Hoist guide (article no.: 516010)



Pos.	Article no.:	Description	Quantity
1	516011	Hoist rod, welded	2
2	516014	Screw-on plate	1
3	516015	Handle	1
4		Hexagon bolt, DIN 933 - M12x80	1
5		Cylinder screw, DIN 7984 - M10x40	4
6		Washer, DIN 125 A - D10.5	4
7		Hexagon nut with clamping part, DIN 985 - M10	4

6. Palett (article no.: 517010)



Pos.	Article no.:	Description	Quantity
1	517011	Pallet base, welded	2
2	517014	Baseplate	1
3	517015	Pallet support	2
4	517016	Pallet base	4
5	517017	Pallet arrestor	2
6		Cylinder screw, DIN 7984 - M10x25	12
7		Cylinder screw, DIN 7984 - M10x30	2
8		Cylinder screw, DIN 7984 - M10x50	2
9		Fan washer, DIN 6798 - M10.5	2
10		Wing nut, DIN 315 - M10	12
11		Hexagon nut with clamping part, DIN 985 - M10	2

7. Assembling the stone block lifting device

7.1 If the stone block lifting device has been dismantled (into its individual parts), please reassemble the components as shown in Fig. 1.

Caution: Please ensure all screw fittings are fastened / tightened.
Tightening torque max. 90 Nm

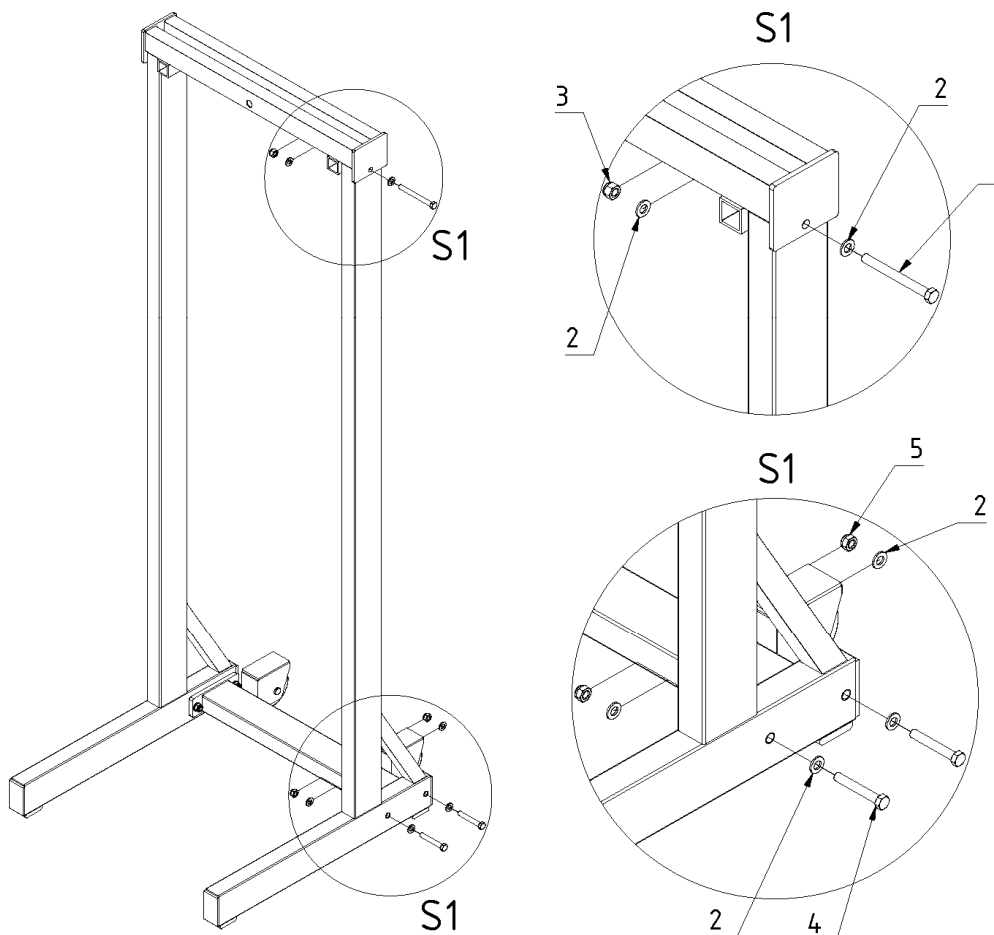


Fig. 1

Pos.	Component	Pc.
1	Hexagon bolt, DIN 931 - M12x120	2
2	Plate, DIN 125 A - D13	12
3	Hexagon nut with clamping part, DIN 982 - M12	2
4	Hexagon bolt, DIN 931 - M12x80	4
5	Hexagon nut with clamping part, DIN 985 - M12	4

7.2 Next, place the chain hoist into the mounting bolt as shown in Fig. 2.

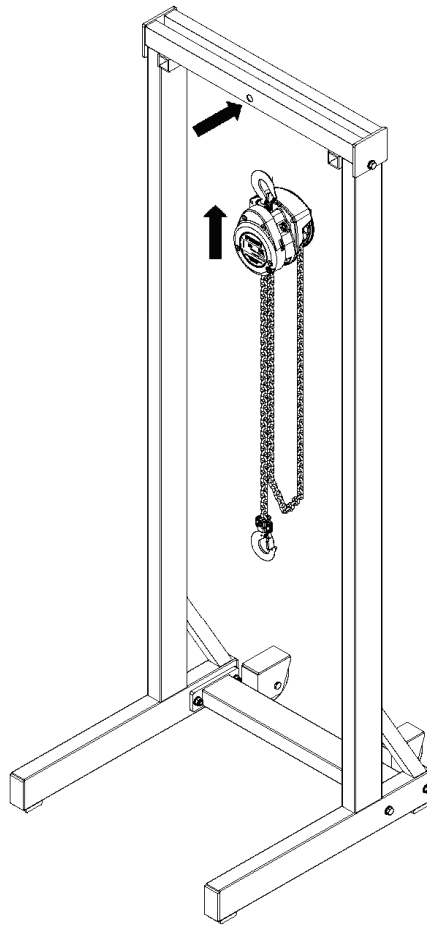


Fig. 2

7.3 Loosen the knurled screws and remove the bolts and guide rollers as shown in Fig. 3.

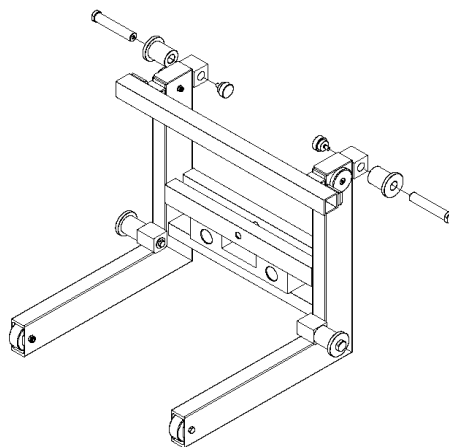


Fig. 3

- 7.4 Place the forked frame into the frame of the stone block lifting device as shown in Fig. 4.
Replace the guide rollers using the bolts as in step 7.3 (removed) and refasten the knurled screw.

Caution: *The knurled screw must be fastened tightly to avoid it inadvertently coming loose during operation.*

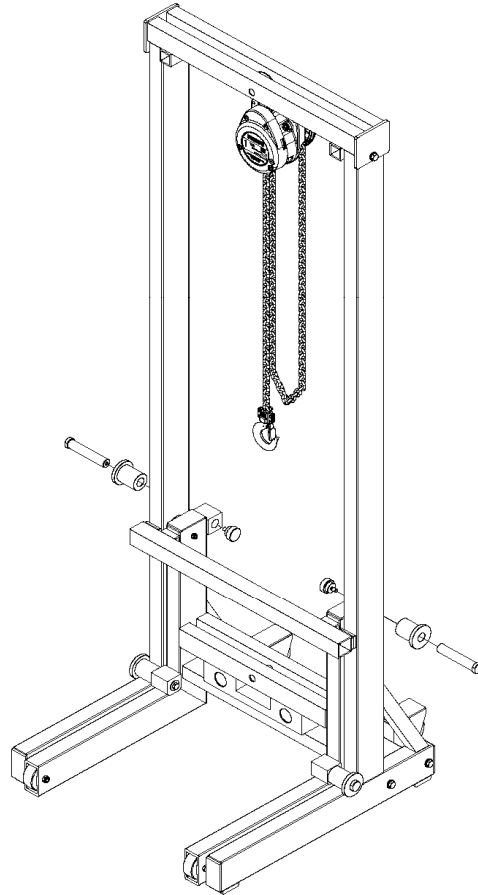


Fig. 4

- 7.5 Next, connect the lower hook of the chain hoist with the mounting bolt of the forked frame as shown in Fig. 5.
The next step is to place the counter brackets into the attachments on the forked frame as shown in Fig. 5.
Place the pallet as shown in Fig. 5 on to the forks of the forked frame and push the pallet right up to the forked frame arrestor.

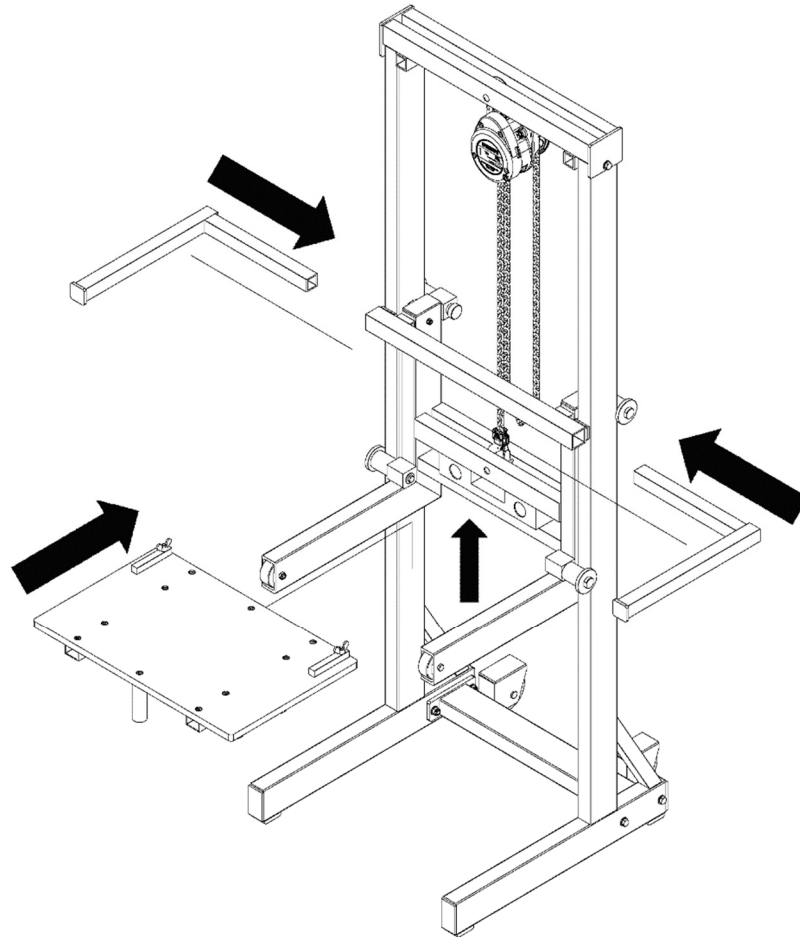


Fig. 5

- 7.6 The next step is to place the hoist unit into the guide bearing of the forked frame as shown in Fig. 6.
Push the hoist unit fully into the forked frame.
Please make sure that the hoist member is placed through the opening in the guide bearing first.

Note: *To make it easier to push the hoist member through the opening it is useful to extend the hoist strap to its full length (to retract the cylinder).
This is done by unscrewing the cylinder bleed screw on the cylinder (though under no circumstances remove it) and pressing the cylinder down by hand!*

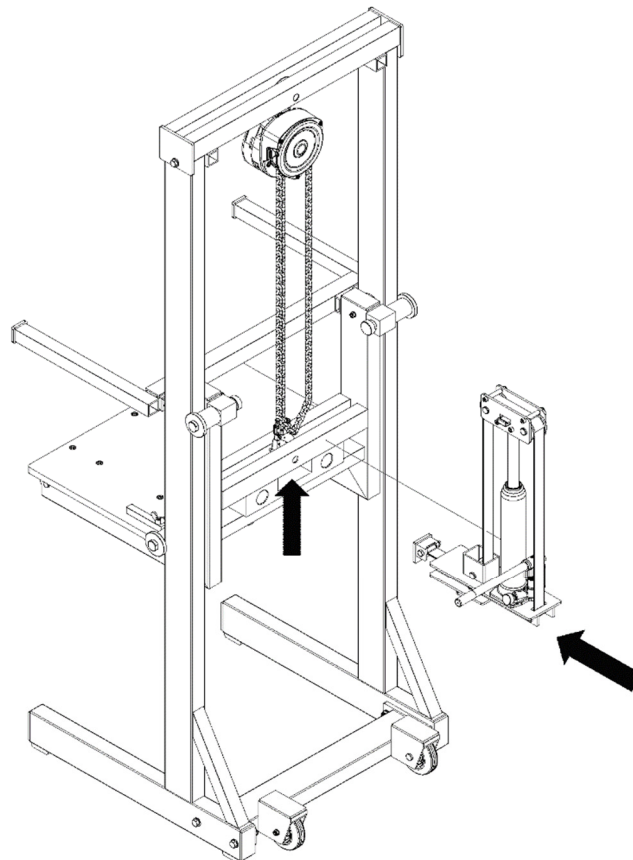


Fig. 6

7.7 The final step of assembly is to push the hoist guide into both boreholes of the forked frame's guide bearing as shown in Fig. 7.

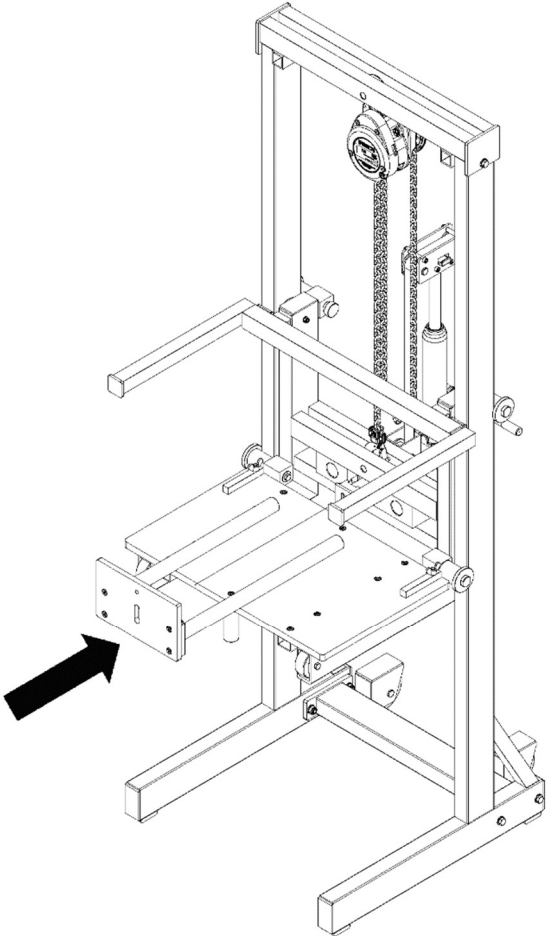


Fig. 7

8. Description of operation

- 8.1 Now place a plug for an M12 screw into the stone block as shown in the following Fig. Position for bore hole in concrete block.
The plug must be placed 95 to 105 mm from the lower edge of the stone block.
The horizontal dimension must lie along the line of gravity.

Note: *Should there be e.g. an opening on the left-hand side of the stone block then the plug hole may be positioned slightly to the right of centre.*

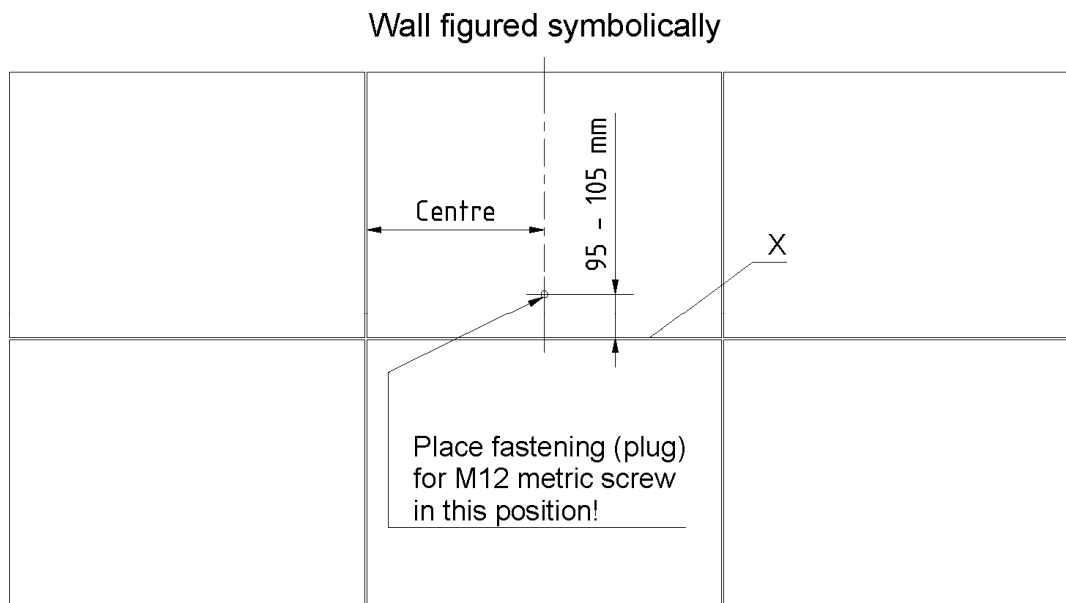


Fig. Position for bore hole in concrete block

- 8.2 Position the stone block lifting device right in front of the wall and aligned with the centre of the concrete block needing removed.
- 8.3 Using the chain hoist, raise the forked frame until the pallet is 2-3 mm below the underside X (see Fig. Position for bore hole in concrete block) of the stone block and is against the wall.
- 8.4 Both counter brackets need to be inserted into the square tubing so that the cover plates are touching the adjacent stones.
This is for safety reasons in case the adjacent loose stones slide out at the same time and because the device could otherwise lift up at the back.
- 8.5 Push the hoist guide from the stone block lifting device up to the concrete block and screw the draw bolt from behind into the hoist guide's slot approx. 30 mm in to the plug in the concrete block.
Lock the screw with the thread of the handle on the screw-on plate of the hoist guide. This is the only way to ensure minimal slippage of the stone block along the slot.
- 8.6 Hook the hoist member of the hoist unit into the head of the protruding draw bolt.
- 8.7 Close the valve on the hydraulic cylinder. This can be done by closing the cylinder bleed screw on the cylinder.

8.8 Use the pump lever on the hydraulic cylinder to pull the stone block out of the wall, initially only by approx. a quarter of its thickness.

8.9 Using the spur gear pulley, now press the pallet against the underside of the stone block, only a quarter of which should be sticking out of the wall.

Caution: *Do not press upwards too hard otherwise the stone block will tilt backwards.*

Note: *This is essential otherwise the stone block may tip forwards onto the pallet which is slightly lower and will yield to pressure.*

8.10 Only now can you pull the stone block out until it is positioned at the centre of the pallet see fig. 8 and fig. 9.

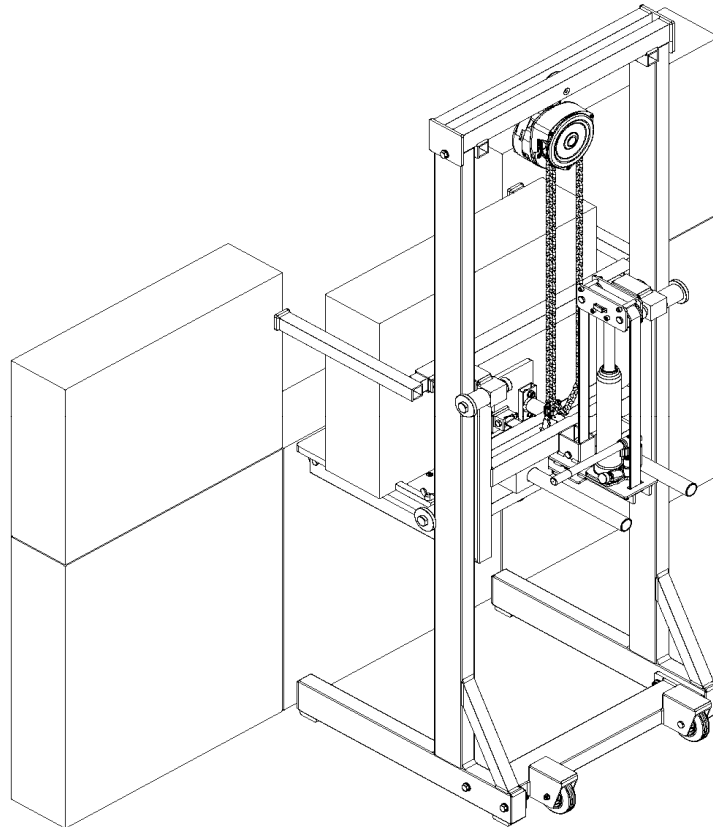


Fig. 8

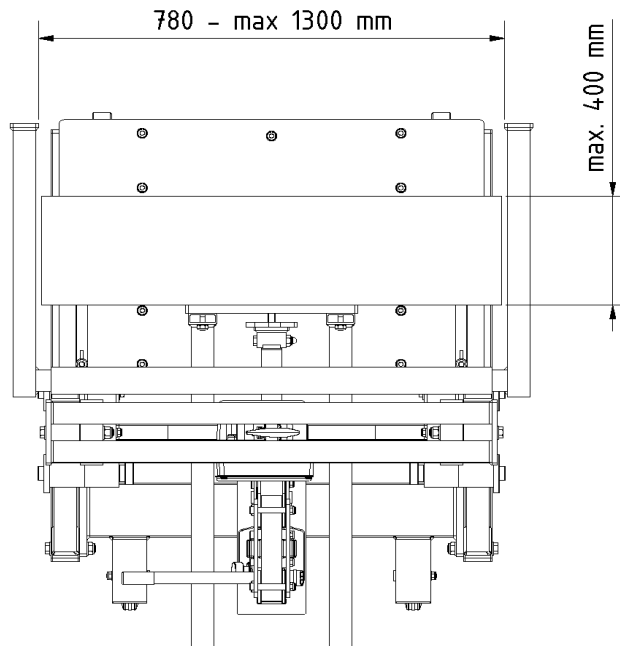


Fig. 9

- 8.11 Now using the chain hoist, lower the forked frame until the pallet is on the floor.
- 8.12 Undo the cylinder bleed screw (but do not remove it) and press the pump rod downwards by approx. 80 mm.
- 8.13 Remove the hoist unit's hoist member and turn the draw bolt M12 to remove it from the plug in the stone block.
- 8.14 Pull the entire stone block lifting device back to move it away.

9. Safety hazards

- 9.1 Keep away from potential crushing zones, like underneath the forked frame or around the polyamide rolls.
- 9.2 Please ensure the stone block is initially only pulled out by a quarter of its thickness and then again with the pallet pressed against it from below using the hoist power via the chain hoist.
- 9.3 Inappropriate handling may lead to injury when lowering or extracting the stone block.
- 9.4 Please ensure that only stable stone blocks are sawn out, otherwise the stone must be secured against toppling.
- 9.5 Monitor the adjacent loose stones during extraction. These should not slide out together with the extracted stone.
Please always use the counter-pressure brackets.
- 9.6 If the stone block tilts and gets jammed, do not use the hoist unit. In this case you should find another way to release the stone block. Tractive force that is too high can cause the whole device to lift up at the back.
- 9.7 Cracks in the weld seams may cause load bearing parts to break and loads to drop.

10 Maintenance, checks, repairs and cleaning

10.1 Maintenance

Maintenance intervals depend on the operating time.

In extremely dusty and dirty environments, maintenance intervals must be adjusted accordingly.

Time interval	Maintenance work
1 day after first operation	Check that all safety bolts are locked and pins are installed.
Daily before starting operation	Visual and operational check of all load-bearing parts for damage. Check all weld seams on load-bearing parts.
Weekly	Visual check and cleaning
Yearly	Inspection to be performed by an expert

Improperly performed work

Improperly performed work can lead to immediate or later injuries or damage.

- Only allow any pending maintenance work to be performed by sufficiently qualified personnel.
- Keep the enclosed original documentation to hand.
- Observe the safety regulations.

10.2 Checks

The operating company must ensure that the SBL is inspected whenever necessary, but at least once every year, by an expert.

Recognized faults must be eliminated immediately.

The Employer's Liability Insurance Association regulation for cranes DGUV Regulation 52 and 54 must be observed.

10.3 Repairs

Repairs may only be performed by persons having the necessary skills and knowledge.

Before putting the SBL back into operation, it must be subjected to an extraordinary inspection by an expert.

10.4 Cleaning

Clean the SBL from adhering soiling and material encrustations.

Dispose of the cleaned soiling according to the currently valid regulations.

Information: Wrong cleaning agents

When cleaning, do not use:

- *aggressive cleaning agents*
- *easily inflammable solutions*
- *substances that are harmful to health*
- *agents containing trichloroethylene, perchloroethylene, or tetrachloroethylene*

11 Safety rules and regulations

11.1 Regulations

The Employer's Liability Insurance Association regulations DGUV 52 / 53 /54 / 55 apply.

11.2 Personnel requirements

The SBL 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 SBL 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 device is to stand) is able to withstand the loads to be carried.

11.5 Unauthorised Modifications

Unauthorised modifications of the SBL 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 device 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	Keep safety clearances

Pos.	Hazards	Body parts	Solution / Warning
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	Keep safety clearances
1.10	Ejection of parts	Load/Operator	Keep safety clearances
1.11	Stability	Ground, floor/ operator	Leave danger zone If possible, lower load immediately, stop the device Place device 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 device, 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
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 device
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 device lock the main switch to the "OFF" position.

13. Hazard areas:

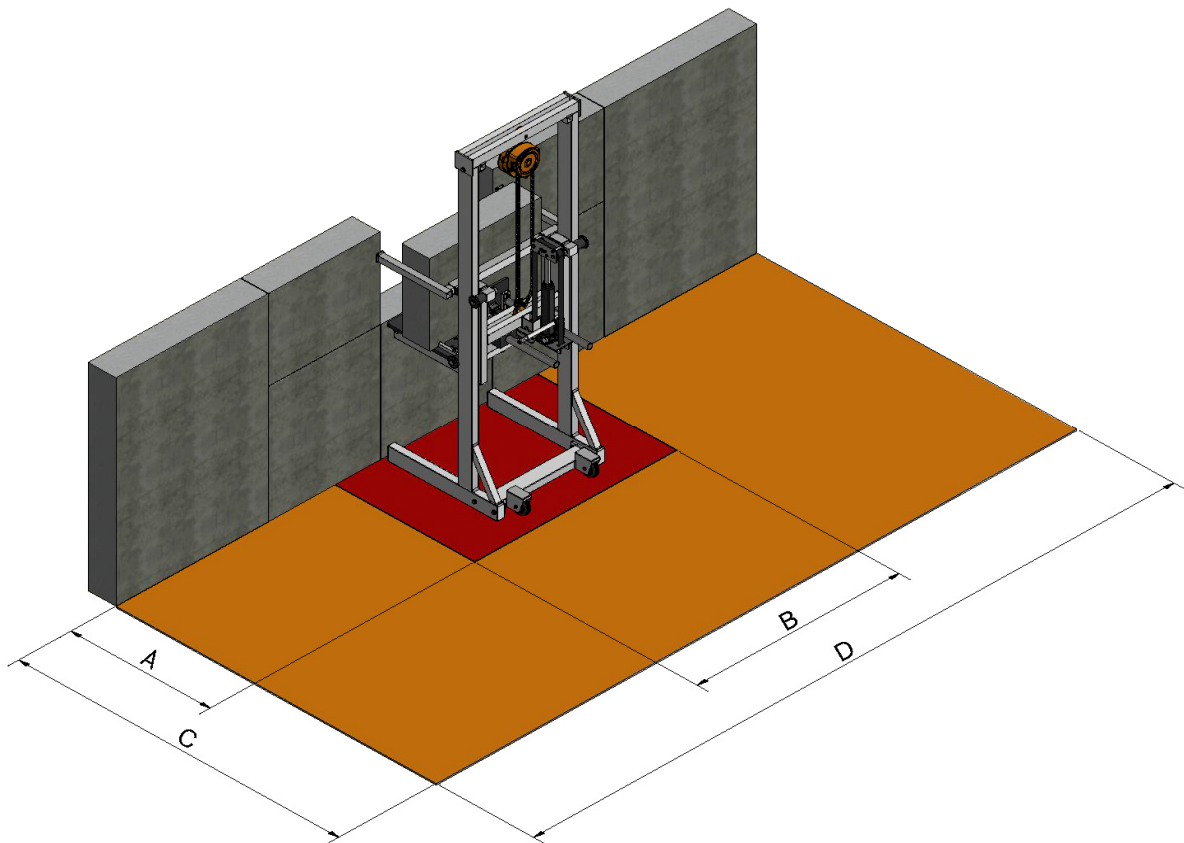


Fig. Stone block lifting device, model Standard - hazard areas



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 device tip over. For *dimensions* please refer to the following table.

	A	B	C	D
Standard	1000	1350	3200	6000
Maxi			3700	7000

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 device only, when it is exactly aligned in horizontal and vertical direction.
- Do not operate the device on slippery surfaces like for example on frozen surfaces.
- Do not operate the device in potentially explosive environments.
- Do not operate the device if it is obviously damaged.
- Do not operate the device if unauthorised persons are staying in the hazard area.
- Do not step or reach out under loads, which are suspended on the device or resting on it.
- Use only approved ladders or similar equipment to work on the device. Never use components of the device, e.g. side panels, to climb on to the device.
- 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 considered as contrary to the intended use. The manufacturer/supplier is not responsible for any damages resulting from that. The user alone bears all risks. The intended use also includes observing the user manual as well as the conditions of inspection and maintenance.

14.5 Organisational measures

- 14.5.1 Keep the user manual continuously available at the place of installation of the machine/equipment (in the tool compartment or in the compartment provided for this purpose)!
- 14.5.2 In addition to the user manual, all general legal regulations as well as other binding rules concerning prevention of accidents and environmental protection should be instructed and observed!
- 14.5.3 Complete the user manual with regulations incl. supervision and notification obligations, taking into account the special features of the company regarding work organisation, operating processes and deployed personnel.
- 14.5.4 The personnel assigned to work on the machine must have read the user manual and especially the chapter on Safety Instructions before starting work. Reading the manual during work is too late. This applies in particular to personnel working only occasionally on the machine, e.g. set-up or maintenance.
- 14.5.5 Check at least occasionally that personnel work safely and with an awareness of risk in accordance with the user manual!
- 14.5.6 Personnel may not have long hair worn loose, nor may they wear loose clothes or jewellery including rings. There is risk of injury, e.g. by getting caught or being pulled in.
- 14.5.7 Use personnel protection equipment where necessary or where required by regulations.
- 14.5.8 Observe all safety and hazard warnings on the machine/equipment!
- 14.5.9 Make sure all safety and hazard warnings on the machine/equipment are present and legible!
- 14.5.10 In case of changes regarding safety of the machine/equipment or its performance, stop the machine/equipment immediately and inform the responsible department/person of the fault!

- 14.5.11 Do not perform any changes or modifications of the machine/equipment that could affect the safety without the prior approval of the supplier. This also applies to the installation and adjustment of safety devices and valves and to any welding work on load-bearing parts.
- 14.5.12 Spare parts must correspond to the technical requirements defined by the manufacturer. This is always guaranteed when using original parts.
- 14.5.13 Prescribed intervals for regular maintenance work or else intervals as specified in the user manual must be adhered to!
- 14.5.14 Workshop equipment appropriate to the task in hand is imperative for carrying out maintenance work.
- 14.5.15 Inform personnel of the location and operation of fire extinguishers!
- 14.5.16 Observe fire alarm and firefighting contingencies!

14.6 Personnel selection and qualification; basic duties

- 14.6.1 Work on/with the machine/equipment must only be performed by reliable personnel. Observe the legal minimum age!
- 14.6.2 Only deploy trained or instructed personnel; clearly define their responsibilities for operation, set-up, maintenance and repair!
- 14.6.3 Make sure that only authorised personnel work on the machine!
- 14.6.4 Define the responsibility of the machine operator – also regarding traffic regulations – and permit them refusal of instructions given by third persons that are contrary to safety!
- 14.6.5 Any personnel in need of training, induction or instruction or working within the scope of general training may only work on the machine/equipment under permanent supervision by an experienced member of staff!
- 14.6.6 Work on the electrical equipment of the machine/equipment must only be performed by an electrically skilled person or other instructed persons under the direction and supervision of an electrically skilled person in accordance with electrotechnical regulations.
- 14.6.7 Work on running gears, braking and steering systems must only be performed by specially trained personnel!

- 14.7 Safety regulations regarding different phases of operation**
- 14.7.1 Normal operation
 - 14.7.1.1 Avoid any procedures that raise safety concerns!
 - 14.7.1.2 Get acquainted with the work environment on site before starting work. The work environment includes e.g. obstacles in the work and traffic areas, load capacity of the ground and required safeguarding of the building site from the public traffic zone.
 - 14.7.1.3 Take measures to operate the machine/equipment only in a safe and functioning state! Operate the machine only if all protection and safety equipment such as detachable protective equipment, emergency stops, sound insulation equipment, suction devices are available and functioning!
 - 14.7.1.4 Check the machine/equipment at least once per shift to detect any external damage or fault. Inform the responsible department/person immediately of any changes (incl. changes in the operating behaviour)! If necessary, shut the machine down immediately and secure it.
 - 14.7.1.5 In case of malfunctions, stop and lock the machine/equipment immediately! Have the malfunctions repaired without delay!
 - 14.7.1.6 Observe indicator lamps and procedures for switching on and off in accordance with the user manual!
 - 14.7.1.7 Before switching on/starting the machine/equipment, ensure nobody is put at risk of harm by starting the machine/equipment!
 - 14.7.1.8 Check before starting the operation/work that brakes, steering, signalling and lighting systems are fully operational!
 - 14.7.1.9 Before moving the machine make sure that the accessories are safely stored to avoid accidents!
 - 14.7.1.10 Always switch on the lights in case of reduced visibility or darkness!
 - 14.7.1.11 Always ensure sufficient clearance when negotiating subways, bridges, tunnels, overhead lines, etc!
 - 14.7.1.12 Always ensure sufficient clearance to edges of foundation ditches and slopes!
 - 14.7.1.13 Avoid any working method that affects the stability of the machine!
 - 14.7.1.14 Do not drive crosswise on slopes; always carry the equipment and the loaded material near the ground, especially when driving down a slope!
 - 14.7.1.15 When leaving the machine, always lock it in order to prevent it from moving unintentionally and protect it against unauthorised use.
 - 14.7.2 Special work while operating the machine/equipment and maintenance work as well as troubleshooting during work flow; disposal
 - 14.7.2.1 Observe the working procedures and dates specified in the user manual for set-up, maintenance and inspection incl. information on replacing parts/equipment parts! These operations must be performed by qualified personnel only.
 - 14.7.2.2 Inform the operating staff before proceeding with special and maintenance work! Appoint a supervisor!

- 14.7.2.3 For all work regarding operation, adjustment of production, changing and setting of the machine/equipment and the safety equipment as well as inspection, maintenance and repair, please observe the start-up/stop sequences according to the user manual and the guidelines concerning repair work!
- 14.7.2.4 Cordon off any necessary maintenance areas including the space around them!
- 14.7.2.5 If the machine is completely switched off for maintenance and repair work, it has to be protected against unexpected restart:
- lock the main control units and remove the key and/or
- put a warning sign on the main switch.
- 14.7.2.6 Only proceed with maintenance or repair work when a machine is on even and solid ground and secured against moving and buckling!
- 14.7.2.7 When replacing individual parts and larger subassemblies, these must be fixed and secured to hoisting devices to avoid any dangers that may arise. Only use suitable hoisting devices in perfect technical condition and load suspension devices of sufficient carrying load! Do not stand or work under suspended loads.
- 14.7.2.8 Only experienced personnel should be charged with attaching loads and instructing crane operators! The instructor should either be in sight of or have voice contact with the operator.
- 14.7.2.9 For performing assembly work above body height, use the climbing aids or platforms provided for this purpose or similar safety-compliant equipment. Do not use parts of the machine as climbing aids! Wear a safety harness when carrying out maintenance work at greater heights! Make sure that handles, steps, rails, platforms and ladders are free from dirt, snow and ice!
- 14.7.2.10 Before proceeding with maintenance/repair work, remove any oil, fuel or cleaning agents from the machine, especially from the connections and screw fittings! Do not use any aggressive cleaning products! Use lint-free cloths!
- 14.7.2.11 Before cleaning the machine with water, steam jet (high-pressure cleaning device) or other cleaning agents, cover/tape up all openings where for operational or safety reasons no water/steam/cleaning agents should get in. Electric motors and switch cabinets are particularly at risk.
- 14.7.2.12 Completely remove covers/tapes after cleaning!
- 14.7.2.13 Always tighten slackened screw fittings during maintenance and repair work!
- 14.7.2.14 If it is necessary to remove safety equipment for set-up, maintenance and repair, this must be reinstalled and checked immediately following the maintenance and repair work.
- 14.7.2.15 Ensure the safe and environmentally friendly disposal of operating materials and auxiliary supplies as well as replacement parts!

- 14.8 Information regarding special hazard types**
- 14.8.1 Electric power
- 14.8.1.1 Only use original fuses of the prescribed amperage! Stop the machine/equipment immediately in case of disruption of the power supply!
- 14.8.1.2 Make sure that there is sufficient clearance between the machine/equipment and the electric overhead lines! When working near overhead lines make sure that the equipment is not near the lines. Risk of death! Acquaint yourself with the required safety clearances!
- 14.8.1.3 After each contact with power lines - Do not leave the machine - Move the machine out of the danger zone - Caution external persons against getting closer and touching the machine - Arrange for power supply to be cut off - Only leave the machine if the touched/damaged line is definitely disconnected from the power supply!
- 14.8.1.4 Work on the electrical equipment of the machine/equipment must only be performed by an electrically skilled person or other instructed persons under the direction and supervision of an electrically skilled person in accordance with the electrotechnical regulations.
- 14.8.1.5 If specified, the power supply of machine/equipment parts on which inspection, maintenance and repair work is performed must be cut off. The disconnected parts must first be inspected to determine they are volt-free, before being earthed and short-circuited and also insulate neighbouring live parts!
- 14.8.1.6 The electrical equipment of a machine/equipment must be checked/inspected at regular intervals. Immediately repair faults such as slackened connections or scorched cables.
- 14.8.1.7 If work on live parts is necessary, call in a second person to operate the emergency stop or main switch in case of emergency. Close off the work area with a red/white safety chain and a warning sign. Use only insulated tools!
- 14.8.2 Gas, dust, steam, smoke
- 14.8.2.1 Observe the applicable regulations for the respective place of use!
- 14.8.2.2 Only perform welding, burning and grinding work if explicitly authorised; this entails severe risk of fire and explosion!
- 14.8.2.3 Remove any dust and combustible material from the machine/equipment and its environment and ensure sufficient ventilation (risk of explosion) before proceeding with welding, burning and grinding work!
- 14.8.3 Hydraulics and pneumatics
- 14.8.3.1 Check all lines, hoses and screw fittings at regular intervals in order to detect leaks and any damage visible from the outside! Have the malfunctions repaired without delay! Splashing oil may lead to injuries and fire.
- 14.8.3.2 Depressurise all system sections to be opened and pressurised pipes (hydraulics, compressed air) before beginning repair work according to the components descriptions!

14.8.3.3 Lay and mount hydraulic and pneumatic pipes correctly! Do not mix up the connections! The fittings, lengths and quality of the hoses must comply with requirements.

14.8.4 Noise

14.8.4.1 The sound insulation devices on the machine/equipment must always be in protective position during operation.

14.8.4.2 Compulsory ear protection equipment must be worn!

14.8.5 Oils, greases and other chemical substances

14.8.5.1 When handling oils, greases and other chemical substances, observe the product-related safety regulations!

14.8.5.2 Be careful when handling hot operating materials and auxiliary supplies (risk of burning and scalding)!

14.9 Transportation; restarting

14.9.1 Use only suitable means of transport and hoisting devices of sufficient lifting capacity!

14.9.2 When restarting, proceed in accordance with the user manual!

EC declaration of conformity

in accordance with EU Machinery Directive 2006/42/EC, Appendix II A

We herewith declare that the:

Equipment:	Stone block lifting device (SBL)
Model:	Standard – Maxi
Article no.:	510000 – 520000
Load capacity:	
Model Standard	1000 kg
Model Maxi	700 kg

complies with the safety regulations.

The CE marking is fixed visibly at the product.

Manufacturer or Supplier:	Feltes GmbH, Gerätebau - Gerätevertrieb Marie-Curie-Strasse 9 D-40822 Mettmann
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Relevant EC directives:	Machinery Directive 2006/42/EC
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Applied harmonised standards:	DIN EN ISO 12100 - Safety of Machinery DIN EN 13001-3-1:2013-12 (Steel) DIN EN 1999-1-1:2014-03 (Aluminium)
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Applied national standards and technical specifications, where appropriate and in particular:	DGUV Regulation 52 DGUV Regulation 53 DGUV Regulation 54 DGUV Regulation 55
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Place, date: Mettmann, 1 January 2018

Signed:

Identification of the signatory: Norbert Feltes (Managing Director)



16. Additional documents

Inspection before delivery

Product: Stone block lifting device (SBL)
Model: Standard – Maxi
Manufacturer: Feltes GmbH, Gerätebau - Gerätevertrieb
Year of manufacture: 2018
Article number: 510000 – 520000
Load capacity:
Model Standard: 1000 kg
Model Maxi: 700 kg

Serial number: *You will find the serial number on the identification label which is affixed to the forked frame.*

Weight: Chapter 4 (see page 5)

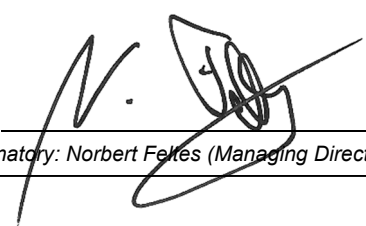
1) Inspection before delivery

Visual and functional inspection of the aluminium gantry crane and its components is completed. The product was developed, constructed and produced according to the rules of engineering.

Date: Dispatch day (see delivery note)

Signature: _____

Identification of the signatory: Norbert Feltes (Managing Director)



Maintenance log

Date	Signature	Work completed / Remarks

Maintenance log

Date	Signature	Work completed / Remarks

Make your own lists for further records.

Notes
