

EN

LISSMAC

CONSTRUCTION TECHNOLOGY

OPERATING MANUAL MASONRY SAW DTS

DTS 700



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Imprint

The operating manual is valid for:
LISSMAC masonry saw

- DTS 700

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Translation of the original operating manual
Status: 01-2022

Keep this manual for future reference!

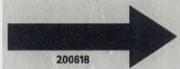
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BASIC SAFETY INSTRUCTIONS

Warning notices and symbols in this operating manual

	Danger!	Indicates that failure to comply could lead to severe injury or even death.
	Caution!	Indicates that failure to comply could sometimes lead to injuries.
	Notice	Indicates that failure to comply leads to damage to the machine or other property.

The following warning and safety symbols were attached on the machine.

	Observe the operating manual	
	Wear hearing protection	
	Wear safety glasses.	
	Lifting Point	
	Noise power level Noise level of the machine	
	Do not reach inside. Risk of shearing from moving parts	
	Rotating sawblade	
	Forklift transport	
	Warning of dangerous electrical voltage	
	Remove power plug before transport or service	
		Open water tap when sawblade is running
	Do not remove power plug when sawblade is running	
		Running direction of sawblade

OPERATING MANUAL

Preface

This operating manual should make it easier to get to know the machine and make use of its intended applications.

The operating manual contains important information on how to operate the machine safely, properly and economically. Your close attention helps avoid risk, repair costs and downtime, and increase the reliability and lifetime of the machine.

The operating manual is to be supplemented by directives for accident prevention and environmental protection, according to applicable national requirements.

The operating manual is to be kept permanently available at the machine location.

The operating manual must be read and used by each person assigned to work with the machine, e.g.:

- Operating, including tooling, troubleshooting during operating, correction of production rejects, service, disposal of operating and auxiliary materials
- Maintenance (service, inspection, repair) and/or
- Transport

Along with the operating manual and the valid legal regulations for accident prevention in the country of use and the place of use, also recognised technical regulations for safety and proper work are to be observed.

Required tool

In order for the masonry saw to be operated, a tool - in the form of a saw blade - is required. These tools can be purchased from the manufacturer.

Changes and reservations

We attempt for this operating manual to be correct and up-to-date. To maintain our technological lead, it can be necessary to change the product without advance notice and to perform their operation. We accept no liability for malfunctions, breakdowns and damage caused by this.

Target group

These operating instructions are aimed at semi-skilled and trained personnel in the fields of structural mechanics, concrete cutting technology, road construction, and civil engineering.

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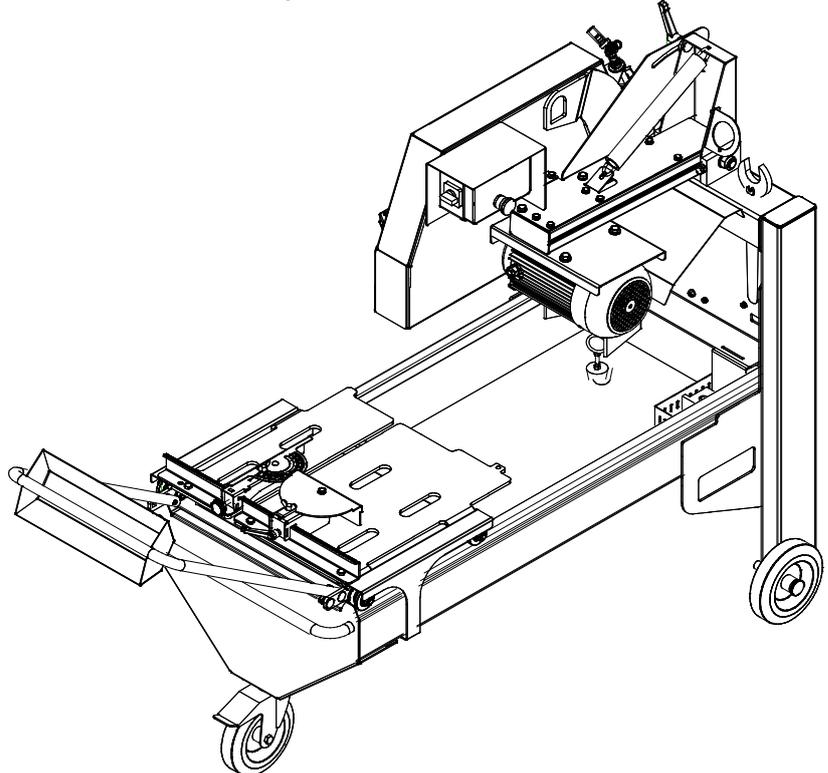
1. FEATURES & ADVANTAGES

The DTS 700 masonry saw belongs to the equipment class of masonry machines and is used to cut components from mineral material in the wet cutting method.

The ideal combination of modern technology and well thought out user-oriented design make LISSMAC diamond cut-off saws the trusted jack-of-all-trades on the construction site.

The innovative sawing technology and precise saw head guidance guarantee exact cutting, low saw blade wear and high stability of the saw head.

- Construction site appropriate and low maintenance design
- High stability of value and operating safety
- Easy to service and maintain due to modular design
- Exact table support for precise stone cuts
- Firm, torsion-free seat through three-point support
- Stable and strong frame
- Galvanised sawing table with imprinted scale
- Table guidance profile and rollers made of durable, high-strength steel
- Low tool costs due to precise table guiding
- Perfect saw blade cooling and immediate removal of sawing debris with the LISSMAC water feed system
- User friendly through free loading and front-side operating controls
- Easy removal of the water pump (e.g. for cleaning or to avoid freezing)
- Water tank extends toward the rear
- Simple and secure transport position of the saw head
- Easier transport due to front swivel castor, forklift brackets and crane eyes
- Inclusive LISSMAC diamond cutting disc Ø 700 mm for Poroton/ sand-lime brick



1.1. Selection of the tool

	<ul style="list-style-type: none">• Only diamond saw blades should be used• Cutting with toothed saw blade is prohibited• The saw blade requires input of direction of rotation and must be specified for the intended use in this machine. Saw blade diameter, speed and adapter must fit the machine• Damaged saw blades must not be used.
 Notice	Tools can be selected using the LISSMAC sales booklet. This sales booklet can be obtained from the manufacturer at any time.

1.2. Basics of intended use

1.1.1	The warranty obligation of the manufacturer and supplier is voided for improper or non-intended use. Any change to the machine which is not carried out by the manufacturer is prohibited. Changes, removal or addition of parts to the masonry saw only with the written approval of the manufacturer.
1.1.2	The machine is constructed according to the state of the art and recognised technical safety rules. However, danger to life and limb of the user or third parties, and/or damage to the machine or other property may still arise from its use.
1.1.3	Only use the machine in technically faultless condition and for intended use, aware of safety and danger complying with the operating manual. You should particularly handle malfunctions which can compromise safety immediately, or have them addressed by experts.
1.1.4	<p>The LISSMAC masonry saw is made exclusively for sawing mineral material, in the wet cutting method. Sawing of wood, plastic or metal and other materials is not intended use. The masonry saw may only be operated by one person. The operation is limited by the intended position of the operator directly on the handle (Pos. 16). Any other use or use above and beyond is not considered intended use. The safety of this machine is only guaranteed when correct saw blades for this machine are used.</p> <p>Intended use also includes compliance with the operating manual and observance of inspection and maintenance manual.</p>
1.1.5	<p>Foreseeable misuse / non-intended use:</p> <ul style="list-style-type: none">• Sawing without saw hood• Sawing without water• Sawing of wood, plastic or metal• Any constructional changes, which change the safety or the type of design

1.3. Organisational measures

1.3.1	The operating manual must be easily accessible for each person at the location of the masonry saw.
1.3.2	All additions to the operating manual, all generally valid legal and otherwise binding regulations for accident prevention and environmental protection are to be followed and instructed! Such obligations may also apply, for example, to the handling of hazardous materials or the wearing of personal protective gear or traffic regulations.
1.3.3	Personnel assigned to activities on the masonry saw must have read and understood the operating manual, particularly the Safety Instructions chapter, before starting work. In the middle of work it is too late. This particularly applies to personnel only occasionally engaged with the crane, such as those involved in tooling and maintenance.
1.3.4	At least occasionally, perform checks for safe and hazard awareness work by operators while following the operating manual!
1.3.5	Use personal protection equipment if necessary or required by regulations!
1.3.6	Observe all safety instructions and danger warnings on the masonry saw and keep them complete and in legible condition! Replace safety and danger instructions, that are damaged or non-readable any more.
1.3.7	For safety-related changes to the machine or its running behaviour, stop the machine immediately and mark it accordingly. Report the problem to the responsible post/person!
1.3.8	No changes, removal or addition of parts without the written approval of the manufacturer! The instructions of the tool maker must be followed.
1.3.9	Only use tested original replacement parts from the manufacturer!
1.3.10	Observe required or prescribed deadlines given in the operating manual for inspection.
1.3.11	Before the test, the machine must be thoroughly cleaned and the power plug must be pulled for all service and repair work.
1.3.12	Workshop equipment suitable for the work is absolutely necessary for performing maintenance actions.

1.4. Personnel choice and personnel qualification; basic responsibilities

1.4.1	Only qualified personnel 18 years of age or older may operate the masonry saw independently. All personnel must be trained in the operation and be explicitly, in writing, authorized by the company to operate the machine.
1.4.2	Establish responsibilities of the personnel for operating, changeover, servicing, and repairing the machine!
1.4.3	Make sure that only authorized personnel works at the machine.
1.4.4	The operator must wear personal safety equipment according to the safety regulations, such as safety shoes, safety gloves and safety glasses.

	1.4.5	Remaining in the working area of the machine unnecessarily is prohibited! Direct unauthorized personnel, who are not working on the machine, away from the work area. Block off the working area, if necessary.
	1.4.6	During all movements, operating personnel must ensure that they and other people are not endangered. All obstacles which may hinder the operation or implementation of the machine at the location of use must be moved out of the way.
	1.4.7	Work on the electrical equipment of the machine may only be carried out by qualified electricians or trained personnel under the management and supervision of a qualified electrician, and in accordance with the rules of electronics.
	1.4.8	Any personnel training, learning, being instructed, or currently involved in general education may only work with the machine under the continual supervision of an experienced person!

1.5. Safety instructions for operation phases

1.5.1. Danger for the operator by the machine

	1.5.1.1	Before leaving the operating position, the machine must be shut down and the saw blade must no longer rotate. There is a danger of injury by a rotating saw blade.
	1.5.1.2	Working on the masonry saw and moving with rotating saw blade is prohibited.
	1.5.1.3	The motor must only be put in operation for intended use cutting.

1.5.2. Transport, assembly and installation

	1.5.2.1	Transport, assembly and installation may only be carried out in transport position. The masonry saw must be secured against rolling away using the parking brake.
	1.5.2.2	Transport the masonry saw in compliance with the maximum operating weight, this should be exclusively done by crane.
	1.5.2.3	Transport may only be done, as long as all machine parts are tightened on the machine and individual parts cannot fall.

1.5.3. Commissioning

1.5.5.1	The commissioning of the machine may only be carried out in transport position.
1.5.3.2	When inserting the saw blade, observe the running direction.
1.5.3.3	When inserting the saw blade, protect against sharp edges.
1.5.3.4	Ensure that the floor on which cuts are to be made fulfills load carrying capacities. All obstacles must be cleared away from the cutting area and make sure there is sufficient lighting.
1.5.3.5	At least once per shift check the machine for externally recognizable damage and deficiencies! Any changes which occur (including operating behavior) must be reported immediately to the responsible post/person! If necessary, immediately stop the machine and secure it against restart! Before starting cutting operation each day, you must check: <ul style="list-style-type: none">• check condition of the saw blade• check safety equipment for proper function
1.5.3.6	No rotating tools which have a maximum rotation speed smaller than the nominal speed of the machine can be used. Defective or broken tools must be replaced immediately.

1.5.4. Use

1.5.4.1	Refrain from working in any manner that is questionable in regard to safety!
1.5.4.2	Take measures to ensure that the masonry saw is operated only in a safe, functional condition!
1.5.4.3	At least once per shift check the machine for externally recognizable damage and deficiencies! Any changes which occur (including operating behavior) must be reported immediately to the responsible post/person! If necessary, immediately stop the machine and secure it against restart!
1.5.4.4	Immediately stop and secure the machine in case of malfunctions! Immediately correct malfunctions! Electrical work may only be carried out by qualified electricians.
1.5.4.5	Only suitable and tested tools must be used.
1.5.4.6	The masonry saw is made exclusively for sawing mineral material, in the wet cutting method. Sawing of wood, plastic or metal and other materials is not intended use.
1.5.4.7	It is forbidden to connect the machine to the power mains without GCFI protection in the mains supply line or the junction box.
1.5.4.8	For protection before acceleration, the cutting process must be initiated into the material slowly and in steps. Avoid any contact with the running tool.
1.5.4.9	It is prohibited to cut without the saw hood (Pos. 4). The operator must be protected by turning parts.
1.5.4.10	Keep water sources handy for refilling the water tank. Water sources may not be connected directly.
1.5.4.11	Do not pull the power plug when power is on.
1.5.4.12	Remove the water pump from the water tank if there is danger of frost. Already frozen water pumps must be thawed out before turning on.

1.5.5. Moving the masonry saw

1.5.5.1	The masonry saw may only be moved when the saw blade is at a standstill.
1.5.5.2	Before leaving the operating position, the machine must be shut down and the saw blade must no longer rotate. There is a danger of injury by a rotating saw blade.
1.5.5.3	The operator must activate the parking brake directly after moving the machine. The machine must be secured against rolling away.

1.5.6. Special work while using the machine

1.5.6.1	Follow all setup, maintenance, and inspection activities and schedules prescribed by the operating manual, including all information about the replacement of parts / assemblies! These activities may only be carried out by technical personnel.
1.5.6.2	Inform operating personnel before beginning special and maintenance work! Name a supervisor!
1.5.6.3	If the machine is turned off during maintenance and repair work, it must be secured against unexpected application of power.
1.5.6.4	Before cleaning all openings in which no cleaning agent should penetrate due to safety and/or functional reasons must be covered and glued. Electric motors, switches and plugs are especially at risk. After cleaning, remove the covers/tape completely!
1.5.6.6	During service and repair work, always tighten loose bolt joints!
1.5.6.7	If dismantling is required for fitting, servicing and repair, the safety fittings must be remounted and checked immediately following the service and repair work!
1.5.6.8	No rotating tools which have a maximum rotation speed smaller than the nominal speed of the machine can be used.

1.6. Safety instructions for special types of dangers

1.6.1. Electric power

	1.6.1.1	Use only original fuses with the specified current rating! In case of malfunctions, turn off the machine immediately! Electrical work may only be carried out by technical and qualified personnel.
	1.6.1.2	Carry out maintenance or repair work only when the motor of the machine is turned off and the saw blade is not running any more. Transport position requires special care.
	1.6.1.3	The machine's electrical equipment must be inspected/checked regularly. Faults such as loose connections or damaged cables must be corrected immediately. The machine must be labeled so that it cannot be started by others.

1.6.2. Dust

	1.5.2.1	When working in close quarters, follow any applicable national guidelines!
	15.2.2	To prevent dust build-up during cutting, the saw blade must be cooled using water. Dry cutting is prohibited and damages not only the saw blade.

1.6.3. Noise

	1.5.3.1	See 2.5 Noise power level of the machine
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1.7. Transport

	1.7.1	To implement using a crane, slinging equipment with sufficient load carrying capacity must be used. Slinging equipment must be checked for damage before use.
	1.7.2	Name expert instructors for the lifting process!
	1.7.3	Lift the machine only according to the instructions in the operating manual and with proper lifting gear!
	1.7.4	Only use suitable transport vehicle with sufficient load capacity!
	1.7.5	Secure loads reliably according to the regulations. Use suitable attachment points!
	1.7.6	Even when moving only for a short distance, the motor of the machine must be turned off. The saw blade may not be rotating before a restart!
	1.7.7	When recommissioning, follow the operating manual!

1.8. Packaging and Storage

To ensure sufficient protection during shipping and transport, the machine and its components are carefully packaged. When receiving the machine, the machine should be checked for damage. The packaging of the device consists of materials which can be recycled. Put these by type into the relevant recycling containers, so that they can be recycled properly.

In the case of damage, the machine must not be put into operation. Even damaged cable and plugs represent a safety risk and must not be used. In this case, please contact the manufacturer.

If the machine is not immediately put into operation after unpacking, it must be protected from moisture and dirt.

1.9. Environmental protection

Packaging material, cleaning agents, used or residual operating materials, as well as removed wear parts, such as drive belts or motor oils must be taken to recycling corresponding to the valid regulations for environmental protection at the place of use.

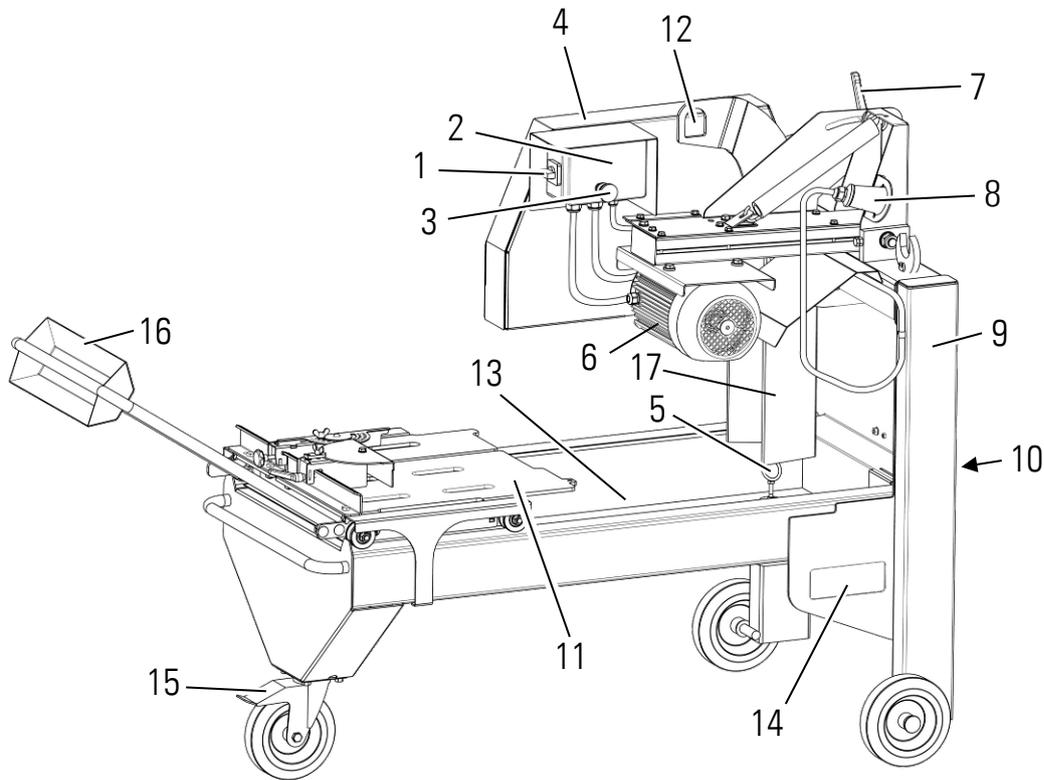
1.10. Disposal

If the expiry date of the device has been reached, in particular if functional errors happen, make the machine unusable.

Dispose of the device according to the valid regulations for environmental protection of your country. Electrical waste may not be disposed of in household waste. Take the used device to a central rubbish collection centre.

2. DESCRIPTION OF THE DEVICE

2.1. Name of machine parts



Pos. 1	Main switch	Pos. 10	Locking for saw table
Pos. 2	Switch box	Pos. 11	Saw table
Pos. 3	Emergency stop switch	Pos. 12	Crane eye
Pos. 4	Saw hood	Pos. 13	Water tank with water pump
Pos. 5	Water stoppers	Pos. 14	Forklift supports
Pos. 6	Motor	Pos. 15	Steerable wheel with parking brake
Pos. 7	Clamping lever for cutting height adjustment	Pos. 16	Handle
Pos. 8	Power plug	Pos. 17	Mist protection
Pos. 9	Frame		

2.2. Safety guards

Pos. 3	Emergency stop switch	Pos. 4	Saw hood
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2.3. Technical data

	DTS 700
Motor output	5,5 KW / 400V / 32A
Power consumption	11 A / 3PH + N + PE
Max. cutting depth	270 mm
Max. cutting length	520 mm
Max. saw blade diameter	700 mm
Saw blade holder	60 mm (Pin 11.5 / TK 120 mm)
Saw blade shaft speed	1400 rpm
Table width	630 mm
Max. table loading	200 kg
Nominal weight	230 kg
Max. operating weight	345 kg
Dimensions L/W/H	1520 / 940 / 1430 mm
Protection class	IP 55

	max. dimensions of the workpiece to be cut
Length	600 mm
Width	600 mm
Height	270 mm

2.4. Scope of delivery:

- 1 pc. Masonry saw DTS 700 with saw hood, water tank, saw table and water pump
- 1 pc. Saw blade Ø 700 mm
- 1 pc. Open ended spanner SW 10
- 1 pc. Open ended spanner SW 19

2.5. Noise power level



Danger!

In an environment with a high noise level, for example when working near loud machinery, wearing hearing protection in the workplace is prescribed for above 85dB(A).

The details define volume of noise level, related to the operator workspace and the noise power level of the masonry saw.

The measured noise level L_{WA} 92 dB(A)

The emission noise pressure at the operator's place L_{pA} 79 dB(A)

The guaranteed noise power level is 94 dB(A)

The values are determined by the noise emission measurement.

Testing is done without load with the largest permitted saw blade of \varnothing 700 mm.

	Without load	Porous concrete Cut depth 95 mm	Sand-lime brick Cut depth 95 mm	Perforated brick Cut depth 95 mm
Continuous sound power level at workplace L_{pA}	79 dB(A)	82 dB(A)	94 dB(A)	92 dB(A)
Noise power level L_{WA}	93 dB(A)	95 dB(A)	105 dB(A)	106 dB(A)

Measurement tolerances:

2.5 dB for the A-value noise power level

4 dB for the A-value emission noise pressure level

Emission noise pressure is done in compliance with EN ISO 3744, EN 12418 and guidelines 2000/14/EC.

2.6. Hand arm vibration

The given value was determined with a maximum saw blade diameter of 700 mm.

The total vibration value is under the action value of 2.5 m/s^2 .

In practice, these values are influenced by the following conditions:

- Quality of the saw blade
- Number of saw blades
- Weight of the operator
- Feed speed
- Condition of the machine
- Material properties and type

3. COMMISSIONING

3.1. Connections and operating materials

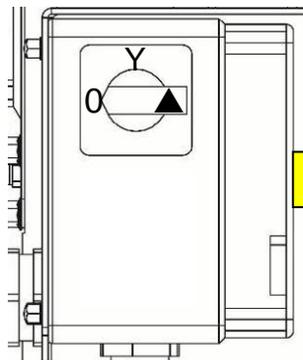
Connection of electricity

Allowable power source with working voltage of 400V, 32A must be available.

Operating material water

The water tank may only be filled with water. This water is used when sawing as a cooling and lubricating agent and is conveyed with a water pump to the saw blade.

3.2. Function and adjustable parts



Main switch (pos. 1)

The main switch consists of a star delta connection and is used to start larger 3-phase motors with squirrel cage rotors having a power of 4 kW and up. This prevents the triggering of fuses and possible voltage drops due to the high starting current with direct starting.

Emergency stop switch (Pos. 3)

The machine is switched off by activation of the Emergency Stop switch. The power mains to the drive elements is finally disconnected.



Power plug (Pos. 8)

The power plug can be locked by hanging in the receptacle with a padlock.

3.3. Setting up the masonry saw



Notice

Ensure that the floor on which the machine is used fulfills load carrying capacities. All obstacles must be cleared away from the cutting area and make sure there is sufficient lighting.

3.4. Water tank and pump



Notice

If there is danger of frost, the water pump must be taken out of the water tank (Pos. 13) and the water circuit must be emptied. Already frozen pumps must be thawed out before turning on.

3.5. Parking brake



Danger!

In order to secure the masonry saw against rolling away, the parking brake must be used.

The parking brake (Pos. 15) is engaged using the steerable wheel.

3.6. Tools (saw blade)

Selection of the saw blade

see 8 Tools

3.7. Clamping lever for cutting height adjustment



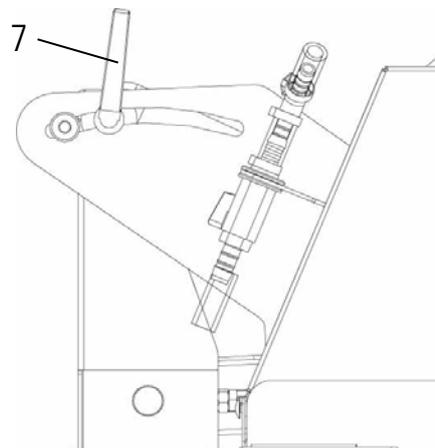
Danger!

The clamping lever for cutting height adjustment (Pos. 7) may only be opened when the saw blade is stopped!



Danger!

During sawing the clamping lever for cutting height adjustment (Pos. 7) must be tightened so that the saw head is in a firm position.



The saw head can be adjusted in height by releasing the clamping lever (Pos. 7).

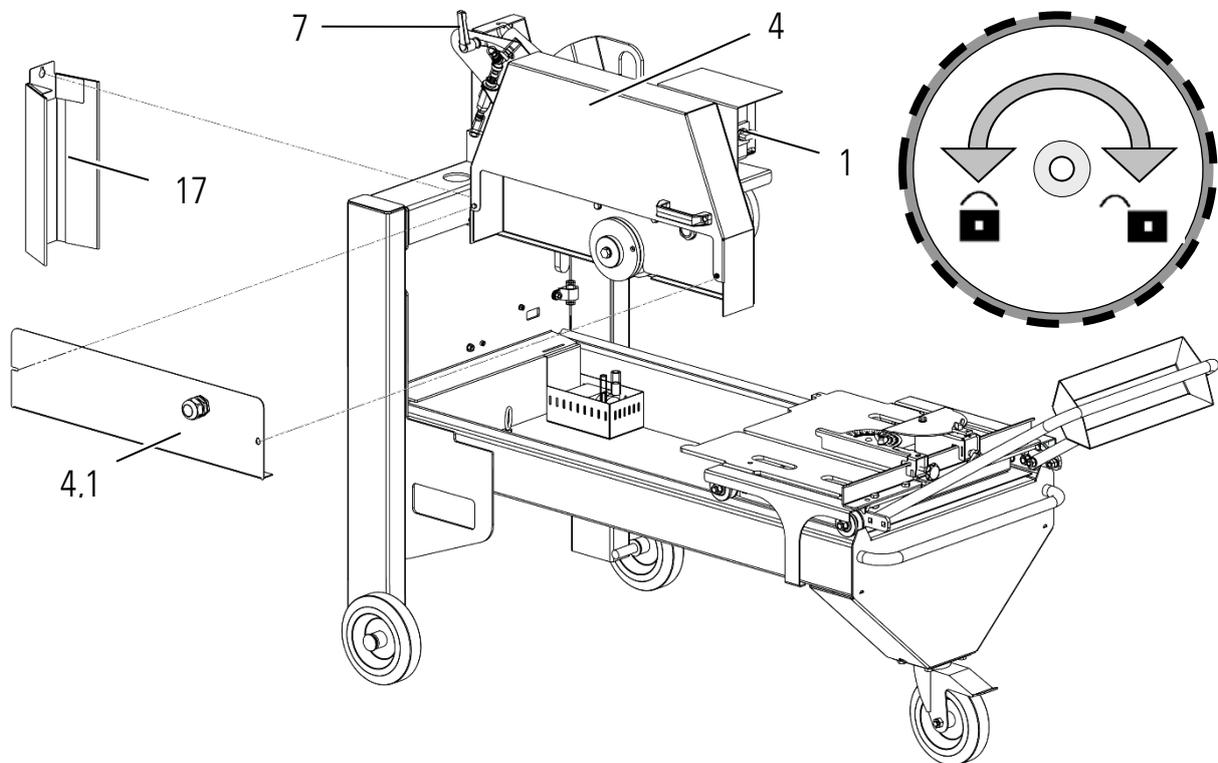
The safety stop is in the pathway of the clamping lever (Pos. 7) and prevents the saw table from being sawn into.

3.8. Saw blade removal



Danger!

Opening of the saw hood or reaching into the rotating saw blade during cutting is prohibited. These works may only be carried out with the saw blade at a standstill and the motor turned off.



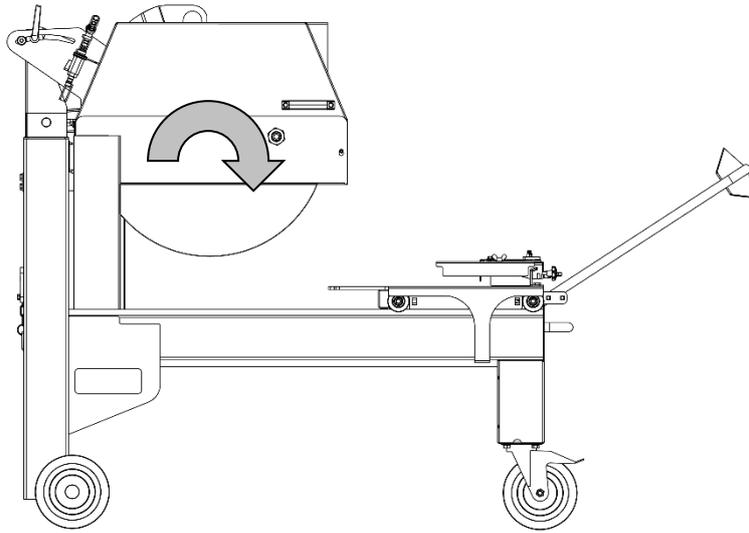
Notice

No rotating tools which have a maximum rotation speed smaller than the nominal speed of the machine can be used. Defective or broken tools must be replaced immediately.

In order to change the saw blade, the following steps must be carried out:

- Put the main switch (Pos. 1) in the Off position and disconnect the power plug (Pos. 8) from the power source
- Clamping lever for cutting height adjustment (Pos. 7) must be tightened
- Remove the water hose coupling on the saw hood plate (Pos. 4.1)
- Loosen and remove the hexagon bolts from the saw hood plate (Pos. 4.1) with the 10 mm open-ended spanner
- Open flange screws (left-hand thread) with the 19 mm open ended spanner and remove the pressure disc
- Remove the saw blade from the machine

3.9. Mounting saw blade



Notice

When installing the saw blade, ensure that the flange surfaces are clean. The saw blade must sit directly on the flange. Match the direction of rotation of the saw blade with the rotation direction arrow on the saw hood.

- Put the main switch (Pos. 1) in the Off position and disconnect the power plug (Pos. 8) from the power source.
- Clamping lever for cutting height adjustment (Pos. 7) must be tightened
- Remove the water hose coupling on the saw hood plate (Pos. 4.1)
- Loosen and remove the hexagon bolts from the saw hood plate (Pos. 4.1) with the 10 mm open-ended spanner
- Open flange screws (left-hand thread) with the 19 mm open ended spanner and remove the pressure disc
- Insert saw blade
- Mount the pressure disc and flange screw and tighten with the 19 mm open ended spanner
- Tighten the hexagon bolts from the saw hood plate (Pos. 4.1) with the 10 mm open-ended spanner
- Mount the water hose coupling on the saw hood plate (Pos. 4.1)

Testing the direction of rotation

- Switch the main switch (Pos. 1) briefly to the "star" position

Change of direction of rotation (Change the phase sequence)

- Turn off the main switch (Pos. 1)
- Remove the mains cable from the power plug (pos. 8).
- Exchange the phase of the power plug (pos. 8) with a screwdriver

4. TRANSPORT

4.1. Transport position



Danger!

In order to secure the masonry saw against rolling away, the masonry saw may only be transported in transport position.

The transport position includes:

- Masonry saw is disconnected from power and the power plug (Pos. 8) is hung in the holder
- Parking brake on the steerable wheel (Pos. 15) is activated
- Saw table (Pos.11) is moved to the stop in the machine and secured on the rear with the linchpin (Pos. 10)
- Clamping lever of the cutting height adjustment (pos. 7) is tightened
- Check the locking mechanism of the saw arm
- Water tank (pos. 13) must be emptied

4.2. Move with the construction crane



Danger!

The masonry saw may only be transported or moved in transport position.



Danger!

Only use undamaged slinging equipment with sufficient carrying capacity. Personnel should never remain under hanging loads.

Hang masonry saw with slinging equipment with sufficient carrying capacity on the crane eye (Pos. 12).

- Name expert instructors before the lifting process
- Only use suitable lifting devices with sufficient load capacity
- Lift carefully and pay attention to the centre of gravity
- Always keep an eye on the masonry saw
- Secure loads reliably. Use suitable attachment points
- When recommissioning, follow the operating manual

4.3. Move with the forklift



Danger!

The masonry saw may only be transported or moved in transport position.



Danger!

Personnel should never remain under hanging loads.

The masonry saw can be picked up and moved with a forklift truck using the forklift supports (Pos. 14)

- The machine must be completely grasped with the forks of the forklift
- Name expert instructors before the lifting process
- Only use a suitable lifting device with sufficient load capacity
- Lift carefully and pay attention to the centre of gravity
- Always keep an eye on the masonry saw
- Secure loads reliably. Use suitable attachment points
- When recommissioning, follow the operating manual

5. OPERATION

5.1. Setting up the masonry saw



Danger!

Before the masonry saw is put into operation, it must be ensured that the machine is sitting securely. The load-carrying foundation must be clean and all wheels must have contact with the floor. The parking brake on the steerable wheel (Pos. 15) must be active.

5.2. Saw preparation

- Fill the water tank with water until the water pump is under water
 - Open the water tap on the saw hood
 - Plug power cable (400V, 32A) into the power plug (pos. 8)
-



Notice

Observe conditional connections according to electromagnetic compatibility see 7 Conditional connections!

- Checking safety equipment
 - Control the running direction of the tool
-

5.3. Sawing with the masonry saw



Notice

The operational position of the operator is at the handle (Pos. 16) in front of the saw table. (Pos. 11). Wear personal protective equipment!

- Set the saw table (Pos. 11) completely towards the operator
 - Place the brick on the saw table (Pos.11)
-



Danger!

Handling rotating tools carelessly can lead to life threatening injuries! Never reach into the rotating tool.

- Set the main switch (pos. 1) to "star"
 - Wait until the motor has reached the full rotation speed (uniform sound)
 - Set the main switch (pos. 1) to "delta".
-



Caution!

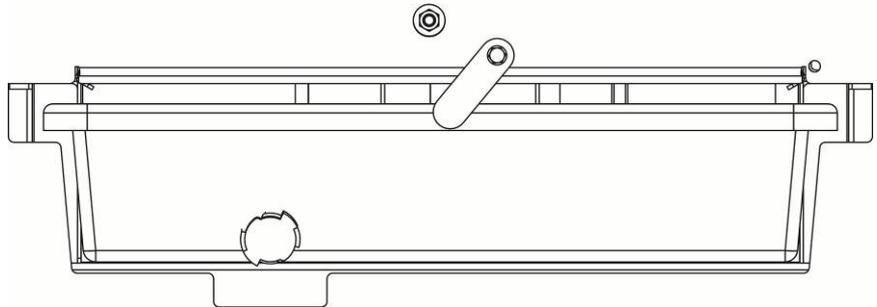
Does the saw blade get sufficient water for cooling?

- Dry cuts are not permissible
 - Too little cooling water leads to premature wear or to a defect of the saw blade.
-
- Initiate the feed movements using the handle (Pos. 16) of the saw table (Pos. 11)
 - When cutting, start with low feed force and then adapt the feed force to the saw blade.
-

5.4. Resharpener the tool

If the saw blade should loses its cutting quality after long working time, the saw blade can be resharpener with a few cuts into sand-lime brick or similar material.

5.5. Changing the cooling and lubricating agent



Very dirty water reduces the service life of the water pump and saw blade. With heavy use, change the water daily. Remove sawing sludge and clean the suction sieve of the pump.

- Drain the water by opening the GEKA water connection on the rear of the machine

6. MAINTENANCE

6.1. Service



Danger!

Maintenance and repair works must only be carried out by qualified personnel. The masonry saw must be secured against turning on by other people. The saw hood must only be swung out when the saw blade is at a standstill.
Maintenance and repair works may only be carried out when the machine is turned off.

Cleaning

To protect painted surfaces no aggressive cleaning agents may be used.

Electrical tests must be carried out according to the Ordinance on Industrial Safety and Health (BGV-A3).

The test intervals must be determined on a plant-specific basis. (this applies to Germany only)



Notice

If there is danger of frost, the water pump must be taken out of the water and the water circuit must be emptied. Already frozen pumps must be thawed out before turning on.

	before each use	daily	weekly	monthly
Visual inspection for recognizable damage and deficiencies	●			
Thoroughly clean the masonry saw (depending on use)		●		
Check saw blade	●			
Change cooling water		●		
Screw connections	Retighten all screw connections after 20 operating hours see 6.3			

6.2. Troubleshooting table



Danger!

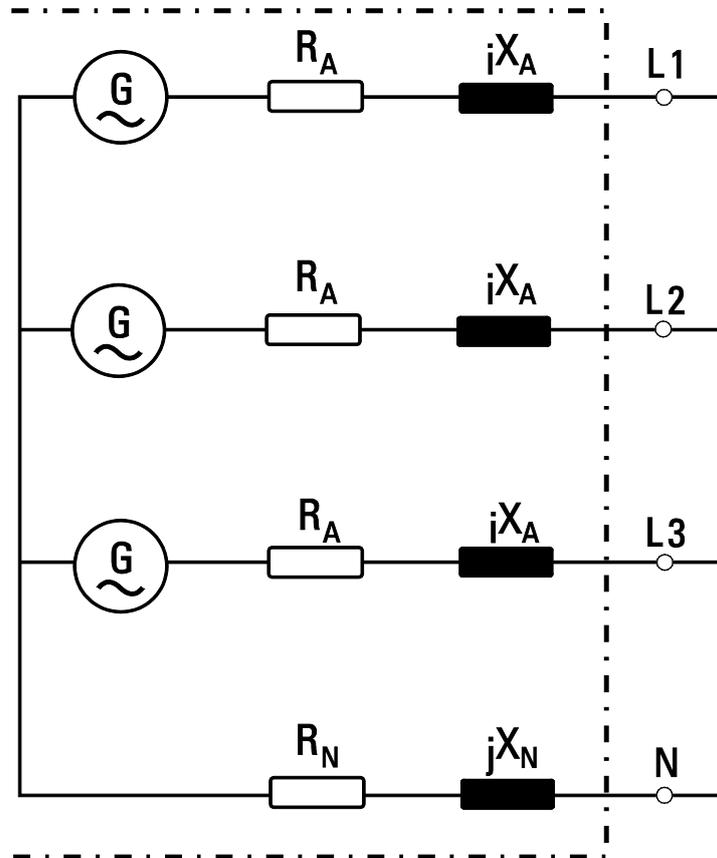
Pull the power plug before any maintenance or repair work. Measures must be taken, so that an accidental start-up by others is not possible. Maintenance and service works may only be carried out by qualified personnel.

Error	Cause	Remedy
Motor does not start	Mains cable	Control of the mains cable
	Motor faulty	May only be corrected by a trained technician
	Switch faulty	May only be corrected by a trained technician
Wrong direction	Motor has wrong polarity	Rotate phases in the connector plug
Motor stops while sawing, however, can be restarted after a short pause.	Feed too fast	Cut with slower feed
	Saw blade dull	Resharpener saw blade by 10-15 cuts in sand-lime brick
	Saw blade worn out pad below 2 mm	Replace saw blade
No water in saw blade	Pump does not run	May only be corrected by a trained technician
	Lines plugged	Control of the lines
Blocking of the saw blade	Saw jammed when cutting	Switch off the machine and remove the saw blade from the stone

6.3. Torque of screw connections

Strength class: Dimensions	8.8 Max. tightening torque in Nm	10.9 Max. tightening torque in Nm	12.9 Max. tightening torque in Nm
M4	3,3	4,8	5,6
M5	6,5	9,5	11,2
M6	11,3	16,5	19,3
M8	27,3	40,1	46,9
M10	54	79	93
M12	93	137	160
M14	148	218	255
M16	230	338	395
M18	329	469	549
M20	464	661	773
M22	634	904	1057
M24	798	1136	1329
M27	1176	1674	1959
M30	1597	2274	2662

7. CONDITIONAL CONNECTIONS



Conditional connections according to EN 61000-3-3 or IEC 61000-3-11

$$R_A = 0.15 \Omega$$

$$jX_A = 0.1 \Omega \text{ at } 50 \text{ Hz}$$

$$R_N = 0.1 \Omega$$

$$jX_N = 0.06 \Omega \text{ at } 50 \text{ Hz}$$

8. TOOLS

Depending on the application purpose and area, tools are different.
To have the best results, the parameters must match.



Notice

Tools can be selected using the LISSMAC sales booklet.
This sales booklet can be obtained from the manufacturer at any time.

Storage of tools

The used tools must be protected by moisture. The applied segments around the saw blade must be protected from damage.

9. WARRANTY

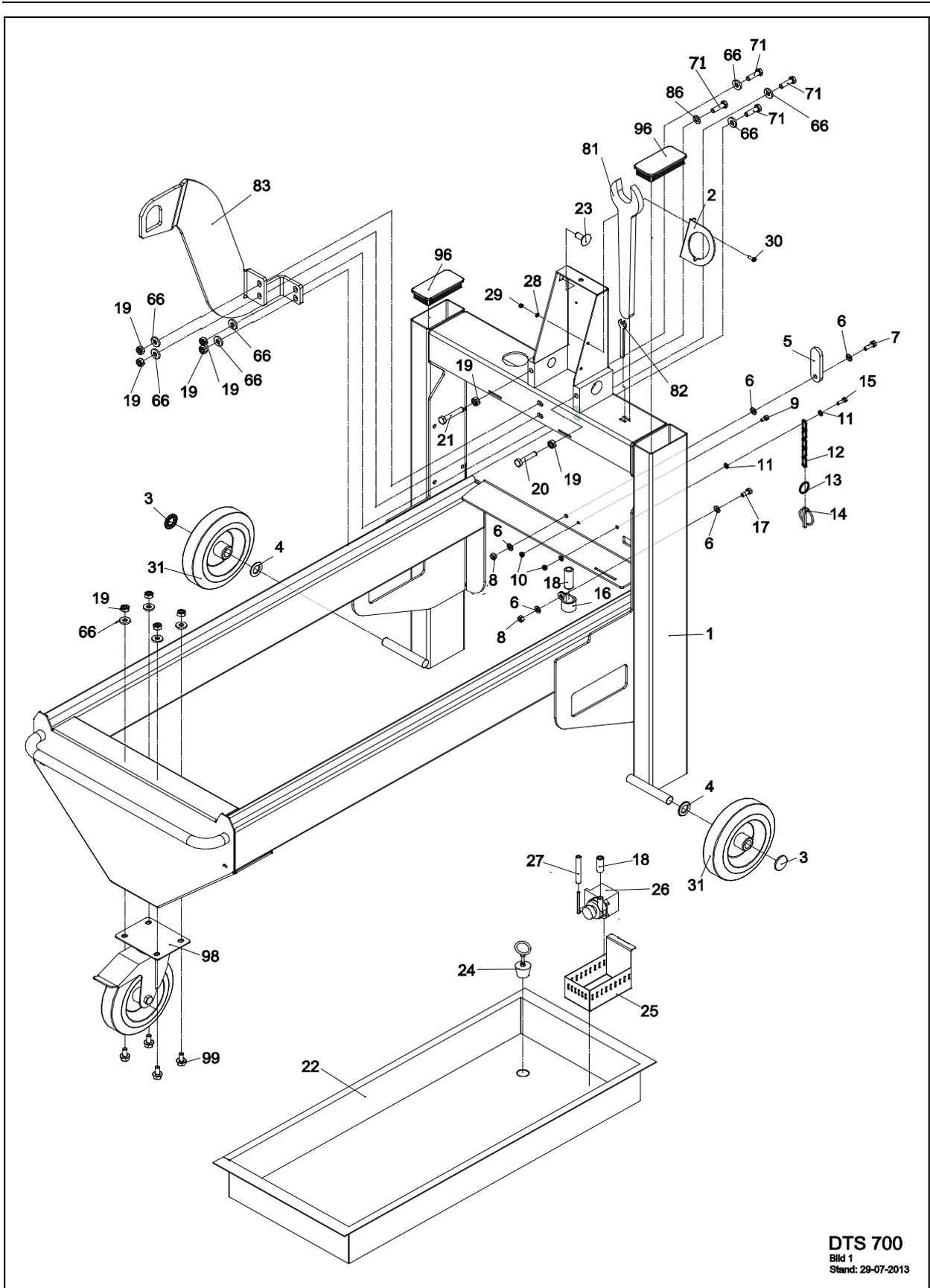
The warranty for this machine is 12 months. For the following listed wear parts the warranty only applies if the wear is not caused by operation.

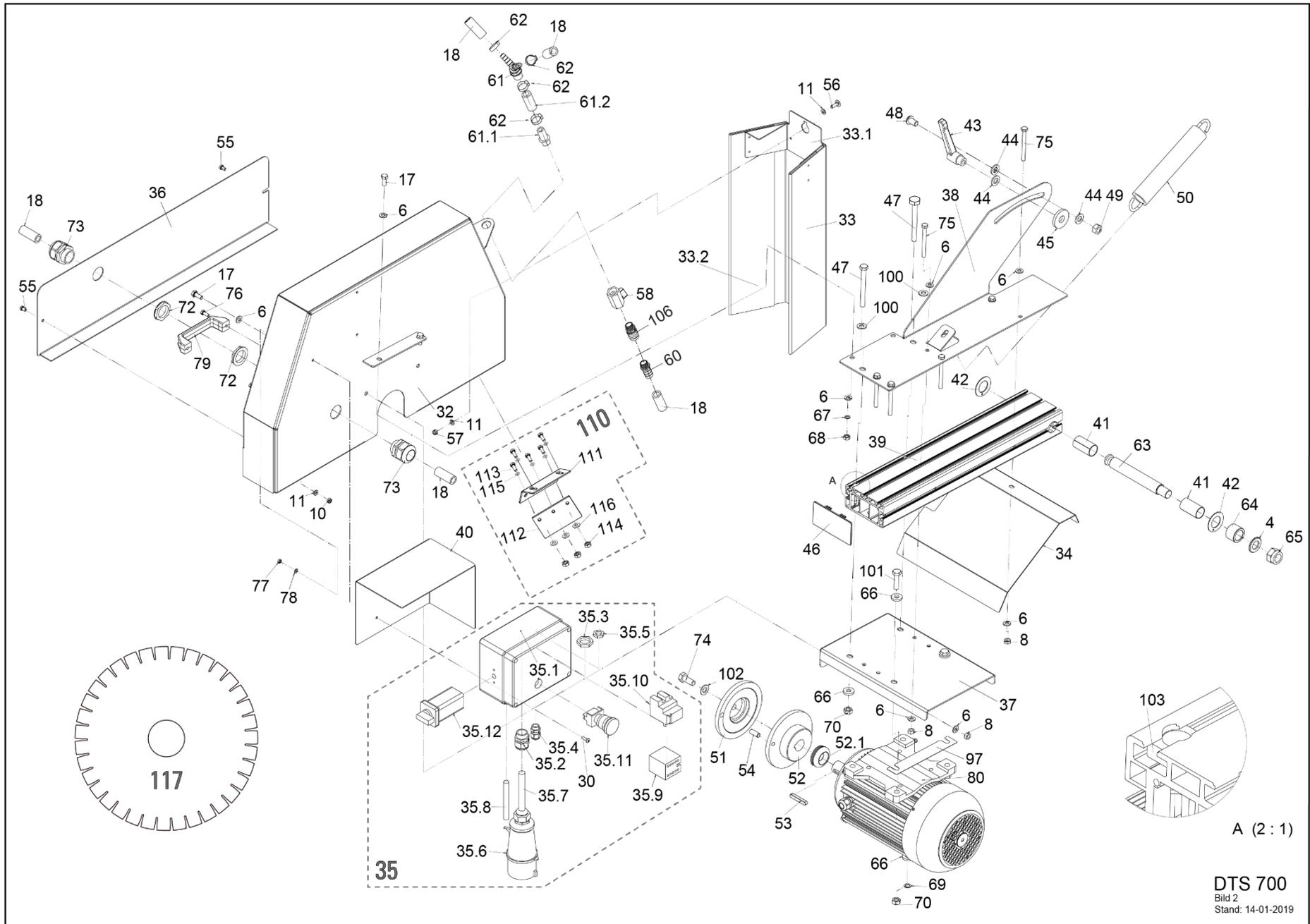
Wear parts are parts that with intended use of the machine have limited operational wear. The wear time is not uniformly specified, it differs according to intensity of use. Wear parts are device specific and are to be maintained, adjusted and if required exchanged according to the manufacturers' operating manual.

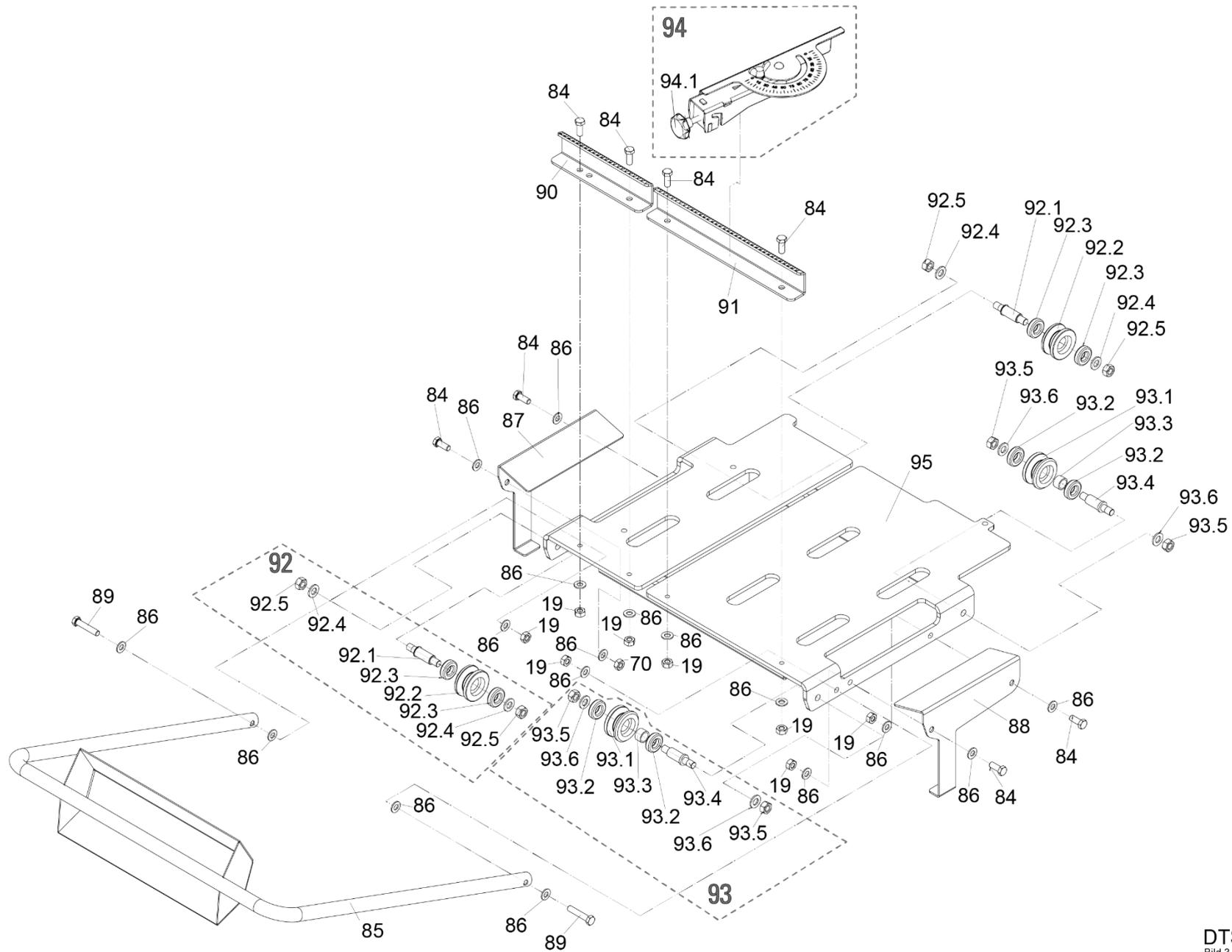
Wear caused by operation does not qualify for warranty claims.

- Feed and drive elements, such as toothed racks, gears, pinions, spindles, spindle nuts, spindle bearing, cables, chains, chain wheels, belts
- Seals, cable, hoses, collars, connectors, couplings and switches for pneumatics, hydraulics, water, electrical, fuel
- Guide elements, such as guide strips, guide bushings, guide rails, rollers, bearings, anti-slide plating
- Tension elements from quick-coupling systems
- Flushing head seals
- Plain and roller bearings, which do not run in oil bath
- Shaft sealing rings and sealing elements
- Friction and overload couplings, braking equipment
- Carbon brushes, collectors
- Easily dissolvable rings
- External potentiometer and manual switching elements
- Fuses and lamps
- Auxiliary and operating materials
- Fastening elements, such as pegs, anchors and screws
- Bowden cables
- Lamella
- Diaphragms
- Spark plugs, glow plugs
- Parts of reversing starters, such as crank cable, crank handle, crank roller, crank spring
- Sealing brushes, sealing rubber, splash guard cloths
- All types of filters
- Drive and deflector rollers and bracings
- Cable laying protection elements
- Running and drive wheels
- Water pumps
- Cut goods transport rollers
- Drilling, separating and cutting tools
- Transport belt
- Rubber scrapers
- Needle felt protection
- Energy storage

10. SPARE PARTS LIST







Item	Item no.	Description	Specification	Pc.	Spare part Recommendation
1	691601	Frame assembly		1	
2	607519	Switch holder		1	
3	280183	Star lock cap washers	Ø 20mm	2	X
5	610099	Pan locking bar		1	
6	300125	Washer	DIN 125 A 8.4	-	
7	300323	Hexagon head screw	DIN 933 8x25	-	
8	300834	Lock nut	BIW V-Form 8,0	-	
9	300400	Cylinder head screw with hexagonal	DIN 912 6x12	-	
10	300833	Lock nut	M6	-	
11	300248	Washer	M6	-	
12	200324	Chain	C link	1	
13	202653	Key ring	D-30mm	1	
14	280041	Plug fuse	8x 41 x 47 mm	1	
15	300172	Hexagon head screw	DIN 933 6x20	-	
16	200311	Pipe clamp	Type 1 B=20 mm	1	
17	300124	Hexagon head screw	DIN 933 8 x20	-	
18	205062	PVC hose	13x3.5	-	
19	300240	Lock nut	M10	-	
20	300239	Hexagon head screw	DIN 933 10x50	-	
21	300262	Hexagon head screw	DIN 933 10x60	-	
22	607617	Water tank		1	
23	300386	Carriage bolt	DIN 603 12x30	-	
24	690061	Water stoppers		1	X
25	607552	Pump basket		1	
26	404016	Submersible pump	P3_230V	1	X
27	280165	PVC hose	10x2	-	
28	300271	Schnorr safety washer	5.0	-	
29	300317	Hexagon nut	M5	-	
30	300883	Round head screw	DIN 7985 5x16	-	
30,1	209851	Protective stoppers captive screws (not illustrated)		-	
31	280003	Wheel, solid rubber		2	X
32	691745	Hood assembly		1	
33	680985	Mist protection		1	X
33,1	615371	Retaining plate		1	
33,2	615372	Splash guards		1	
34	607614	Swirler vane		1	
35	681386	Switch assembly		1	
35,1	1082086	Switch KSMB housing		1	
35,2	403166	Cable gland	M25x1.5	-	
35,3	403168	Lock nut	M25x1.5	-	
35,4	403055	Cable gland	M16x1.5	-	
35,5	403062	Lock nut	M16x1.5	-	
35,6	400060	Phase inverter plug	32-A	1	
35,7	403243	Line, rubber flex	5x2.5 mm	-	
35,8	403244	Line, flex	7x1.5	-	
35,9	403297	Contactora	B7-30-10 400V	1	X
35,10	403298	Thermal relay		1	X
35,11	400610	Emergency stop button		1	X
35,12	403296	Star-delta switch		1	X
36	607624	Saw hood plate		1	
37	607757	Motor plate		1	
38	607758	Saw arm plate		1	
39	203692	Saw arm		1	
40	607555	Switch panel		1	
41	262177	Cylinder bush		2	

Item	Item no.	Description	Specification	Pc.	Spare part Recommendation
42	203698	Thrust washer	GTM -2848-015	1	
43	280043	Clamping lever	M12	1	X
44	300166	Washer	M12	-	
45	300292	Disk	DIN-6340-M17	-	
46	203412	Slide stopper-aluminum profile		1	
47	360152	Hexagon head screw	DIN 933 10x100	-	
48	300967	Fillister head	M12x20	-	
49	300559	Lock nut	M12	-	
50	203670	Tension spring	Z-322	1	
51	607754	Pressure disc		1	
52	607753	Fixture flange		1	
52.1	201852	V ring seal	NBR 63 x 6 x 11	1	
53	300019	Parallel key	DIN 6885 A 8 x 7 x 50	1	
54	300267	Set screw	DIN 427 10x25	1	X
55	300387	Hexagon head screw	DIN 933 6x10	-	
56	300618	Carriage bolt	DIN 603 6x20	-	
57	300154	Hexagon nut	M6	-	
58	280263	Ball valve		1	X
60	280013	Hose connection	3/4"AGx19mm	1	X
60	201905	Ger-hex stud		1	X
61	200724	Y-piece		1	X
61,1	280101	Hose screwed connection		1	X
61,2	200195	PVC hose		-	
62	300054	Single-ear clamp	20.7	4	X
63	607612	Bearing pins		1	
64	607613	Pressure sleeve		1	
65	300836	Hexagon nut	M20	1	
66	300263	Disk	DIN-7349 10.5	-	
67	300245	Schnorr safety washer	8.0	-	
68	300273	Hexagon nut	M8	-	
69	300202	Schnorr safety washer	10.0	-	
70	300146	Hexagon nut	M10	-	
71	300193	Hexagon head screw	M10x35	-	
72	403169	Lock nut	M32x1.5	-	
73	403167	Cable gland	M32x1.5	-	
74	301678	Hexagon head screw LH	DIN 933 M12LHx30	-	
75	300690	Hexagon head screw	DIN 933 8x80	-	
76	300276	Hexagon head screw	DIN 933 6x16	-	
77	300832	Lock nut	M6	-	
78	300319	Washer	M5	-	
79	200237	Handle	D=6.5	1	
80	404011	E-Motor		1	
81	280204	Open-ended spanner	SW 19	1	
82	201655	Open-ended spanner	SW 10	1	
83	615361	Crane lifting hook		1	
84	300342	Hexagon head screw	M10x25	-	
85	692369	Handle assembly		1	
86	300177	Washer	M10	-	
87	607843	Table safety lock, left		1	
88	607842	Table safety lock, right		1	
89	300239	Hexagon head screw	DIN 933 10x50	-	
90	607627	Stop, left		1	
91	607415	Stop, right		1	
92	680294	Floating bearing		2	X
92,1	607562	Stud bolt - loose		2	
92,2	607561	Guide roller		2	

Item	Item no.	Description	Specification	Pc.	Spare part Recommendation
92,3	206300	Ball bearing	6003-2RS	4	
92,4	300166	Washer	M12	-	
92,5	300080	Hexagon nut	M12	-	
93	680295	Fixed bearing		2	X
93,1	607561	Guide roller		2	
93,2	206300	Ball bearing-6003-2RS		2	
93,3	607560	Spacer bushing		2	
93,4	607563	Stud bolts, fixed		2	
93,5	300080	Hexagon nut	M12	-	
93,6	300166	Washer	M12	-	
94	681141	Stop assembly		1	X
94,1	207718	Star handle	8x40	1	
95	692368	Table, welded		1	
96	206195	Slide stopper		2	
97	607755	Setting panel		-	
98	203457	Wheel, solid rubber		1	X
99	301191	Safety screw	M10x20	-	
100	300177	Steel washer	DIN125 A10,5	-	
101	300277	Hexagon head screw	DIN 933 10X 40 galv.	-	
102	300985	Steel washer	DIN 125 A 13,0	-	
103	611799	Setting panel		1	
-	209692	Label "LISSMAC DTS 271" 250 mm (rear side)			
-	208677	Label "LISSMAC DTS 271" 300 mm (hood)			
106	280109	Pipe clamp	AG 1/2" IG 3/4"	1	
110	1010301	Bearing pin rubber KPL:			
111	1010279	Crank handle		1	
112	1010280	Rubber		1	
113	300276	Countersunk screw galvanised	DIN 933 6x 16 verz.	5	
114	300833	Splash guard	BWI V-Form M6,0 verz.	5	
115	300289	Screw nipple	DIN 9021 6,4 verz.	5	
116	300242	Screw nipple	DIN 125 A 6,4 verz.	5	
117	790188	Diamond Saw Blade D 700			



Notice

To prevent incorrect deliveries, when ordering spare parts, indicate the complete model designation, year of manufacture and the machine number!

We make it explicitly clear that parts not supplied by us are also not tested and released by us. The installation and use of such products can therefore, in certain conditions, modify your equipment negatively and thus affect safety. For damages caused by the use of non-original parts and accessories, there is no liability!

Translation of the original declaration of conformity



This EC Declaration of Conformity is valid for the following machine:
LISSMAC masonry saw DTS 700.

This declaration relates exclusively to the machine in the state in which it was placed on the market, and excludes components which are added and/or operations carried out subsequently by the final user. It is confirmed that the machine conforms to the relevant provisions of Directive 2006/42/EC and 2004/14/EC.

Manufacturer:

LISSMAC Maschinenbau GmbH
Lanzstrasse 4
D-88410 Bad Wurzach

The technical documentation retained by
LISSMAC Maschinenbau GmbH, D-88410 Bad Wurzach

Machine description:

The masonry saw is one of the stone cutting saws and is designed exclusively for sawing mineral material in wet cutting process. The sawing of wood, plastic or metal and other materials is not intended.

	DTS 700
Cut depth	270 mm
cut length	520 mm
Saw blade diameter, max.	700 mm
Saw blade holder	60 mm
Motor output	400 V/5.5 kW
Saw blade speed	1400 rpm
Guaranteed noise power level	93 dB
Measured noise level L _{WA} :	94 dB
Feed	manually
Weight	230 kg

Harmonised standards:

EN 12418:2000+A1:2009
EN ISO 12100 Corrigendum 1:2013-08
EN 60204-1; VDE 0113-1/A1:2009-10
EN 55014-1:2012-05; VDE 0875-14-1:2012-05
EN 55014-2:2016-01; VDE 0875-14-2:2016-01
EN 61000-3-2:2015-03; VDE 0838-2:2015-03
EN 61000-3-3:2014-03; VDE 0838-3:2014-03

Legally binding representative:

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Bad Wurzach, dated 01.02.2016

ppa. Benjamin Mayer
(Head of Development Construction Technology)

LISSMAC
UNS BEWEGEN IDEEN

