INSTRUCTIONS FOR USE

THE LOG BAND SAW

BBS 500 B

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ORIGINAL INSTRUCTIONS FOR USE

ver. 05/05/2014

Dear Customer,

we thank you that you have decided to purchase our product, and we wish you much success with it. To get the machine without problems served, please pay careful attention to the following instructions.

Manufacturer: Südharzer Maschinenbau GmbH
Helmestraße 94
99734 Nordhausen
Germany

These instructions correspond to the current technical specifications. Any technical changes, misprints and differences in pictures are subject to change without notice. In case the machine will be sold to a third party, provide it with this guide..

Content

0. Generally

This manual is intended to provide you information and help you to become familiar with the log band saw of the BGU maschine company and utilizing its potential use by its determination. The operating instructions contain important instructions how to operate the machine safely, professionally and economically. Its observance will avoid risks, reduce repair costs and downtime and increase reliability and service life. Instruction manual provides guidance based on the current national regulations for accident prevention and environmental protection. The operating instructions must be in place to use the machine still available. Operating instructions must be read and applied by anyone who is responsible for the installation, transport and storage, use, operation, maintenance and disposal of equipment. In addition to the manual and binding rules applicable in the user country and the place of use for the prevention of accidents must be observed and approved rules for safe and professional work.

Due to the certification of CE it is forbidden to make any adjustments to the machine or to use it other than as specified in the instructions for use. Otherwise you run the risk of injury, fire, explosion, burns, poisoning by exhaust gases and the like, and the loss of the right to any warranty claims!

Read carefully the operating instructions before transporting the machine on the work place and putting the machine into operation. The manufacturer is not liable for damages resulting from disregard of operating instructions and safety instructions. At the same time the buyer loses entitlement to any warranty claims!

Warranty Card - service

The Warranty Card is a separate attachment of the operating instructions

The warranty period : see warranty card

Conditions for maintaining liability claims
- Transporting and storing the machine according to the manual
- Use and maintenance of equipment according to the manual
- The use of prescribed operational fillings

The warranty does not apply to:
- Violent and mechanical damage to the machine by an intervention of consumers or other persons
- Unavoidable event (natural disaster)
- Damage to the machine during transport
- Storage or placement the machine in a humid, chemical, or otherwise unsuitable environment
- Wear parts - band saw guides, V-Belts of impellers, band saw blade

Any requests for warranty and post-warranty repairs should be addressed by telephone, fax, e-mail or by post to the address: see warranty card.

Notifications to consumers:
The seller is obliged immediately to issue to the consumer when purchasing, the product warranty card which must be completed correctly and legibly and stamped by the dealer signature and date of purchase. The seller must inform the buyer informatively to be familiar with the product, its use and handling.

The data required for the application of the warranty (post warranty) repairs:

- Type of machine
- The warranty card number (the same as the serial number of the machine)
- Date of issue of the warranty certificate

0.1. Safety regulations

The machine is designed using state of the art and the approved safety rules. However, it may occur when using a serious threat to the health of users or third parties or to adverse effects on the machine or other property values. In order to avoid these threats as much as possible, it is essential to ensure the safety notes in the operating instructions. These safety instructions the person has to read and understood before starting up the machine. Failure to follow these instructions can result in serious injury and property damage!

Safety instructions in this manual and on the machine are marked with safety labels - marks of dangerous places! Keep the utmost caution!

Particularly important points in this manual that relate to safety are highlighted with a symbol and exclamation mark

Warning label - danger of compression, shear, impact

Warning label - danger of cuts or cut off, snatching, draw in

Warning label - Danger caused by a sawdust scattering

Warning label - Danger caused by falling objects or their ejection

Warning label - Danger - hot surface

Warning label - Danger - toxic gas

Warning label - Danger - explosion

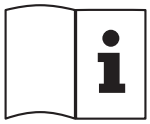
Warning label - Danger - fire

Label TOTAL STOP - Use when necessary equipment emergency stop

Label of the need to use protective equipment - Eye and Ear Protectors

Label of the need to use protective equipment - Protective gloves, boots (rubber boots) or work boots with steel toe and sole that does not slip

Label of the machine safe handling - Place of suspension



Before using the band saw, read carefully this manual and make sure that you understand its contents

0.2. Scope of use / Designated use

Log Band Saw is designed primarily for the logs initial processing. It is intended solely for cutting wood materials, whether soft, hard, dry, raw or frozen in length according to the machine design. The use according to specifications includes compliance with the operating instructions and compliance with inspection and maintenance conditions.

The machine must be installed under the shelter!
The machine must always be protected against rain!

The machine must not be operated in a closed space!
Danger of poisoning by exhaust gases

0.3. Unacceptable ways of using

Any other use defined in Chapter. 0.2. is understood as the use of inappropriate determination. For damages caused by this way the manufacturer is not liable. Risk is borne by the user.

0.4. Requirements for operational staff

The machine can operate only the informed, and in the technical safety field, trained staff!

The machine operator is responsible for the overall safe operation of the machine and compliance with safety and technical instructions given in this manual.

The machine may only be operated if it is in the perfect technical safety condition!

User is obliged to **at least once per shift** to check the machine outside recognizable damages or defects (see Chapter 6). The resulting defects and damage to the protective devices, and machines behavioral changes that threaten the safety, report immediately to the supervisor. Switch off the machine and secure against restarting. Wait for decision on the repair and reinstatement of your machine.
When operating the machine, not remove, relocate, shut it down or modify any safety devices. Warranty claims are otherwise ineffective! If during the repair or maintenance must be some safety devices removed, turn the ignition switch, activate TOTAL STOP button and close the fuel supply.

- Remove when working loose clothing and cover long hair
- Ensure that other persons were away from the belt at least 5 m, protect them against flying sawdust and dangers in the event that the saw band should have broken
- All the people that help you must be familiar with all safety rules
- Safety rules must be placed at the workplace on a clearly visible place
- Keep your hands away from the saw band, never adjust any saw band when the engine is running. Before you manipulate with the saw band, turn off the motor and secure it against restarting!

Never use the machine when you are tired, overworked, under the influence of medication, drugs or alcohol!
Observe the applicable health regulations of the airspace in the workplace.

While working you should wear appropriate clothing, footwear and appropriate protective equipment (eyewear, hearing, gloves, safety shoes with steel toe).

0.5. Requirements for machine - security devices

Risk of injury!
In the cut area the saw band is not covered!

Before opening the protective device, wait until the saw band is at rest.
Threats in the saw arm workspace!

Risk of burns from hot surfaces of the engine! Do not touch the running engine!

Shutting down the machine in case of an emergency with the button STOP TOTAL. New start-up is possible only after the removal of the emergency and manual override of the button by its pulling or turning.

Manual cleaning, removal of waste (e.g. sawdust, wood chips, bark) is, during the machine and tool operation and deceleration, prohibited.
It is necessary to ensure compliance with all applicable regulations on fire protection. The workplace must be equipped with a first-aid kit.

Danger zone (see the chapter 2.1.1)

In the danger zone shall be any unauthorized person. The danger zone must also be free of foreign objects and the ground must be flat to prevent tripping.

The entire area of the danger zone must be enclosed by a fence with the high min. 1 m with a gate which must be provided with a lock!
The keys to the lock may be only with the machine operator and the keeper.

The fence is not part of the machine, its installation must perform the machine keeper before putting the machine into operation!

Parking zone (see the chapter 4.2)

The parking zone is used to a safe shut down of the traversing bridge with a band saw arm.

The bridge with arm of the saw band must be located in the parking area whenever:

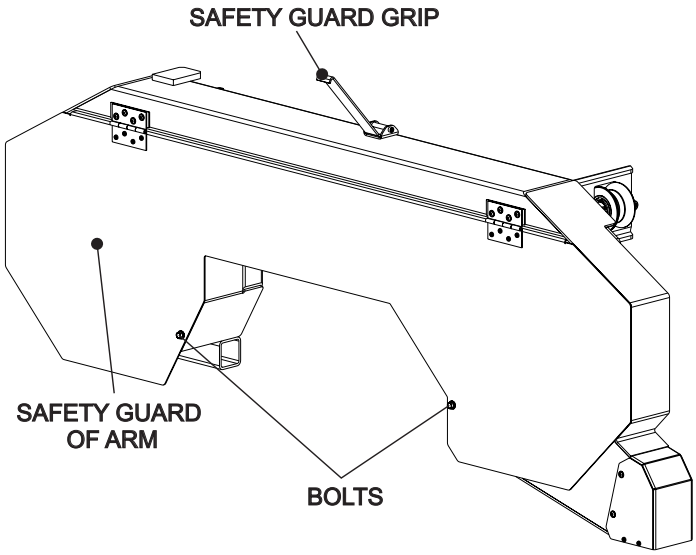
- You provide the handling of the cut material (niggering of log, alignment, clamping, rotating, removing of timber)
- You provide the setting of the movable bar of the saw band (if the machine is not equipped with a motorized bar*)
- You provide the setting of the saw band cooling
- You provide the cleaning or maintaining the machine
- You provide the cleaning around the machine
- The machine operator leaving the workplace

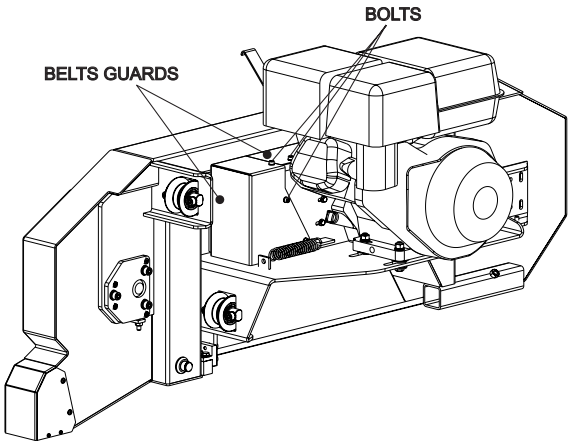
0.6. Safety guards

The log band saw is the cutting machine equipped with a cutting saw band. To perform this process, the teeth of the saw band must penetrate into the work piece in the machining area. Safety guards against the contact with the saw band can therefore be installed only outside the machining area. Other safety guards protect against a contact with dangerous parts of the drive or hot engine parts..

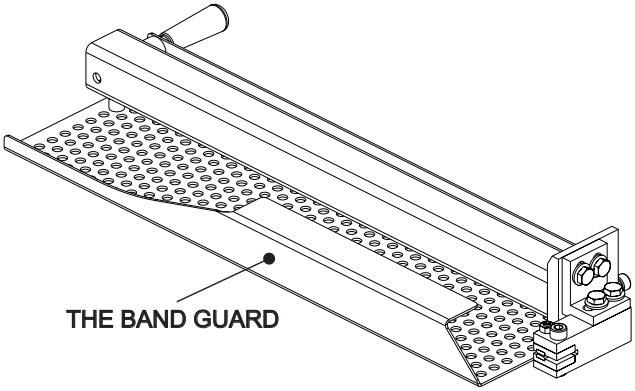
Do not use devices without the safety guards!

• The safety arm cover (impellers of the saw band with belt) is secured by two screws in captive design. If the safety cover is not closed and both screws are not tightened, it is not permitted to run the engine. Safety covers are fitted with hinges, in service operations is not necessary to disassemble.





• Safety guards of the saw band drive (pulleys and belts) . Guards must be removed during tensioning, exchange and check of V-belts and the brake adjusting.



• The safety guard of the band outside the machining area on the moving guide bar. During service operations is not necessary to remove the guard.

Safety guards are allowed to dismount only when the engine is not running and the ignition switch is turned off. The machine restarting is only possible after refitting the guards and after testing their safety functions.

1. Shipping, handling and storage

The machine is dispatched dismantled and packed on a wooden pallet. If, with the machine whose the basic length is 4500 mm, more than one extension section of length 2225 mm is supplied, these extension sections are stored on other pallet. The machine is supplied with one saw band mounted on the machine, the oil filling of the engine and without fuel. During transport must be taken appropriate measures to prevent damage from moisture, vibrations and shocks. After installing the basic and extension section(-s) at the site of use, the bridge with the arm is lifted by crane and placed gently on the basic section.

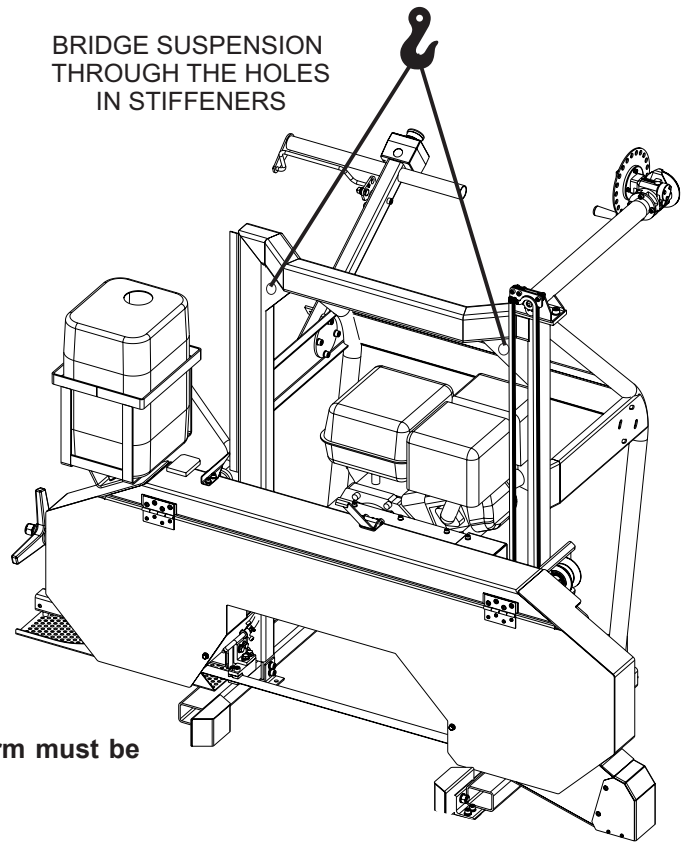
Traversing bridge can only be lifted by crane.

When the traversing bridge is attached to the original manufacturer pallet, it can be transported on a pallet trolley.

WITHOUT PALLET IS THE USE OF FORKLIFT PROHIBITED!

The appropriate measures must be taken to prevent any damage from moisture, vibrations and shocks.

Scope of delivery:
- The basic machine (see chapter 3.2)
- Optional equipment according to the order (extension section)
- 1 saw band (installed)
- Instructions for use



1.1. Surface protection

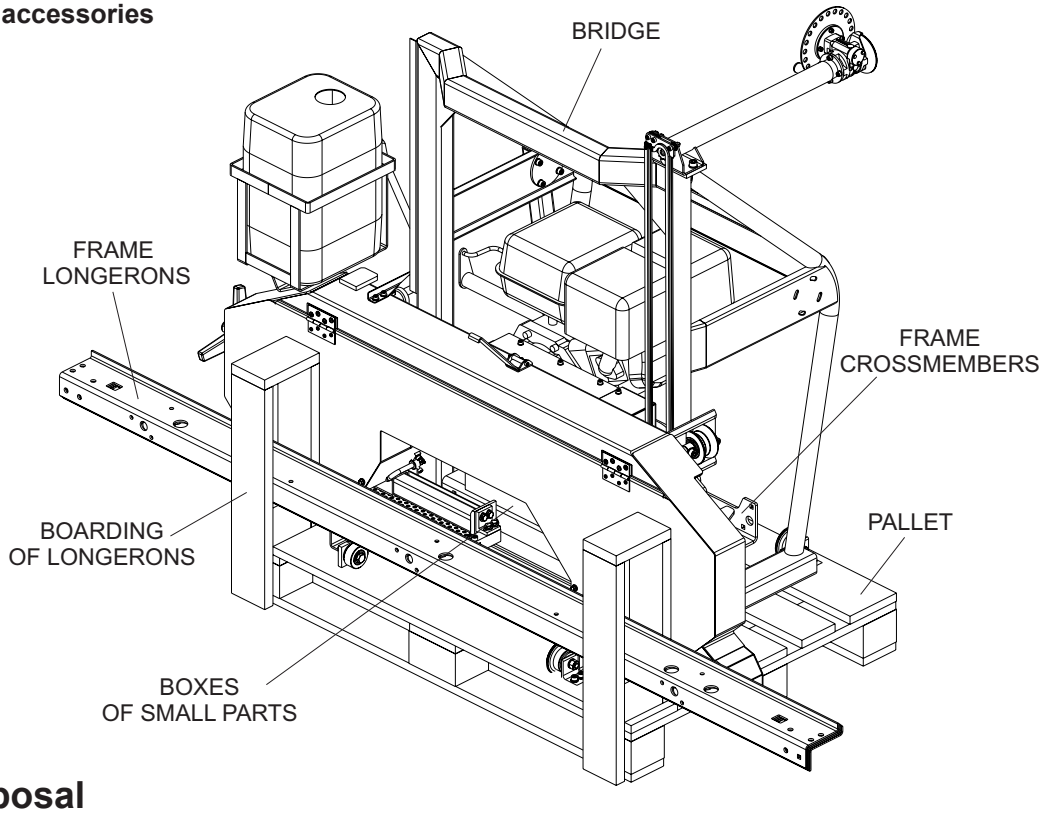
Machine components are protected against corrosion with powder coat or base colour and two-component polyurethane varnish. Sliding surfaces are coated with anti-rust oil. Other components and machine parts are finished with zinc.

1.2. Packing

Against weather influences during the transport, the machine parts are packed in a stretch foil. Upon customer request according the type of expedition, the machine can be in casing or overseas box.

1.3. Dismantling/ repacking

1. Set all machine parts to the basic position, the arm must be located in the parking zone, see chapter 4.2.
2. Empty and clean the container of coolant
3. Clean machine
4. Drain the gasoline and treat the engine according to the user manual of the engine - page 13: Engine laying
5. Coat the sliding surfaces of machine with anti-rust oil
6. Secure the bridge travel of the arm for transport
7. Check that all machine protective devices are bolted
8. Enclose accessories



1.4. Disposal

After the final removal from service, the machine is disposed according to the provisions in force in the respective country. We recommend contacting a company specialized in disposal.

2. Installation

Installation of the machine is done by customer itself according to the „Mounting instructions“, see Annex 1. Installation can be performed also by professional service - contact your dealer or manufacturer.

2.1. Required surface

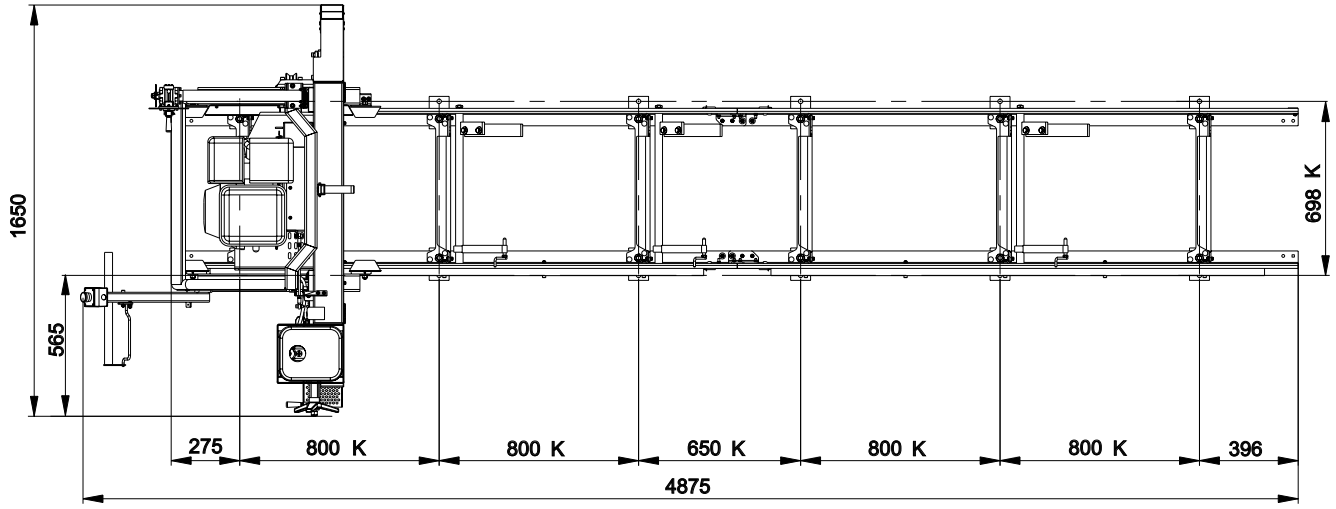
The machine can be installed on any convenient flat floor. For optimum machine performance and achievement of maximum accuracy in cutting, it is recommended to install the machine on a flat concrete surface or on concrete slabs under shelter. Any other basis is necessary to consult the manufacturer. Due to the drive by gasoline engine is not permitted to operate with in confined spaces.

Recommendations / preconditions:

- Plan to have enough space for the flow of material, material removal and machine maintenance, see Danger zone
- Post of the saw and staff must be flat, clean and shall not impair the operation and activities of the operator
- Install lifting equipment for heavy materials
- Provide good lighting in the workplace

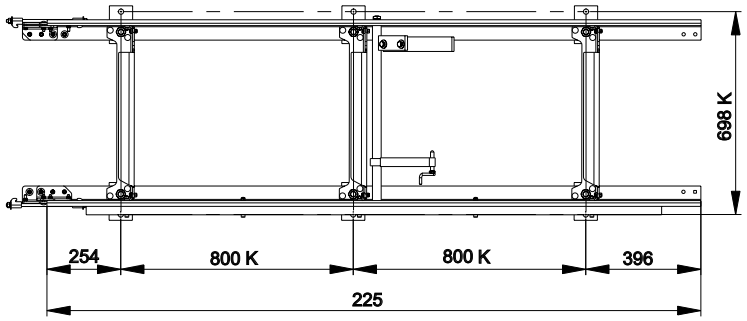
For the spatial arrangement of the machine, observe all applicable standards and sanitary regulations of the airspace in the workplace. The deployment of machines must eliminate threats to other employees from the operation in the event of the tool accident, by thrown material to be cut due to the insufficient clamping, breakage of the saw band and the like.

BBS 500 - without extension sections



The dimensions marked for K are the anchor holes dimensions of the machine basic section, holes ø 11 mm.

BBS 500 - extension sections



The dimensions marked for K are the anchor holes dimensions of the machine basic section, holes ø 11 mm.

2.1.1. Danger zone, operator´s station

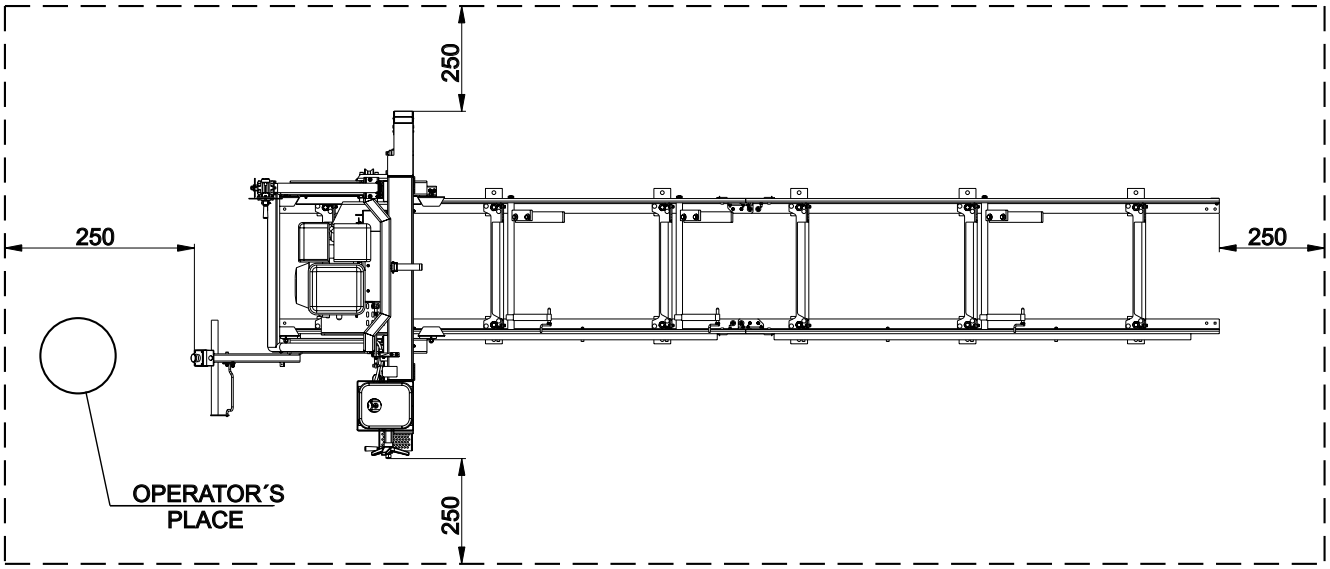
Danger zone is within 2.5 of each side of the machine. In the danger zone must not be any unauthorized person. The danger zone must also be free of foreign objects and the ground must be flat to prevent tripping.

The entire area of the danger zone must be enclosed by a fence with the gate. The fence must have the following features::

- **The wire mesh size of 50 mm. The total height of the fence min. 1 m**
- **Distance from posts themselves 2-3 m**
- **The gate must be equipped with a lock. The keys to the lock may be only with the machine operator and the keeper.**

The fence is not part of the machine, its installation must perform the machine keeper before putting the machine into operation!

The machine operator must, when running the saw band, be located at the control panel only.



2.2. Location of machine

Protect the machine unconditionally against moisture, rain and dust! The machine must be installed under the shelter!

The machine can be operated at ambient air temperature of + 5 ° C to + 40 ° C. The average air temperature must never exceed 24 hours + 35 ° C. Relative humidity from 30% to 95%, to an altitude of 1000 m. In the case of higher altitudes consult the use with the machine manufacturer. At temperatures lower than +5 ° C, replace conventional refrigerants for the media which operate at the appropriate temperatures.

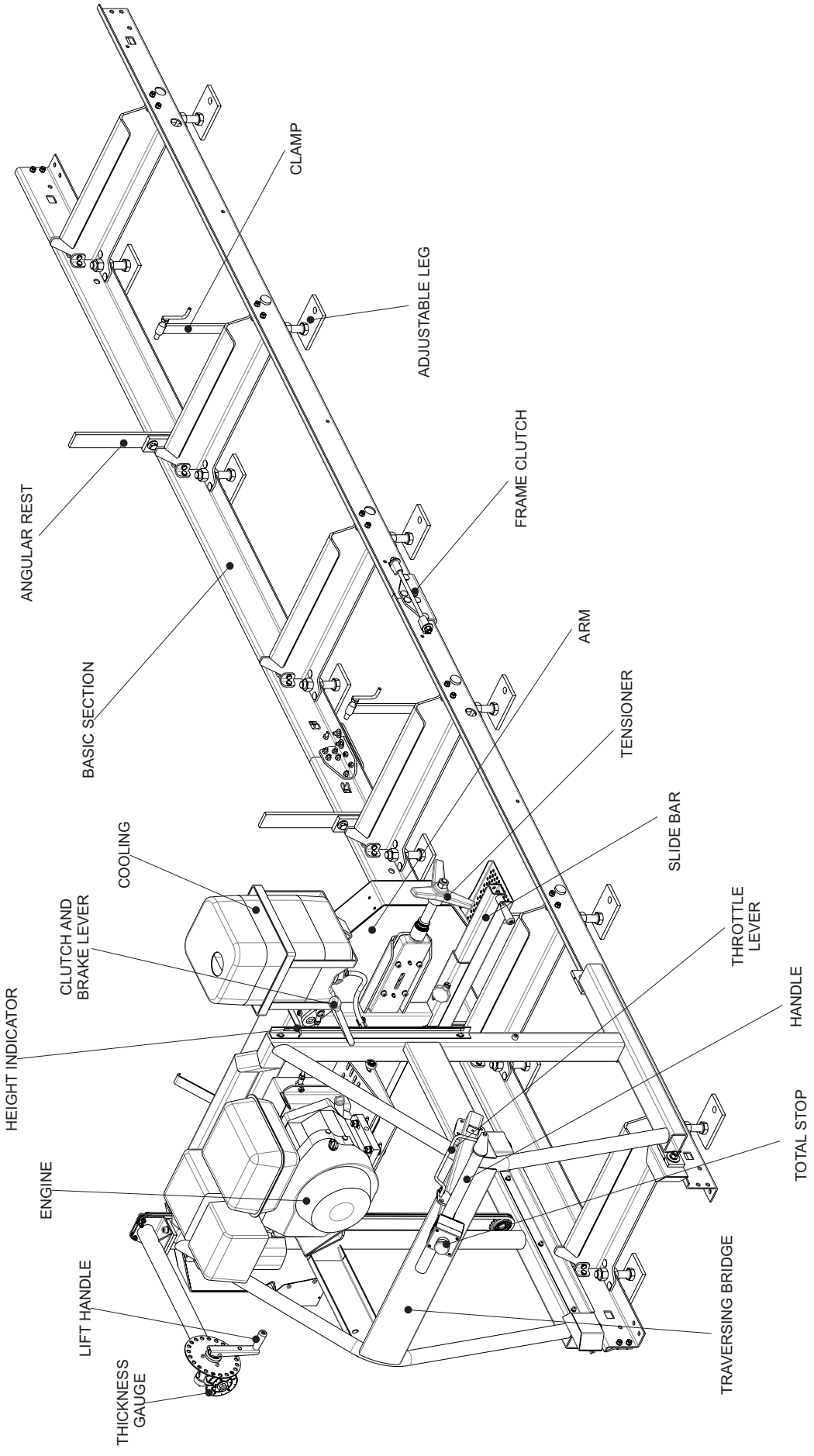
2.3. Fuel

Used engine is approved to operate on unleaded gasoline with an octane rating of 86 or higher.

Risk of fire! Gasoline is highly flammable and when refilling may result in burns or seriously injure. Turn off the engine, near must not be resources of heat, sparks or open flames! Wipe up spilled fuel immediately!

Gasoline can damage varnishes and some plastics. Be careful not to spill gasoline. Damage caused by spilled gasoline is not covered under warranty.

3. The machine data



3.1. Description of the machinery

The machine is designed in a modular way which allows easy replacement or adjustment of all major technology units and their individual parts. The machine consists of three basic parts:

- **Basic section**
- **Traversing bridge**
- **Band saw arm**

The basis of each machine is a basic section to which you can connect, according the required cut length, the extension sections. Basic and extension sections are fitted with fixed log loading surfaces, clamps of material and angular adjustable rests.

On traversing sections moves the bridge of the band saw arm. The movement of the bridge on sections is manual - pushing. On the bridge is placed the arm of the saw band which is placed on pulleys in order to move up and down. The vertical movement of the arm is secured by a chain drive and worm gear. The movement of the arm is manually operated by handle with arrestment. Precise adjustment of the arm height allows a circular scale indicator.

On the right side of the arm is a drive wheel of the saw band, driven by a spark ignition engine through a two-stage belt gear. The clutch function represents the belt tension by the move of the entire motor, and a quick stop of the saw band is secured by the brake shoe acting on the pulley. Position of the drive wheel pin is adjustable. On the left side is located a tension wheel system. The movable body of the tensioning system moves in the cast iron guiding. Both wheels are made of light alloy. In the circumference of the wheel is a machine cut groove for V-belt which forms the interface between the wheel and the saw band. When cutting, the saw band is guided on both sides with guides of hard metal.

3.2. Machine design

The basic design of the machine is possible, for an extra fee, to supply with special accessories.

The basic version:

Traversing frame, with length of 4.5 meters can cut logs of a maximum 3.45 m, is equipped with three sets of angular rests and clamps. Material handling and clamping is manual.

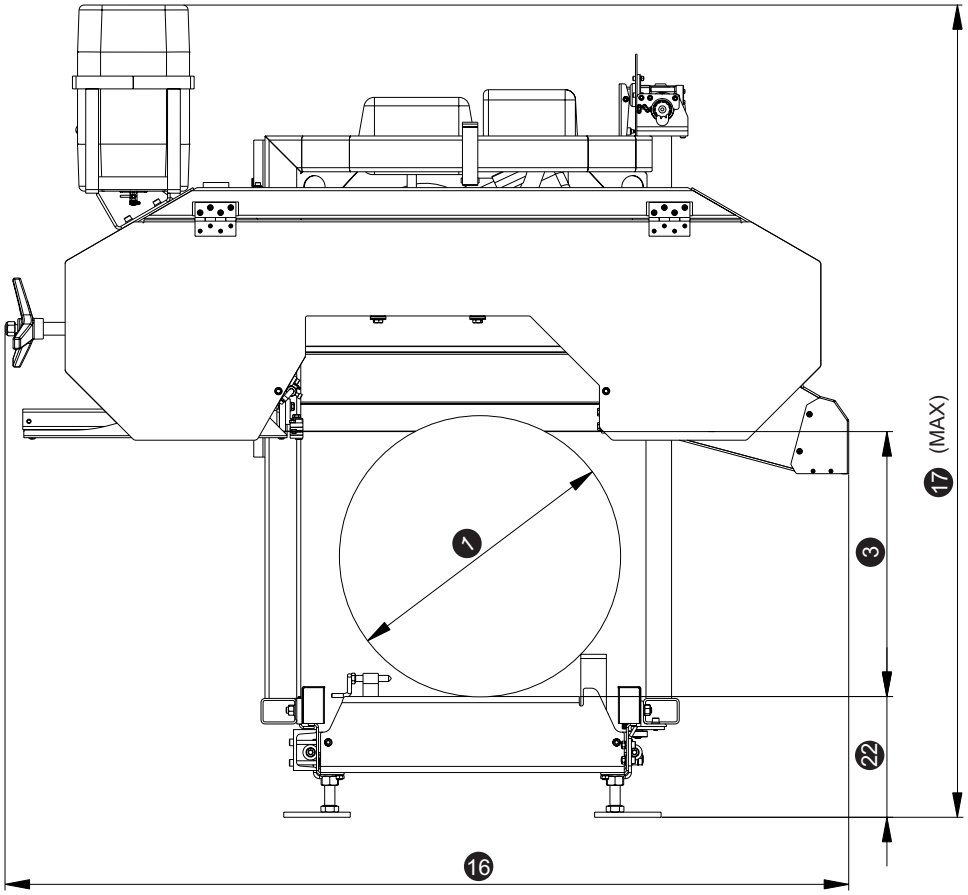
Special accessories:

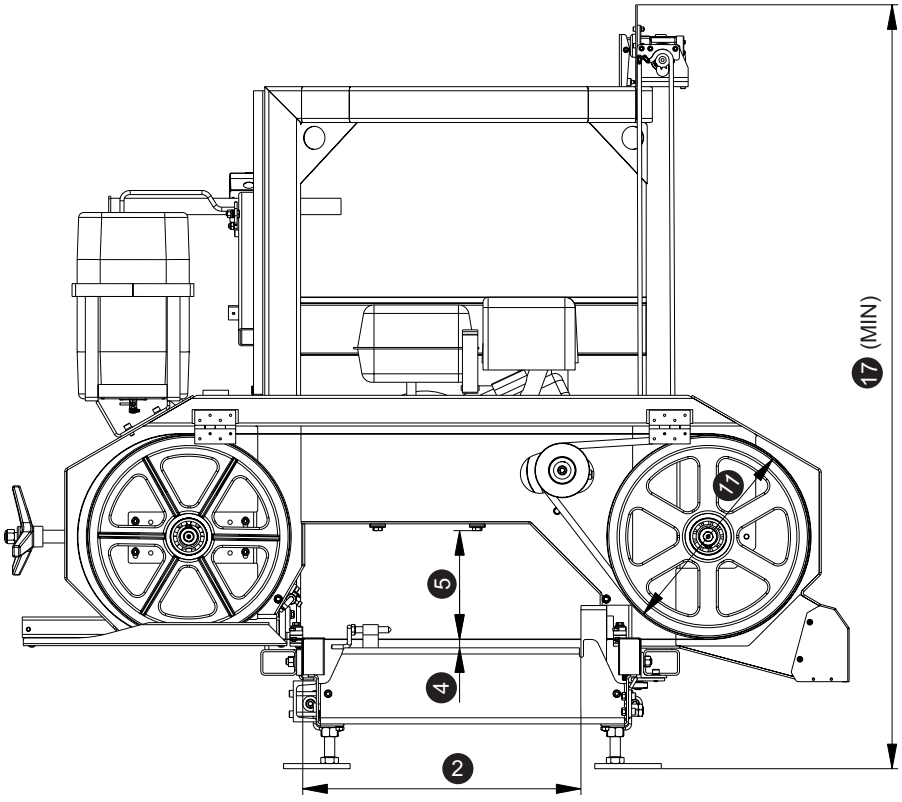
Extending sections: the total length of 2.25 m, it extends the cutting length of the basic section by 2.25 m, contains 1x angular rest and 1x clamp. The number of extending sections is not limited.

Angular rest with clamp: The basic version can be fitted with a maximum of 6 angular rests with the clamp. Each extension section can be equipped with a maximum of 3 angular rests with clamp.

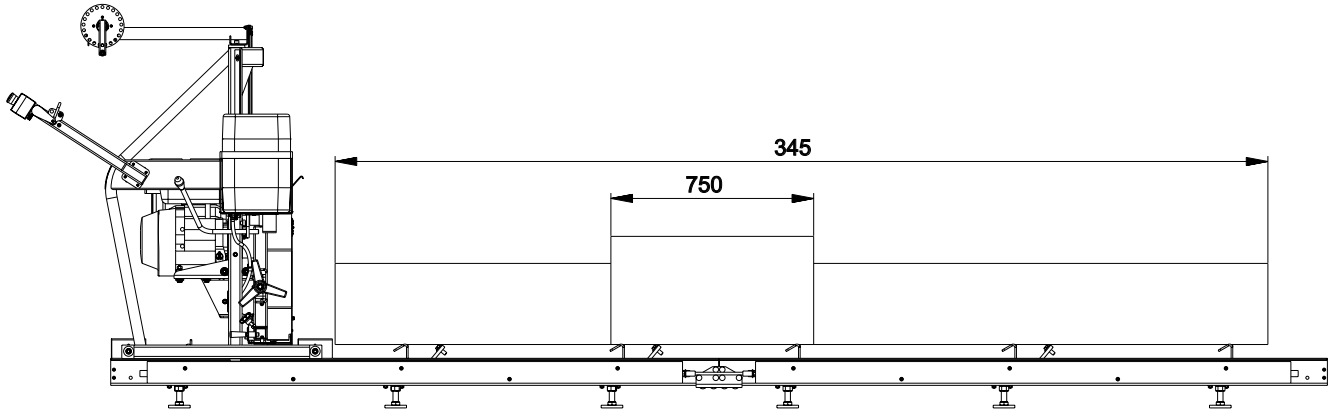
3.3. Technical data

BBS 500 B		
1	Max. diameter of the log	550 mm
2	Max. width of the beam (board)	530 mm
3	Max. stroke of the saw band	480 mm
4	Min. height of the saw band above the table	25 mm
5	Max. passage of the arm	200 mm
6	The cutting length of the basic section	3,45 m
7	The length of the extending section	2,25 m
8	Max. cutting length	unlimited
9	Min. cutting length	0,75 m
10	The engine of the saw band	8,7 kW
11	Diameter of impellers	400 mm
12	Width of impellers	25 mm
13	Dimensions of the saw band	3340 × 27 × 0,9 mm
14	Cutting loss	1,5 - 2,2 mm
15	Saw band speed	15 m/s
16	Machine width - max.	1660 mm
17	Machine height min. - max.	1500 - 1600 mm
18	The length of the basic version incl. control panel	4,9 m
19	Weight of the basic version incl. accessories	370 kg
20	The length of the extending section	2.25 m
21	Weight of extension	73 kg
22	Working table height from floor	235 - 260 mm


1
3
22
16
17 (MAX)


11
5
4
2
17 (MIN)

The cutting lengths of the machine



To use the minimum length of the cut is necessary to place the clamp so that it is possible to clamp a log by two clamps. Each extending section increases cutting length by 2.25 m

Machine´s noise

The noise measurements were made at machine steady state . During the operating state of a load, the most commonly used technology process was measured. During operating statuses with the technology, the noise levels were measured at a work station.
Measured according to EN ISO 3746:2011

	The measured values
Machine sound power L_{WA}	109,8 dB (A)
Sound pressure L_{PA}	92,3±3 dB (A)

The measured value exceeds the value specified in Decree 176/2008, Article 1.7.4.2. point, therefore **it is necessary during operation to use hearing protection devices** and monitor the noise characteristics of the device. The values of the measured noise level of the machine may vary according to the type of material and technology used. These values are emission levels and may not represent the safe working level. Although the correlation between emission levels and exposure levels, these values can not be used to reliably determine whether or not further action is required. Factors that affect the actual level of exposure include the characteristics of the work area, other sources of noise, etc., such as the number of machines and other adjacent processes. Maximum permissible levels of exposure may also be different in different countries. This information is intended to serve users as better tools for hazards and risk assessment.

Electromagnetic radiation

With regard to the electromagnetic field, the device meets all requirements of the standard EN 12198-1 + A1: 2008.

4. Putting into operation

4.1. Safety check

Perform only if the bridge with arm of the saw band is in parking S \ zone, and the saw band is at rest!

It‘s all as for the technical safety in perfect condition?

Are all protective devices correctly installed?

Risk of injury!
In the cut area the saw band is not covered!
Threats in the working transfer zone of the bridge arm!

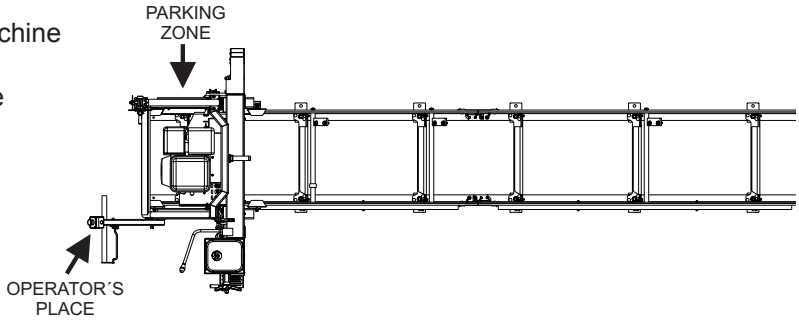
- Check the position of the clamps and angular rests to be out of the cutting path of the saw band
- Check the positions of the cut material to prevent its release during the cutting or its thrust to the traversing bridge
- The machine is now ready for operation

4.2. Parking zone

The parking zone is used to a safe shut down of the traversing bridge with a band saw arm.

The bridge with arm of the saw band must be located in the parking area whenever:

- You provide the handling of the cut material (niggering of log, alignment, clamping, rotating, removing of timber)
- You set the sliding guide rail of the saw band
- You set the cooling of the saw band
- You provide cleaning or maintaining the machine
- You clean around the machine.
- The machine operator leaves the workplace



The saw track must be set up horizontally so that the bridge with a band saw arm could not spontaneously move and leave the parking area!

4.3. The first cut

1. Make sure that the TOTAL STOP button is released, the band covers are closed and the band is properly tensioned.
2. Make sure that traversing bridge is in the parking zone at the beginning of the machine track
3. Set up the angular rests to the vertical position
4. Load up the log on a saw table
   a) using suitable machinery - such as a forklift truck
   b) using the track for rolling up the log * and levers for rolling up the log *
      - place the two parts for rolling up the log in suitable position with regard to the length of the log
      - roll up the log, using a lever for turning the log, so that it has always been secured with the track latch before changing the position of the lever
5. According to the diameter of the log, set the angular rests to the appropriate position
6. Clamp the log by the material clamps
7. Visually inspect if the position of the log, angular rests and clamps allows you to make the cut
8. Adjust the height of the saw band
9. Adjust the sliding guide bar to the suitable position according to the diameter of the log
10. Make sure that the clutch lever and the brake is in the position „braked
11. Open the fuel supply, turn the engine switch to position 1, and when the engine is cold turn the choke.
12. Pull the starter handle cable to start the motor. If necessary starting again, wait until the motor stops.
13. Adjust coolant flow

14. If the choke was turned on, you can, after stabilization of the engine, turn it off.
15. With a throttle lever slightly increase the engine speed and smoothly move the clutch and brake lever to the position „connected“.
16. Pull the throttle lever to the handle to set the maximum engine speed and smoothly move the band into the material.
17. During the cutting operation observe the machine, possibly the sound changes. If necessary (large knots, larger width change of the cut), you can adjust the traverse speed - change the speed as smooth as possible, and in the smallest necessary extent - a sharp change in traverse speed can affect the cut flatness,).
18. Once the belt at the end of the log comes out of the wood, release the throttle and clutch lever and brake lever to the position „stopped“.
19. Lift the saw band above the material being cut off
20. Move the travel bridge cross to the parking zone at the start of the track
21. Remove the cut material from the saw
22. Adjust the height of the band for the next cut

4.4. Setting up and the clamping of material

Any material handling perform only when traversing bridge with a band saw arm is in the parking zone and the saw band is at rest

Before loading a log (logs) on the table, it is necessary the angular rests tilted so that the logs does not fall from the table. This device is also used for slabing when producing the squared timber. Log clamping is carried out by material clamps. Clamps can be moved on the machine frame according the length the cut log. The actual log clamping is performed using the spikes of the clamp that can be adjusted in height by folding clamp arms according to shape and size of timber.

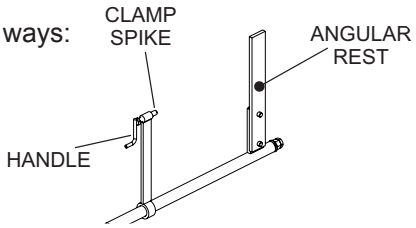
4.4.1. Angular rests

Serve:
- To prevent rollover of the log via the machine table when loading
- As the rest when clamping
- To create a right angle

Before cutting or traversing a saw bridge, the angular rests must be set in such a position (height) to avoid a collision with the saw band!

4.4.2. Material clamps

They are collapsible, allowing their height adjustment. They can be used in two ways:
1. Clamping against angular rests
   The wood is pushed by spikes set to the appropriate height to angular rests
2. Clamping against the stop on the frame cross member
   Applicable only for prisms
   Angular rests are folded and the clamps are adjusted as low as possible



Before starting the saw band, the cut material must be clamped! Make sure that the cut material is properly clamped!
Angular rests and clamping spikes must be set, when cutting, below the level the saw band and the guide rollers.

The sliding guide roller of the saw band must be as close as possible to the material being cut. Material must not with its length exceed the length of the cutting machine.

During material handling, observe caution. Heavy weight!
Put on your working boots with steel toe.

When loading material on the machine frame store it gently and avoid greater impact - it could cause deformation of the machine or its displacement.
Check logs before their cutting (stones in the bark, mud, sand, tie pins, etc.). Very dirty logs is necessary, especially from the side where the saw band get into the log, to get rid of bark or clean (e.g. with a wire brush).

It is forbidden to clamp and cut two or more logs next to each other at once. It is forbidden to cut work pieces shorter than 0.75 m.

4.5. Residual risks and risk situations

Processed according to standards: Directive 2006/42/EC, NV 176/2008 Coll., EN 1807+ A1: 2010, EN ISO 14121-1:2008

According to EN 1050	Danger	Examples of dangerous situations / activities	Dangerous space (spaces))	Protective measures *(implemented by the designer / user)*	Safety sign at machine
1	**Mechanical danger**				
1.1	Compression danger	Clamping of the cut material during insertion / modification of the position / removing material	Between the jaws and material to be sawn	Warning instructions - use gloves	It is not
1.2	Danger of cut	Clamping of the cut material during insertion / modification of the position / removing material	Between the jaws and material to be sawn	Warning sign on both ends of the arm (covering) warnings in the instructions for use	
1.3	Danger of cutting yourself or cutting off	The moving of the cutting tool in the work, machine adjusting, changing cutting tools, maintenance, repair	For the cutting tool	IInstallation of guards outside the cutting area, warning signs at both ends of the arm (covering) warnings in the instructions for use	
1.4	Danger of capturing	Manually operated a cutting tool traverse during an activity	For the the cutting tool and the adjacent stationary parts of the machine. Between the facilities for cleaning tool and the cutting tool for cutting	Installation of guards outside the cutting area, warning signs at both ends of the arm (covering) warnings in the instructions for use	
		Parts of the machine during the mechanically controlled movement (for example, parts of the transmission)	For the moving part of the machine	Safe covering of the belt drive, warnings in the instructions for use	It is not
1.5	Danger of drawing in or capturing	The moving of the cutting tool in the work	In the vicinity of the cut material and adjacent parts of the machine	IInstallation of guards outside the cutting area, warning signs at both ends of the arm (covering) warnings in the instructions for use	
		Parts of the machine during the mechanically controlled movement (for example, parts of the transmission)	At places for insertion and removal, and service areas and in the vicinity of the cutting process	Safe covering of the belt drive, warnings in the instructions for use	It is not
1.6	Danger of impact	Material handling during the activity, adjustment of machine, assembly of tool for cutting	Parts of the machine with mechanical movement (such as frame saw band in action)	Warning sign on both ends of the arm (covering) warnings in the instructions for use	
		The fall due to gravity	U řezaného materiálu, u mechanismů pro manipulaci s obrobkem	Warnings in this manual, to observe the conditions of occupational safety	
1.7	Danger of stab or puncturing	Handling the instrument (s) for cutting	For cutting tool (especially when replacing)	The sign to use protective equipment on the control panel, warning in the instructions for use - replacement of the saw band	
3	**Thermal hazards**				
3.2	Touching a person of parts with high temperature	During repairs	Hot engine parts, exhaust	Partial covers, warnings in the instructions for use	
4	**Hazards caused by noise**				
4.1	Loss of hearing (deafness), other physiological disorders (loss of balance, consciousness)	•Vibration of the cutting tool and the cut material • Aerodynamic noise of the cutting tool • Handling of the cut material • Parts generating and transmitting power	At the machine and / or in its vicinity	The sign to use protective equipment on the control panel, warning in the manual - optimal work piece clamping and the choice of cutting conditions	
7	**Hazards caused by processed, used or secreted materials and substances**				
7.1	Hazards caused by contact with harmful substances or their inhalation or swallowing (liquids, mists, gases, fumes, dust)	Skin contact with harmful materials	At the machine and / or in its vicinity	Signs to use protective equipment on the machine, instructions in the manual, to observe the conditions and safety instructions of the manufacturer of cooling liquid	
		Inhalation or ingestion of substances (e.g. coolant) used or generated during cutting		To observe the safety conditions of work and the manufacturer's instructions of cooling liquid warning in the manual - when spraying to reduce the amount of cooling liquid	NIt is not
		Leakage of dust, mists and fumes while cutting		To observe the the safety conditions of work, cautions in the manual - in the event of change of cutting conditions	It is not
7.2	Risk of fire or explosion	Flammable material being cut and waste (sawdust, shavings, bark)	At the machine and / or in its vicinity	Caution in the manual - maintaining order at the machine, cleaning of machine	It is not
		Refilling of gasoline	At the machine and / or in its vicinity	Caution in the manual, signs of explosion and fire	

8	Danger from neglecting of ergonomic principles				
8.1	Unhealthy position or excessive exertion (repeated overload)	Inappropriate body position and excessive exertion	For the saw control	The ergonomic design of the machine, lifting of the cutting head is controlled by an electric drive	It is not
	Excessive exertion and / or repeated overloading	Manual control of the machine	At the track of machine	When manual handling of log use the track for rolling up the log as well as the lever, warnings in the manual	It is not
8.2	Inadequate demands on the anatomy of the arm - hand	Manual control of the machine	In places of the operator when working	Ergonomic positioning of the control panel and other controls, observe the conditions of work safety, warnings in the manual	It is not
8.4	Inadequate local lighting	Weakened balance and accuracy in handling activities / setting the cut material and cutting tools	In places of the insertion and removal of cut material, in places of tool assembly for cutting	Observe the safety conditions of work, cautions in the manual - recommended lighting of machine	It is not
		When inserting or removing material, while adjusting, changing of cutting tool, maintenance		Observe the safety conditions of work, cautions in the manual - recommended lighting of machine	It is not
8.6	Human errors, human behaviour	Logically implied improper use	For the machine	Caution in the manual - forbidden use of the machine	It is not
		Careless operation of controls		Warning in the manual - requirements for operational staff	It is not
		Improper handling of the material being cut and the cutting tool, their incorrect adjustment		Warning in the manual - safe handling and clamping of material, machine adjustment	Není
		When inserting or removing material, while adjusting, changing of cutting tool, maintenance		When replacing the saw blade, the machine can not start (cover is open, service mode), warning in the manual - a safe handling and clamping of material, machine adjustment	It is not
8.7	Danger caused by an inappropriate design,placement or wrong identification of controls	Improper placement and choice of manual controls (such as control device to start, stop and for coolant) during the operation, while adjusting, changing tools for cutting and maintenance	For the machine	Ergonomic positioning of the control panel and other controls.	It is not
11	**Hazards caused by the inability to stop the machine in most appropriate conditions**	Malfunction or failure of the control system during the working cycle of the machine	At the machine and / or in its vicinity	Installation of the emergency button TOTAL-STOP on the control panel, warnings in the manual	
14	**Failure of control circuit**	When adjusting, cleaning	For the machine	Without deliberate mechanical action on the starter cord, the engine can not start, warnings in the manual - the correct and safe maintenance and adjustment	It is not
15	**Danger caused by incorrect connection**	Tool for cutting, or its part ejected during machine operation	At the machine and / or in its vicinity	Covering of the most part of the saw band on the arm, warnings in the manual - replacement, tensioning and adjustment of the saw band	It is not
17	**Danger caused by falling down or ejection of objects or leakage of liquid**	Ejection or falling parts of the cut material and debris, during the machine operation, cutting, adjusting, changing cutting tools, maintenance	At the space and / or in the vicinity of the cutting area and cut material	Signs to use protective equipment, warning in the manual - the optimum cutting conditions, setting the sliding guides, maintenance instructions	
		Cutting tool or tooth breakage and ejection	At the machine and / or in its vicinity	Covering most of the saw band, warnings in the manual - the optimum cutting conditions, setting the sliding guide bar, the control panel in a safe position	It is not
		Ejection of broken machine parts		Caution in the manual - in the danger zone only machine operator	It is not
18	**Hazards caused by loss of stability**	Dropping or tipping over an unsecured machine or its parts	For the machine	The machine has a robust design to prevent overturning during normal operation. When handling - warnings on machinery packaging, warnings in the manual - instructions for safe handling and installation of equipment, anchoring of equipment	

5. Description of the machine and its adjustment

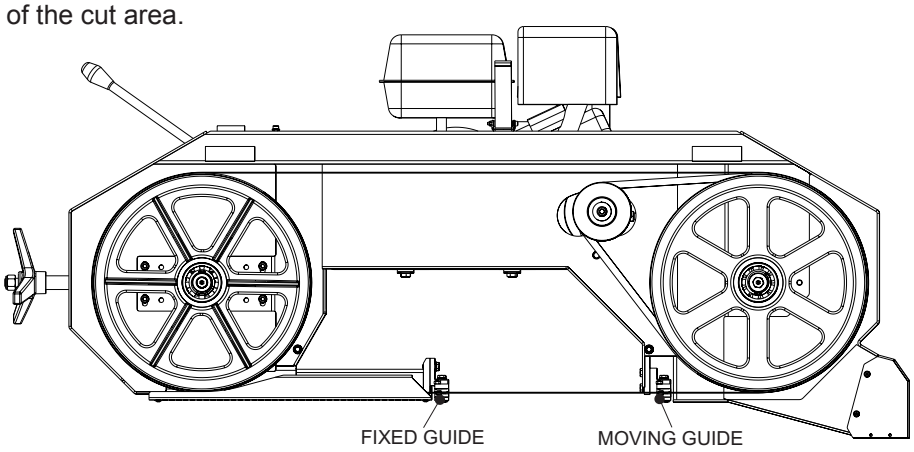
Any material handling perform only when the traversing bridge with a band saw arm is in the parking zone and the saw band is at rest!

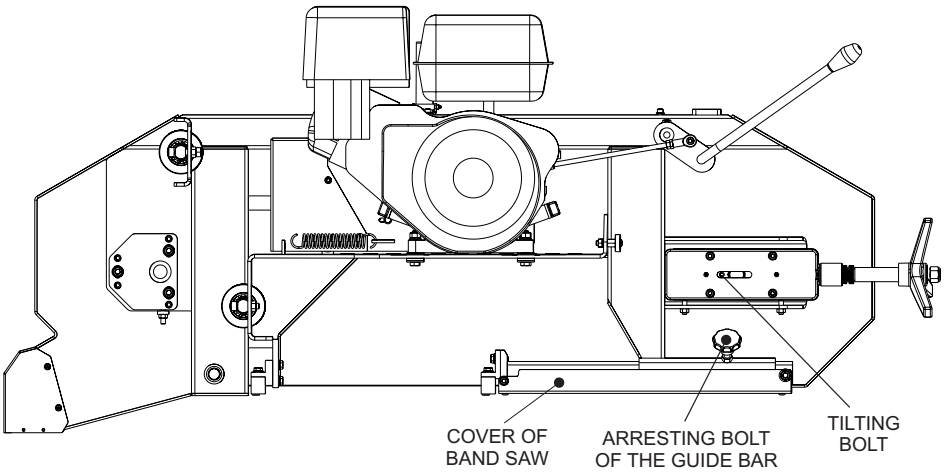
5.1. Arm

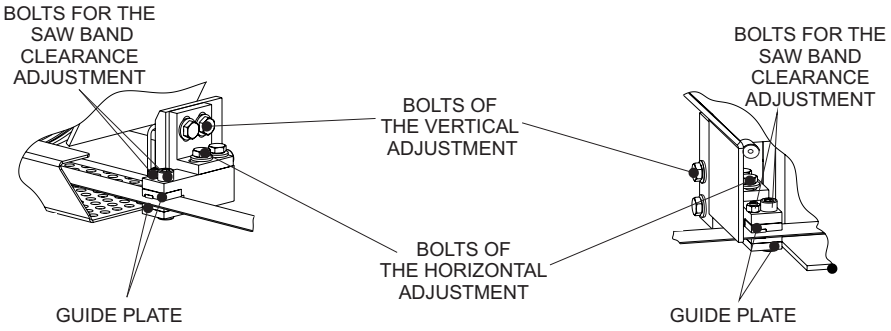
5.1.1. Adjustment of a saw band

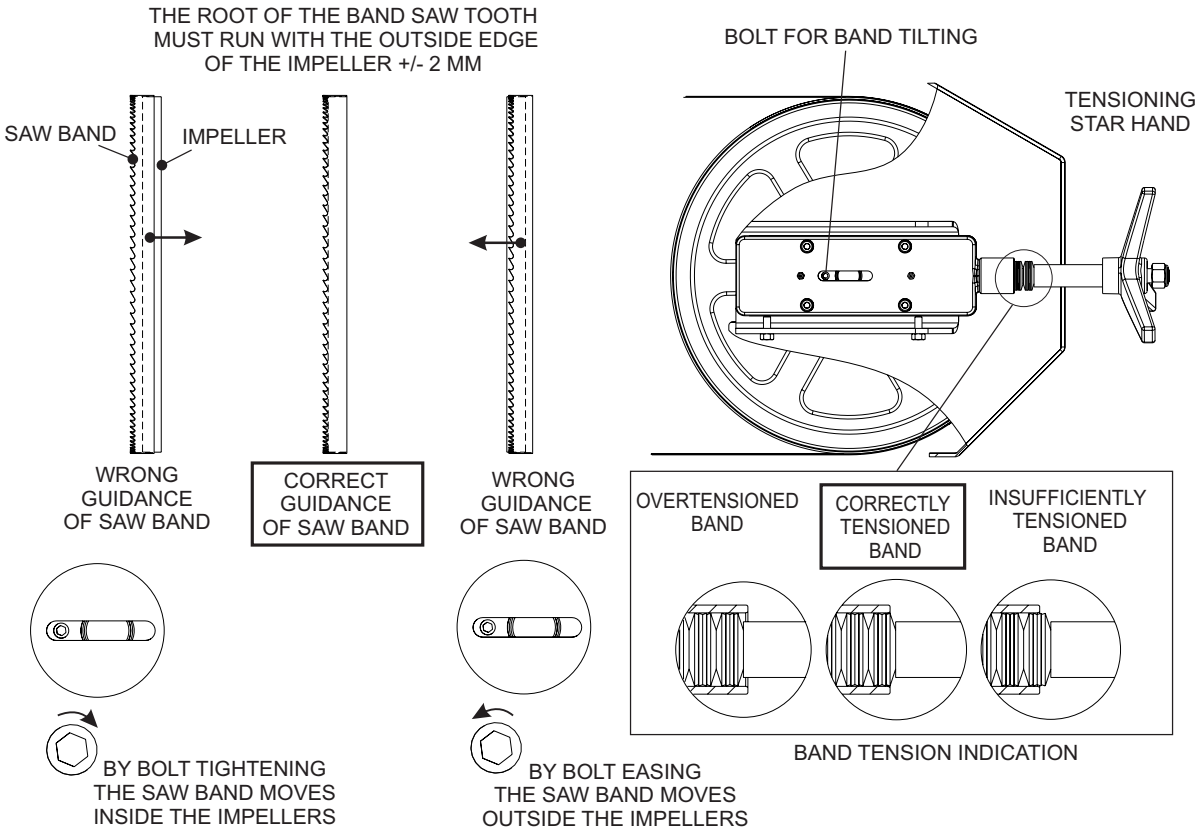
Risk of injury!
In the cut area the saw band is not covered!

The arm is a sturdy steel weldment. The saw band is guided on the drive and tensioning wheel, front of and behind the cut in two guides with hard metals. Fixed guide is placed on the saw arm. The movable guide is movable on the guide bar and in feeds always as close to the material being cut. A sliding guide bar is provided with a saw band guard out of the cut area.



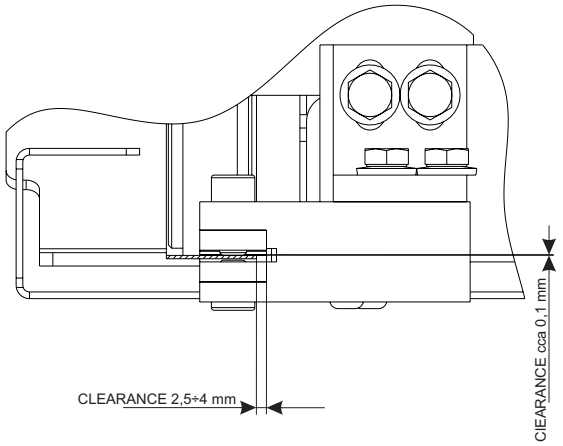






Tensioning wheel is tilt able. Adjusting of its tilt angle is done by the tilting bolt. To a tilting bolt is attached a key on chain which used for adjustment.

Proper adjustment of guide rollers



Fixing of the guides allows the adjustment both vertically and horizontally. Bolts in the guide allow the adjustment of the saw band clearance in the guide.

- Tighten the saw band.
- In the vertical direction adjust the guides to the plane of the saw band..
- By the guide moving horizontally, adjust the clearance behind the saw band 2.5 + 4 mm
- Adjust the saw band clearance between the guides on cca 0,1 mm.
- Manually, by spinning, make sure that the adjustment is constant throughout the length of the saw band, and that the saw band in any position (weld, distortion caused by previous operations) in the guides are not encumbered.

Attention!

Improper alignment of guides, and mainly the slow down of the saw band can cause machine vibration and saw band cracking.
Ensure adequate flow of cooling and cleansing from sawdust .
The guide plates are not covered by warranty! Buy a spare part from the manufacturer or machine vendor.

5.1.2. Replacing of the saw band

To achieve the good cutting performance, surface quality and the dimensional stability of work pieces, is required a timely replacement of the saw band. The blunt saw band results in higher energy consumption, bevel cuts and rough cutting surfaces. One of the critical factors affecting the quality of cut and cutting tool life is correct and sufficient tension of the saw band. For more details on the saw bands in Chapter 7..

Turn off the ignition switch
Risk of injury from sharp teeth of the saw band. Use working gloves. Do not reach between the guide wheels and the saw band.

1. Move the traversing bridge of the saw to the parking zone, adjust the arm to a suitable height, and by the sliding guide bar move the guides as close as possible to each other
2. By loosening the tensioning star handle release the tensioning wheel and thus the saw band
3. Release the arm cover bolts, open the cover, remove the saw band from impellers and slide it out from the guides
4. Insert the new saw band into the guides
5. Put the saw band on the impellers and tighten the tensioning star handle.
6. Manually spin the drive wheel in the direction of the cut, make sure that the saw band is properly placed on impellers and guides
7. Tighten the tensioning star handle so that the indication of the saw band tension was set as shown above (an edge of the disc springs cover must be set to edge of the past disc spring - all springs are hidden)
8. By the repeated manually spin of the drive wheel in the direction of the cut, make sure that the saw band is properly placed on impellers and guides
9. If the saw band is not correctly set up on impellers, release the tensioning star handle, and using the tilting bolt to adjust the saw band guide as shown above. Re-tighten the star handle again, and with a manual spin check again the position of the saw band. If necessary, repeat the adjustment.
10. Close the arm cover and tighten the cover bolts
11. Turn on the power switch
12. Perform a test run of the saw band

5.1.3. Cooling, cleaning of the saw band

The saw band is required, during cutting, to rinse lightly with an aqueous solution, with a solvent in a ratio of 1:150 (1 dl of solvent per 15 litres of water). This mixture dissolves the sticking resin and washes out the sawdust from the saw band. As a solvent, for example, we recommend „dishwashing compositions“, for winter operation add to a solution of antifreeze „Glacidet“ and the like. When processing wood with high resin content, it is necessary to increase the concentration of solvent..

Setting the cooling of the saw band (flow control) may only be in the parking zone when the saw band at rest!
To prepare a water solution, use only clean water to prevent clogging of the nozzle.

5.1.4. The sliding guide bar of the saw band

The sliding guide bar is used to set the cutting passage according to the diameter of the cut material. The sliding guide of the saw band must be as close as possible to the material being cut..

The sliding guide bar of the saw band must always be closed after the completion of work to avoid a danger to the operator by uncovered parts of the saw band or by the extended portion of the bar!

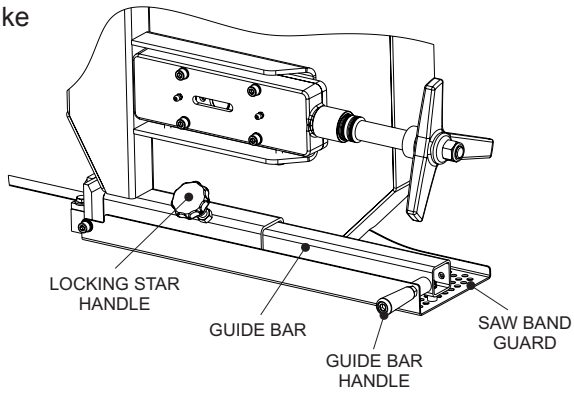
Control of the bar when cutting:

1. After clamping the log, set the sliding guide bar in a such position that you could make the cut along the entire length

Attention for the conical logs, avoid bumping into log!

2. After its adjustment, lock the bar with a handle
3. Make a cut

4. After getting out of the cut, stop the cutting saw band and take the arm up so that you were above the cut-off material
5. Return the bridge back to the starting position
6. Set the desired cutting height
7. Adjust the slide guide bar according the point 1
8. The whole cycle will repeat according to the points 2 - 8
9. After finishing work close the sliding guide bar of the saw band!



5.1.5. Replacing of the tensioning wheel V-belt

1. Remove the saw band of the impellers (see chapter 5.1.2)
2. Remove the old V-belt from the impeller
3. Clean the groove for V-belt
4. Put on the new V-belt
5. Put on the saw band of the impellers (see chapter 5.1.2.)
6. The V-belts are not covered by warranty! Buy a spare part from the manufacturer or machine vendor. Specification of the type of belt: B 1260 LW

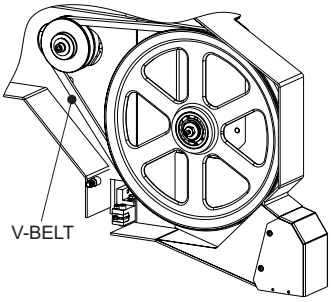
5.1.6. Tensioning of the drive wheel V-belt

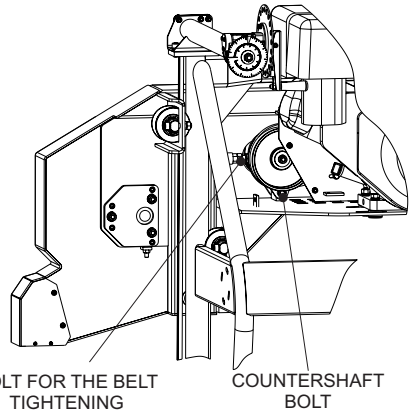
The engine power is transmitted to the drive wheel via a belt transmission. The belt transmission consists of a pulley on the motor shaft, the drive wheel and the belt. The V-belt is tensioned by moving the engine. Insufficient belt tension causes noise machine at start-up, vibration, belt slippage and its rapid wear.

Belt tensioning procedure

It can only be performed when the engine is at rest.

1. Loosen the cover bolts and open the cover
2. Check the belt tension (tension is correct if the deflection midway between the pulleys 1 - 1,5 cm)
3. Loosen the countershaft bolt and nut securing the bolt for belt tensioning
4. Tighten the belt by tightening bolt for belt tightening.
5. Loosen the countershaft bolt and nut securing THE BOLT for V-belt tensioning
6. Close the arm cover and tighten the cover bolts.
7. Start the engine and perform a test run. Specification of the type of belt: SPB 1500 LW





Do not use devices without the safety guards!

5.1.7 Adjustment of the clutch and brake, belt replacement

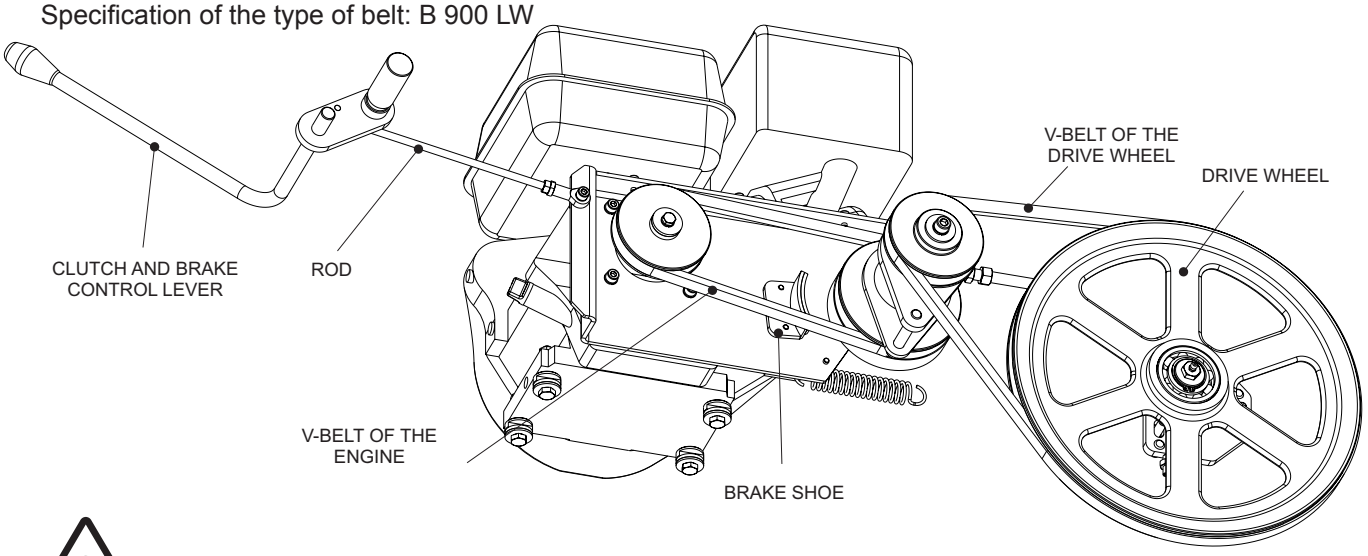
The clutch and brake is operated by a lever on the right side of the bridge in front of operator´s station. The clutch function represents the belt tension by the move of the entire motor, and a quick stop of the saw band is secured by the brake shoe acting on the pulley on the countershaft.

Belt tensioning procedure

It can only be performed when the engine is at rest.

1. Remove both belt covers.
2. Check the condition of the belt. If the belt is okay, continue with point
3. If you need to replace the belt, move the clutch and brake to the ON position.
4. Remove the brake shoe.
5. Move the lever to the brake in a halt position and replace the belt.
6. Move the lever to the ON position and mount the brake shoe.
7. In the lever ON position, check the belt tension.
8. If you need to tight or loose the belt, move the lever to the stop position, loose the nuts securing the rod head and remove the bolt connecting rod to the lever.
9. By turning the head as necessary, shorten or extend the handle.
10. Using the bolt to connect the rod to the lever.
11. Move the lever to the ON position and check the belt tension. If necessary, repeat the procedure.
12. Move the lever to the brake in a halt position and check whether the brake shoe rests on the cylindrical surface of the pulley.
13. If you need to adjust the brake, move the lever to the ON position, loosen the brake shoe screws, by tapping on the shoe move it closer to the pulley and tighten the screws.
14. Check the brake according the procedure outlined in point 12.
15. If everything is okay, install the belt cover.
16. ..Start the engine and performe test run. After moving the lever to the brake in a halt position, the belt must stop within 10 seconds. The belt must remain calm without any twitching. Check!

Specification of the type of belt: B 900 LW



Do not use devices without the safety guards!

5.2. The drive

5.2.1. Engine

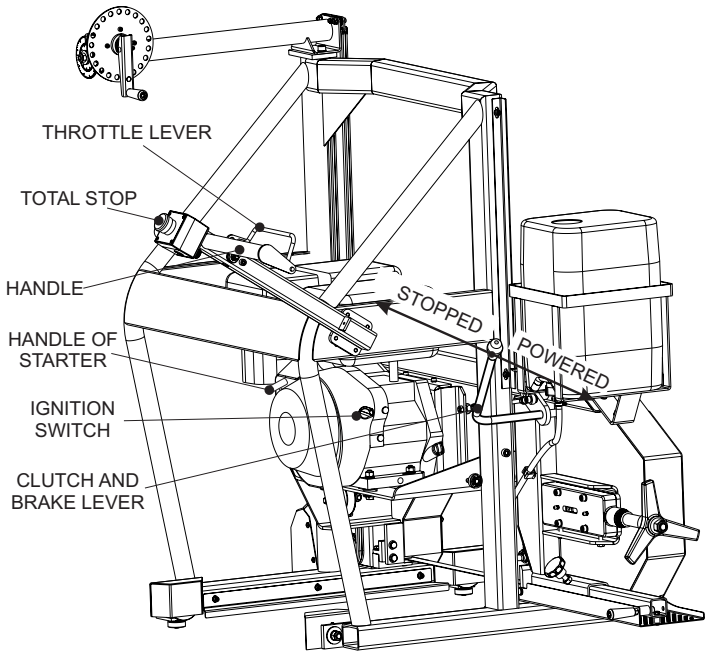
As the drive of the saw is used Honda GX 390 engine. Operate and maintain the engine according the instructions that are included. Driven is the saw band only.

5.2.2. The saw control

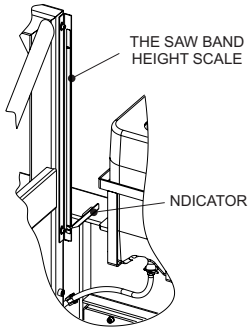
A manual control is placed on the machine on the left in the direction of the cut. On the handle, for which the operator pushes the saw to cut, is the throttle lever and button TOTAL STOP.

Prior to handle, within easy reach of the operator, there are the clutch lever and brake.

The ignition switch, fuel valve, choke and starter handle are directly on the motor (see also the user manual for motor)



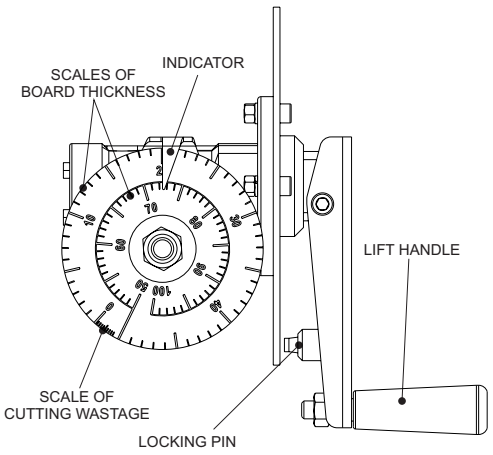
5.3. Setting the cut thickness



5.3.1. Measurement of the cut height

The cut height above the loading surface of sections can be read on the scale on the right side of the bridge in front of the control panel.
This scale you will use for the layout of cuts and for measuring the thickness of prisms greater than 100 mm.
When setting the thickness of the cut off material you must add about 1.5 mm of wastage.

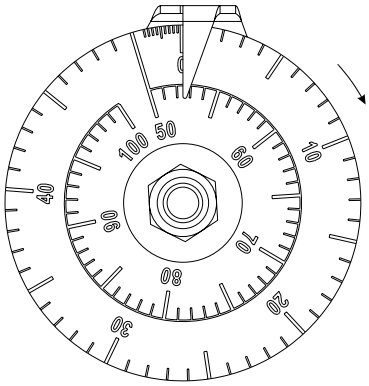
5.3.2. Thickness setting using the dial..

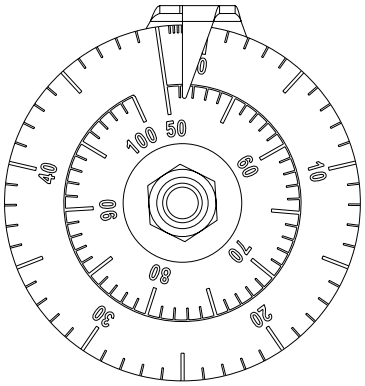


The cut off material thickness and the size of the saw cut wastage you will set on the scale disc which is shown at the left side of saw on the gear of the arm elevation. The disc is a two-scale of the board thickness (the outer ring of 0-50 mm and an inner ring for a second revolution of the wheel 50-100 mm) and a short scale on the opposite side from zero to set a cut wastage. One division of the scale is 0.2 mm. The wheel can be, in spite of the resistance of the frictional pad, manually rotated. The actual size of the cut wastage depends on the saw band thickness, the size of teeth distribution and partly on the type of cut wood. For the correct work, measure the cut wastage within the first cuts with the new saw band. For a rough estimate the cutting wastage can be calculated as:
For example, if the saw band thickness is 0.9 mm and saw setting 0.3 mm on each side, then the cutting wastage will be 0.9 + 2 x 0.3 = 1.5 mm

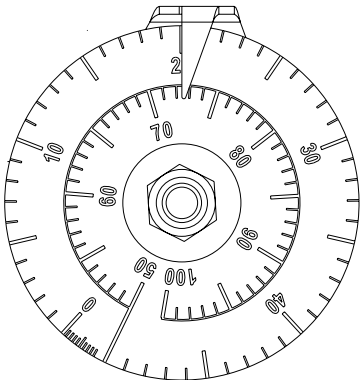
Procedure when using the measuring disc.

1. Set the saw band to the height where you want to make the first cut.
2. Rotate the measuring wheel so that, on the scale of cutting wastage to the left from zero, was 1.5 mm
3. Make the first cut.
4. Lift the arm above the cut piece of material and return back to the bridge in front of the material being cut. Do not move with the scale





5. Remove the cut board.
6. Lower the arm down until the scale indicator shows you the desired thickness of the other board.



7. Turn the scale to the right and set the cutting wastage.
8. Make a cut.
9. Repeat the process from point 4 for other cuts.

6. Preventive maintenance of machine

6.1. Maintenance and inspection

Perform maintenance work only if the bridge with the saw band arm is in the parking zone, engine is not running and the ignition switch is turned off

Risk of injury

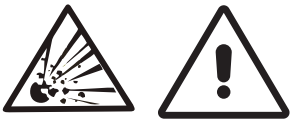
To maintain the functionality of the machine and its components, it is absolutely necessary the care and maintenance!
Maintenance is performed by the user!

The maintenance plan

Plan your maintenance according to the use of machines in operation. The procedure described below applies to the maintenance of the machine in single-shift operation. If the machine is used in operation more often, you need to plan maintenance more frequently.

Daily maintenance:

1. Clean and lubricate the guide rollers on the guide steel pipe for the arm lifting.
2. Clean and lubricate the chain for the arm lifting
3. Check all guards. Make sure they are intact and in good condition.
4. Clean sawdust from the inner part of the arm and the whole machine
5. Clean from sawdust and resin both belts in the shoulder area
6. Clean and inspect the saw band guides
7. Check the saw band cooling
8. Visually check the tightening of bolted joints
9. Visually inspect the cables and the throttle cable routing
10. Visually inspect the integrity of the V-belts
11. Check the function of clutch and brake
12. Fill the petrol in the tank



Risk of fire! Gasoline is highly flammable and when refilling may result in burns or seriously injure. Turn off the engine, near must not be resources of heat, sparks or open flames! Wipe up spilled fuel immediately!

13.13. Visually inspect all warning labels

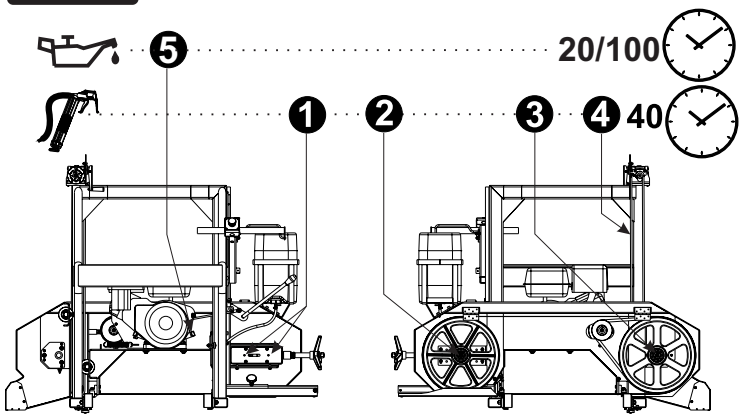
Weekly maintenance:

1. Make precisely all acts of Daily maintenance
2. Lubricate all components according to the Lubrication schedule (see Chapter 6.2.)
3. Make mechanical inspection of bolted joints
4. Make sure that the travel sections are firmly supported by all adjustable legs.
5. Check the V-belt tension (see Chapter 5.1.6.)
6. Check the clearance in the bearings of the drive and tensioning wheel (see Chapter 5.1.7.)
7. Check and possibly clean the electrical parts from the deposited dust

If faults occur that you are unable to remove using the instructions provided in this manual, call service (manufacturer, distributor)!
Consign the engine repairs to an authorized Honda service

6.2. Lubricating plan

Lubrication should only be done with suitable lubricants recommended by the manufacturer of lubricants



Recommended lubricant:
1, 2, 3, 4.....Mogul LV 2-3, after every 40 hours of operation
5.....engine oil according to the user manual for engine, the first change after 20 operating hours, next after every 100 hours of operation.

Description of lubrication points:
1. Grease nipple of tensioning body
2. Grease nipple of tensioning wheel
3. Grease nipple of driving wheel
4. Lifting chain
5. Engine oil filling

7. Saw bands

7.1. Safety regulations

When unpacking or packing and during manipulation (e.g. when installing the machine), proceed with caution! Risk of injury by very sharp cutting edges! Whenever you manipulate with the saw blade, wear protective gloves and goggles!

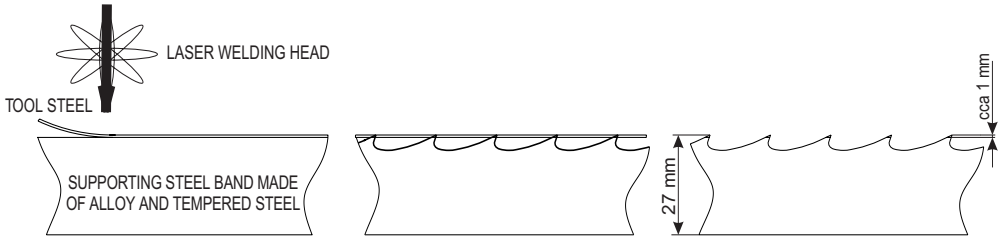
Transport tool in an appropriate container! Risk of injury!
Carefully clean the wheels and guides. Inspect the cutting edge. Check the adjustment of the machine. Do not exceed the minimum and maximum tensioning force! The tool must be installed and secured in accordance with regulations of the machine manufacturer. Improper use and use of inappropriate purpose is prohibited

7.2. Instructions for tool operation

- The main prerequisite for a good machine performance and achieving precise dimension of lumber are the good quality saw bands.
- Drive into the work piece slowly and only then when the saw band has reached the full operating speed.
- Try to find the optimum feed speed for cutting. For the low feed speed, the saw band becomes quickly blunt, while under a heavy pressure to the cut, the cut is crooked and the saw band earlier bursts.
- Do not let the saw band idle. After work, release the saw band tension.
- Store unused saw bands hanging freely in a safe, dry place, and before using them, the saw bands clean and check for cracked and damaged teeth.

The machine is designed to be fitted with the bi-metal saw band which is commonly used on saw bands for metal. This saw band is not sharpen and set in operation, after blunting is exchanged for a new one

Recommended type of saw band: Bi METAL M42 dimension 3330x27x0,9 mm, pitch 3 teeth per 1´´.



Saw band design

7.3. Troubleshooting when using the saw bands

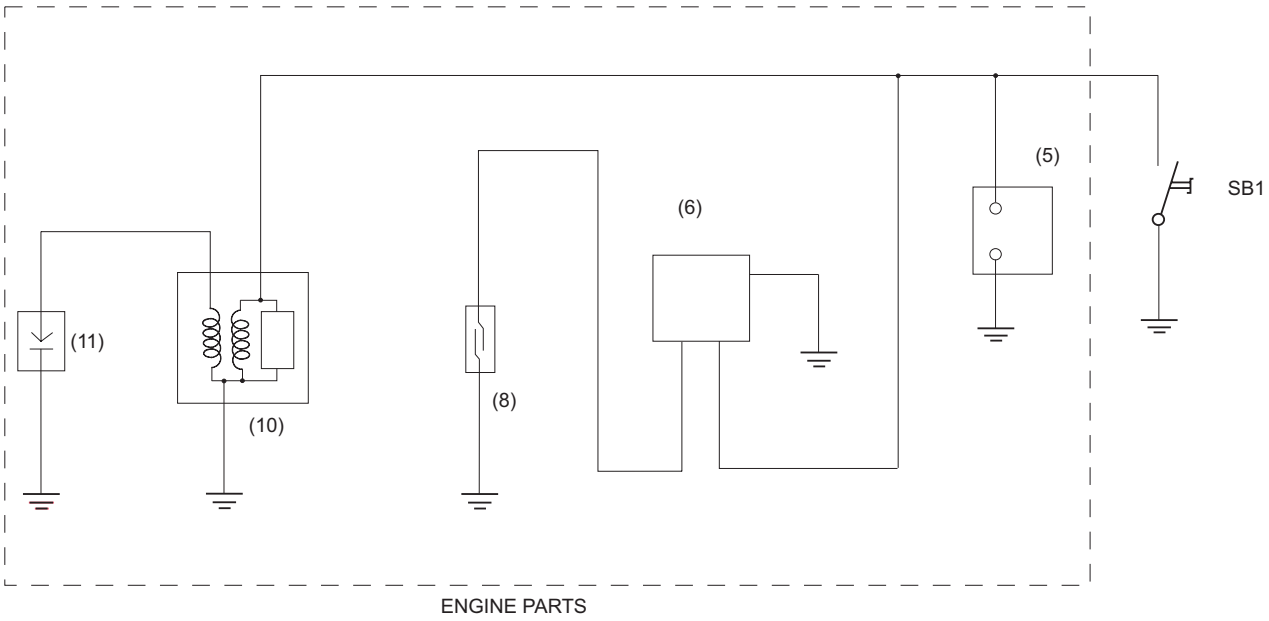
COMMON PROBLEM	PROBABLE CAUSE	SOLUTION
Teeth breakage	Great pressure on the saw band	Reduce travel speed
	Impurities in the material being cut	Avoid cutting in areas where impurities (stones, metal, etc.).
Cracking of saw bands	Incorrect alignment of machine	Follow the instructions in Chapter 2.
	Poorly tightened saw band	Check the tension of the saw band - see Chapter 5.1.2.
	Worn or improperly seated V-belt	Check and replace according to Chapter 5.1.5.
	Worn guides of the saw band	Replace with new guides and adjust according to Chapter 5.1.1.
	Dirty guides	Clean the guides
	Guides pre-tighten the saw band	Adjust guides according to chapter 5.1.1.
	The guides are not in one plane	Adjust guides according to chapter 5.1.1.
	There is not clearance between the saw band and guide	Adjust guides according to chapter 5.1.1.
	Changing the settings of the drive and tensioning wheel	Call the service centre!
	A large clearance in the bearing of the drive or tensioning wheel or in the tension body	Replace the bearings
	Long use of the saw band without a break	Use saw bands max. 2 hrs, let them rest 24 hrs
	Excessive wear of the saw band, fatigue, impaired of the saw band structure	Replace the saw band with a new one. Use saw bands max. 2 hrs let them rest 24 hrs
	High travel speed in cutting	Reduce the material pressure on the saw band - reduce the travel speed
	Dirt between the impeller and the saw band	Clean wheels.
	The saw band is blunt	Replace the saw band
	Cracking in the weld	Replacement or have it repaired
Sliding down of the saw bands from the impellers	Worn or improperly seated V-belt	Check and replace according to Chapter 5.1.5.
	Dirty impellers with resin	Clean the wheels according to chapter 5.1.3.
	Quick entry and exit when cutting with the saw band	Enter and exit the cut continuously
	Too fast travel in the cut with a blunt saw band	Replace the saw band with a sharp one.
	A large clearance in the bearing of the drive or tensioning wheel or in the tension body	Replace the bearings
	Changing the settings of the drive and tensioning wheel	Call the service centre!
Uneven cut	A large travel speed in the cut	Reduce travel speed
	Insufficient saw band tension	Check the tension of the saw band, see Chapter 5.1.2.
	Wrong type of of the saw band	Change the pitch of the teeth
	The long distance of the guide from material	Adjust the guide roller as close to the material being cut
	Blunt saw band	Replace the saw band
	Incorrect alignment of the saw band on wheels or in guides	Follow the instructions in Chapter 5.1.1. and 5.1.2.
	Impellers dirt with resin	Clean the wheels according to chapter 5.1.3.
	Incorrect alignment of machine	Follow the instructions in Chapter 2..
	Cut material is not square	Adjust working table and angular rest against the saw band

8. Faults - causes and remedies

FAULT	POSSIBLE CAUSES OF FAULT	REMEDY
Engine can not be started	The engine switch is turned off, or the button TOTAL STOP is pressed	Turn on the engine switch. Unlock the TOTAL STOP
	Open the choke	Unless the engine is warm, move the choke lever to the closed position
	Fuel cock is closed	Open the fuel cock
	Low oil level	Check, possibly add the specified oil "
	Fuel shortage	Refuel engine
	The wrong fuel, the engine was shut down without treatment or discharge of fuel, or was filled with incorrect gasoline	Drain the fuel tank and carburettor, refill with fresh gasoline
	Faulty spark plug (damaged or the wrong electrode gap	Adjust the electrode gap or replace spark plug
	Spark plug is wet with gasoline (supersaturated motor)	Dry and reinstall spark plug. Start the engine with the throttle in position MAX
	A clogged fuel filter, ignition fault, seized valve	Contact a specialized service Honda
The engine has low power	A poorly adjusted throttle cable	Adjust
	Zanesené vložky ve filtru vzduchu	Vyčistěte, případně vyměňte
	The wrong fuel, the engine was shut down without treatment or discharge of fuel, or was filled with incorrect gasoline	Drain the fuel tank and carburettor, refill with fresh gasoline
	A clogged fuel filter, ignition fault, seized valve	Contact a specialized service Honda
Skipping of the lifting chain	A dirty lifting chain and chain wheels	Clean the lifting chains and chain wheels
	A worn lifting chain	Replace with a new one - call the service centre!
The tensioning wheel does not move (tighten)	Clogged tightening body with sawdust	Clean from sawdust, degrease and re-lubricate according to chapter 6.2.
Intense machine noise	Impellers are dirty with resin	Clean impellers, increase the flow rate of the cooling solution, see chapter 5.1.3.
	Dry or seized wheel bearings	Check and lubricate guide wheels according to chapter 6.2.
	Poorly adjusted guides	Adjust the guides according to chapter 5.1.1.
	Damaged guides	Replace with a new one - call the service centre!
Vibration during the cutting	Impellers are dirty with resin	Clean impellers according to chapter 5.1.3.
	Worn out guides	Replace with new guides and adjustaccording to Chapter 5.1.1.
	A loose V-belt	Tension the V-belt as described in chapter 5.1.6.
	Large clearance in wheel bearings	Replace the bearings
	Incorrect alignment of machine (travel sections)	Follow the instructions in Chapter 2.
	Damaged impellers	Call the service centre!
	PoDamaged pulley	Call the service centre!
	Defective engine of the saw band	Call the service centre!

9. Circuit diagram

9.1. Circuit diagram for BBS 500 B



9.2. List of electrical components of BBS 500 B

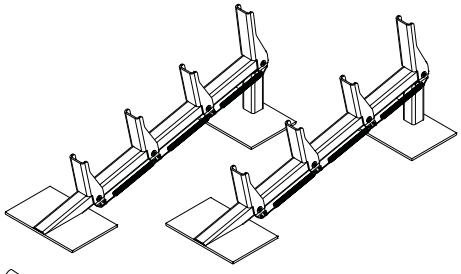
v.1.0 9.9.2013

Diagram:	Name	Type:	Order No.::
Honda engine components			
(5)	engine switch		
(6)	OIL ALERT unit		
(8)	oil level switch		
(10)	ignition coil		
Parts of the saw			
SB1	TOTAL STOP button	YW1B-V4E20R +BOX	006099

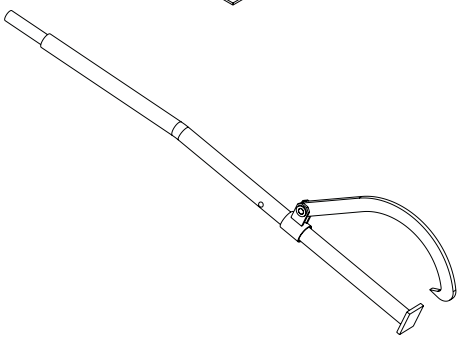
Note: The manufacturer reserves the right option to change the components and suppliers

10. Machine accessories

The rolling track for a log
Allows easy, and thanks to the folding stops, also safe rolling a log on the machine working table.



Lever for rolling a log
It serves as a tool for manipulation and rotation of a log on the worktable of the machine.



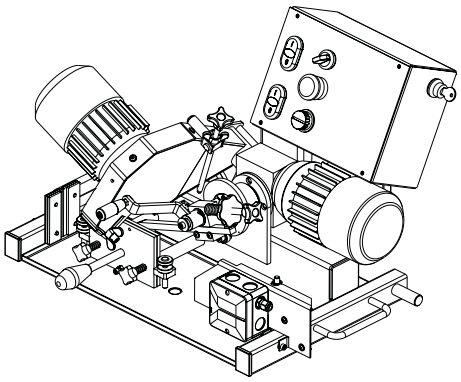
Tarpaulin
(no picture)
Serves for covering the bridge with the saw band arm. At the bottom is fitted with lugs and a thin cable to lock. Waterproof.

If you choose instead of the recommended bimetal saw bands use the conventional saw bands for wood dimensions 3330x35x0.9, you may need the following accessories:

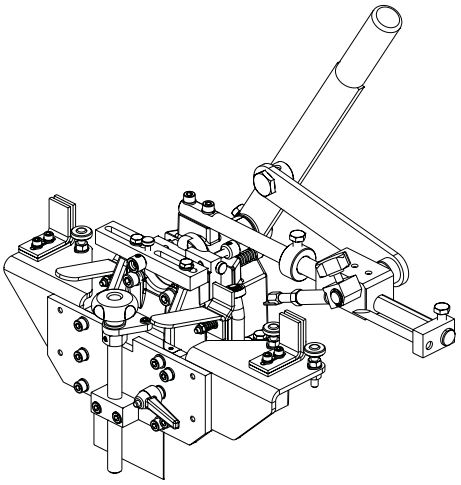
OR 50 - Semi-automatic grinding machine of saw bands
Extremely robust and professional grinder design ensures absolute precision grinding of saw bands, which is a prerequisite for the quality and productivity of cutting. This grinder is equipped with a stoneware grinding wheel.

The stoneware grinding wheel - thin grinding wheel with an adjustable cam system follows the shape of the tooth. This system permits adjustment of virtually any size and shape of the tooth.

OR 50 F
The grinder is also equipped with a frequency converter which allows continuously variable speed of the saw band. This increases the quality and productivity of grinding.



RW 35, RW 70 - Equipment for teeth setting
RW 35, RW 70 - Equipment for teeth setting
Solid cast iron construction guarantees a long service life and maximum accuracy of the teeth setting. By one lever movement you can set simultaneously two teeth (right, left) or three teeth (right, left, straight).



SK 40 - Pliers for teeth setting
(no picture)
Used to repair setting of individual teeth.

To purchase accessories, please contact us, Pilous company!

11. EC Declaration of Conformity, Certificates

EC - Declaration of Conformity

with the CEE Machines Directive No. 42/2006 and EMV (Low Voltage) Directive 108/2004
We hereby declare that the equipment described in this manual responds in full to the actual version brought on the market. We, the manufacturer further declare that this equipment was duly designed and manufactured in accordance with the actual European Safety and Health Standards settled by the relevant EEC directives as well as the latest electromagnetic standards issued by the European Council and later enforced by all member states.
This statement of compliance does not apply to customer modifications of the equipment without manufacturer's written approval.

Machine type:	**LOG BAND SAW**
Models:	**BBS 500 B**
Production Nr.:	see model label
Applicable European Standards:	EEC Machine Directive Nr. 42/2006 EEC Low Voltage Directive and 95/2006 EEC EMV-Directive 108/2004
Other applicable Standards:	Full compliance to the European safety rules was assured by enforcement of the following harmonised Standards : EN 1870-6:2010, EN 61000-3-2:2006, EN 61000-3-3, EN 55014-1:2006, EN 55014-2:1997+A1:2001, EN 294, EN 847-1, EN 60204-1

Person responsible for the technical documentation: René Pareis (Management)

Südharzer Maschinenbau GmbH
Helmestraße 94 · 99734 Nordhausen/Harz
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e-mail: info@bgu-maschinen.de

Nordhausen, den 10.10.2016

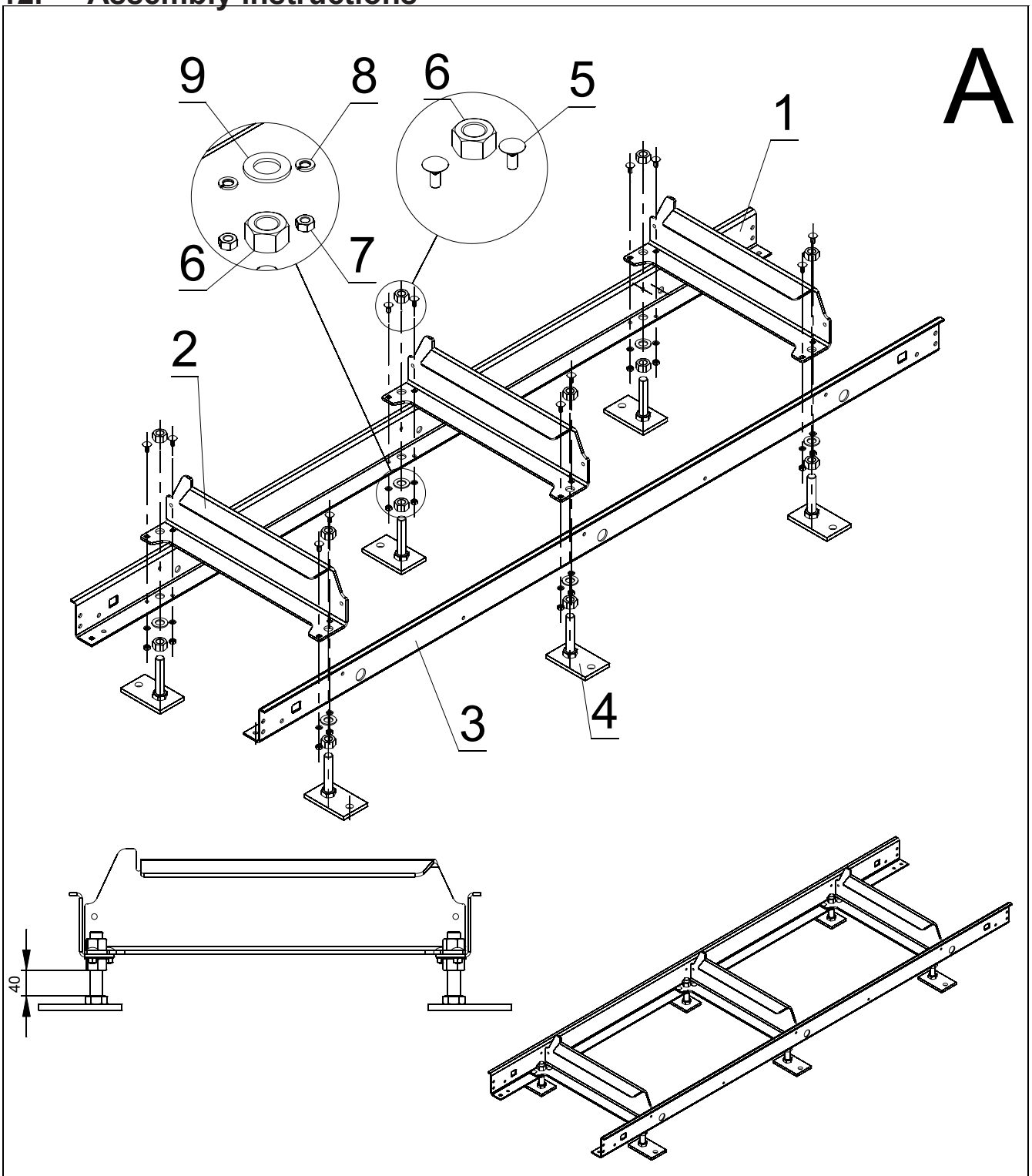
Date

Official user language: English

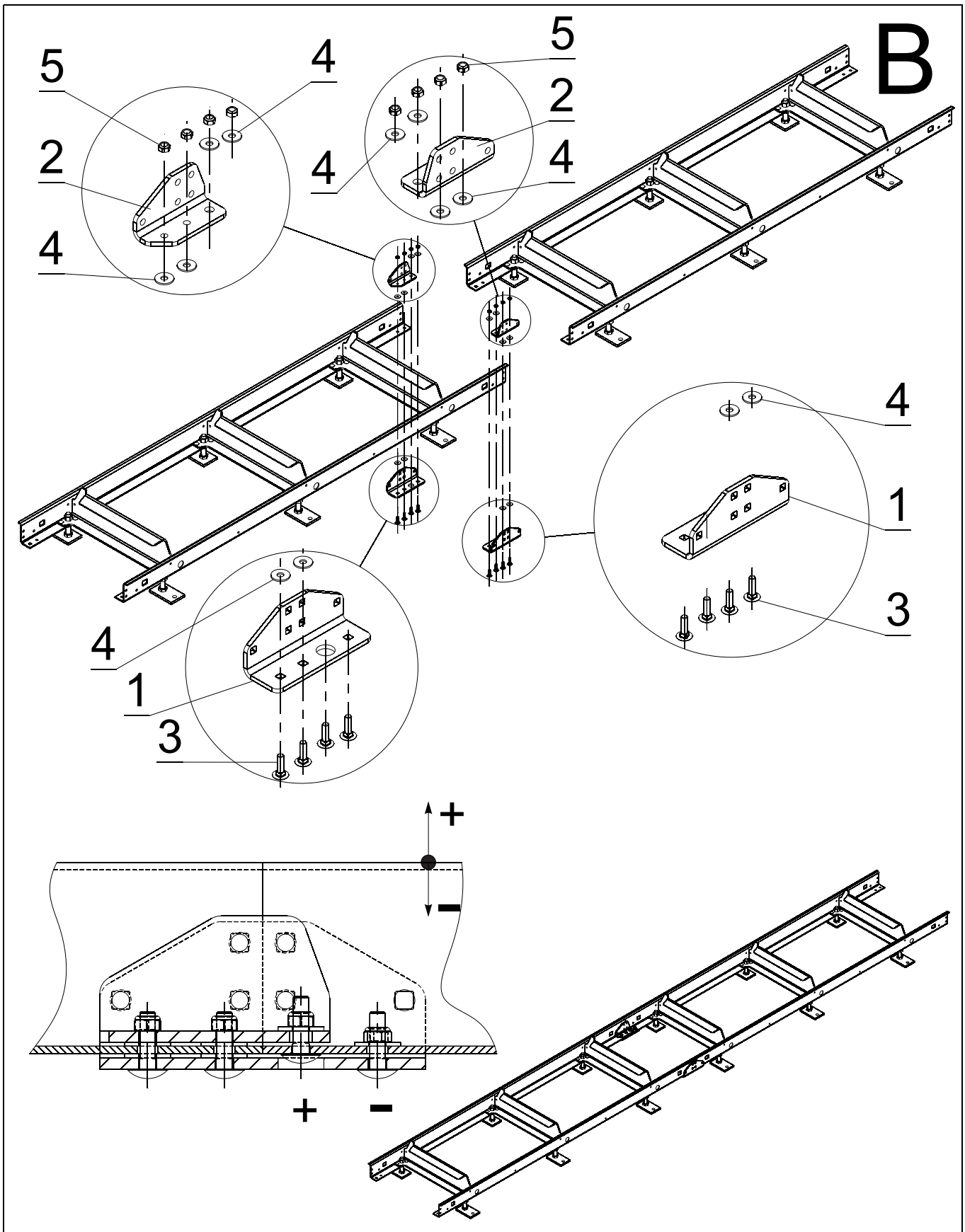
René Pareis (Director)

(User's release)

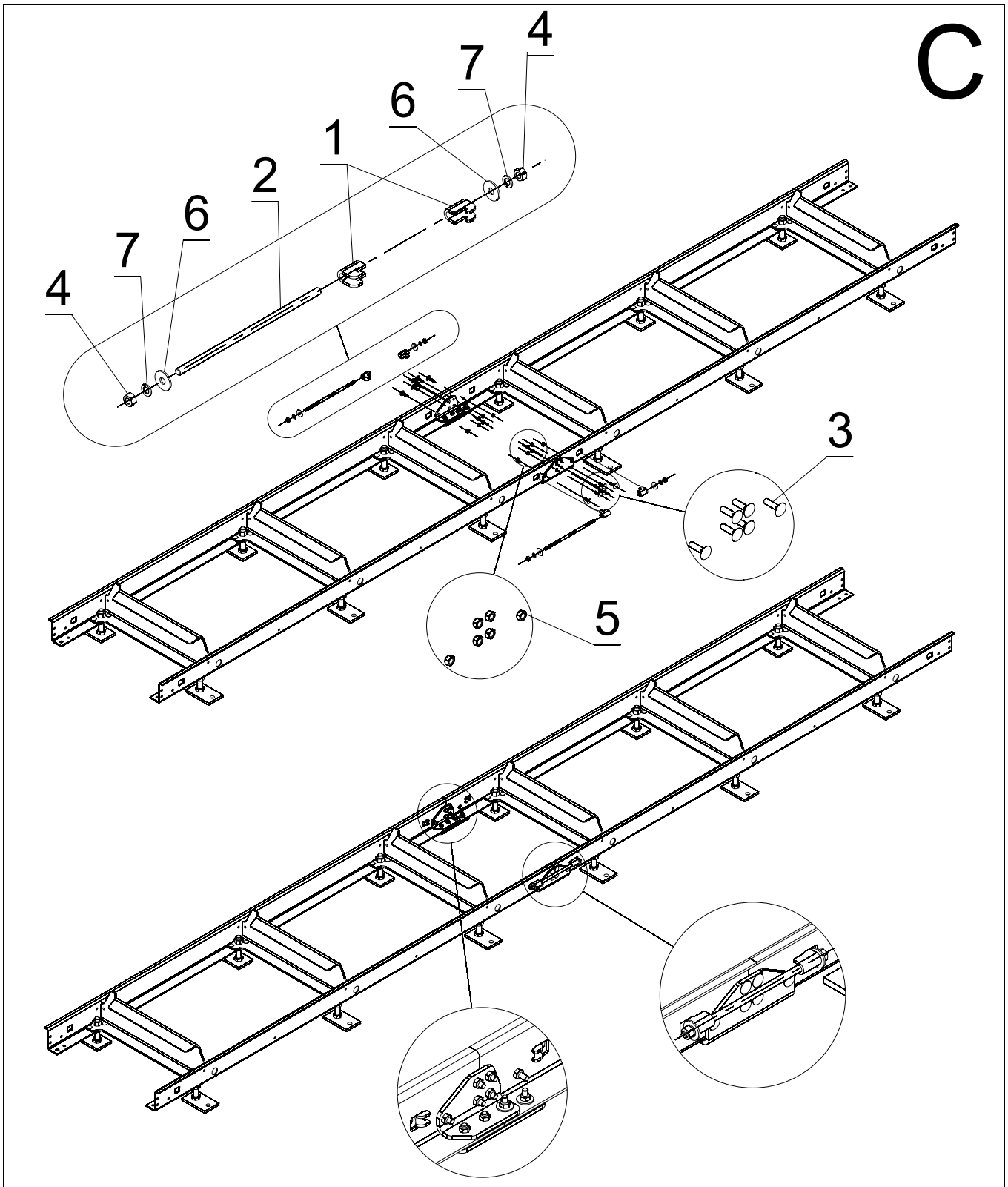
12. Assembly instructions



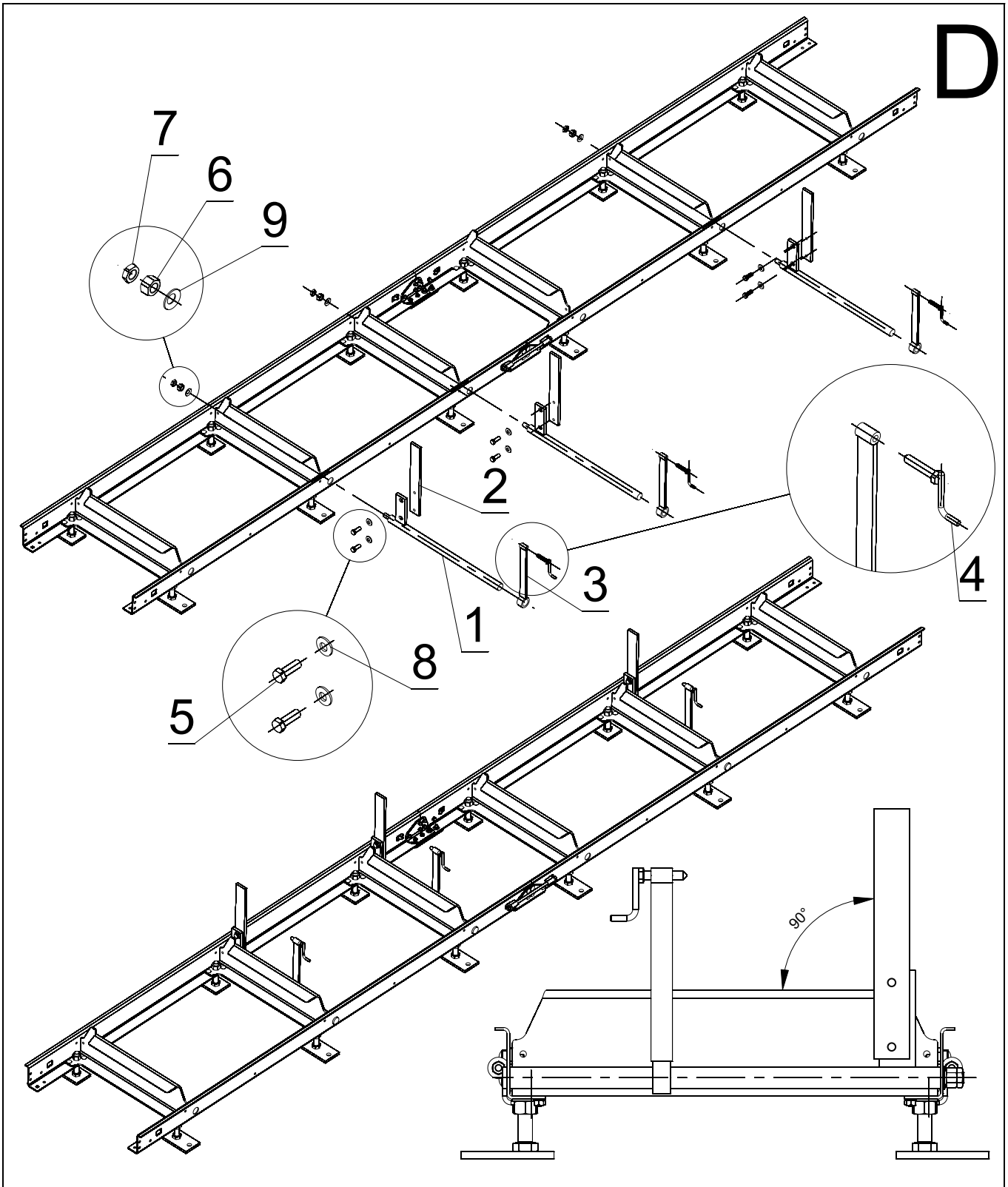
9	FLAT WASHER	002446	ISO 7089 20 Zn	6
8	SPRING WASHER	001479	DIN 127B 8 Zn	12
7	NUT	001468	ISO 4032 M8 8 Zn	12
6	NUT	001471	ISO 4032 M20 8 Zn	12
5	CARRIAGE BOLT		ISO 8677 M8x20 8.8 Zn	12
4	LEG	016149	03-03-008	6
3	LONGERON RIGHT	016144	03-03-003	1
2	TRANSOM	016143	03-03-002	3
1	LONGERON LEFT	016142	03-03-001	1
POS	NAME	ASSORT. No.	PART No.	KS



POS	NAME	ASSORT. No.	PART No.	PCS
5	LOCK NUT	001712	ISO 7040 M8 8 Zn	8
4	WASHER		ISO 7093 8 Zn	12
3	CARRIAGE BOLT		ISO 8677 M8x30 8.8 Zn	8
2	INTERNAL JOINT	016152	03-03-012	2
1	EXTERNAL JOINT	016150	03-03-009	2

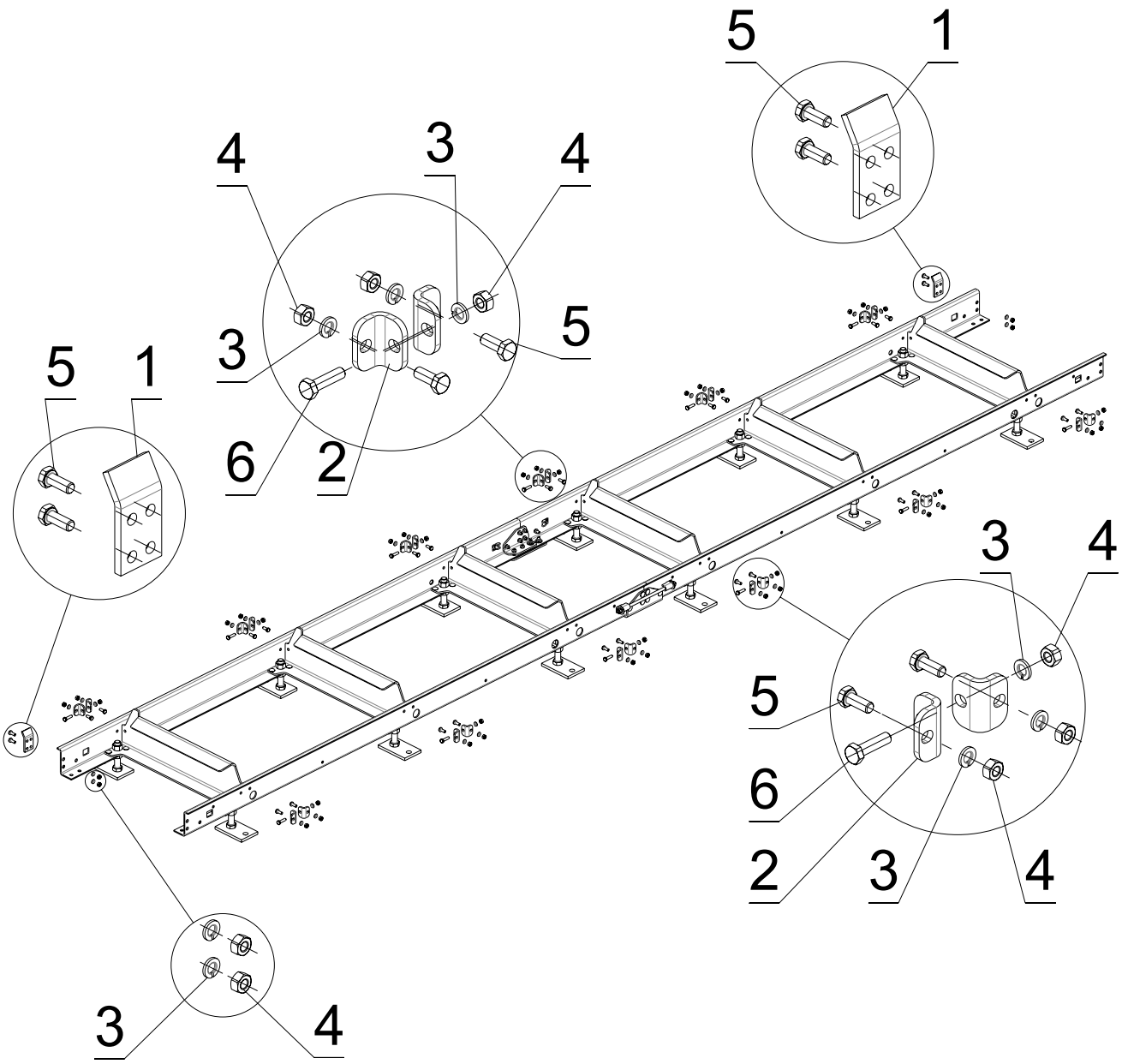


POS	NAME	ASSORT No.	PART No.	PCS
7	SPRING WASHER	001581	DIN 127B 10 Zn	4
6	WASHER	004277	ISO 7093 10 Zn	4
5	LOCK NUT	001712	ISO 7040 M8 8 Zn	12
4	NUT	001469	ISO 4032 M10 8 Zn	4
3	CARRIAGE BOLT		ISO 8677 M8x30 8.8 Zn	12
2	BOLT	016349	03-03-011	2
1	YOKE	016151	03-03-010	4



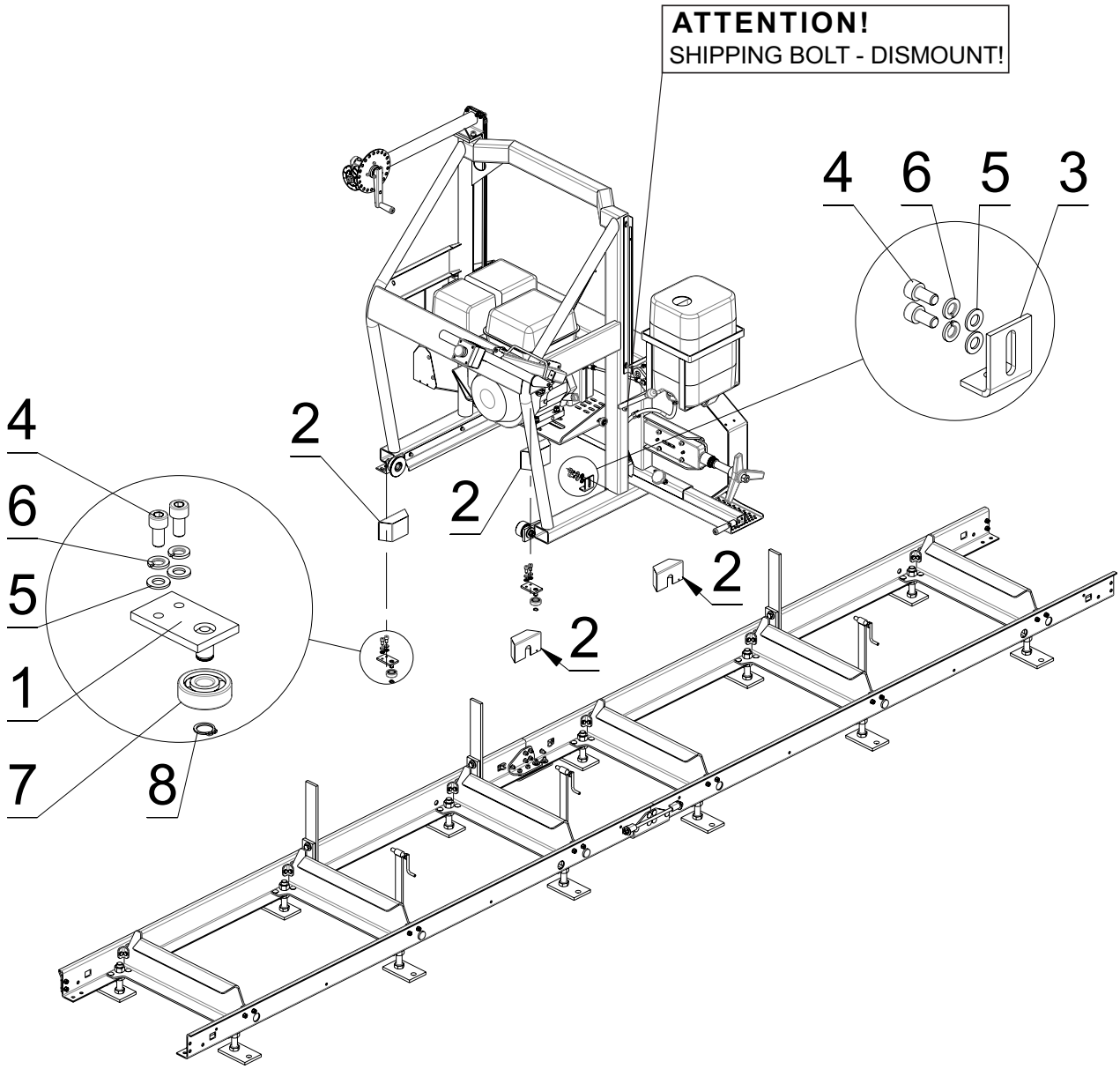
POS.	NAME	ASSORT. No.	PART No.	PCS
9	DISK SPRING	001483	TP 31,5x16,3x1,8x2,5	3
8	CONICAL SPRING WASHER		DIN 6796 12	6
7	THIN NUT	001570	ISO 4035 M16 8 Zn	3
6	NUT	001570	ISO 4032 M16 8 Zn	3
5	BOLT SW.	003634	ISO 4017 M12x35 8.8 Zn	6
4	CLAMP HANDLE	016148	03-03-007	3
3	CLAMP	016147	03-03-006	3
2	ANGLE	016146	03-03-005	3
1	HOLDER OF ANGLE	016145	03-03-004	3

E



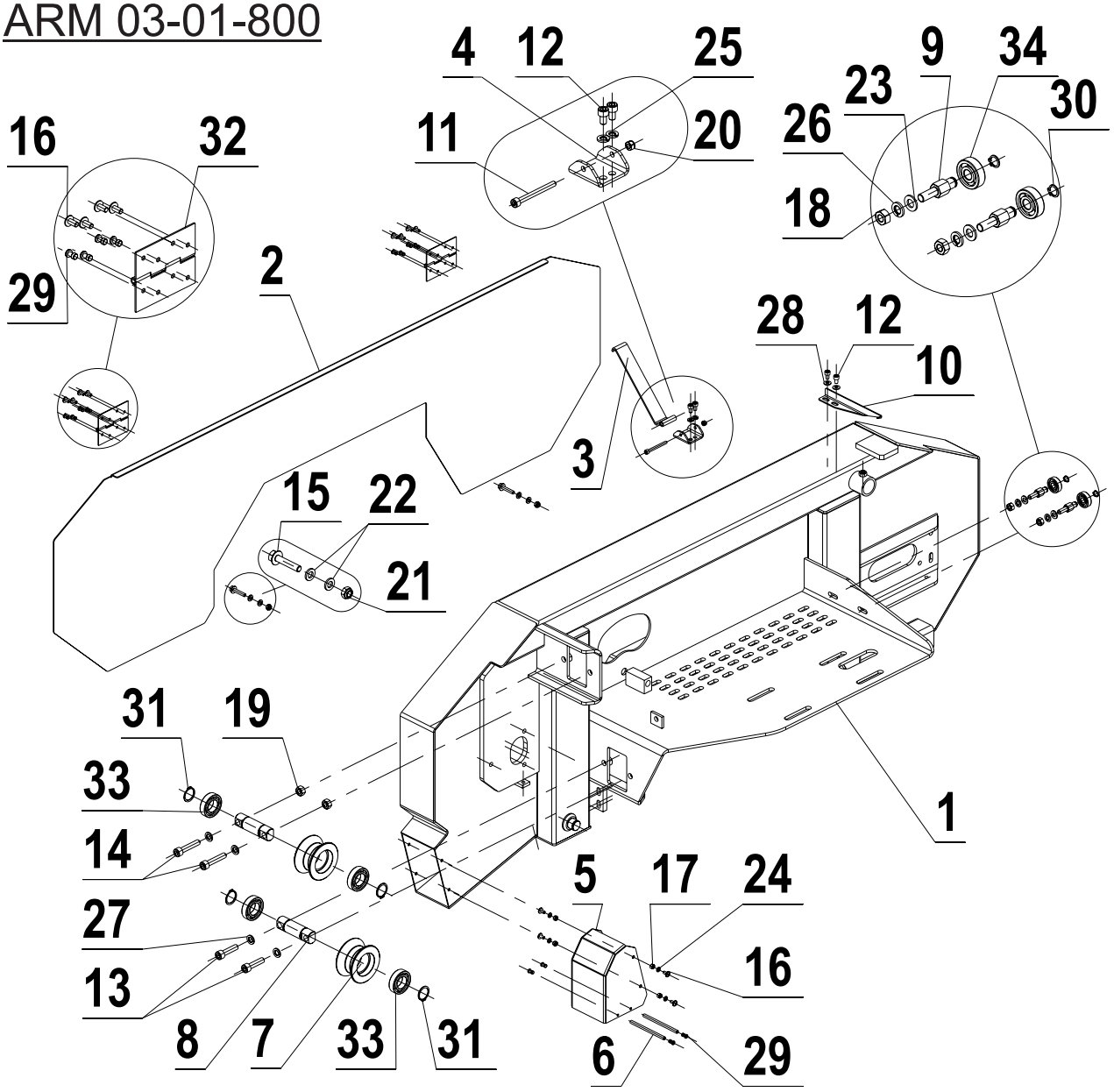
6	BOLT SW.	001717	ISO 4017 M8x30 8.8 Zn	12
5	BOLT SW.	003051	ISO 4017 M8x20 8.8 Zn	28
4	NUT	001468	ISO 4032 M8 8 Zn	64
3	SPRING WASHER	001479	DIN 127B 8 Zn	1
2	STIFFENER	016307	03-03-114	24
1	STOP	016153	03-03-013	2
POS.	NAME	ASSORT. No.	PART No.	PCS

F



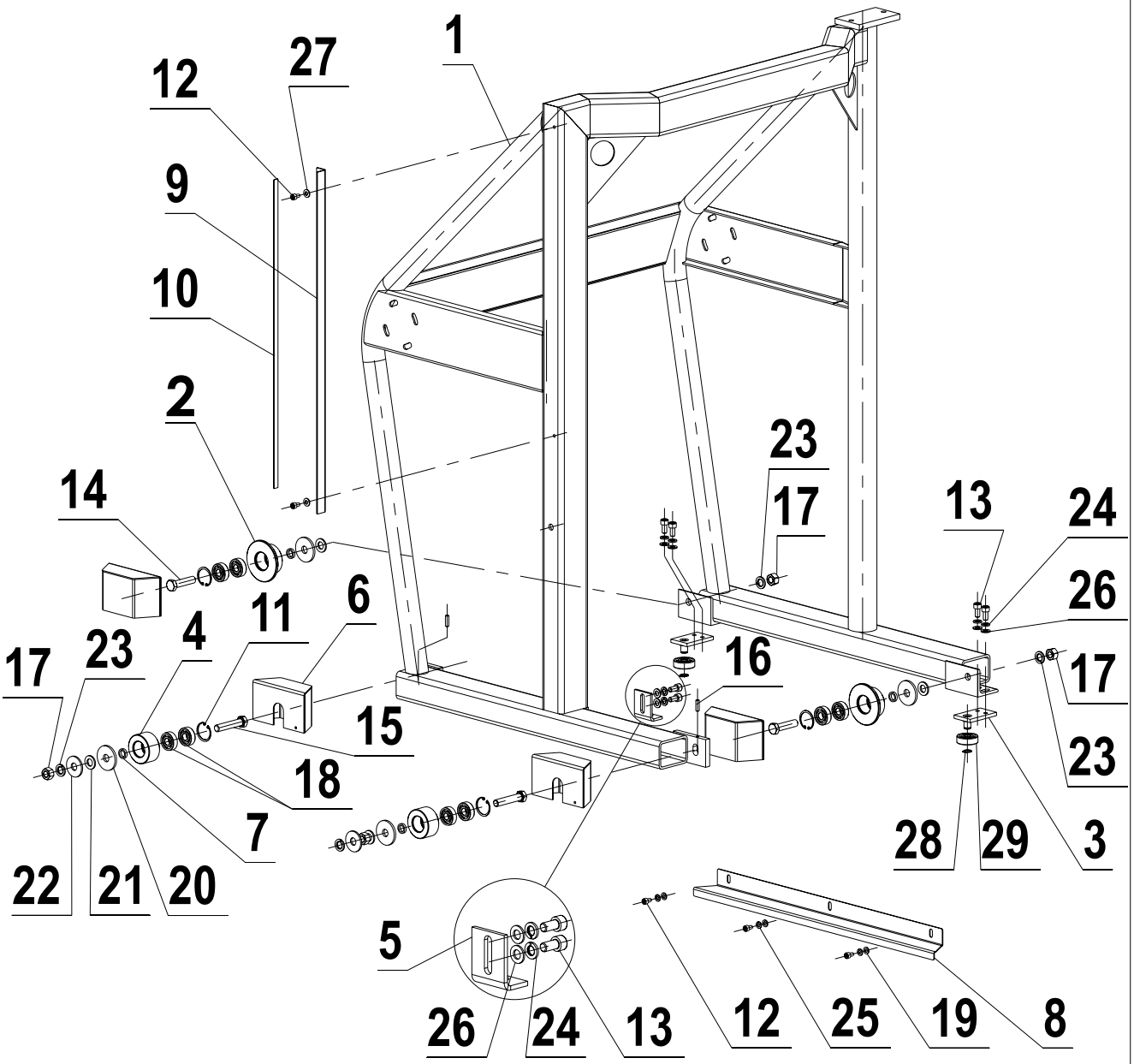
Pos.	Name	Assort. No.	Part No.	Pcs
8	RETAINING RING FOR SHAFT	001429	CSN 022930 12	2
7	BALL BEARING	016943	6301-2Z	2
6	SPRING WASHER	001479	DIN 127B 8 Zn	6
5	FLAT WASHER	001474	ISO 7089 8 Zn	6
4	HEXAGON SOCKET HEAD CAP SCREW	001562	ISO 4762 M8x16 8.8 Zn	6
3	HOOK	016135	03-02-805	1
2	FENDER	016138	03-02-013	4
1	PULLEY HOLDER	016133	03-02-003	2

13. Spare parts



Pos.	Name	Assort. No.	Part No.	Pcs	Pos.	Name	Assort. No.	Part No.	Pcs
34	BEARNG	005413	6200-2RS1 SKF	2	17	NUT	002745	ISO 4032 M5 8 Zn	4
33	BEARNG	003415	6005-2RS	4	16	BOLT FLANGE	002743	FLANGE M5x10 10.9 Zn	12
32	HINGE	016491	ZÁVĚS KZ 80 Zn	2	15	BOLT SW. FLANGE		DIN 6921 M6x30 8.8 Zn	2
31	RETAINING RING FOR SHAFT	001652	CSN 022930 25	4	14	HEX. SOCK. HEAD SCREW	001646	ISO 4762 M10x50 8.8 Zn	2
30	RETAINING RING FOR SHAFT	002087	CSN 022930 10	2	13	HEX. SOCK. HEAD SCREW	001563	ISO 4762 M10x40 8.8 Zn	2
29	BLIND RIVET	002381	DIN 7337A 4x10	12	12	HEX. SOCK. HEAD SCREW	001821	ISO 4762 M6x10 8.8 Zn	4
28	CONICAL SPRING WASHER		DIN 6796 6	2	11	HEX. SOCK. HEAD SCREW	002207	ISO 4762 M5x50 8.8 Zn	1
27	SPRING WASHER	001581	DIN 127B 10 Zn	4	10	INDICATOR GX	019590	03-02-823	1
26	SPRING WASHER	001479	DIN 127B 8 Zn	2	9	PIN OF PULLEY 1	016141	03-02-021	2
25	SPRING WASHER	001573	DIN 127B 6 Zn	2	8	PIN OF PULLEY	016137	03-02-012	2
24	SPRING WASHER	001572	DIN 127B 5 Zn	4	7	PULLEY	016136	03-02-011	2
23	FLAT WASHER	001474	ISO 7089 8 Zn	2	6	PIPE OF DEFLECTOR	016565	03-01-010	2
22	FLAT WASHER	001473	ISO 7089 6 Zn	4	5	DEFLECTOR	016130	03-01-007	1
21	LOCK NUT	006657	ISO 7040 M6 8 Zn	2	4	HOLDER OF CAPTURE	016121	03-01-005	1
20	LOCK NUT		ISO 7040 M5 8 Zn	1	3	CAPTURE OF GUARD	016120	03-01-004	1
19	NUT	001469	ISO 4032 M10 8 Zn	2	2	ARM COVER GX	019686	03-01-802	1
18	NUT	001468	ISO 4032 M8 8 Zn	2	1	ARM GX	019585	03-01-801	1

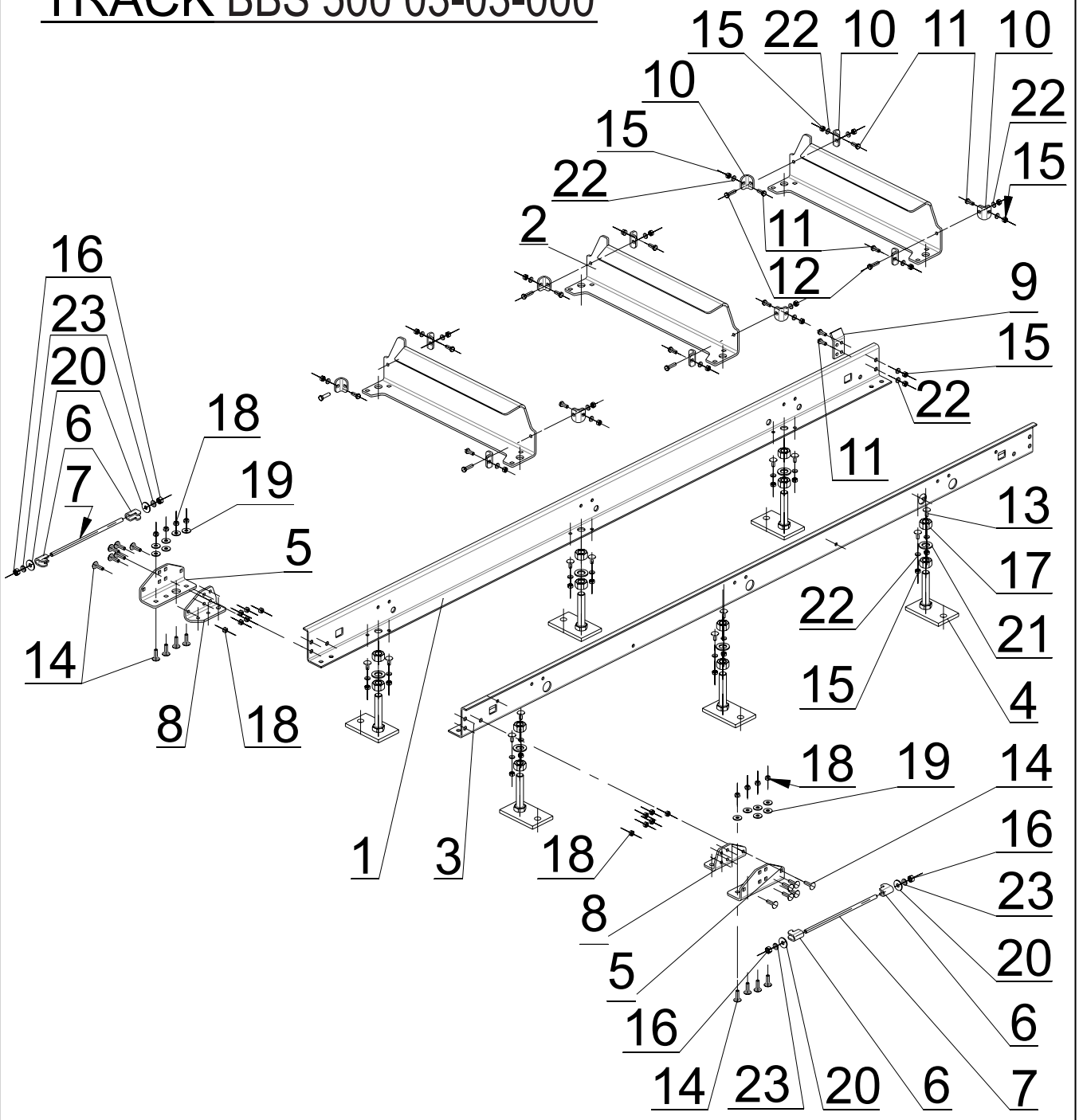
BRIDGE 03-02-800



Pos.	Name	Assort. No.	Part No.	Pcs
29	BEARING	016943	6301-2Z	2
28	RETAINING RING FOR SHAFT	001429	CSN 022930 12	2
27	CONICAL SPRING WASHER		DIN 6796 6	2
26	FLAT WASHER	001474	ISO 7089 8 Zn	6
25	SPRING WASHER	001573	DIN 127B 6 Zn	3
24	SPRING WASHER	001479	DIN 127B 8 Zn	6
23	SPRING WASHER	001582	DIN 127B 12 Zn	4
22	FLAT WASHER	004399	ISO 7093 12 Zn	2
21	FLAT WASHER	001475	ISO 7089 12 Zn	4
20	FLAT WASHER	001477	ISO 7094 12 Zn	4
19	FLAT WASHER	001473	ISO 7089 6 Zn	3
18	BEARING	012090	6201-2Z	8
17	NUT	001470	ISO 4032 M12 8 Zn	4
16	HEX. SOCK. SET SCREW	003279	ISO 4026 M6x20	2

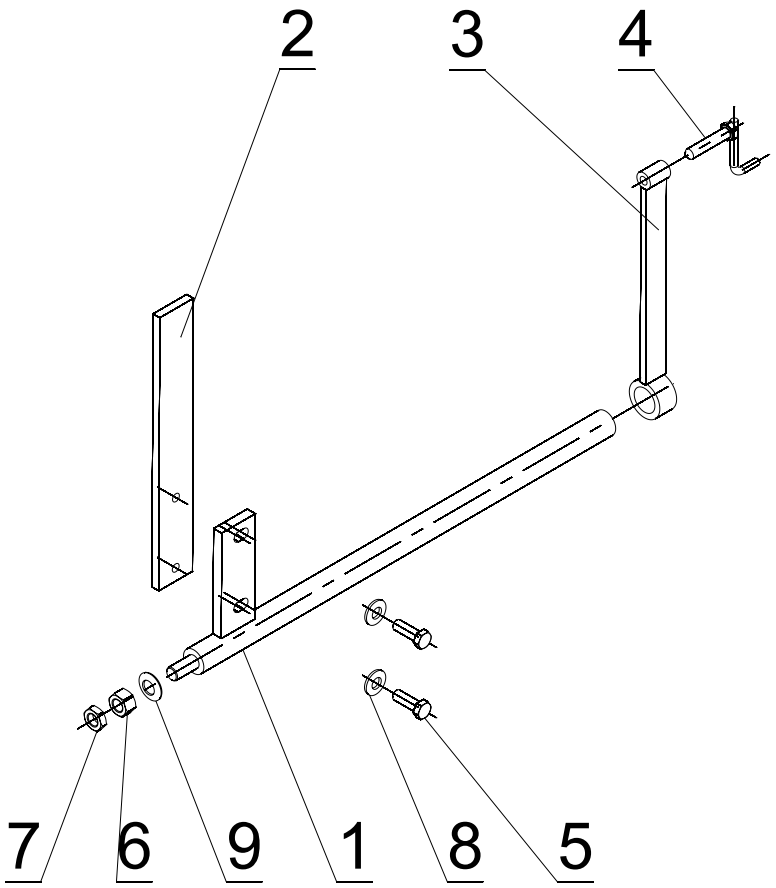
Pos.	Name	Assort No.	Part No.	Pcs
15	BOLT SW.	003633	ISO 4017 M12x60 8.8 Zn	2
14	BOLT SW	001334	ISO 4017 M12x50 8.8 Zn	2
13	HEX. SOCK. HEAD SCREW	001562	ISO 4762 M8x16 8.8 Zn	6
12	HEX. SOCK. HEAD SCREW	001821	ISO 4762 M6x10 8.8 Zn	5
11	RETAINING RING FOR BORE	004222	CSN 022931 32	4
10	GAUGE mm	009295	S-07-002	1
9	GAUGE HOLDER	016269	03-02-822	1
8	TRACK COVER	016140	03-02-015	1
7	RING 12x17x4		03-02-114	4
6	FENDER	016138	03-02-013	4
5	HOOK	016135	03-02-805	1
4	WHEEL WITHOUT FLANGE		03-02-104	2
3	PULLEY HOLDER	016133	03-02-003	2
2	WHEEL WITH FLANGE		03-02-102	2
1	BRIDGE GX	019587	03-02-811	1

TRACK BBS 500 03-03-000



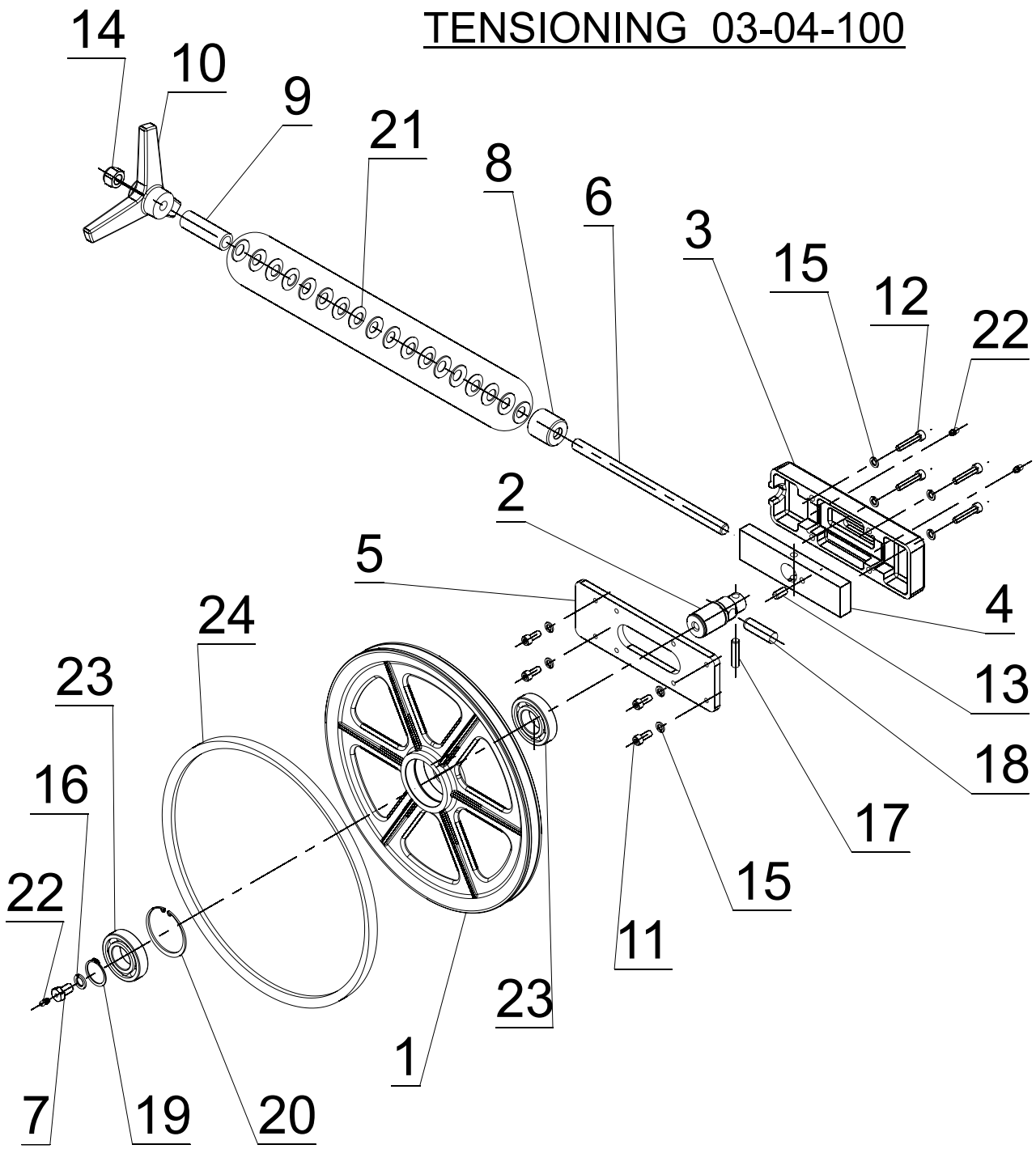
					12	BOLT SW.	001717	ISO 4017 M8x30 8.8 Zn	12
23	SPRING WASHER	001581	DIN 127B 10 Zn	4	11	BOLT SW.	003051	ISO 4017 M8x20 8.8 Zn	28
22	SPRING WASHER	001479	DIN 127B 8 Zn	64	10	STIFFENER	016307	03-03-114	24
21	FLAT WASHER	002446	ISO 7089 20 Zn	12	9	STOP	016153	03-03-013	2
20	FLAT WASHER	004277	ISO 7093 10 Zn	4	8	JOINT INTERNAL	016152	03-03-012	2
19	FLAT WASHER	001474	ISO 7093 8 Zn	12	7	BOLT	016349	03-03-011	2
18	LOCK NUT	001712	ISO 7040 M8 8 Zn	20	6	YOKE	016151	03-03-010	4
17	NUT	001471	ISO 4032 M20 8 Zn	24	5	JOINT EXTERNAL	016150	03-03-009	2
16	NUT	001469	ISO 4032 M10 8 Zn	4	4	LEG	016149	03-03-008	12
15	NUT	001468	ISO 4032 M8 8 Zn	64	3	LONGERON RIGHT	016144	03-03-003	2
14	CARRIAGE BOLT	016570	ISO 8677 M8x30 8.8 Zn	20	2	TRANSOM	016143	03-03-002	6
13	CARRIAGE BOLT	016569	ISO 8677 M8x20 8.8 Zn	24	1	LONGERON LEFT	016142	03-03-001	2
Pos.	Name	Assort. No.	Part No.	Pcs	Pos.	Name	Assort. No.	Part No.	Pcs

CLAMP WITH ANGLE 03-03-200



Pos.	Name	Assort. No.	Part No.	Pcs
9	DISC SPRING	001483	TP 31,5x16,3x1,8x2,5	1
8	CONICAL SPRING WASHER		DIN 6796 12	2
7	THING NUT	001570	ISO 4035 M16 8 Zn	1
6	NUT	001570	ISO 4032 M16 8 Zn	1
5	BOLT SW.	003634	ISO 4017 M12x35 8.8 Zn	2
4	CLAMP HANDLE	016148	03-03-007	1
3	CLAMP	016147	03-03-006	1
2	ANGLE	016146	03-03-005	1
1	HOLDER OF ANGLE	016145	03-03-004	1

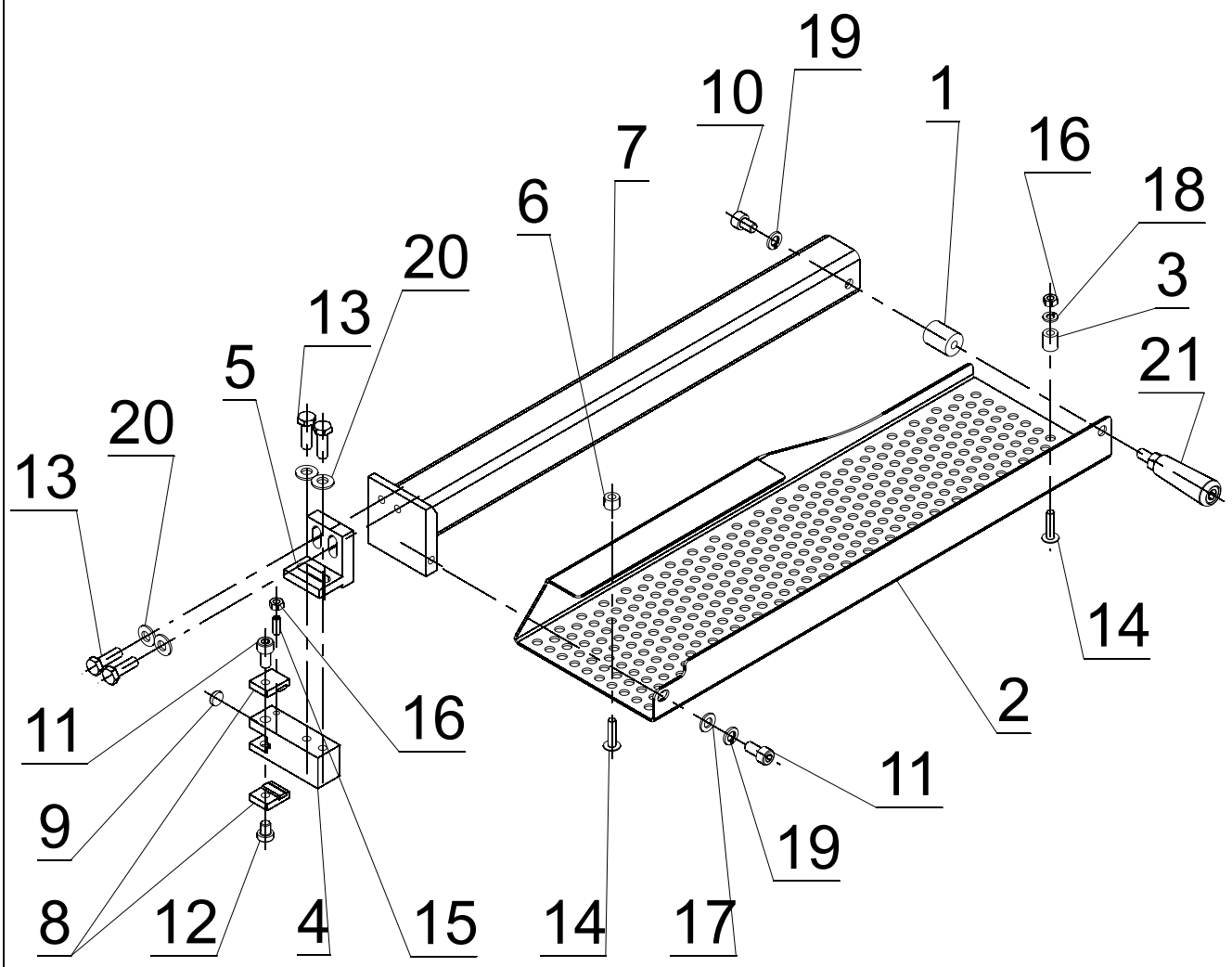
TENSIONING 03-04-100



Pos.	Name	Assort. No.	Part No.	Pcs
1	WHEEL	16175	03-04-001	1
2	TENSIONING PIN	16154	03-04-003	1
3	TENSIONING BODY	16176	03-04-005	1
4	TENSIONING BOARD	16155	03-04-006	1
5	BOARD	16127	03-04-007	1
6	ROD M16x290		BV-03-04-008	1
7	BOLT SW WITH HOLE	16156	03-04-009	1
8	BAND TENSION INDIKATION		03-04-013	1
9	PIPE 25x4x77	14099	72-13-024	1
10	TRIANGLE	1930	E-01-107	1
11	HEX. SOCK. HEAD SCREW	1441	ISO 4762 M8x20 8.8 Zn	4
12	HEX. SOCK. HEAD SCREW	1618	ISO 4762 M8x40 8.8 Zn	4
13	HEX. SOCK. SET SCREW		ISO 4026 M10x20	1

Pos.	Name	Assort No.	Part No.	Pcs
14	LOCK NUT	3263	ISO 7040 M16 8 Zn	1
15	FLAT WASHER	1479	DIN 127B 8 Zn	8
16	FLAT WASHER	1582	DIN 127B 12 Zn	1
17	PIN	2384	ISO 8734-A 10x45	1
18	PIN	6845	ISO 8734-A 16x55	1
19	RETAINING RING FOR SHAFT	1557	CSN 022930 35	2
20	RETAINING RING FOR BORE	1629	CSN 022931 72	1
21	DISC SPRING	1483	TP 31,5x16,3x1,8x2,5	18
22	LUBRICATING NIPPLE	3704	HLAVICE MAZACÍ KM6	3
23	BEARING	1627	6207-2RS1	2
24	V-BELT	16185	ŘEMEN SPB 1250	1

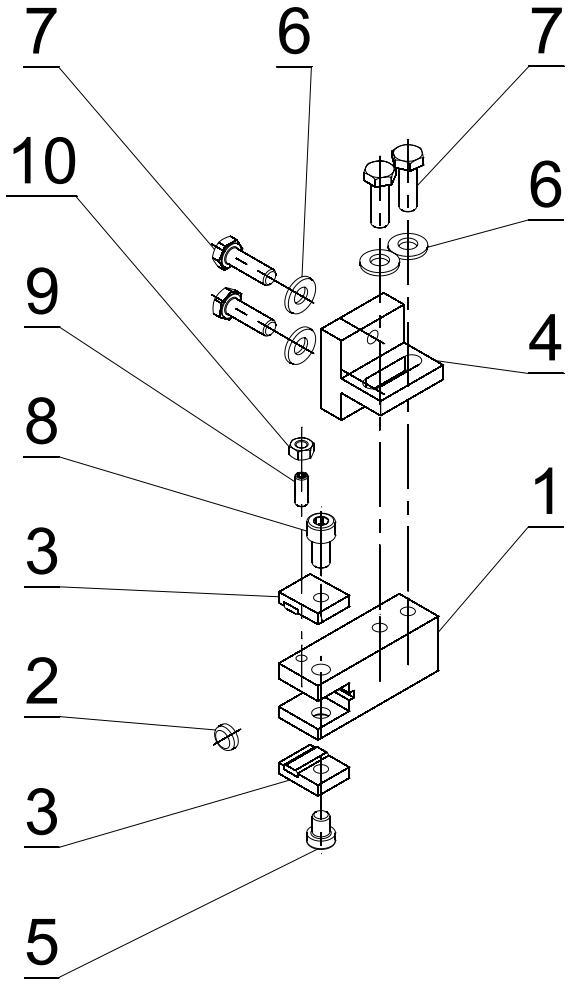
BAND MOVING GUIDE 03-05-200



Pos.	Name	Assort.No.	Part No.	Pcs
1	NUT	16123	03-05-002	1
2	SAW BAND GUARD	16124	03-05-003	1
3	SPACER TUBE 12/6 - 14	16344	03-05-004	1
4	CUBE	16557	03-05-011	1
5	MOVING HOLDER	16559	03-05-013	1
6	SPACER TUBE 12/6 - 9	16560	03-05-014	1
7	MOVING BAR	16561	03-05-021	1
8	HARDMETAL PLATE BRAZED ASSEMBLY	1349	A-01-152	2
9	ROUND HARDMETAL	1351	A-01-154	1
10	HEX. SOCK. HEAD SCREW	1939	ISO 4762 M8x12 8.8 Zn	1
11	HEX. SOCK. HEAD SCREW	1562	ISO 4762 M8x16 8.8 Zn	2

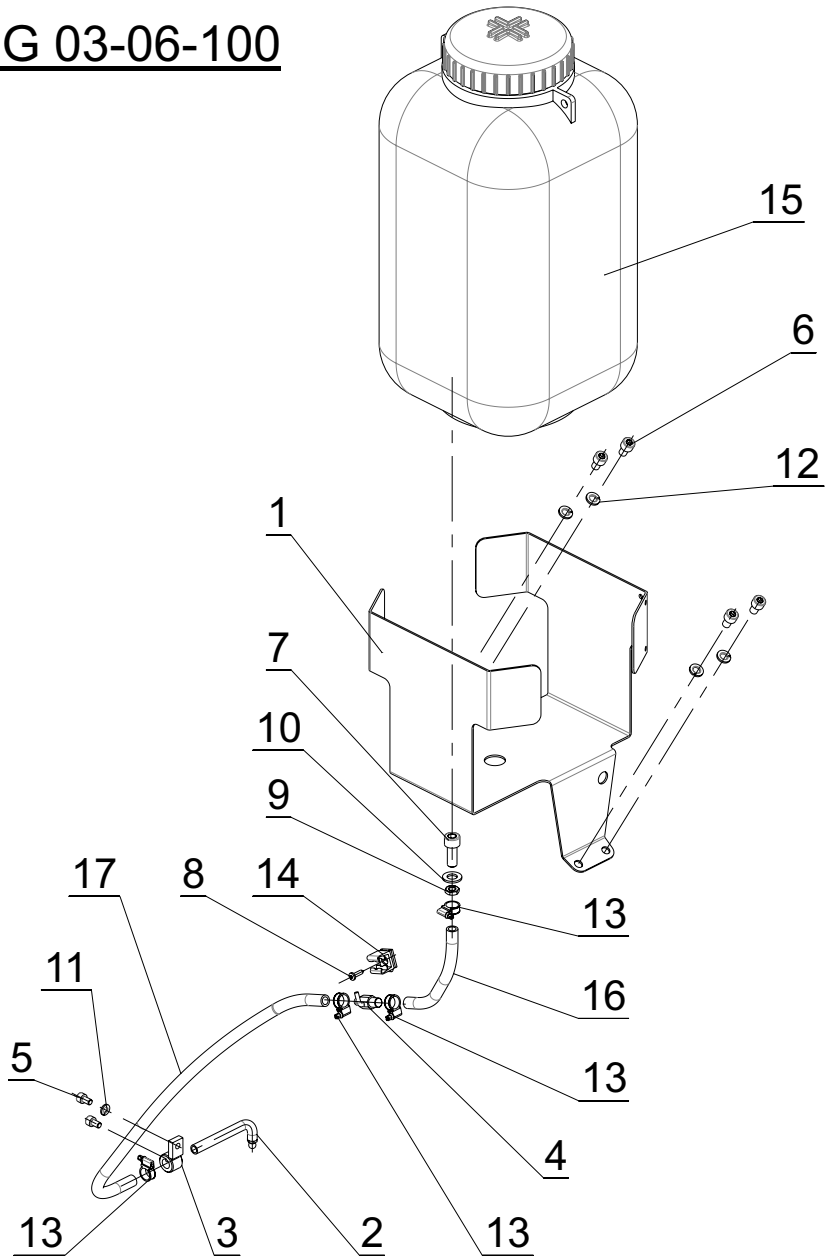
Pos	Name	Assort. No.	Part. No.	Pcs
12	HEX. SOCK. HEAD SCREW.	5030	DIN 7984 M8x10 8.8 Zn	1
13	BOLT SW.	1454	ISO 4017 M8x25 8.8 Zn	4
14	SCREW WITH FLANGE	2743	FLANGE M6x25 10.9 Zn	2
15	HEX. SOCK. SET SCREW	5741	ISO 4026 M6x16	1
16	NUT	1467	ISO 4032 M6 8 Zn	2
17	FLAT WASHER	1474	ISO 7089 8 Zn	1
18	SPRING WASHER	1573	DIN 127B 6 Zn	1
19	SPRING WASHER	1479	DIN 127B 8 Zn	2
20	CONICAL SPRING WASHER		DIN 6796 8	4
21	HANDLE	12991	HANDLE M8 complete	1

BAND GUIDE FIXED 03-05-300



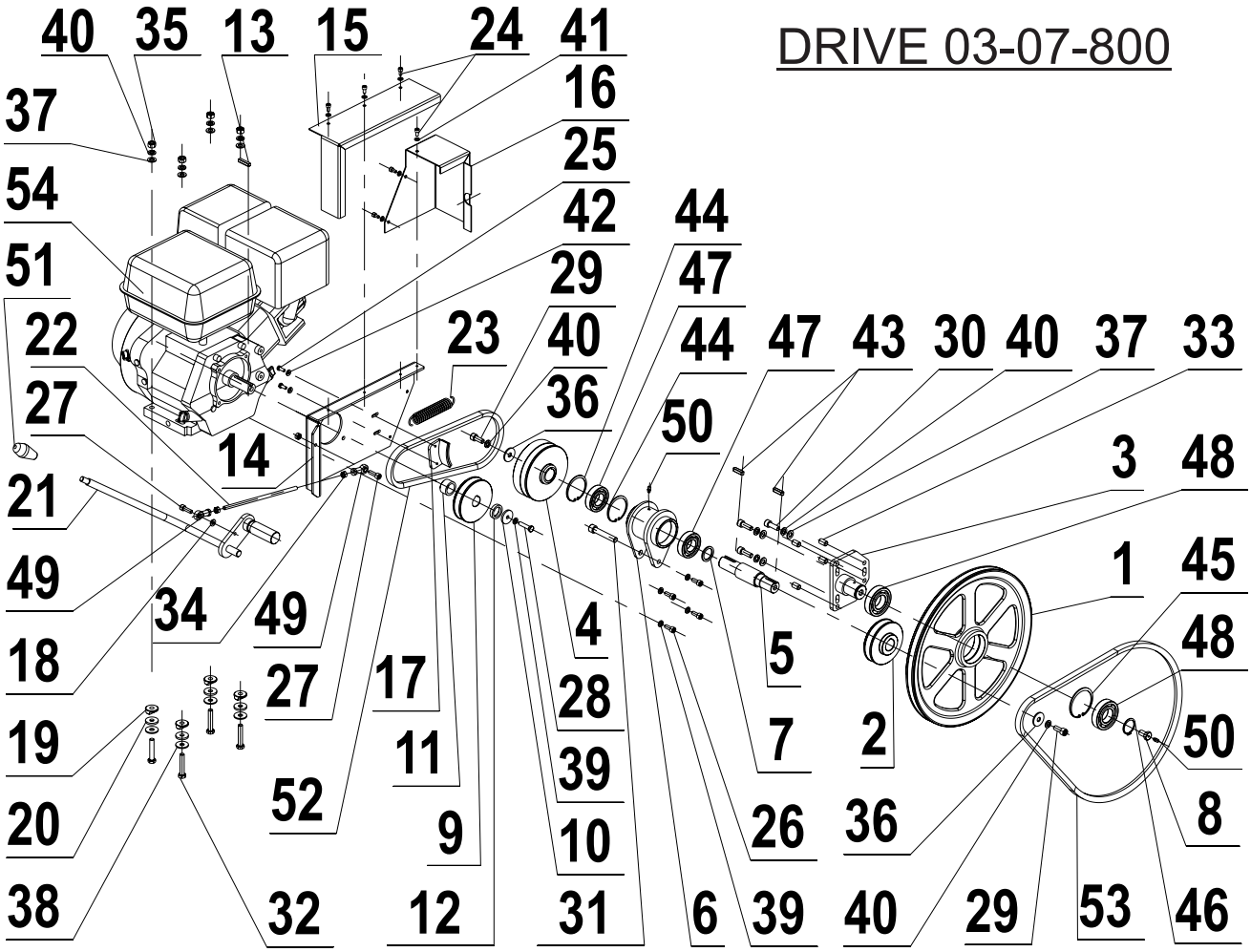
Pos.	Name	Assort. No.	Part No.	Pcs
10	NUT	001467	ISO 4032 M6 8 Zn	1
9	HEX. SOCK. SET SCREW	005741	ISO 4026 M6x16	1
8	HEX. SOCK. HEAD SCREW	001562	ISO 4762 M8x16 8.8 Zn	1
7	BOLT SW.	001454	ISO 4017 M8x25 8.8 Zn	4
6	CONICAL SPRING WASHER		DIN 6796 8	4
5		005030	DIN 7984 M8x10 8.8 Zn	1
4	FIXED HOLDER	016558	03-05-012	1
3	HARDMETAL PLATE BRAZED ASSEMBLY	001349	A-01-152	2
2	ROUND HARDMETAL	001351	A-01-154	1
1	CUBE	016557	03-05-011	1

COOLING 03-06-100



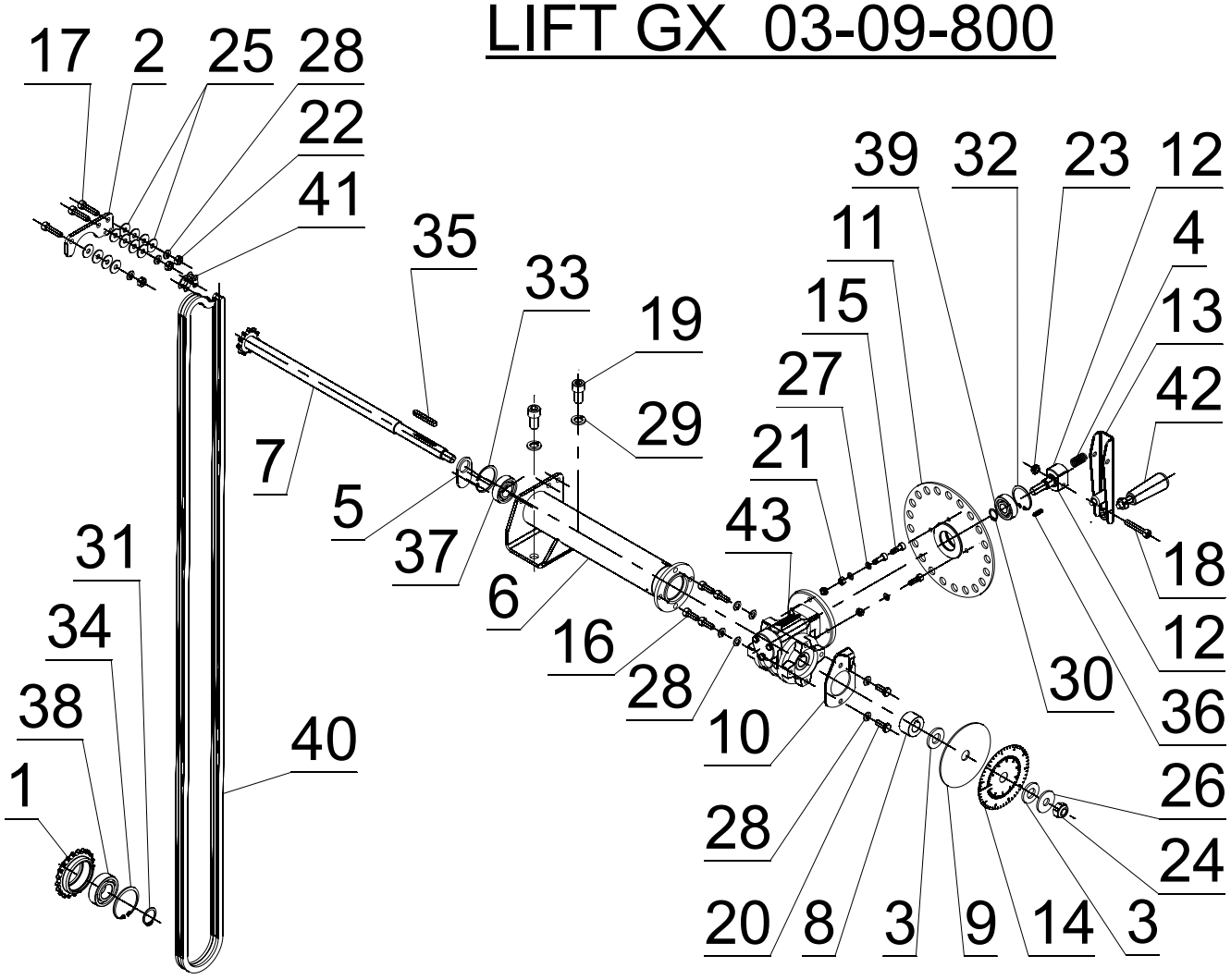
Pos.	Name	Assort. No.	Part No.	Pcs
17	HOSE DN8x2 - 500	001399	HAD-63-06-4	1
16	HOSE DN8x2 - 170	001399	HAD-63-06-3	1
15	KANISTER	020533	KANISTER 15 l	1
14	FISCHER	001393	CLIP FC 9-12	1
13	HOSE CLIP	001398	HOSE CLIP 7-13	4
12	SPRING WASHER	001479	DIN 127B 8 Zn	4
11	SPRING WASHER	001573	DIN 127B 6 Zn	1
10	WASHER	001476	ISO 7089 10 Zn	1
9	THIN NUT	002281	ISO 4035 M8 8 Zn	1
8	THREAD ROLLING SCREW	002146	ISO 7049 4.2x16-C-H Zn	1
7	SCREW WITH HOLE	020535	63-06-001	1
6	HEXAGON SOCKET HEAD CAP SCREW.	001939	ISO 4762 M8x12 8.8 Zn	4
5	HEXAGON SOCKET HEAD CAP SCREW.	001821	ISO 4762 M6x10 8.8 Zn	2
4	COOK	001402	SA-07-100	1
3	OUTLET HOLDER	009033	71-06-003	1
2	OUTLET	009032	71-06-002	1
1	BASKET 15	020441	91-06-102	1

DRIVE 03-07-800



Pos.	Name	Assort. No.	Part No.	Pcs	Pos.	Name	Assort. No.	Part No.	Pcs
54	MOTOR	020476	HONDA GX 390	1	27	HEX. SOCK. HEAD SCREW	001443	ISO 4762 M8x25 8.8 Zn	2
53	V-BELT	011242	V-BELT SPB 1472	1	26	HEX. SOCK. HEAD SCREW	001441	ISO 4762 M8x20 8.8 Zn	4
52	V-BELT		V-BELT B 875 Lw	1	25	HEX. SOCK. HEAD SCREW	003050	ISO 4017 M6x16 8.8 Zn	2
51	HANDLE	001580	HANDLE M12	1	24	HEX. SOCK. HEAD SCREW	001442	ISO 4762 M6x12 8.8 Zn	6
50	LUBRICATI ON NIPPLE	003704	HLAVICE MAZACÍ KM6	2	23	SPRING	012870	X-22-132	1
49	ARTICULATED EYE	018087	PHS 8	2	22	ROD	019574	03-07-865	1
48	BEARING	001627	6207-RS	2	21	COMPLETE LEVER	019573	03-07-864	1
47	BEARING	010815	6206-RS	2	20	WASHER 10x30x4 PA	019572	03-07-863	4
46	RETAINING RING FOR SHAFT	001557	CSN 022930 35	1	19	GLIDER	019571	03-07-862	4
45	RETAINING RING FOR BORE	001629	CSN 022931 72	1	18	RING 8x16x3	019570	03-07-861	1
44	RETAINING RING FOR BORE	001437	CSN 022931 62	2	17	JAW WITH LINING	019569	03-07-860	1
43	KEY	006698	8e7x7x32	2	16	BELT COVER 2	019567	03-07-858	1
42	CONICAL SPRING WASHER		DIN 6796 6	2	15	BELT COVER 1	019566	03-07-857	1
41	SPRING WASHER	001573	DIN 127B 6 Zn	6	14	BOARD GX 390	019565	03-07-856	1
40	SPRING WASHER	001581	DIN 127B 10 Zn	9	13	KEY 7x7x35	019564	03-07-855	1
39	SPRING WASHER	001479	DIN 127B 8 Zn	5	12	RING 25x34x7	019563	03-07-854	1
38	FLAT WASHER	004277	ISO 7093 10 Zn	4	11	RING 25x34x19	019562	03-07-853	1
37	FLAT WASHER	001476	ISO 7089 10 Zn	7	10	WASHER 8x34x4	019561	03-07-852	1
36	FLAT WASHER	004277	ISO 7094 10 Zn	2	9	PULLEY SPB 100 GX	019560	03-07-851	1
35	NUT	001469	ISO 4032 M10 8 Zn	4	8	BOLT SW	016156	03-04-009	1
34	NUT	001468	ISO 4032 M8 8 Zn	3	7	RING 37x28x3	016581	03-07-808	1
33	HEX. SOCK. SET SCREW	006920	ISO 4026 M12x20	4	6	COUNTER SHAFT BODY	019580	03-07-807	1
32	BOLT SW	003311	ISO 4014 M10x55 8.8 Zn	4	5	SHAFT	019579	03-07-806	1
31	HEX. SOCK. HEAD SCREW	002305	ISO 4762 M12x70 8.8 Zn	1	4	PULLEY WITH DRUM	019578	03-07-805	1
30	HEX. SOCK. HEAD SCREW	001447	ISO 4762 M10x30 8.8 Zn	3	3	DRIVE PIN	016160	03-07-003	1
29	HEX. SOCK. HEAD SCREW	001446	ISO 4762 M10x25 8.8 Zn	2	2	PULLEY SPB 100	016159	03-07-002	1
28	BOLT SW	001623	ISO 4014 M8x35 8.8 Zn	1	1	WHEEL	016175	03-04-001	1

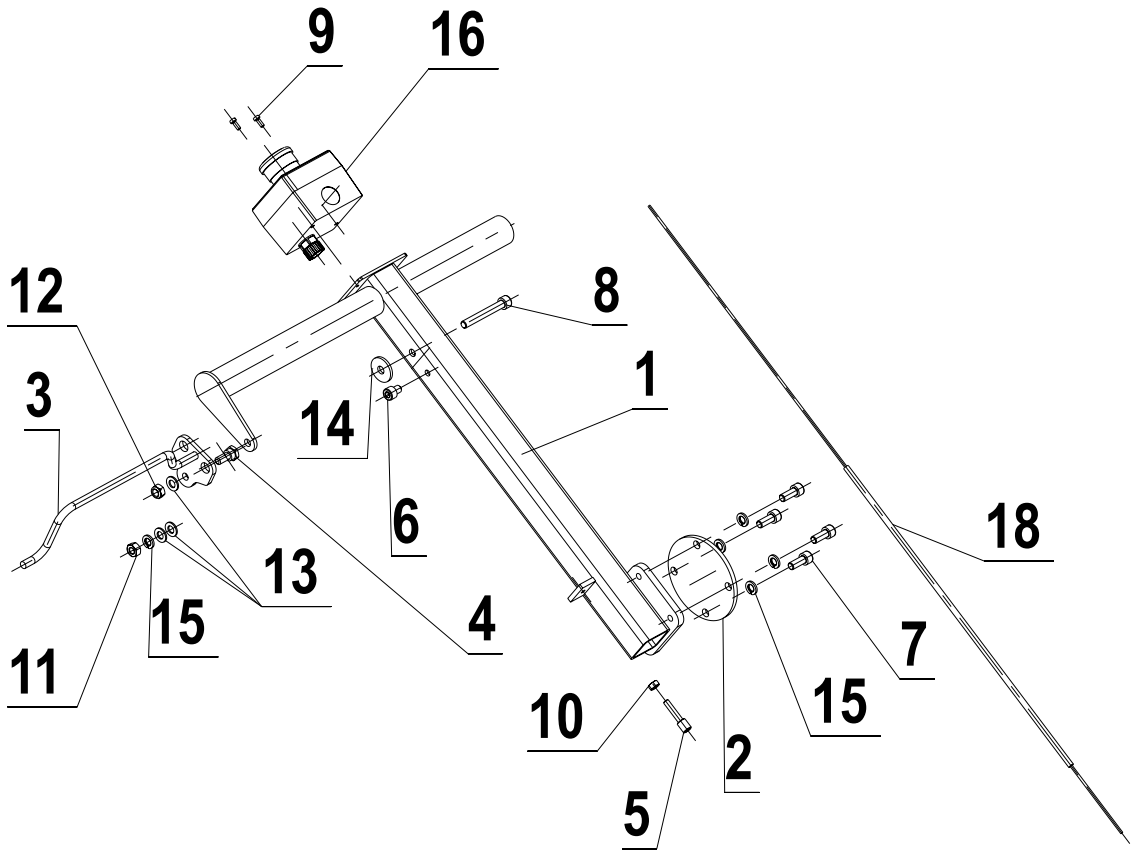
LIFT GX 03-09-800



Pos	Name	Assort.No.	Part No.	Pcs
1	SPROCKET	16163	03-09-004	1
2	CHAIN PLATE	16164	03-09-005	1
3	FRICTION RING 15x32-3	16169	03-09-010	2
4	HANDLE SPRING	16244	03-09-012	1
5	SCRAPER	16275	03-09-015	1
6	LIFT BODY	16277	03-09-821	1
7	LIFT SHAFT COMPLETE	16278	03-09-022	1
8	RING	16279	03-09-023	1
9	SCALE DISC	16280	03-09-024	1
10	INDICATOR	16281	03-09-025	1
11	COMPLETE LOCKING DISC	16282	03-09-026	1
12	SHAFT OF HANDLE	16283	03-09-027	1
13	COMPLETE HANDLE	16284	03-09-829	1
14	LIFT MEASUREMENT LABEL		S-73-001	1
15	HEX.SOCK.HEAD SCREW	1560	ISO 4762 M5x16 8.8 Zn	3
16	HEX.SOCK.HEAD SCREW	1440	ISO 4762 M6x16 8.8 Zn	4
17	HEX.SOCK.HEAD SCREW	2122	ISO 4762 M6x25 8.8 Zn	3
18	HEX.SOCK.HEAD SCREW	2042	ISO 4762 M6x35 8.8 Zn	1
19	HEX.SOCK.HEAD SCREW	1445	ISO 4762 M10x20 8.8 Zn	2
20	BOLT SW		ISO 4017 M6x16 8.8 Zn	2
21	NUT	2745	ISO 4032 M5 8 Zn	3
22	NUT	1467	ISO 4032 M6 8 Zn	3

Pos	Name	Assort. No.	Part No.	Pcs
23	LOCK NUT	6657	ISO 7040 M6 8 Zn	1
24	LOCK NUT	9714	ISO 7040 M10 8 Zn	1
25	FLAT WASHER		ISO 7093 6 Zn	12
26	FLAT WASHER	4277	ISO 7093 10 Zn	1
27	SPRING WASHER	1572	DIN 127B 5 Zn	3
28	SPRING WASHER	1573	DIN 127B 6 Zn	9
29	SPRING WASHER	1581	DIN 127B 10 Zn	2
30	REAINING RING FOR BORE	1429	CSN 022930 12	1
31	REAINING RING FOR BORE	1431	CSN 022930 20	1
32	REAINING RING FOR SHAFT	4222	CSN 022931 32	1
33	REAINING RING FOR SHAFT	1557	CSN 022931 35	1
34	REAINING RING FOR SHAFT	1558	CSN 022931 42	1
35	KEY	2420	5e7x5x40	1
36	KEY	16653	3e7x3x16	1
37	BALL BEARING	1546	6003-2Z	1
38	BALL BEARING	1549	6004-2RS1	1
39	BALL BEARING	12090	6201-2Z	1
40	LIFT CHAIN	3006	CHAIN 6B1 - 2753 mm	1
41	CHAIN COUPLER	3009	6B1 SPOJKA	2
42	HANDLE	12991	RUKOJEŤ M8 úplná	1
43	GEARBOX	15542	RMI28PP56B14i10	1

CONTROL 03-12-800



Pos.	Name	Assort. No.	Part No.	Pcs	Pos.	Name	Assort. No.	Part No.	Pcs
18	BOWDEN	003017	BOWDEN CTR 520 GX	1	9	BOLT	001685	ISO 1207 M4x10 8.8 Zn	2
17	OUTLET	007239	MSV PG9	1	8	HEX. SOCK. HEAD SCREW	001172	ISO 4762 M8x60 8.8 Zn	1
16	TOTAL STOP	006099	IDEC FB1W-111Y	1	7	HEX. SOCK. HEAD SCREW	001441	ISO 4762 M8x20 8.8 Zn	4
15	SPRING WASHER	001479	DIN 127B 8 Zn	5	6	HEX. SOCK. HEAD SCREW	005318	ISO 4762 M8x10 8.8 Zn	1
14	FLAT WASHER	002038	ISO 7094 8 Zn	1	5	SETTING BOLT	010796	61-07-032	1
13	FLAT WASHER	001474	ISO 7089 8 Zn	3	4	CABLE BOLT	014723	68-12-009	1
12	LOCK NUT	001712	ISO 7040 M8 8 Zn	1	3	THROTTLE LEVER	019576	03-12-803	1
11	NUT	001468	ISO 4032 M8 8 Zn	1	2	HANDLE GIB	019577	03-12-802	1
10	NUT	001467	ISO 4032 M6 8 Zn	1	1	HANDLE	019575	03-12-801	1