

Masonry bench saw

MS 400



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MS400

Translation of the original operating instruction and spare parts list



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EC-DECLARATION OF CONFORMITY

Manufacturer

GÖLZ® GmbHDommersbach 51, D-53940 Hellenthal
Tel.: (02482) 12 200 / Fax: (02482) 12 222

Declare hereby certifies on its sole responsibility that the following product:

MS 400

Masonry bench saw

Serial number: _____

which is explicitly referred to by this declaration meet the following directives:

2006/42/EG	Safety and health requirement
2004/108/EG	Electromagnetic compatibility
2006/95/EG	Low Voltage Directive

meet the following standards:**EN 12418**

Documented evidence conforming to the requirements of the directives is kept available for inspection at the above manufacturer's address.



Hellenthal, den 06.05.2014

General Manager
B. Schmitz

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Preface

This operating manual is designed to familiarize the user with the masonry bench saw, hereinafter referred to as the machine, and to use its intended applications.

The operating manual contains important information on how to operate the machine safely, properly and most efficiently. Observing these instructions helps to avoid danger, to reduce repair costs and downtimes and to increase the reliability and the life of the machine.

This operating manual is to be supplemented by the respective national rules and regulations for accident prevention and environmental protection.

The operating manual must always be available wherever the machine is in use.

It is to be read and applied by any person in charge of work with or on the machine, such as:

- **Operation** including setting up, troubleshooting in the course of work, elimination of manufacturing waste, care and disposal of fuels and consumables.
- **Servicing** (maintenance, inspection, repair) and/or
- **Transport**

In addition to the operating manual and to the mandatory rules and regulations for accident prevention of the country and place of use of the machine, the recognized technical rules for safe and proper working conditions and procedures are also to be observed.

In this manual all the information required for the intended use of the unit is included. If though you have any specific questions, please refer to your representative, to one of our sales representatives or directly to us:

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Warning signs and symbols



Wear safety glasses!



Wear hard hat!



Wear ear muffs!



Wear safety boots!



Wear safety clothes!



Wear dust protection!



Wear protective gloves!



Read owner's manual
before first initiation!



Important advice!



Danger exists to cut oneself!



General danger!



Never touch!

1. Technical data and accessory

1.1 Technical data of the machine

Type	MS 400
Max. cutting depth	135 mm - 5,3 in.
Max. cutting length	800 mm - 31,5 in.
Blade shaft size	25,4 mm - 1 in.
Max. blade-Ø	400 mm – 15,7 in.
Engine	Electric Engine 2,2 kW, 320 V, IP54, 1Ph
Speed	2800 rpm
Water supply tank	30 l
Dimensions (L x B x H)	989 x 842 x 1290 mm - 38,9 x 33,1 x 50,8 in.
Dimensions (L x B x H) leg folded	989 x 740 x 695 mm – 38,9 x 29,1 x 27,4 in.
Weight	66 kg – 145,2 lbs.
Sound power level after ISO EN 3744	92 dB(A)
Sound pressure level after ISO EN 11201	80 dB(A)
Vibration	2,3 m/s ²

1.2 Provided accessory

- Operating instruction
- Spare parts list

1.3 Optional accessory

	MS 400
Water pump	✓

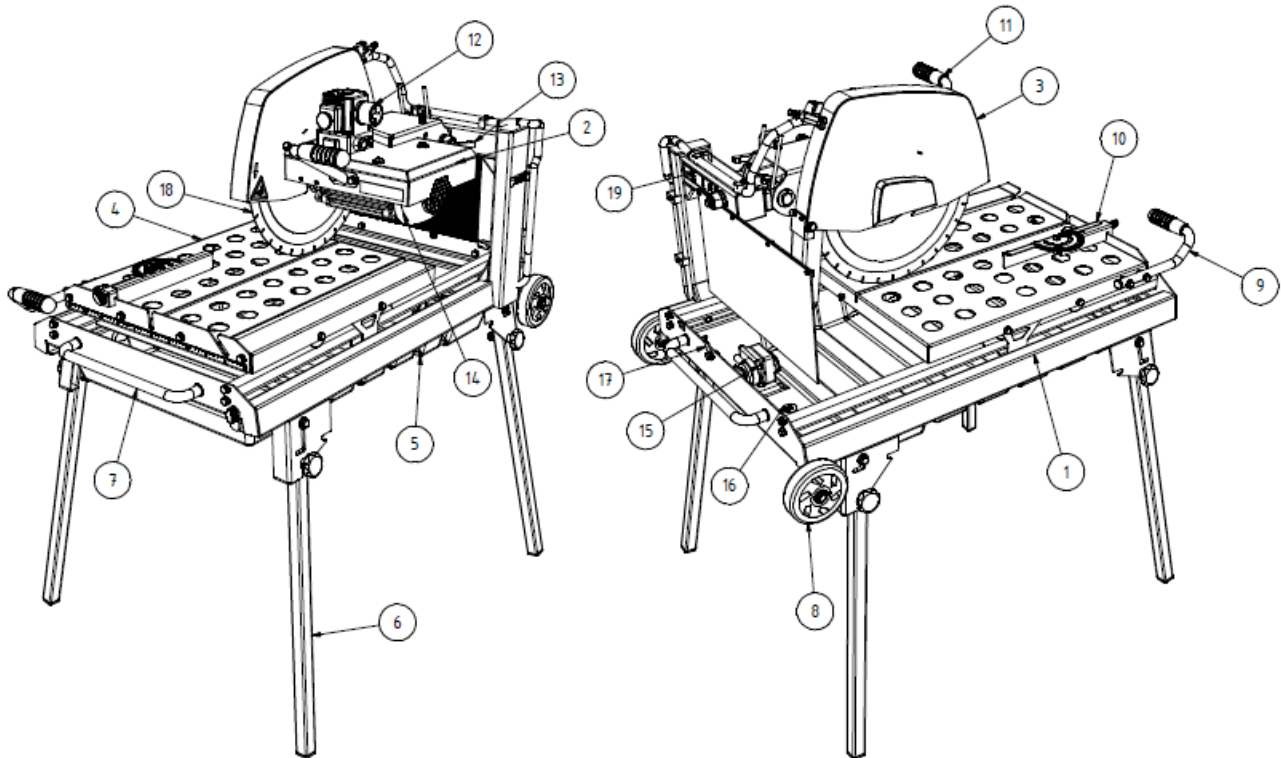
For the item number of accessories, please refer to the current catalogue of **GÖLZ®**

If accessories are used which do not correspond to **GÖLZ®** specifications, no liability is assumed for any damage resulting hereof.

For details regarding the selection of the right **GÖLZ®** diamond blades, please refer to the current **GÖLZ®** catalogue for diamond tools.

2. Description



2.1 Main parts



- | | | |
|----------------------|-------------------------|-------------------|
| 1) Main frame | 8) Transport wheel | 15) Water pump |
| 2) Cutting head | 9) Table handle | 16) Drain plug |
| 3) Blade guard | 10) Back square | 17) Table locker |
| 4) Cutting table | 11) Cutting head handle | 18) Blade |
| 5) Water supply tank | 12) Switch | 19) Machine plate |
| 6) Main pillar | 13) Adjusting handle | |
| 7) Transport handle | 14) Engine | |

3. Basic safety instructions

In this manual the following terms and symbols are used for particular important information:

	<i>Note / Important: Contains important information which stands out from the other text!</i>
	<i>Attention: Contains instructions which must be strictly observed to prevent damage from the unit and the operator!</i>

Important text passages are highlighted in italics or bold or can be found in a grey highlighted text field.

3.1 Intended use


The machine has been built in accordance with state-of-the-art standards and the recognized safety rules. Nevertheless, its use may constitute a risk to life and limb of the user or of third parties, or cause damage to the machine and to other material property.

The machine must only be used in technical perfect condition in accordance with its designated use and the instructions set out in the operating manual, and only by safety-conscious persons who are fully aware of the risks involved in operating the machine. Any functional disorders, especially those affecting the safety of the machine, should therefore be rectified immediately!

The machine is designed exclusively for cutting in concrete, reinforced concrete, natural stone, cast stone and brickwork. Using the machine for purposes other than mentioned above (such as cutting in wood and so on) is considered contrary to its designated use. The GÖLZ® GmbH cannot be held liable for any damage resulting from such use. The risk of such misuse lies entirely with the user.

Only use gear drives and motors, which are provided by GÖLZ® GmbH. Also attend those operating manuals.


Operating the machine within the limits of its designated use also involves observing the instructions set out in the operating manual and complying with the inspection and maintenance directives

	<i>Attention: Read and observe all the operating instructions which belong to this unit!</i>
---	---

3.2 Operating range

The operating range of the unit can be extended due its wide range of accessories allowing easy retrofitting which can be carried out by the operating personnel themselves.

Do not modify, add components to or retrofit the unit in a way which could affect its safety and do not use non-official accessories! This is not allowed without prior approval of GÖLZ® GmbH!

	<i>Note: Read and observe the operating instructions to the accessories!</i>
---	---

3.3 Organisational measures

This operating manual must always be at hand at the place of use of the machine and must be accessible to the person operating the machine!

In addition to this operating manual, all other generally applicable legal and other mandatory regulations relevant to accident prevention and environmental protection must be observed! Such obligations may also comprise the handling of hazardous materials, provisioning and/ or wearing of personal protective equipment, or road traffic regulations.

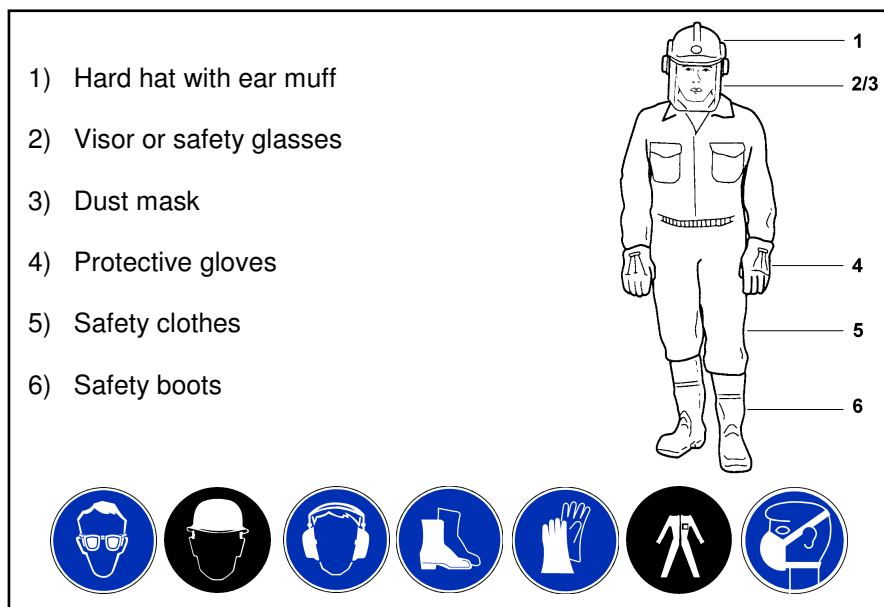
This operating manual must be supplemented by instructions covering the duties involved in supervising and notifying special organizational features, such as job organization, work flows or the person entrusted with the work. Person entrusted with work on the machine must have read the operating manual prior to taking up work. This applies especially to persons working only occasionally on the machine, e.g. during set-up or maintenance activities.

Check - at least from time to time - whether the personnel is carrying out the work in compliance with the operating manual and paying attention to risks and safety-relevant factors.

For reasons of safety, long hair must be tied back or otherwise secured, garments must be close-fitting and no jewellery - including rings - may be worn.

Severe injury may result from being caught by moving parts of the machine. Personal protective equipment must be used wherever required by the circumstances or by law (e.g. safety glasses, ear protectors, safety boots, suitable safety clothing). Observe the regulations for prevention of accidents! Observe all safety precautions and warnings attached to the machine and always keep them in good and perfectly legible condition.

The personal protection equipment should consist of the following parts:



In case event of safety-relevant modifications or changes in the behaviour of the machine, stop the machine immediately and report the malfunction to the competent authority/ person. Do not remove or make inoperative any safety devices the machine is equipped with.

Never make any modifications, additions or conversions which might affect safety without **GÖLZ® GmbH** prior approval! This also applies to the installation and adjustment of safety devices as well as to welding and cutting work on supporting structures.

Damaged or worn parts of the product must be replaced immediately. Use genuine spare parts only.

All spare parts and tools must comply with the technical requirements specified by the manufacturer/ distributor. Adhere to the legally prescribed preventive maintenance and inspection intervals or those specified in this operating manual!

Hydraulic hose pipes must be changed within the specified or appropriate intervals, even if no safety-relevant defects are visible.

All maintenance and repair activities must be performed by qualified personnel using suitable tools and other suitable workshop equipment. Observe the fire alarm and fire fighting measures. The personnel must be made familiar with the location and handling of fire extinguishers!

3.4 Selection and qualification of person

Only permitted personnel is allowed to work on and with the machine! The legal minimum age is to be observed!

Only assign trained and instructed personnel! Clearly define the responsibilities of the personnel with regard to operating, setting-up, maintaining and repairing the machine! The **GÖLZ® GmbH** can assist you in training your personnel.

Make sure that only instructed and competent personnel works on the machine. Define the responsibility of the machine operator, also in terms of traffic regulations and enable him to refuse instructions of third parties which breach safety regulations.

Personnel that is to be trained or to be instructed or that is serving a general training is only to be permitted to operate the machine under the supervision of an experienced person.

To operate the machine you must be rested, in good physical condition and mental health. If you have any condition that might be aggravated by strenuous work, check with your doctor before operating with the machine. Do not operate the machine if you are under the influence of any substance (drugs, alcohol) which might impair vision, dexterity or judgment.

Works on electrical, pneumatic, combustion and hydraulic fittings and equipment are only to be carried out by qualified personnel or instructed people being directed and supervised by qualified personnel in compliance with the respective rules!

3.5 Safety instructions governing specific operational phases

Before work

Avoid any operational mode that might be prejudicial to safety!

Before beginning work, familiarize yourself with the surroundings and circumstances of the site, such as obstacles in the working and travelling area, the soil bearing capacity and any barriers separating the construction site from public roads.

Take the necessary precautions to ensure that the machine is used only when in a safe and reliable state. Operate the machine only if all protective and safety-oriented devices, such as removable safety devices, emergency shut-off equipment, sound-proofing elements and exhausters, are in place and fully functional.

Regard all safety specifications!

Check the machine at least once per working shift for obvious damage and defects. Report any changes (incl. changes in the machine's working behaviour) to the competent organization/ person immediately. If necessary, stop the machine immediately and lock it. Have any defects rectified immediately. At any time, ensure the operator has sufficient view to his working area, in order to have intervention to the working process.

Wet cutting is to be accomplished while working. This prevents the appearance of particulate matter and increases the life-time of the diamond tool. During start-up and shut-down procedures always watch the indicators in accordance with the operating instructions!

Before starting or setting the machine in motion, make sure that nobody is at risk. Keep children and unauthorized persons away from the work area.

Noise protection equipment on the unit must be in protective position during operation. Wear the required individual ear protection!

Always keep at a distance from the edges of building pits and slopes. Avoid any operation that might be a risk to machine stability! Keep the work area clean. Cluttered areas and benches invite injuries! Do not operate when you are tired! Watch what you are doing! Risk of stumbling! Cables and hoses must complete rolling up. After assembly do not leave any tools, a wrench for example, on the unit.

Check to see that the tools are removed from the machine before operating! Damaged blades have to be changed immediately. Use only recommended blades from the **GÖLZ® GmbH**.

Control the working area for water-, gas- and electrical lines!



Important: Wet cutting is to be accomplished while working! This prevents the appearance of particulate matter and increases the life-time of the diamond tool!

During work

Make sure, that the machine is well fastened before and while cutting!
Never touch rotating parts like blade shaft or blade!

After work

Before leaving the machine always secure it against unauthorized use!

3.6 Special work related to the maintenance and repair of the machine

Observe the adjustment, maintenance and inspection activities and intervals set out in the operating instructions, including information on the replacement of parts and equipment! These activities may be executed by skilled personnel only.

Brief operating personnel before beginning special operations or maintenance work, and appoint a person to supervise the activities.

In any work concerning the operation, conversion or adjustment of the machine and its safety-oriented devices or any work related to maintenance, inspection and repair, always observe the start-up and shut-down procedures described in the operating instructions and the information on maintenance work. Ensure that the maintenance area is adequately secured.

Carry out maintenance and repair work only if the machine is positioned on stable and level ground and has been secured against inadvertent movement and buckling. If the machine is completely shut down for maintenance and repair work, it must be secured against inadvertent starting.

To avoid the risk of accidents, individual parts and large assemblies being moved for replacement purposes should be carefully attached to lifting tackle and secured. Use only suitable and technically perfect lifting gear and suspension systems with adequate lifting capacity. Never work or stand under suspended loads.

The fastening of loads and the instructing of crane operators should be entrusted to experienced persons only. The marshaller giving the instructions must be within sight or sound of the operator.

For carrying out overhead assembly work always use specially designed or otherwise safety-oriented ladders and working platforms. Never use machine parts as a climbing aid. Wear safety harness when carrying out maintenance work at greater heights.

Clean the machine, especially connections and threaded unions, of any traces of oil, fuel or preservatives before carrying out maintenance / repair. Never use aggressive detergents. Use lint-free cleaning rags.

Before cleaning the machine with water, steam jet or detergents, cover or tape up all openings which - for safety and functional reasons - must be protected against water, steam or detergent penetration.

Do not clean the machine with a high-pressure cleaner. The hard water jet can put damage to parts of the machine. After cleaning, remove all covers and tapes applied for that purpose.

After cleaning check the machine for loose connections, chafe marks and damage! Have identified defects repaired immediately!

Always tighten any screwed connections that have been loosened during maintenance and repair.

Any safety devices removed for set-up, maintenance or repair purposes must be refitted and checked immediately upon completion of the maintenance and repair work. Ensure that all consumables and replaced parts are disposed of safely and with minimum environmental impact.

3.7 Information about special risks with electrical energy

Observe the relevant national regulations or standards. Electrical connections must always be kept free from dirt and moisture.

Use only original fuses with the specified rating! Switch off the machine immediately, if trouble occurs in the electric power supply!

If your machine comes into contact with a live wire:

- warn others against approaching and touching the machine
- have the live wire de-energized

When working with the machine, maintain a safe distance from overhead electric lines. If work is to be carried out close to overhead lines, the working equipment must be kept well away from them.

Caution, danger to life!

- Check out the prescribed safety distances.
- Work on the electrical system or equipment may only be carried out by a skilled electrician himself or by specially instructed personnel under the control and supervision of such electrician and in accordance with the applicable engineering rules.
- If provided for in the regulations, the power supply to parts of machines and plants, on which inspection, maintenance and repair work is to be carried out must be cut off.
- Before starting work, check the de-energized parts for the presence of power and ground or short-circuit them in addition to insulating adjacent live parts and elements.

The electrical equipment of machines is to be inspected and checked at regular intervals. Defects such as loose connections or scorched cables must be rectified immediately.

Necessary work on live parts and elements must be carried out only in the presence of a second person who can cut off the power supply in case of danger by actuating the emergency shut-off or main power switch. Secure the working area with a red-and white safety chain and a warning sign. Use insulated tools only.

If mobile electrical equipment, connecting cables and/ or extension/ appliance cords with plug connectors are used, ensure that such equipment, cables and cords are checked for correct function at least once every six months by a qualified electrician or - if suitable testing equipment is available - by a properly instructed person.

Protective installations with fault-current protection units used in non-stationary equipment must be checked for correct operation at least once a month by a properly instructed person.

Fault-current and fault-voltage protection units must be checked for correct operation by actuating the testing facility:

- once on every working day in the case of mobile equipment,
- at least once every six months in the case of stationary equipment.

3.8 Gas, dust, steam, smoke

Operate combustion engines only in well-ventilated rooms! Before starting the unit in closed rooms, make sure that the room is sufficiently ventilated and use the exhaust gas hose!

Welding, burning and grinding operations on the machine are only to be carried out if this is explicitly authorized (there is the danger of fire and explosion)!

Before welding, burning and grinding operations clean the machine and its surrounding area from dust and flammable substances and care for sufficient ventilation (danger of explosion)!

When working in confined spaces observe any existing national regulations!

3.9 Noise

During operation sound protection devices on the machine must be in safe position. Wear the prescribed personal ear protection! (UVV 29 § 10, Article 29 of the Accident Prevention regulations).

The use of noise emitting machines may be restricted to certain times by national or local regulations.

3.10 Illumination

The machine is designed for use in daylight! The machine operator / owner must ensure sufficient workplace lighting for non-illuminated work sites!

3.11 Oils, greases and other chemical substances

When handling hydraulic fluids, lubricants, greases or preservatives (referred to hereinafter as fuels and lubricants), the safety regulations which apply to the respective machine are to be observed!

Avoid long contact of the fuels and lubricants with your skin! Careful cleaning of the skin from adhering fuels and lubricants is necessary.

Be careful when handling hot consumables (risk of burning or scalding) particularly at liquid temperatures above 60 °C, avoid any skin contact with these liquids!

If you get fuels or lubricants in your eyes, rinse them immediately and carefully with potable water. Then consult a doctor.

Remove flown out fuels and lubricants immediately! Therefore use a binder.

Fuels and lubricants must not seep into the soil or into the public sewage system! Fuels and lubricants which can no longer be used are to be collected, properly stored and to be properly disposed of.

The respective regulations and laws for handling fuels and lubricants which are valid in the country of use are to be observed and adhered to. This also applies to the disposal of such fuels and lubricants. To inform yourself turn to the responsible authorities.

3.12 Transport

Use only suitable means of transport and lifting gear of sufficient capacity when loading or transporting the machine! Appoint an experienced instructor for the lifting operation!

Always observe the instructions given in the operating manual when lifting the machine (use only the prescribed lifting eyes for attaching the lifting gear)!

Use only suitable transport vehicles with sufficient load capacity! Secure the load carefully. Use suitable fastening points for securing!

Before loading the machine or parts of it, secure the machine against inadvertent movement! Attach a suitable warning sign!

The blade must be removed for transport. Even in case of a minor change of location, the engine must be stopped!

Before using the machine again, make sure that such protection material or devices are properly removed! Parts which had to be removed for transporting of the machine must be refitted and secured carefully before the machine is used again!

Before setting the machine in motion always check that all accessories are safely stowed.

The recommissioning procedure must be strictly in accordance with the operating instruction! Observe the instructions given in the operating instruction when reassembling and operating the machine.

The machine can be transported by two persons using the transport handles or one person using the transport wheels. **The machine is not designed to be transported by crane!**

Before transporting the machine always do the following instructions:

- Remove the blade
- Empty the water tray,
- Lock the table
- Fold and tight the legs with the locking screws
- Make sure the transport handles and wheels are mounted correctly and well tighten.

3.13 Store

Store the machine in a dry, high or locked place, out of the reach of children or unauthorized persons. Clean and preserve the machine with corrosion preventive if storing over a longer time like winter time!

Note: Store dismounted blades so, that the blades not exposed to mechanical damages and harmful environmental conditions (UV radiation, temperature, humidity, etc.).



Attention: Store blades just standing or hanging!

Before storing always do the following instructions:

- Clean the machine
- Empty and clean the water tray
- Clean the water pump
- In case of frost, empty all water cooling system from its water.

4. Bringing into service



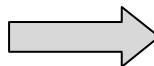
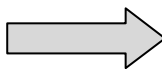
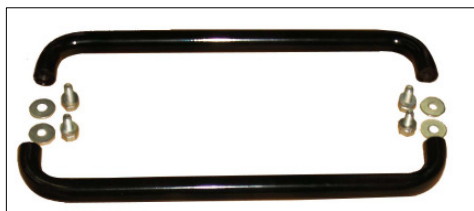
Attention: Do not yet turn the engine on! The following work is to be done with the engine being stopped!

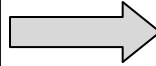
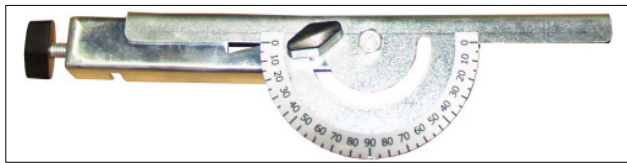
4.1 Export checking

Remove the transport packaging and place the unit vertically on a horizontal, flat and stable surface. Dispose of the transport packaging according to environmental regulations. Since the unit is delivered completely assembled, you need only check if it is complete and intact. For the scope of delivery, see "Technical Data and Accessories".

4.2 Assembling

Some components must be mounted on the machine. Look at the following pictures.





4.3 Engine



Note: Read and observe the instructions to the engine!

4.4 Setting up the machine



Attention: The cutting head must be set and detected with the control handle in a raised position!



Attention: The cutting table must be saved with the transport lock.

Loosen the star knob screws on the legs to close this out. Setting up the machine on a solid level and stable surface.

4.5 Mounting / changing the blade

To mount a new blade, always do the following instructions:

- Switch off the machine and unplug the supply cable.



- Loose the screw on the side of the blade guard and loose the screw at the front of the blade guard until the blade guard can pivot to access the tool.



- Loose the left threaded hexagonal nut on the motor shaft and remove the outer flange and the tool.



- Clean the tool shaft and flanges and inspect for wear.



- Mount the new blade. Make sure the tool rotation is correct and the bore corresponds to the shaft diameter.



- Mount back the outer flange.



- Tighten the left threaded hexagonal nut on the motor shaft.



- Close the blade guard. Tighten the screw at the front and on the side.



4.6 Electrical connections

Before connecting the machine to a power supply, make sure:

- The voltage/phase supply corresponds to the information indicated on the motor plate and machine plate.
- Available power supply must have ground connection in conformity with safety regulations.
- The size of the electric cable of the extended lead is sufficient (H07RNF 3x2.5mm² up to 50m for 230V)

5. Operation



Attention: Location rid of anything that might interfere with the operation! Ensure correct installation of the blade! With the exception of the operator, should be no other persons present in the work area!



Warning: Never touch rotating parts!

5.1 Before starting the machine

Before starting observe the following points:

- Make sure that the blade is correct installed and the blade guard is closed. The blade guard must always be fitted when cutting.
- Defective or worn blades must be replaced immediately.
- Make sure that the blade is not touching the cutting table at any position of the cutting table or cutting head.
- Fill the water tank with clean water and make sure the water pump in completely immersed in the water. The water pump doesn't run without water refill the water tank with clean water if necessary.
- Supply cooling water to the blade by the water pump.
- The material to be cut must not exceed the following:
Weight < 10 kg - 22 lbs.
Max. Dimensions: 600 x 500 x 135 mm - 23,6 x 19,7 x 5,3 in.

The machine only is operated in safe operating condition!

Pay attention to the dispositions of cooling water and flushing water as well as cutting muds. Cutting muds must be absorbed, filtered and disposed of.

5.2 Starting the machine

To start the machine, open the cover of the switch and press the green button.

After starting the machine check immediately the following points:

- The cooling water must be transported in sufficient quantity from the water pump to the blade. The water should drain on both sides of the blade.
- The water nozzles and water hoses should not clog.

If one of these points is not correct, stop immediately the machine!

The motor is equipped with a thermal protection to prevent high temperature rises, if the thermal protection triggers, wait until the motor has cooled down before starting the machine again.

5.3 Cutting operation



Important: Observe all the previous chapters in this manual, in particular the safety and warning instructions!



Warning: Never touch rotating parts!



Attention: Transport the unit only when the engine is stopped! This applies also to a short change of location!



Attention: Wear appropriate individual protective equipment!

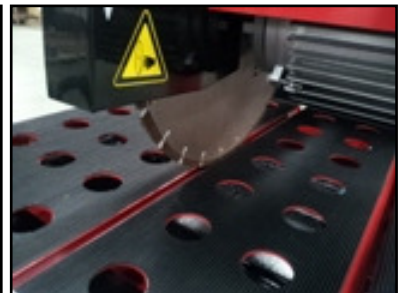
5.3.1 Cutting method: Fixed depth cutting

In fixed depth cutting, the cutting head is locked in a fixed position. To do fixed depth cutting, please follow this procedure:

- Switch off the machine and make sure the blade is not rotating.



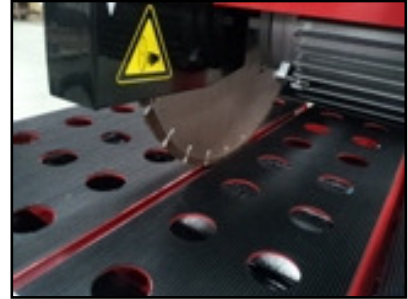
- Loosen the adjusting handle and adjust the cutting head to the desired position.



- Adjust the depth stop and tighten the counter nut to fix it well.



- Make sure that the blade is not touching the cutting table at any position of the cutting table or cutting head.



- Tighten strongly the adjusting handle and make sure the cutting head is well fixed and cannot move.



- Put the material on the cutting table. By using the back square control the position of the material.



- Start the machine.



- Put your left hand on the table pushing handle. Put your right hand on the cutting head handle. Your right hand should be ready to push the emergency stop in case of any unexpected problem.



- Push the cutting table slowly and without undue pressure towards the rotating blade. The blade cuts the applied material.



5.3.2 Cutting method: Free depth cutting for multiple steps cutting

In free depth cutting, the cutting head is not locked in a fixed position. This cutting method enables multiple steps cutting which consists of moving the table back and forth with the material to be cut under the rotating blade. For hard material, it is recommended to use this cutting method (e.g. by doing many shallow cuts).

To do free depth cutting, please follow this procedure:

- Switch off the machine and make sure the blade is not rotating.



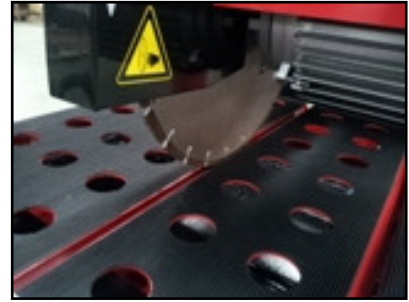
- Loosen the adjusting handle.



- Adjust the depth stop and tighten the counter nut to fix it well.



- Make sure that the blade is not touching the cutting table at any position of the cutting table when the cutting head is at the lowest position.



- Put the material on the cutting table. By using the back square control the position of the material.



- Start the machine.



- Put your left hand on the table pushing handle. Put your right hand on the cutting head handle. Your right hand should be ready to push the emergency stop in case of any unexpected problem.



- Push the cutting table slowly and without undue pressure towards the rotating blade.



- During the cutting process set the cutting depth manual about the cutter head handle. Push about the table handle the cutting table to the front and back again.



5.3.3 Cutting method: 45° bevel cuts

The machine enables to make fixed or multiple steps 45° bevel cuts. To do 45° bevel cuts, please follow this procedure:

- Switch off the machine and make sure the blade is not rotating.



- Put the cutting table at the front of the machine to clear the space for the pivoting of the cutting head.



- Loosen the big nut at the back of the cutting head.



- Rotate the cutting head until it stops at 45°.



- Tighten well the big nut at the back of the cutting head.



- Loosen the adjusting handle.



- Adjust the depth stop and tighten the counter nut to fix it well.



- Make sure that the blade is not touching the cutting table at any position of the table when the cutting head is at the lowest position.



- Put the material on the cutting table. By using the back square control the position of the material.



- Start the machine.



- Put your left hand on the table pushing handle. Put your right hand on the cutting head handle.
- Your right hand should be ready to push the emergency stop in case of any unexpected problem.
- Push the cutting table slowly and without undue pressure towards the rotating blade.

To put the cutting head back in the normal position, please follow this procedure:

- Switch off the machine and make sure the blade is not rotating.



- Put the cutting table at the front of the machine to clear the space for the pivoting of the cutting head.



- Loosen the big nut at the back of the cutting head.



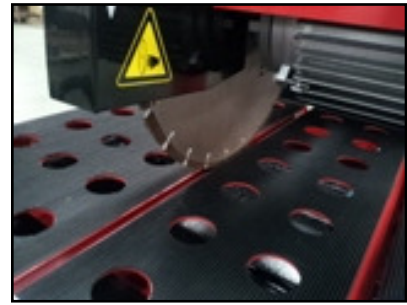
- Rotate the cutting head until it stops at 0°.



- Tighten well the big nut at the back and use your hand to maintain the position of the cutting head at 0° (because the tighten torque could slightly modify the angle possible of the cutting head!).



- Make sure the blade is not touching the table at any position of the table when the cutting head is at the lowest position.



5.4 Stop cutting operation

To stop the machine, press the red button or directly the emergency switch to stop the machine. The motor and the water pump shut off. Carry out the maintenance and care work according to the chapter "maintenance and care".

5.5 Changing the blade

The blade must be changed if:

- the diamond segments of the blade are completely worn
- the material to be cut changes
- the blade turns irregularly
- the diamond segments are damaged or broken

For fitting a new blade, proceed as described in the chapter "Mounting / changing the blade".

6. Maintenance and care



Attention: All maintenance, repair and care work is only to be done if the motor being stopped and the power supply is disconnected!

Spare parts must comply with the technical requirements specified by the manufacturer. Spare parts from GÖLZ® can be relied to do so! Observe the following indications:

In accordance to the given cycles, the subsequently described maintenance work has to be enforced. Also the wearing parts subject to no certain maintenance-intervals have to be checked regularly for wear and to adjust if necessary or to exchange.

		Before starting work	After work	Weekly	In the event of a malfunction	If damaged
Complete machine	check	x			x	x
	clean		x			
Flange	clean		x			
	replace					x
Engine shaft	clean		x			
Engine (housing and fan)	clean		x			
Water tank	clean		x			
Water pump	check				x	x
	clean		x			
Water hoses	deplete		x			
Water nozzle	clean		x			
Guiding rail and guiding roller	clean		x			
Screw fittings	check		x			

6.1 Machine

Clean the machine after each duty and check all functions. Replace all necessary parts that are out of order or worn out immediately.

6.2 Blade

When ending a cutting job - check blade as follows:

Check segments for cracks or break-outs, Cracks between segment and core barrel, Deformation and out of round wear.

In case of doubt, send the blade for repair.

7. Troubleshooting

Cause	Remedy
Machine doesn't work	
No electrical power supply	Check the power cable. Check the power connection.
Defective power cable	Change the power cable
Defective switch	Change the switch
Defective engine	Change the engine
No water on the blade	
Not enough water in the water tank	Refill with clean water
Closed water tap	Open the water tap
Clogged water system	Clean the water system and refill the water tank with clean water
Defective water pump	Clean the water pump. Replace the water pump if cleaning does not improve
Water pump is off	Check the electrical power supply
Engine stops during cutting	
Wrong blade for the application	Change the blade
Defective blade	Change the blade
Worn blade	Change the blade
Cutting advance too fast	Cut slowly
Undue pressure on the blade	Cut slowly



Attention: Only qualified personnel or personnel that is supervised and guided by qualified personal are allowed to work on electrical equipment based to applicable rules.

8. Spare parts list

8.1 Using the spare parts list

The spare parts list is not a mounting or dismounting instruction. The only purpose of the spare parts list is to easily and quickly find spare parts which can be ordered with distribution agencies, see chapter 8.1.3 "Distribution agencies".

8.1.1 Safety regulation



Danger: Mounting or dismounting assembly groups can give rise to risks which are not mentioned in the spare parts list!

Using this spare parts list for mounting or dismounting purposes is not permitted. For assembly and disassembly work exclusively the corresponding descriptions in this operating manual are to be followed.



Danger: Non-observance of this instruction can result in injury which, in the worst case, can result in death!

8.1.2 Ordering information



Note: In order to avoid wrong deliveries the information the ordering information should be checked for accuracy and completeness before sending it! Completely indicate the delivery address!

GÖLZ® GmbH
D - 53940 Hellenthal Tel. (02482) 120

Typ

MS 400

Baujahr

20XX

Maschinen-Nr.

XXXXX




Gew. kg

XX

kW

XXXXX



		
So bekommen Sie schnell und richtig Ihr Ersatzteil	Always indicate	Pour obtenir rapidement les pièces de rechange indiquer
<ul style="list-style-type: none"> • Maschinentyp gemäß Typenschild • Baujahr gemäß Typenschild • Artikelnummer gemäß Ersatzteilliste • Maschinennummer gemäß Typenschild 	<ul style="list-style-type: none"> • machine type according to nameplate • year of manufacture according to nameplate • order number according to spare part list • serial number according to nameplate 	<ul style="list-style-type: none"> • type de la machine conforme de plaque d'identification • Année de construction selon plaque d'identification • Numéro de l'article selon la liste des pièces de rechange • numéro de la machine conforme de plaque d'identification
Für Bestellungen, Fragen und Informationen wenden Sie sich bitte an die zuständigen Stellen.	For orders, questions and information, please contact the competent departments.	Pour les commandes, questions et informations, veuillez-vous adresser aux points de ventes correspondants.

8.1.3 Distribution agencies

Deutschland – Germany - Allemagne GÖLZ® GmbH Dommersbach 51 DE-53940 Hellenthal Tel: +49 (0)2482-12 200 Fax: +49 (0)2482-12 222 E-Mail: info@goelz.de / Internet: www.goelz.de	
Österreich - Austria - Autriche GÖLZ® Ges.m.b.H Samstraße 52 A-5020 Salzburg Tel: +43 (0) 662 - 43 81 75 Fax: +43 (0) 662 - 43 07 34 E-Mail: info@goelz.at / Internet: www.goelz.at	Frankreich - France - France GÖLZ® S.A.S. 1, rue de la Mairie F-67370 Berstett Tel: +33 (0)3.88.59.43.00 Fax: +33 (0)3.88.59.47.77 E-Mail: info@golz.fr / Internet: www.golz.fr
Großbritannien - Great Britain - Grande-Bretagne GÖLZ® (UK) Ltd. Unit A5, Springhead, Enterprise Park Northfleet Kent DA11 8HB Tel: +44 1 474321679 Fax: +44 1 474321477 E-Mail: info@goelz.co.uk / Internet: www.goelz.co.uk	Benelux GÖLZ® Benelux Eupener Straße 61 BE-4731 Raeren-Eynatten Tel: +49 (0)2482-12 200 Fax: +49 (0)2482-12 222 E-Mail: benelux@goelz.de / Internet: www.goelz-online.com
Australien - Australia - Australie GOLZ® Pty Ltd. 44 Stanley Street Peakhurst, NSW 2210 Tel: +61 (0) 2 9534 5599 Fax: +61 (0) 2 9534 5588 E-mail: info@golz.com.au / Internet: www.golz.com.au	USA GOLZ® L.L.C. 5860 East Osage Ridge Lane Columbia MO 65203-6018 Tel: +1 573 474 4961 E-Mail: info@golzusa.com / Internet: www.goelz-online.com

8.2 Wearing parts

Wearing parts for construction devices mentioned in the operating manual such as drilling and sawing machines.

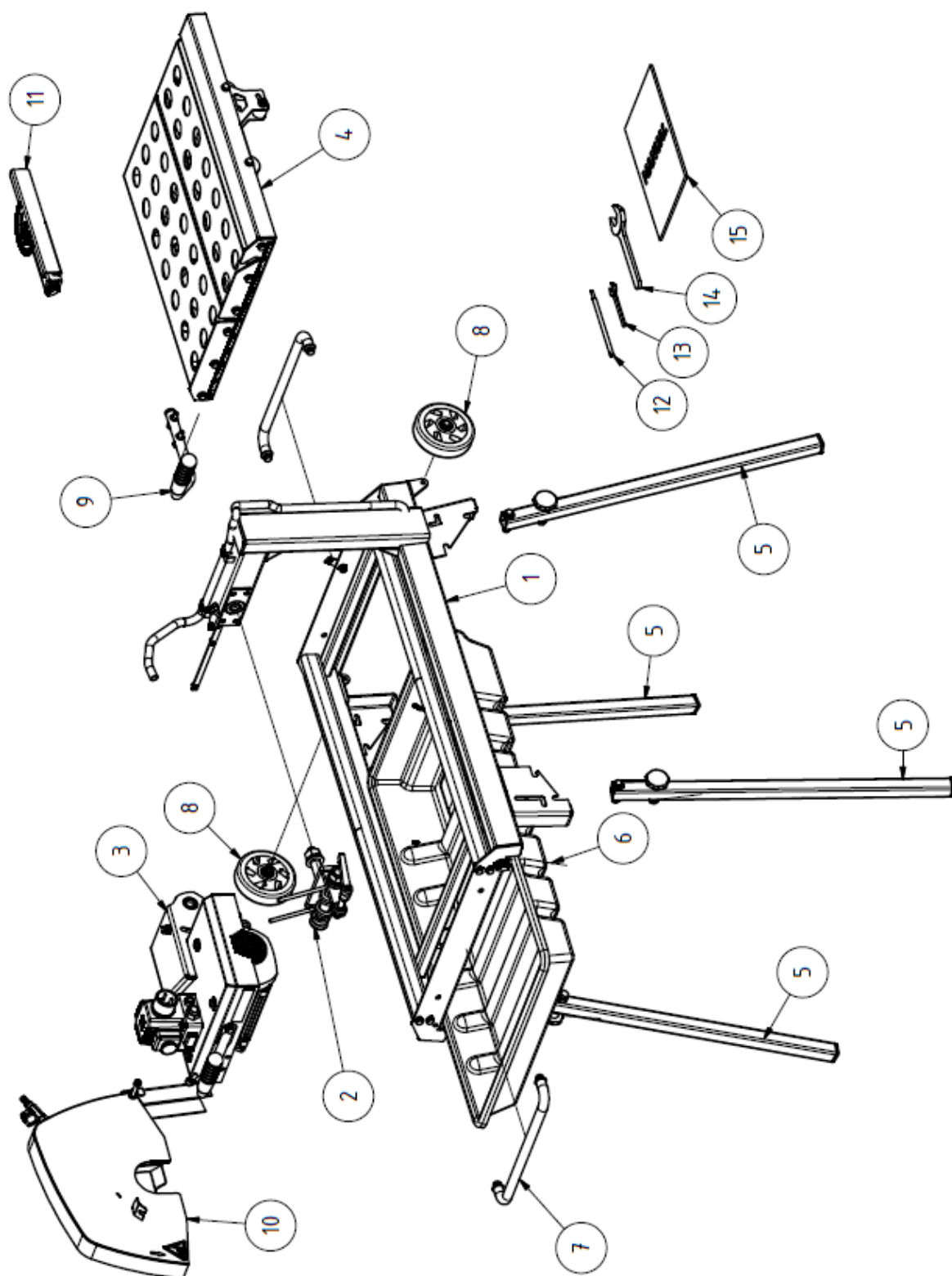
Wearing parts are the parts subject to operation-related (natural) wear during proper use of the device. The wearing time cannot be uniformly defined, and differs according to the intensity of use. The wearing parts must be adjusted, maintained and, if necessary, replaced for the specific device in accordance with the manufacturer's operating manual. Operation-related wear is not a reason for defect claims.

Wearing parts of this machine are grey marked in the spare parts list.

- Feed and drive elements such as toothed racks, gearwheels, pinions, spindles, spindle nuts, spindle bearings, cables, chains, sprockets, belts
- Seals, cables, hoses, packings, connectors, couplings and switches for pneumatic, hydraulic, water, electrical and fuel systems
- Guide elements such as guide strips, guide bushes, guide rails, rollers, bearings, sliding protection supports
- Clamping elements for quick-separating systems
- Flushing head seals
- Slide and roller bearings that do not run in an oil bath
- Shaft oil seals and sealing elements
- Friction and safety clutches, braking devices
- Carbon brushes, commutators / armatures
- Easy-release rings
- Control potentiometers and manual switching elements
- Securing elements such as plugs, anchors, screws and bolts
- Fuses and lamps
- Auxiliary and operating materials
- Bowden cables
- Discs
- Diaphragms
- Spark plugs, glow plugs
- Parts of the reversing starter such as the starting rope, starting pawl, starting roller and starting spring
- Sealing brushes, rubber seals, splash protection cloths
- Filters of all kinds
- Drive rollers, deflection rollers and bandages
- Cable anti-twist elements
- Running and drive wheels
- Water pumps
- Cut-material transport rollers
- Drilling, parting and cutting tools
- Energy storage

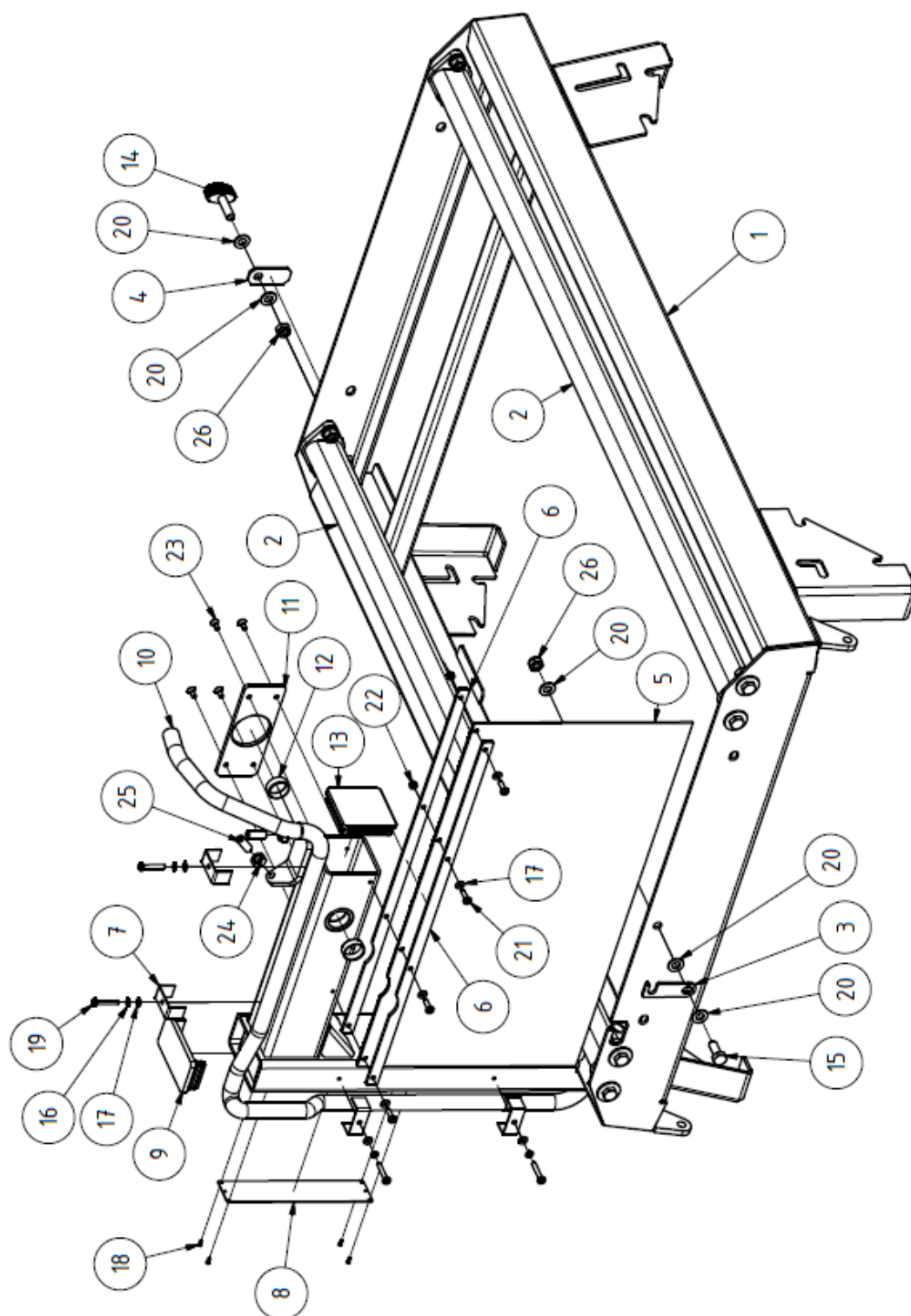
9. Exploded view and spare parts list

9.1 Machine



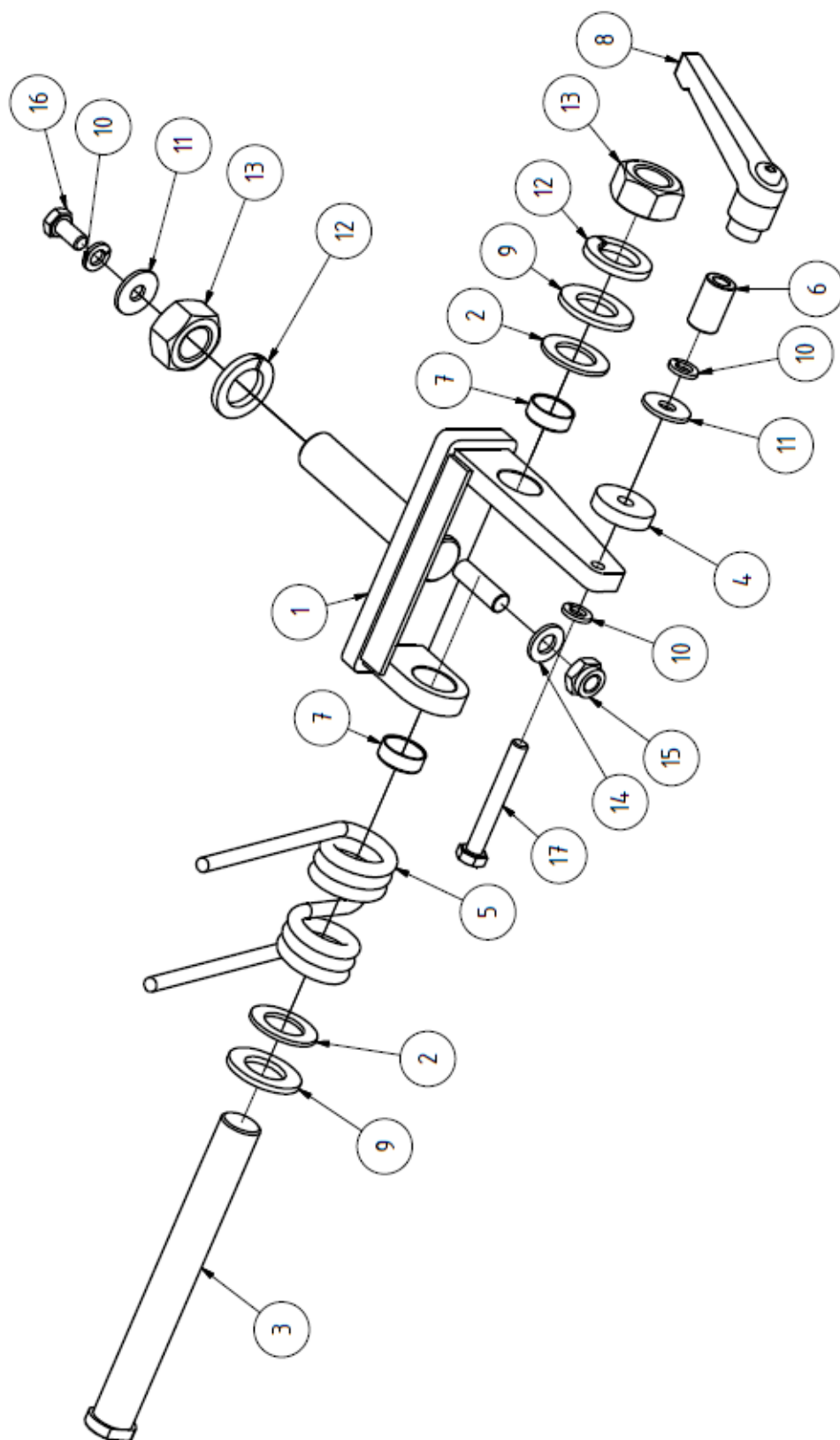
Pos.	Artikelnummer	Menge	Norm	Info	Bezeichnung	Description	Désignation
1	-				Rahmen kpl.	Frame complete	Châssis complète
2	-				Schneidkopfaufnahme kpl.	Cutter head acceptance complete	Levé couteau en-tête complète
3	-				Schneidkopf kpl.	Cutter head complete	Couteau en-tête complète
4	-				Schnittguttisch kpl.	Cutting table complete	Table de travail complète
5	-				Standbein kpl.	Main pillar complete	Jambe de pivot complète
6	-				Wasserbehälter kpl.	Water tank complete	Tank complète
7	-				Transportgriff kpl.	Transport handle complete	Poignée de transport complète
8	-				Transporträder kpl.	Transport wheel complete	Roue de transport complète
9	-				Tischgriff kpl.	Table handle complete	Table poignée complète
10	-				Schutzhaube kpl.	Blade guard complete	Capot protecteur complète
11	-				Anschlagwinkel kpl.	Back square complete	Équerre complète
12	-				Werkzeug	Tool	Outil
13	-			SW 13	Maulschlüssel	Wrench	Clé
14	-			SW 30	Maulschlüssel	Wrench	Clé
15	5007045				Bedienungsanleitung	Operating instruction	Mode d'emploi

9.2 Frame



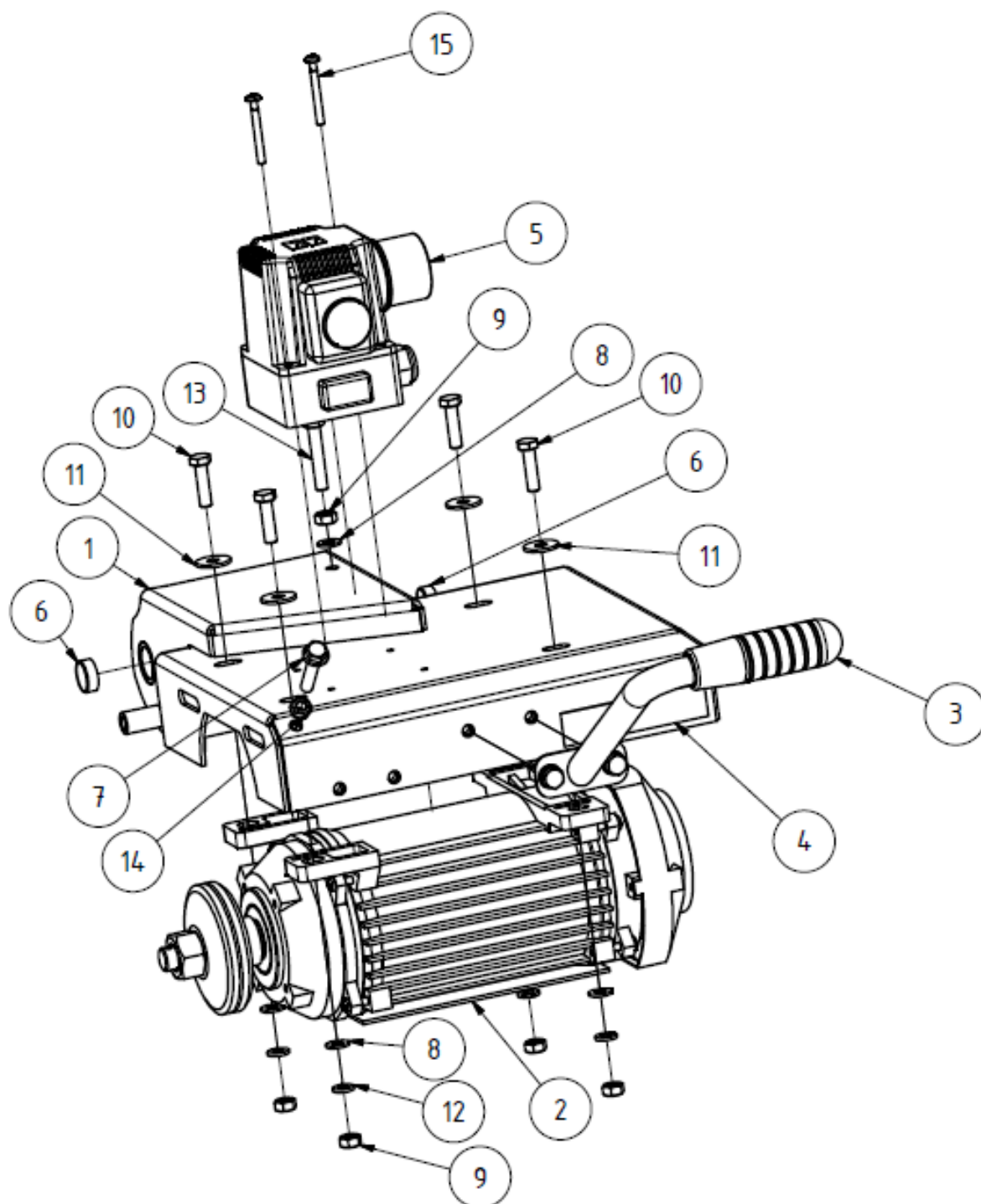
Pos.	Artikelnummer	Menge	Norm	Info	Bezeichnung	Description	Désignation
-	-				Rahmen kpl.	Frame complete	Châssis complète
1	-				Rahmen	Frame	Châssis
2	-				Führungsschiene kpl.	Guiding rail complete	Glissière complète
3	-				Transportsicherung	Transport lock	Sécurité transport
4	-				Anschlag Wasserbehälter	Limitation water tank	Limitation tank
5	-				Spitzschutz	Splash guard	Bavette anti-projection
6	-				Halteblech	Holding plate	Cadre support
7	-				Kabelbrücke	Cable bridge	Pont du câble
8	-				Platte	Plate	Plaque
9	-			80 x 40	Stopfen	Stopple	Bouchon
10	-			Ø 16 x 2	Schlauch	Hose	Tuyau
11	-				Abdeckung	Cover	Coiffe
12	-			GSM 2022-08	Gleitlager	Bush bearing	Roulement coulissant
13	-			60 x 60	Stopfen	Stopple	Bouchon
14	-		GN 531	M8 x 30	Flügelschraube	Wing screw	Vis à ailettes
15	-		DIN EN ISO 4017	M 8 x 20	Schraube	Screw	Vis
16	-		DIN 127	A 4	Federring	Spring washer	Rondelle-ressort
17	-		DIN EN ISO 7089	A 4,3	Scheibe	Washer	Rondelle
18	-		DIN EN ISO 8746	2 x 6 A	Kerbnagel	Drive pin	Clou cannelé
19	-		DIN EN ISO 7045	M 4 x 25	Schraube	Screw	Vis
20	-		DIN EN ISO 7089	A 8,4	Scheibe	Washer	Rondelle
21	-		DIN EN ISO 7045	M 4 x 12	Schraube	Screw	Vis
22	-		DIN EN ISO 7040	M 4	Mutter	Nut	Écrou
23	-		DIN EN ISO 7046	M 4 x 10	Schraube	Screw	Vis
24	-		DIN EN ISO 4032	M 8	Mutter	Nut	Écrou
25	-		DIN EN ISO 4026	M 8 x 20	Gewindestift	Set screw	Tige filetée
26	-		DIN EN ISO 7040	M 8	Mutter	Nut	Écrou

9.3 Cutter head acceptance



Pos.	Artikelnummer	Menge	Norm	Info	Bezeichnung	Description	Désignation
-	-				Schneidkopfaufnahme kpl.	Cutter head acceptance complete	Levé couteau en-tête complète
1	-				Aufnahme	Acceptance	Levé
2	-			Ø 35 x Ø 20,5 x 2	Scheibe	Washer	Rondelle
3	-				Achse	Axis	Arbre
4	-			Ø 30 x Ø 8 x 7	Buchse	Bushing	Douille
5	-				Feder	Spring	Languette
6	-				Buchse	Bushing	Douille
7	-			GSM 2022-08	Gleitlager	Bush bearing	Roulement coulissant
8	-		GN 300	M 8	Klemmhebel	Clamp lever	Levier de serrage
9	-		DIN EN ISO 7089	A 20	Scheibe	Washer	Rondelle
10	-		DIN 127	A 8	Federring	Spring washer	Rondelle-ressort
11	-		DIN EN ISO 7093	8,4	Scheibe	Washer	Rondelle
12	-		DIN 127	A 20	Federring	Spring washer	Rondelle-ressort
13	-		DIN EN ISO 4032	M 20	Mutter	Nut	Écrou
14	-		DIN EN ISO 7089	A 10,5	Scheibe	Washer	Rondelle
15	-		DIN EN ISO 7040	M 10	Mutter	Nut	Écrou
16	-		DIN EN ISO 4017	M 8 x 16	Schraube	Screw	Vis
17	-		DIN EN ISO 4017	M 8 x 60	Schraube	Screw	Vis

9.4 Cutter head



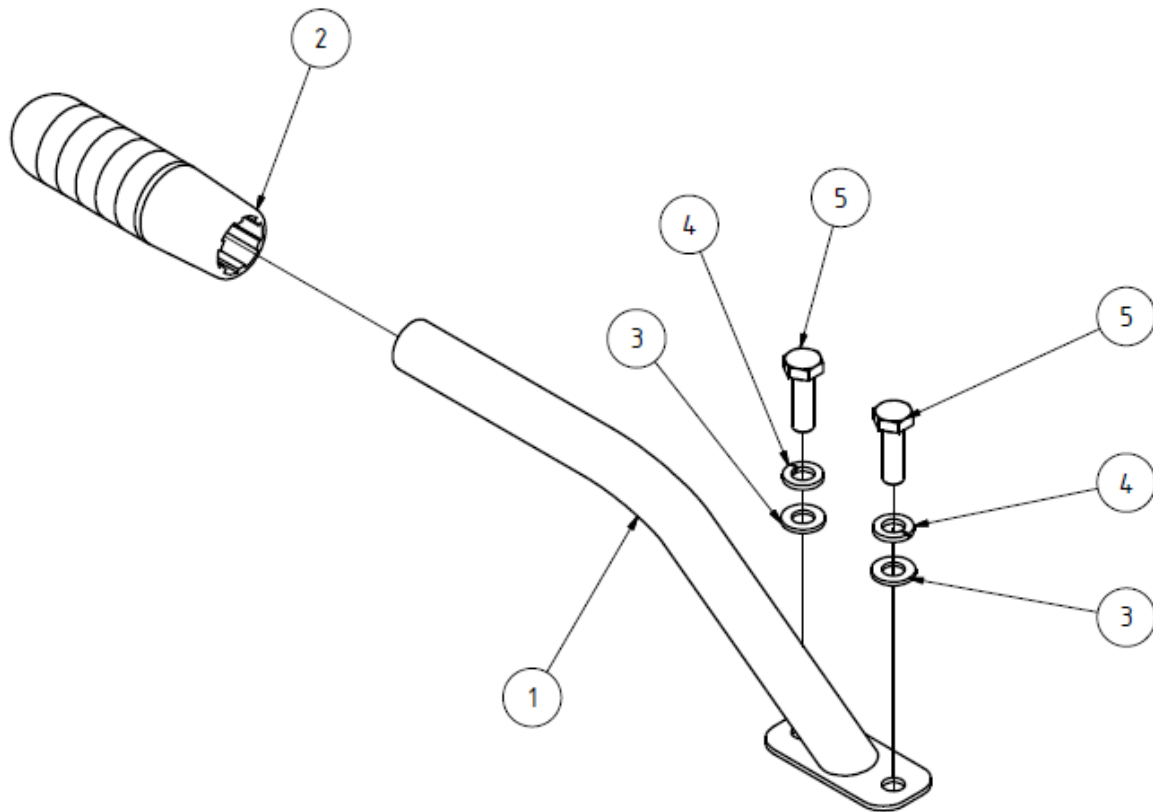
MS400

Translation of the original operating instruction and spare parts list



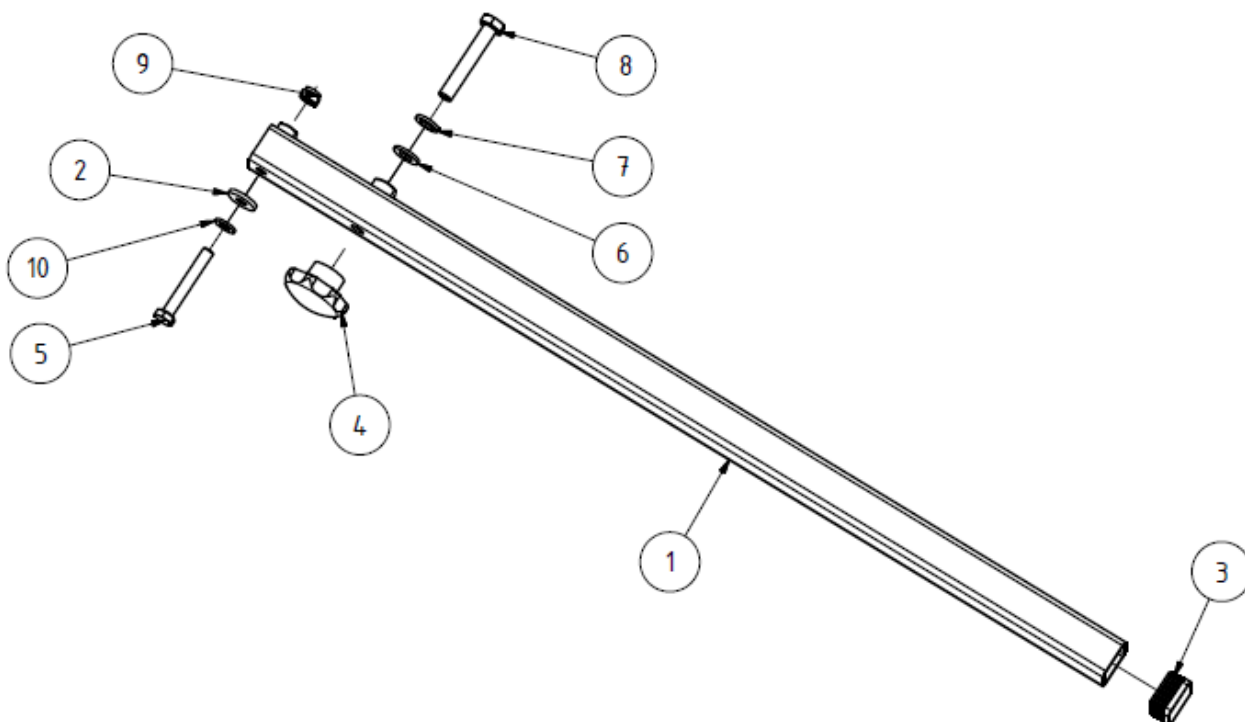
Pos.	Artikelnummer	Menge	Norm	Info	Bezeichnung	Description	Désignation
-	-				Schneidkopf kpl.	Cutter head complete	Couteau en-tête complète
1	-				Schneidkopf	Cutter head	Couteau en-tête
2	-			230 V	Motor	Motor	Moteur
3	-				Schneidkopfgreif kpl.	Cutter head handle complete	Couteau en-tête poignée complète
4	-				Aufkleber	Label	Macaron
5	-			230 V	Schalter / Stecker	Switch / Plug	Interrupteur / Connecteur
6	-			GSM 2022-08	Gleitlager	Bush bearing	Roulement coulissant
7	-		DIN 6921	M 8 x 40	Schraube	Screw	Vis
8	-		DIN EN ISO 7089	A 8,4	Scheibe	Washer	Rondelle
9	-		DIN EN ISO 4032	M 8	Mutter	Nut	Écrou
10	-		DIN EN ISO 4017	M 8 x 30	Schraube	Screw	Vis
11	-		DIN EN ISO 7093	8,4	Scheibe	Washer	Rondelle
12	-		DIN 127	A 8	Federring	Spring washer	Rondelle-ressort
13	-		DIN EN ISO 4017	M 8 x 45	Schraube	Screw	Vis
14	-		DIN EN ISO 7040	M 8	Mutter	Nut	Écrou
15	-		DIN EN ISO 7045	M 5 x 45	Schraube	Screw	Vis

9.5 Cutter head handle



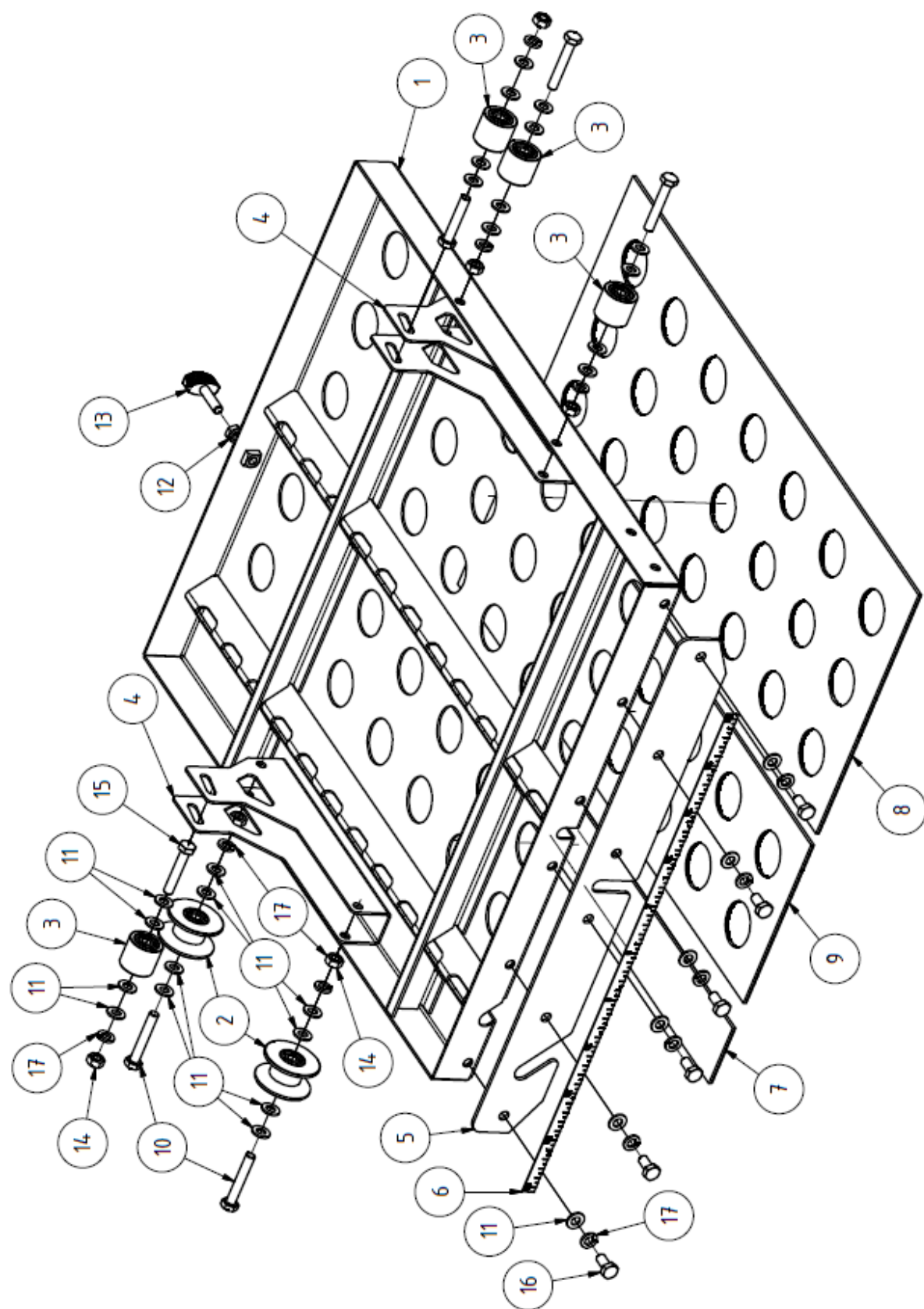
Pos.	Artikelnummer	Menge	Norm	Info	Bezeichnung	Description	Désignation
-	-				Schneidkopfgriff kpl.	Cutter head handle complete	Couteau en-tête poignée complète
1	-				Griffstange	Handle bar	Barres d'appui
2	-				Handgriff	Handle grip	Poignée
3	-		DIN EN ISO 7089	A 8,4	Scheibe	Washer	Rondelle
4	-		DIN 127	A 8	Federring	Spring washer	Rondelle-ressort
5	-		DIN EN ISO 4017	M 8 x 20	Schraube	Screw	Vis

9.6 Main pillar



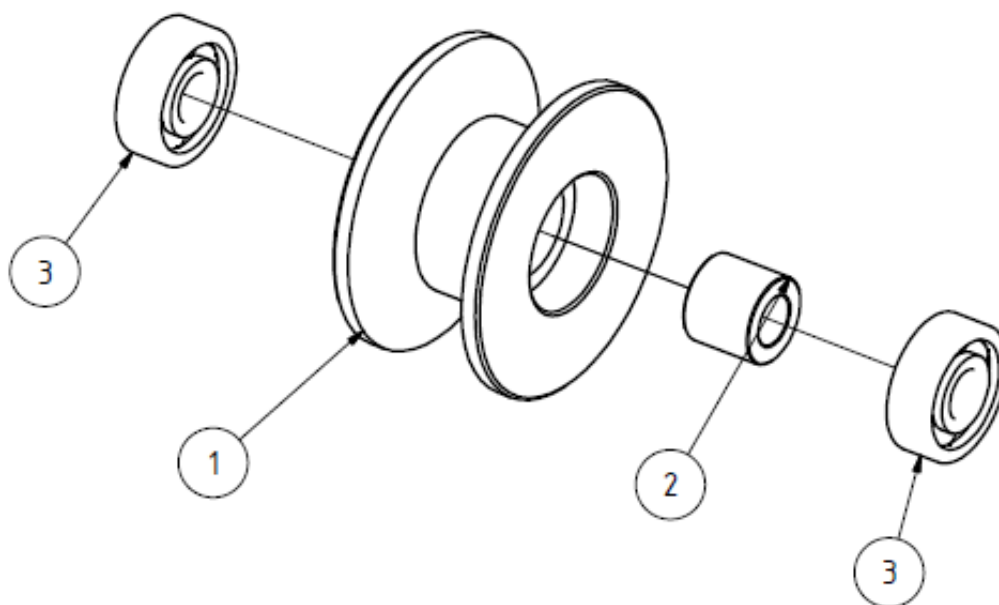
Pos.	Artikelnummer	Menge	Norm	Info	Bezeichnung	Description	Désignation
-	-				Standbein kpl.	Main pillar complete	Jambe de pivot complète
1	-				Standbein	Main pillar	Jambe de pivot
2	-			Ø 22 x Ø 8,5	Scheibe	Washer	Rondelle
3	-			30 x 30	Stopfen	Stopper	Bouchon
4	-			M 10	Sterngriffschraube	Star grip screw	Poignée-étoile
5	-		DIN EN ISO 4014	M 8 x 55	Schraube	Screw	Vis
6	-		DIN EN ISO 7089	A 10,5	Scheibe	Washer	Rondelle
7	-		DIN 127	A 10	Federring	Spring washer	Rondelle-ressort
8	-		DIN EN ISO 4017	M 10 x 60	Schraube	Screw	Vis
9	-		DIN EN ISO 7040	M 8	Mutter	Nut	Écrou
10	-		DIN EN ISO 7089	A 8,4	Scheibe	Washer	Rondelle

9.7 Cutting table



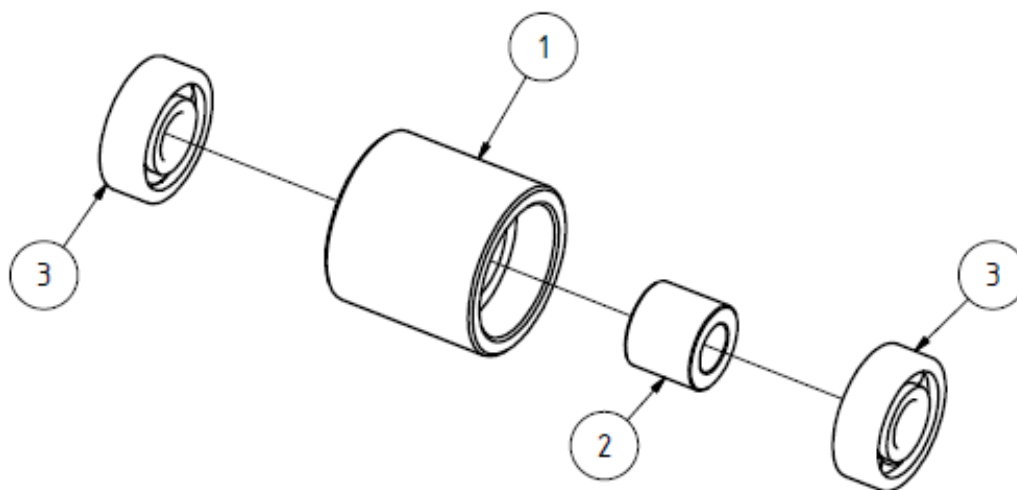
Pos.	Artikelnummer	Menge	Norm	Info	Bezeichnung	Description	Désignation
-	-				Schnittguttisch kpl.	Cutting table complete	Table de travail complète
1	-				Schnittguttisch	Cutting table	Table de travail
2	-				Führungsrolle kpl.	Guidance roller complete	Galet de guidage complète
3	-				Stützrolle kpl.	Support roller complete	Galet de montant complète
4	-				Rollenaufnahme	Roller acceptance	Support du galet
5	-				Anschlagblech	Stop plate	Lame d'arrêt
6	-				Lineal	Rule	Règle
7	-				Gummiplatte 3	Rubber plate 3	Plaque élastique 3
8	-				Gummiplatte 1	Rubber plate 1	Plaque élastique 1
9	-				Gummiplatte 2	Rubber plate 2	Plaque élastique 2
10	-		DIN EN ISO 4017	M 8 x 50	Schraube	Screw	Vis
11	-		DIN EN ISO 7089	A 8,4	Scheibe	Washer	Rondelle
12	-		DIN EN ISO 7040	M 8	Mutter	Nut	Écrou
13	-		GN531	M 8 x 30	Flügelschraube	Wing screw	Vis à ailettes
14	-		DIN EN ISO 4032	M 8	Mutter	Nut	Écrou
15	-		DIN EN ISO 4017	M 8 x 45	Schraube	Screw	Vis
16	-		DIN EN ISO 4017	M 8 x 16	Schraube	Screw	Vis
17	-		DIN 127	A 8	Federring	Spring washer	Rondelle-ressort

9.8 Guidance roller



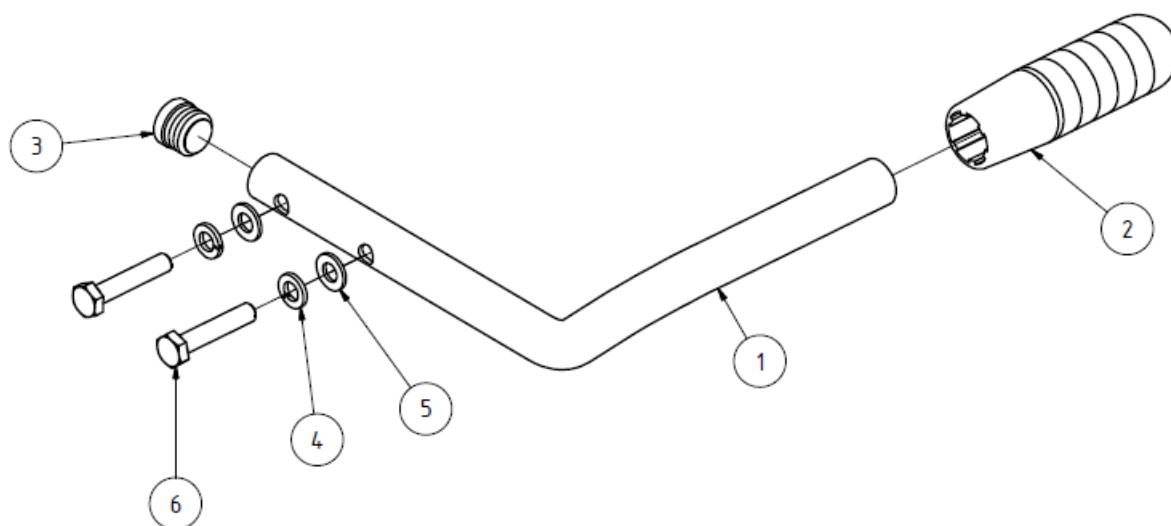
Pos.	Artikelnummer	Menge	Norm	Info	Bezeichnung	Description	Désignation
-	-				Führungsrolle kpl.	Guidance roller complete	Galet de guidage complète
1	-			Ø 50 x Ø 22	Führungsrolle	Guidance roller	Galet de guidage
2	-			Ø 14 x Ø 8 x 5	Buchse	Bushing	Douille
3	-		DIN 625	608-2RS1	Kugellager	Ball bearing	Roulement à billes

9.9 Support roller



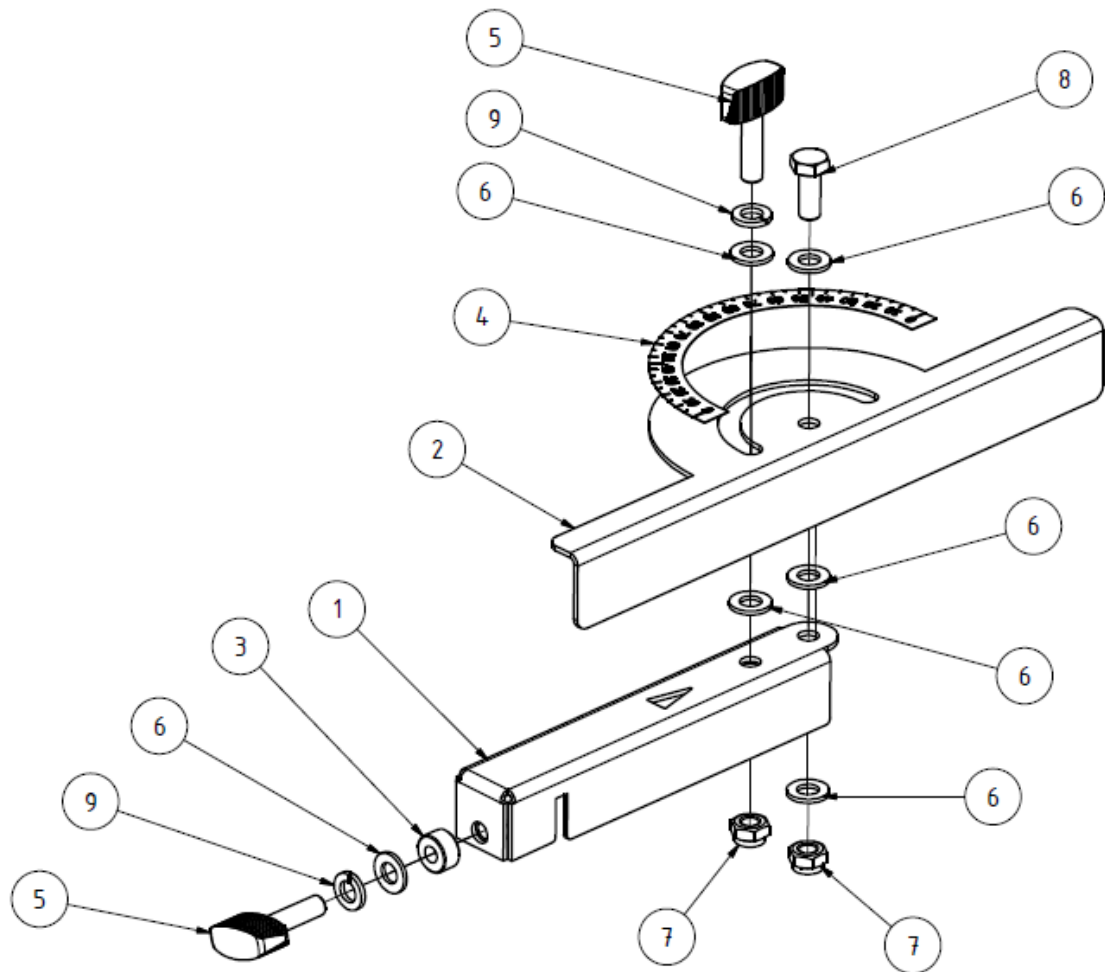
Pos.	Artikelnummer	Menge	Norm	Info	Bezeichnung	Description	Désignation
-	-				Stützrolle kpl.	Support roller complete	Galet de montant complète
1	-				Stützrolle	Support roller	Galet de montant
2	-			Ø 14 x Ø 8 x 5	Buchse	Bushing	Douille
3	-		DIN 625	608-2RS1	Kugellager	Ball bearing	Roulement à billes

9.10 Table handle



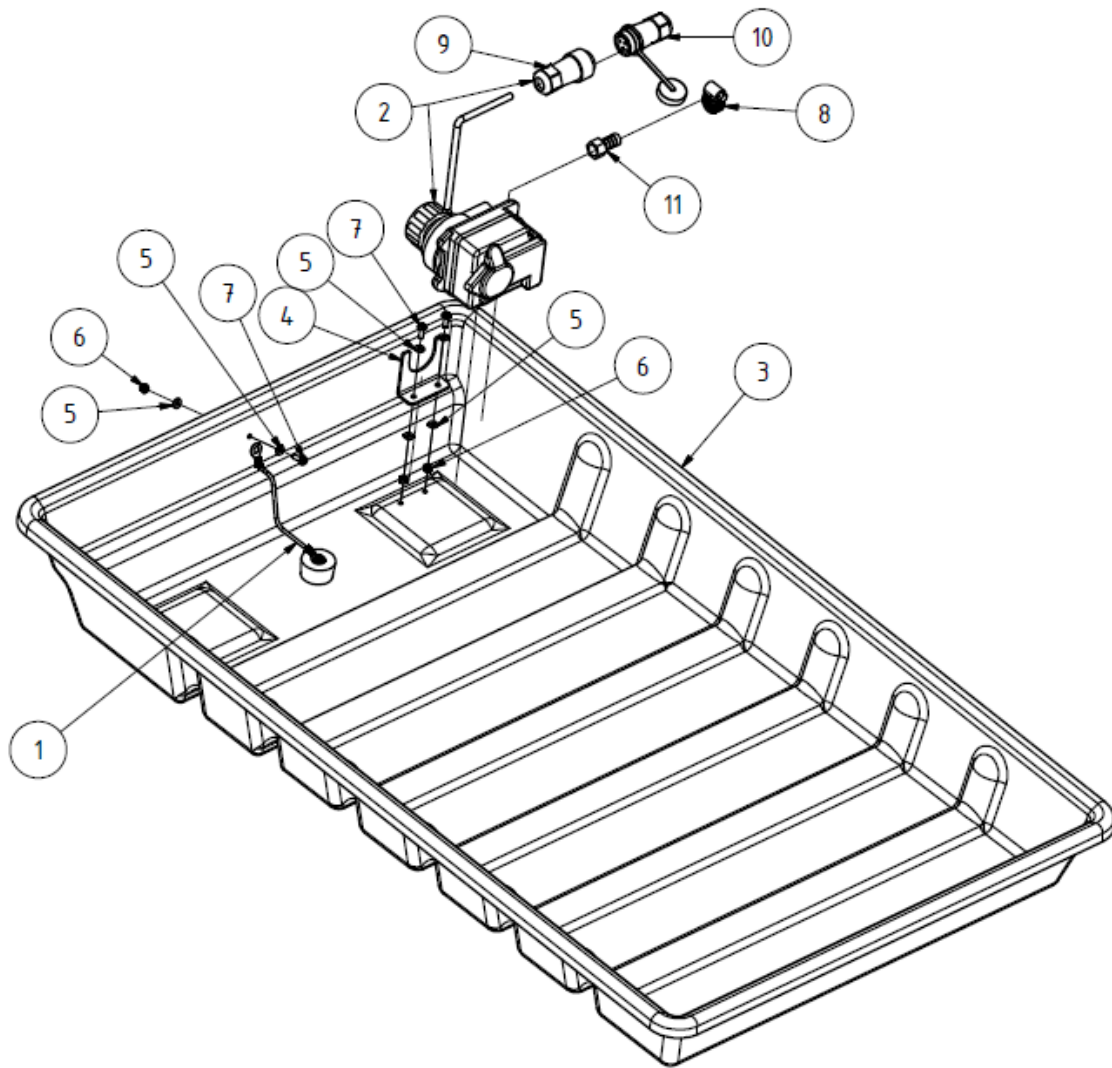
Pos.	Artikelnummer	Menge	Norm	Info	Bezeichnung	Description	Désignation
-	-				Tischgriff kpl.	Table handle complete	Table poignée complète
1	-				Griffstange	Handle bar	Barres d'appui
2	-				Handgriff	Handle grip	Poignée
3	-			Ø 20	Stopfen	Stopple	Bouchon
4	-		DIN 127	A 8	Federring	Spring washer	Rondelle-ressort
5	-		DIN EN ISO 7089	A 8,4	Scheibe	Washer	Rondelle
6	-		DIN EN ISO 4017	M 8 x 40	Schraube	Screw	Vis

9.11 Back square



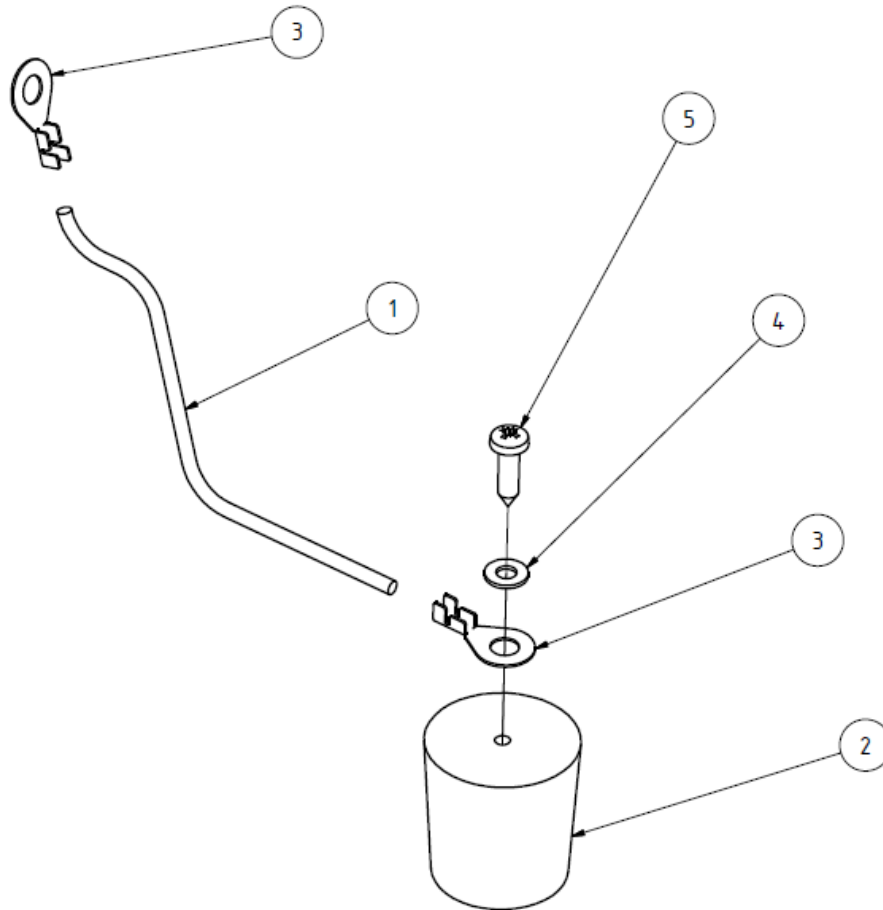
Pos.	Artikelnummer	Menge	Norm	Info	Bezeichnung	Description	Désignation
-	-				Anschlagwinkel kpl.	Back square complete	Équerre complète
1	-				Aufnahme	Acceptance	Levé
2	-				Anschlagwinkel	Back square	Équerre
3	-				Druckplatte	Pressure plate	Estampe
4	-				Skala	Scale	Cadran
5	-		GN 531	M 8 x 30	Flügelschraube	Wing screw	Vis à ailettes
6	-		DIN EN ISO 7089	A 8	Scheibe	Washer	Rondelle
7	-		DIN EN ISO 7040	M 8	Mutter	Nut	Écrou
8	-		DIN EN ISO 4017	M 8 x 20	Schraube	Screw	Vis
9	-		DIN 127	A 8	Federring	Spring washer	Rondelle-ressort

9.12 Water tank



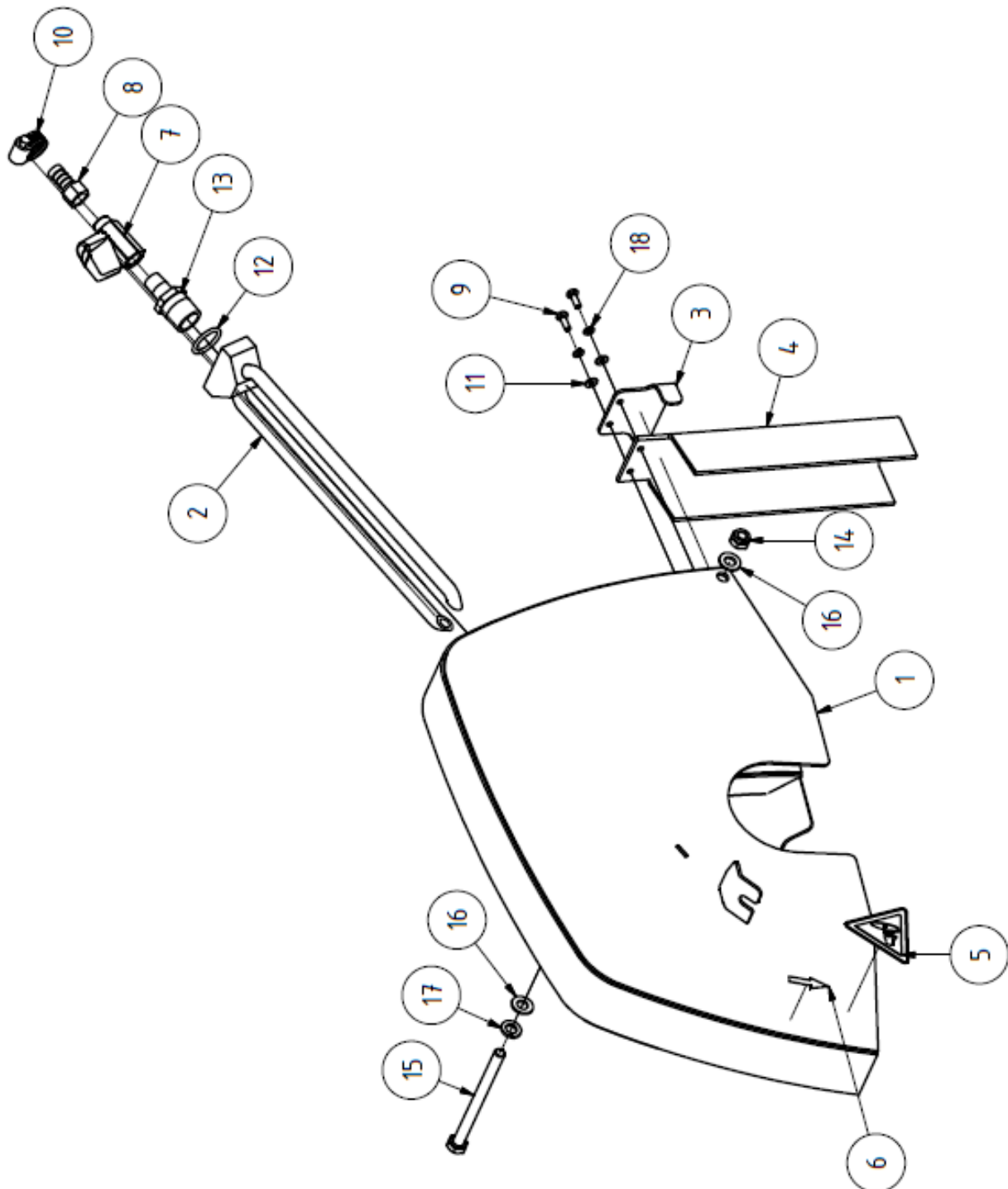
Pos.	Artikelnummer	Menge	Norm	Info	Bezeichnung	Description	Désignation
-	-				Wasserbehälter kpl.	Water tank complete	Tank complète
1	-				Ablaufstopfen kpl.	Stoppie with rope complete	Bouchon avec prolonge complète
2	-			230 V	Wasserpumpe	Water pump	Pompe d'eau
3	-				Wasserbehälter	Water tank	Tank
4	-				Pumpenhalter	Pump holder	Cadre support du pompe
5	-		DIN EN ISO 7089	A 4,3	Scheibe	Washer	Rondelle
6	-		DIN EN ISO 7040	M 4	Mutter	Nut	Écrou
7	-		DIN EN ISO 7045	M 4 x 12	Schraube	Screw	Vis
8	-				Schelle	Clamp	Collier
9	-				Kupplung	Clutch	Raccord
10	-				Kupplung	Clutch	Raccord
11	-			1/4"	Schlauchtülle	Hose fitting	Raccord à queue crantée

9.13 Stopple with rope



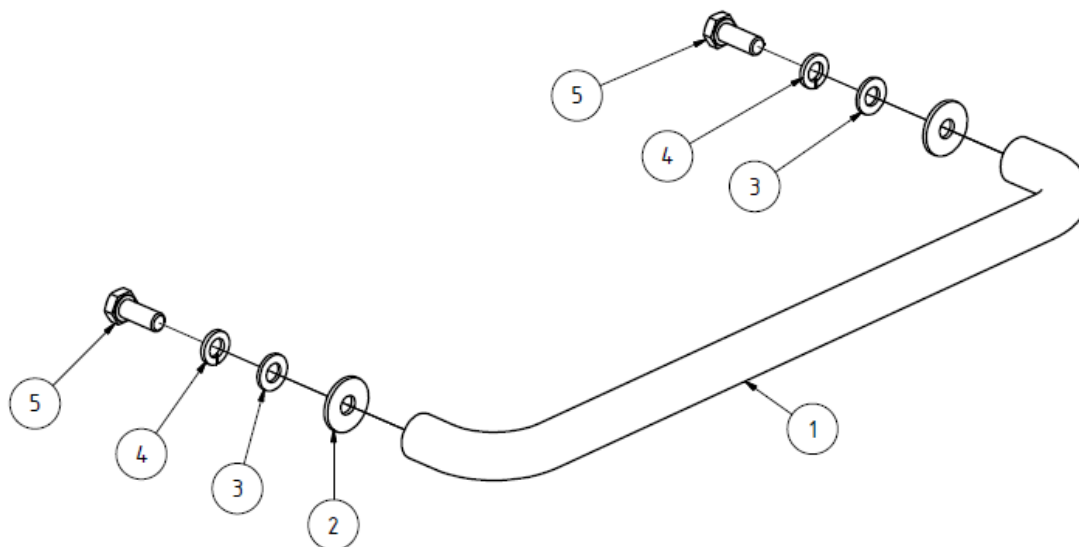
Pos.	Artikelnummer	Menge	Norm	Info	Bezeichnung	Description	Désignation
-	-				Ablaufstopfen kpl.	Stopple with rope complete	Bouchon avec prolonge complète
1	-				Seil	Rope	Prolonge
2	-				Stopfen	Stopple	Bouchon
3	-				Seilklemme	Rope clip	Prolonge clip
4	-		DIN EN ISO 7089	A 4,3	Scheibe	Washer	Rondelle
5	-		DIN EN ISO 7049	4,2 x 16-C-Z	Schraube	Screw	Vis

9.14 Blade guard



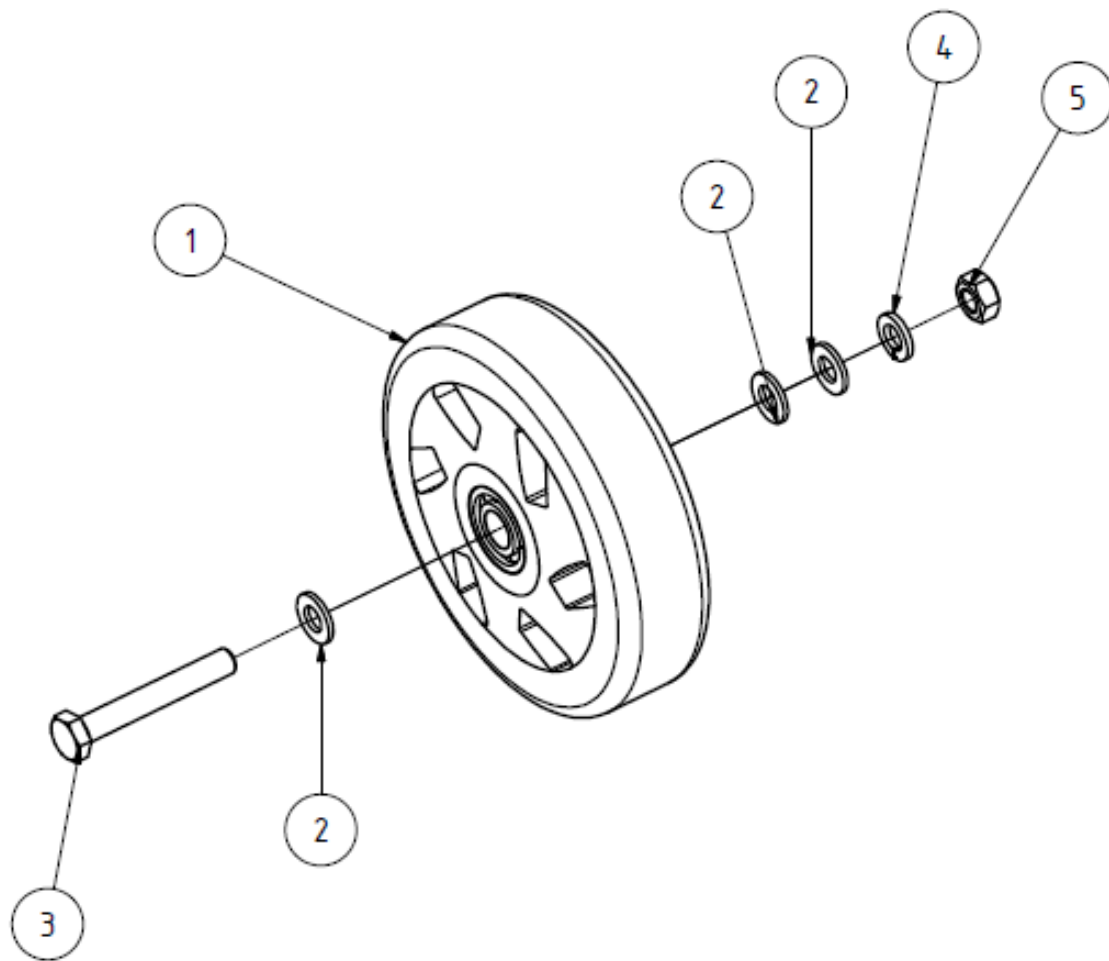
Pos.	Artikelnummer	Menge	Norm	Info	Bezeichnung	Description	Désignation
-	-				Schutzhaube kpl.	Blade guard complete	Capot protecteur complète
1	-				Schutzhaube	Blade guard	Capot protecteur
2	-				Wassergabel	Water distributor	Distributeur d'eau
3	-				Aufnahme Spritzschutz	Splash guard acceptance	Levé bavette anti-projection
4	-				Spritzschutz	Splash guard	Bavette anti-projection
5	-				Aufkleber	Label	Macaron
6	-				Aufkleber	Label	Macaron
7	-			1/4"	Kugelhahn	Ball valve	Robinet à rotule
8	-			1/4"	Schlauchtülle	Hose clip	Tétine (Tuyau)
9	-		DIN EN ISO 7045	M 4 x 12	Schraube	Screw	Vis
10	-				Schlauchschelle	Hose clamp	Collier
11	-		DIN EN ISO 7089	A 4,3	Scheibe	Washer	Rondelle
12	-		DIN 3771	20 x 2,65	O-Ring	O-ring	Joint torique
13	-			1/2" - 1/4"	Reduzierung	Reduction	Réduction
14	-		DIN EN ISO 7040	M 8	Mutter	Nut	Écrou
15	-		DIN EN ISO 4017	M 8 x 100	Schraube	Screw	Vis
16	-		DIN EN ISO 7089	A 8,4	Scheibe	Washer	Rondelle
17	-		DIN 127	A 8	Federring	Spring washer	Rondelle-ressort
18	-		DIN 127	A 4	Federring	Spring washer	Rondelle-ressort

9.15 Transport handle



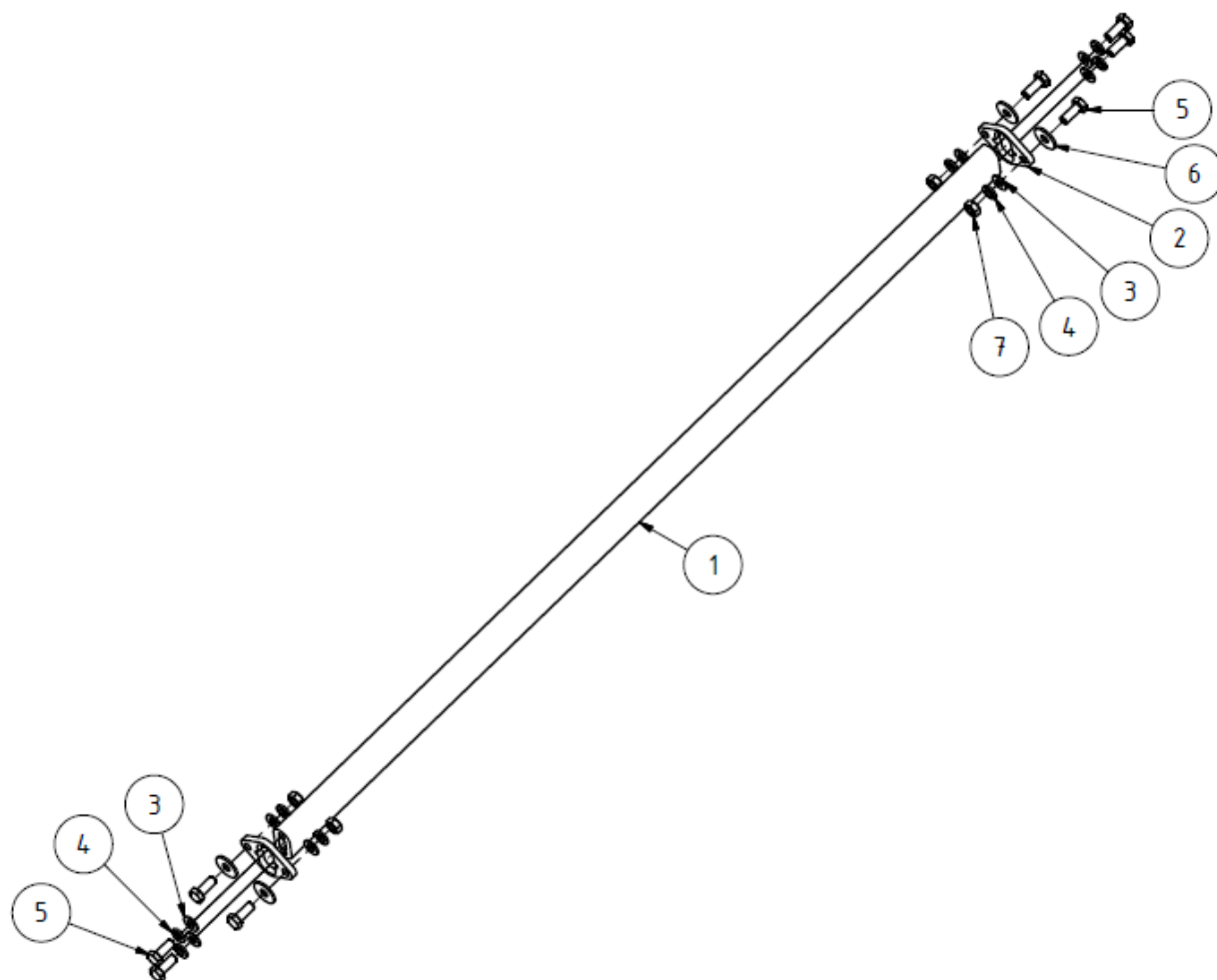
Pos.	Artikelnummer	Menge	Norm	Info	Bezeichnung	Description	Désignation
-	-				Transportgriff kpl.	Transport handle complete	Poignée de transport complète
1	-				Transportgriff	Transport handle	Poignée de transport
2	-		DIN EN ISO 7093	8,4	Scheibe	Washer	Rondelle
3	-		DIN EN ISO 7089	A 8,4	Scheibe	Washer	Rondelle
4	-		DIN 127	A 8	Federring	Spring washer	Rondelle-ressort
5	-		DIN EN ISO 4017	M 8 x 20	Schraube	Screw	Vis

9.16 Transport wheel



Pos.	Artikelnummer	Menge	Norm	Info	Bezeichnung	Description	Désignation
-	-				Transporträder kpl.	Transport wheel complete	Roue de transport complète
1	-			Pos. 1.1-1.2	Transportrad kpl.	Transport wheel	Roue de transport
1.1	-			Ø 125	Rad	Wheel	Roue
1.2	-		DIN 625	6001-2RS1	Kugellager	Ball bearing	Roulement à billes
1.3	-			Ø 10 x Ø 8 x 27,5	Buchse	Bushing	Douille
2	-		DIN EN ISO 7089	A 8,4	Scheibe	Washer	Rondelle
3	-		DIN EN ISO 4014	M 8 x 55	Schraube	Screw	Vis
4	-		DIN 127	A 8	Federring	Spring washer	Rondelle-ressort
5	-		DIN EN ISO 4032	M 8	Mutter	Nut	Écrou

9.17 Guiding rail



Pos.	Artikelnummer	Menge	Norm	Info	Bezeichnung	Description	Désignation
-	-				Führungsschiene kpl.	Guiding rail complete	Glissière complète
1	-				Führungsschiene	Guiding rail	Glissière
2	-				Anschlag	Limitation	Limitation
3	-		DIN EN ISO 7089	A 8,4	Scheibe	Washer	Rondelle
4	-		DIN 127	A 8	Federring	Spring washer	Rondelle ressort
5	-		DIN EN ISO 4017	M 8 x 20	Schraube	Screw	Vis
6	-		DIN EN ISO 7093	8,4	Scheibe	Washer	Rondelle
7	-		DIN ENI ISO 4032	M 8	Mutter	Nut	Écrou

10. Wiring diagram

