Translation

Operating manual

De-stoning machine EP 1000

1 Basic safety principles

1.1 Key to the symbols

Listing of the symbols used and their significance

BEFORE FIRST START INSTRUCTIONS READ

	**Not observing this requirement can lead to serious injury or to death!**

WARNING OF DANGEROUS LIVE ELECTRICAL POWER SUPPLY

	Before any servicing or checking work is undertaken, all parts or supply lines on the machine that are marked with this sign must be switched free from live current. **Not observing this requirement can lead to serious injury or to death!**

WARNING AGAINST BEING DRAWN IN

	The removal of safety components and the non-observation of safety regulations during operation is forbidden! Maintain safety distance to revolving parts! Loose parts of clothing, arm or neck chain jewellery can become caught in moving machine parts during servicing or repair work. If hair is worn long a hairnet must be used to prevent hair from becoming caught or pulled in. **Not observing this requirement can lead to serious injury or to death!**

BEFORE OPENING UNPLUG!

	Interrupting your work on the machine power supply and secure against accidental before reconnecting it and turning. **Non compliance can mean severe personal injury.**

WEAR EAR MUFFS!

	Ear muffs must be worn when there is a high noise level! **Not observing this can lead to serious personal injury!**

WARNING AGAINST GENERAL DANGERS

	The instructions for these signs must be used without fail! **Not observing this requirement can lead to serious injury or to death!**

INFORMATION!

	Helps you to make optimal use of the functionality of your machine.

NOTE!

	Technical requirements for simplifying the operation of the machine!

1.2 General safety regulations

NOTE!

	Ensure that the machine/line is only operated under perfect technical operational conditions and giving full account to the proper use.

WARNING AGAINST GENERAL DANGERS

	Ensure that all possible faulty functions and risk situations are eliminated immediately and without delay before starting up! Faulty functions and risk situations are e.g.: uncontrolled lifting/sinking and turning/swivelling movements loose parts on the machine/line

INFORMATION!

	Not following the instructions in this Operating Manual can lead to the loss of your warranty! Mind the present accident prevention regulations of the employer's liability insurance associations and other rules, e.g. VDE, IEC

1.3 Selection, qualification and responsibility of operating staff

NOTE!

	Please note each operator of the unit must be trained, instructed and older than 15 years. Please observe your national law and regulations for industrial safety. Operating staff who are in training or under instruction may only work under the constant observation of an experienced person who is thoroughly familiar with this machine/line! All work on the electrical systems for this machine/line may only be carried out by a qualified electrician / electrical engineer. All work of this kind may only be carried out under the direction of a qualified electrician / electrical engineer taking full account of the relevant electro-technical guidelines. The operating personnel must ensure that no other people are in the working area. Before you leave the unit, you have to stop it and to ensure that no unauthorized person (especially children) is able to restart it. Therefore lock the main switch in position <0> with a padlock and / or disconnect the main plug!

1.4 Organisational measures

NOTE!

	Before starting up the machine/line the operating personnel must without fail be familiar with the Operating Manual, in particular with the safety regulations and notes. It is too late to make a start on familiarisation with these procedures when work is already being done on the machine/line. This applies in particular to persons who work constantly on the machine/line. Ensure that a copy of the Operating Manual is kept constantly at the machine/line! The Operating Manual must be read by every person whose task is operation or maintenance (servicing, inspection and maintenance). Only line-specific trained personnel who are thoroughly familiar with it may be employed on the machine/line. If the machine/line must be transported only trained staff who are permitted to do so may operate the lifting gear (crane, stacker). Training and instruction must be recorded and entered in this documentation machine/line Operating Manual (instructor, content, participant and date). Safety and danger notes and all notices must be maintained in a perfect and legible state. In the event of warning and notice signs on the machine being illegible the manufacturer must be informed at once!

NOTE!

	Use protective equipment if necessary, but without fail if this is required by the protection regulations! (gloves, masks, ear muffs, protective helmets etc.) Observe all the safety requirements and notices that are place on the machine/line ! In the event of damage to a part or a component group that may a detrimental effect on operating personnel on the line, the line must be shut down immediately and the responsible person or the Customer Service Department must be informed! All changes, additions or subsequent constructions to the machine/line that may have a negative effect on its safety and functionality, may only be made when these are tested, agreed to and released in writing by the machine/line suppliers! This also applies to the installation and setting of the safety devices and safety equipment This also includes the welded constructions of the bearing and support structures . All spare parts must comply with the technical requirements of the machine/line supplier. This is also the case where original spare parts are used .

1.5 Safety requirements for the operating state

WARNING AGAINST GENERAL DANGERS

	The machine/line may only be operated after all statutory safety requirements have been fulfilled.

1.5.1 Servicing/repair operation

WARNING AGAINST GENERAL DANGERS

	Servicing and maintenance work may only be carried out when the machine / line is switched off and is secured against being switched on again (e.g.: after disconnecting the mains plug; locking the switched off mains switch; the key must be securely kept by the operating staff!)

WARNING AGAINST GENERAL DANGERS

	The machine / line may only be operated with assembled safety housing covers! The machine / line area that is to be serviced must be switched off and locked before the start of work. It must be ensured that the machine / line area remains switched off by suitable measures or by the posting of a second person. When working on an unsecured device it must be ensured that the emergency stop button can be actuated at any time by a second person. The second person must be outside the danger area and must be familiar with the measures to be taken in the event of an emergency. Servicing, repair and maintenance work may only be carried out from a safe position. Before beginning normal operation again a functional test of all functional groups and safety equipment must be made without fail.

WARNING OF DANGEROUS LIVE ELECTRICAL POWER SUPPLY

	Before starting servicing and maintenance work on electrical components (e.g.: clamping boxes) the current supply to these components must be switched off, tested with a current tester and suitable measures take to ensure that they are secured against being unintentionally switched on again! Before any electrical connection are loosened it must first be ensured by use of a current tester that they are electrically dead.

1.5.2 Normal Operation

NOTE!

	Avoid working methods that are not clear from a safety aspect! Make all required settings to the machine/line so that can work under reliable and safe operating conditions! The machine/line may only be operated when all safety devices and safety equipment is available and functional, such as e.g.: - emergency stop button - two hand operation (dead man's switch) - protective covers - safety switches - personal safety equipment

WARNING AGAINST GENERAL DANGERS

	Make a visual check of the machine / line before each start for externally visible damage or defects! All changes (also including changes to the Operating Manual) must be documented immediately and the person in charge and/or the customer service must be informed. The machine / line is to be **brought to an immediate standstill and secured against being started up again!** In the event of malfunctions the machine / line must be shut down at once and locked against being restarted! Ensure that the malfunction is dealt with immediately and professionally! Observe the on and off switching processes and compare the monitoring displays with the data provided in the documentation/Operating Manual! Observe all the signs fixed to the machine / line! Before starting up the machine / line it must be ensured that no persons are in danger! Do not remove any safety covers while the machine / line is in operation! Moving mechanical parts must not be touched! Do not use electrical cut-outs that do not comply with the required fuse-protection! In the event of an electricity supply failure the machine / line is to be shut down immediately! In order to ensure a smooth and uninterrupted operation the machine / line and its surroundings are to be kept clean and tidy and adequate lighting must be provided in the working area. Before beginning normal operation a functional test of all functional groups and safety equipment must be made without fail!

1.6 Safety devices

The machine/line may only be used either in the course of normal operation or in servicing/repair operation when all required safety devices are used and are effective.

the following safety regulations have been introduced in order to reduce the remnant risk from the machine/line to an absolute minimum:

- The Operating Manual describes the sources of risk and the orderly behaviour of the operating, servicing and repair personnel.
- Notices on the machine/line marking sources of risk!

e.g.:

Picture 1.6-1) Caution live voltage!

NOTE!

	The safety devices must not be left aside nor made in effectual. Where this is not assured no liability can be accepted. safety devices must be checked monthly. Notices must be easy to recognise.

Electrical safety devices

WARNING AGAINST GENERAL DANGERS

	All electrical safety devices must be connected and functional at all times. they must not be electrically bridged! Before quitting any activated safety devices it must be ensured that no persons are in the danger areas.

The electrical safety devices include for example:

- main switch
- emergency stop-switch and button
- energy supply cables
- any operator controls and control stands if these are provided

Mechanical safety devices

WARNING AGAINST GENERAL DANGERS

	All safety equipment must be firmly installed! It must only be possible to disassemble with the use of tools! The possibility of loosening it manually is not permitted! Protective equipment may only be removed for periods of maintenance and overhauling! The machine / line must be secured against the possibility of being started in an unsafe state!

The mechanical safety devices include for example:

- safety clothing
- railings and barriers
- protective grids
- covers on moving parts

1.7 Remnant risks

Reasonably foreseeable, incorrect use/risk	Remnant risk	Measures
Not maintaining of the safety regulations, as described in the documentation or the Operating Manual	Any failure of safety devices, all forms of risk possible	Additional note on the machine/line about the observation of specified safety regulations
Servicing and maintenance work on the machine/line, while it is not in a safe condition, e.g. the mains electricity has not been switched off, etc.	All forms of risk possible!	For operator training see Operating Manual
Not observing the safety measures in setting up the machine/line	All forms of risk possible, e.g. loose mechanical parts	For operator training see Operating Manual
Catching of clothing in moving mechanical parts during servicing or repair work	All forms of risk possible!	Starting up of the machine/line only with assembled safety covers; Regulation clothing, operator training
Standing beneath hanging loads	The endangering of the ground personnel is possible from falling loads	Wear safety helmets; observe safety notes for servicing and repair work; staff training
Neglect of personal protection equipment in normal operation and servicing and maintenance work	All forms of danger to staff are possible!	For operator training see Operating Manual; use personal protection equipment if required, but without fail if this is required by the protection regulations! (gloves, facial protection and earmuffs, protective helmet etc.)
Straining the body through incorrect manual lifting	Permanent damage to the spine and joints of the hand	Use of suitable permitted lifts

Risk areas

Risk areas must be constantly marked by means of warning plates, coloured markings or other clear indicators.

WARNING AGAINST GENERAL DANGERS

	- The presence of persons during operation in risk areas is prohibited! - A functional test of all safety devices must be carried out before re-starting of line! - It must be assured before switching the main switch and the control power, that there are no persons in the risk areas.

1.8 Correct use

This machine/line is intended and constructed for the following use in full compliance with the contractual terms:

INFORMATION!

	**This machine may only be used for removing stones from core and stone fruit.**

Any other use of this machine/line represents an improper use of the machine/line.
The correct use of this machine/plant to terms of the contract requires further that the documentation/Operating Manual as also the specified inspection and servicing intervals are strictly adhered to.

Although this machine/plant has been constructed to the highest technical standards and the recognised standards of safety and has been accepted by the client, danger of injury or of loss of life may none-the-less arise for the user or third persons as a result of its use, or the machine/line may itself be damaged.

The machine/line may only be operated when in a technically perfect condition, in a professional manner and when the operator is fully aware of the safety and danger aspects.

Recognised weaknesses or faults that may reduce the safety of operation, must be dealt with in a professional manner immediately or must be reported to customer service in a manner that can be proven!

1.9 Inappropriate use

WARNING AGAINST GENERAL DANGERS

	Any use of this machine/line other than that as defined in the chapter "Correct Use", represents an inappropriate use of the machine/line and can result in serious injuries of the operating staff or third persons or to the damage or destruction of the line/machine. The manufacturer/supplier cannot be held liable for any damage resulting from an inappropriate use of the machine/line. **In such cases the user assumes full liability.**

1.10 Training record

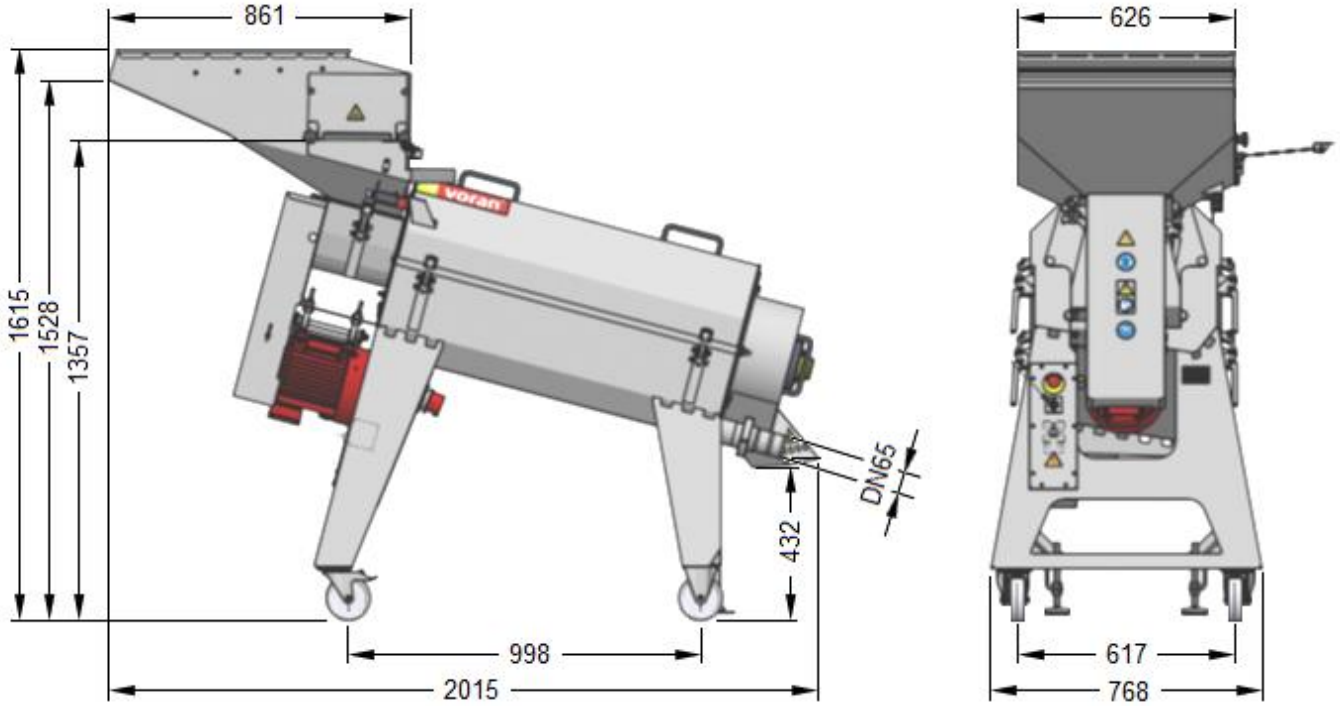
line/machine:	
Trainer:	
Date of training:	
Place of training:	
Training content:	

Participant confirmation

Name of participant	Signature of participant (you confirm with your signature that you have understood the training in special safety measures)

2 Technical data

2.1 Technical data - overall machine/line



Picture 2.1-1) Technical data De-stoning machine EP1000

Weight	220 kg
Sound power level according to EN ISO 3746 and EN ISO 11201	**LWA 114dB**

Electrical supply

400V 50Hz (3 Phasen + Erdung)
Protection max.16 A

Motor

Voltage	400 V 50 Hz
Power	5,5 kW
Motor speed	1380 UpM

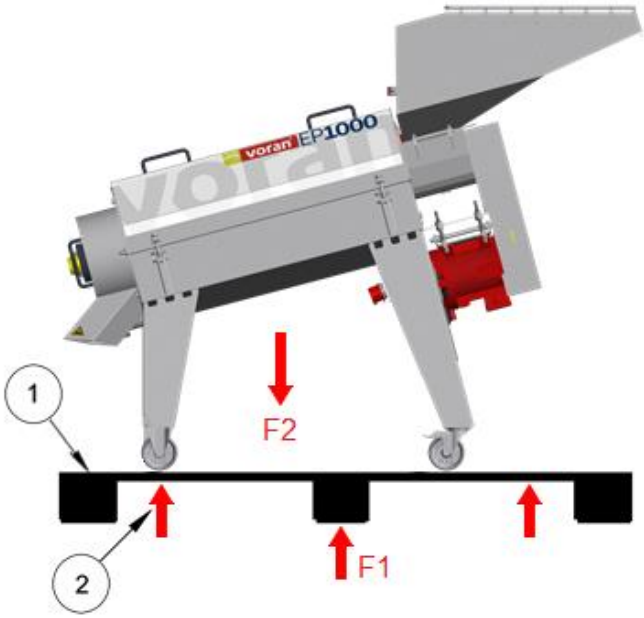
Drivable at complete stainless steel design in the best corrosion-resistant processing

3 Transportation and setting up of the machine/line

3.1 Notes on transportation

NOTE!

	- Before transporting the machine/line the motor is to be switched off and the mains connector plug must be pulled out! - The machine/line must not be tipped! - In order to avoid transportation damage assemble any available transport securing devices. - Secure the machine/line in an orderly manner on the means of transport! - Observe the statutory requirements (StVO) for legally specified dimensions or mark the load!



Picture 3.1-1) Transportation De-stoning machine EP1000

F1 loading of the fork	250 kg
F2 foundation load	1100 N/m² or 110 kg/m²
1	transport pallet
2	Marker arrow for location points

WARNUNG VOR ALLGEMEINER GEFAHR

	A forklift or crane with a lift capacity matched to the above table is necessary for unloading the machine.

3.2 Notes on installation

NOTE!

	It has to be on a horizontal installation of the machine / unit!

INFORMATION!

	**Non-slip, waterproof footwear is recommended**

NOTE!

	There's no separate light mounted on the unit. The licensee is responsible for adequate light based on national requirements for workplace layout!

3.3 Notes on assembly

WARNING OF DANGEROUS LIVE ELECTRICAL POWER SUPPLY

	The Power connection must not come into contact with water! **Not observing this requirement can lead to serious injury or to death!**

NOTE!

	- It must be ensured that the machine is set up in a level position! - The mains connection cables must be kept clear of the machine/line working area ! - **Mobile devices that are used in the open air must be connected with minimum operational current switch protection (FI)**. **If this is not possible, the machine must be grounded separately.** The stone removal system may only be connected to 400 V lines that are protected by a circuit breaker with a maximum of 16 A.

NOTE!

	- The service connections may only be made by appropriately qualified service companies! - Only use connection pipes of at least 4 x 2.5 mm² (5 x 2.5 mm²).

4 Starting up / re-starting of the machine/line

4.1 General

NOTE!

	The machine/line and all machine/line components must be checked by a specialist before starting up and before re-starting after significant changes.

NOTE!

	– **Before starting up and before each restart, the complete unit and all devices must be efficient cleaned.** – For cleaning just use the specified and preferred agents (chapter 9.4.1) – If you should use other cleaning agents the responsibility, suitability and right usage of them belongs to the licensee. – With clear water rinse!

4.2 Controls and settings work before first starting up/re-starting of line

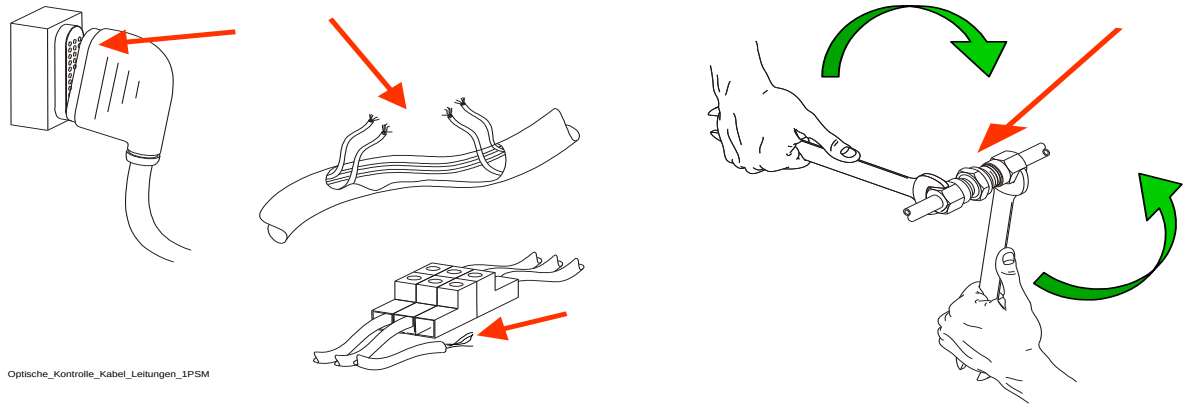
Check the machine/line for loose parts (e.g. forgotten tool)!

Check all cable connections (clamp and plug connections) as also all pneumatic pipelines of the machine/line. Pay particular attention to damaged and loose cable and connections (see illustration)

Check that the required safety devices have been placed in an orderly manner and are intact! (see the chapter "Safety devices")

WARNING AGAINST GENERAL DANGERS

	Before cleaning the device or checking the connection cable, to see if this has been twisted or damaged, switch the machine off without fail and pull out the mains connector plug!



Picture 4.2-1) Symbol image, control cable and connector point

Changes in comparison with normal operation such as

- higher capacity feeding
- higher noise development
- higher acceleration or delay, higher vibration amplitudes
- unusual noises or unusual smells
- response of the safety devices without a motivational cause

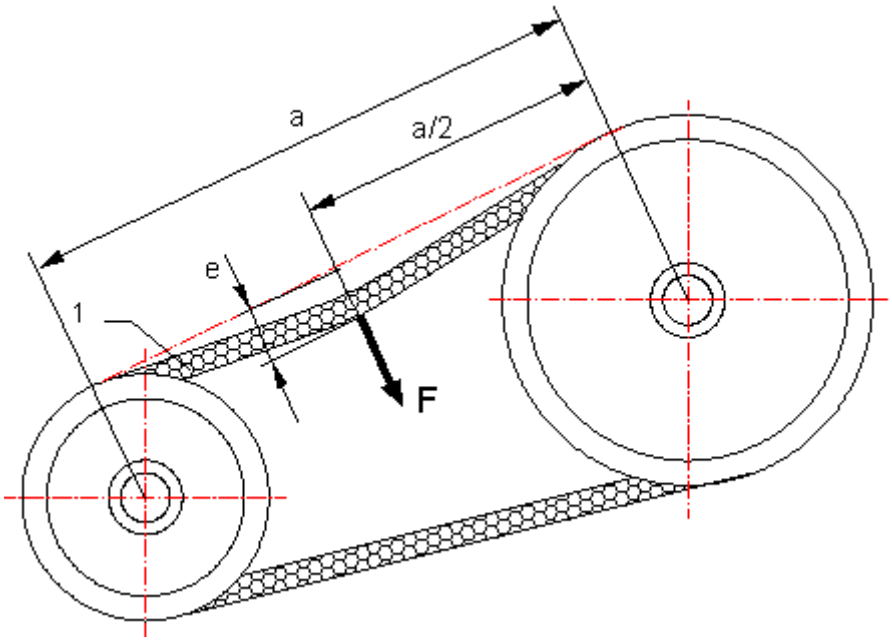
are grounds for recognising that the function of the line/machine is impaired.
Detrimental effects such as this or similar are to be immediately reported by the operator to the person responsible.

4.3 Checking strap tension

We recommend the use of a strap tension measuring device. Should you not have one of these available, the simulate the force (F) that is applied with your thumbs.
Check the strap tension by reference to the depth of the impression aour thumbs make on the strap (1). The testing force (F) is to be applied at right angles to the centre of the strap. The drive must be tightened until the depth of the impressions (e) is below a maximum value of 10 mm (see chapter “Servicing and Repairs -Machine / Unit Components”).

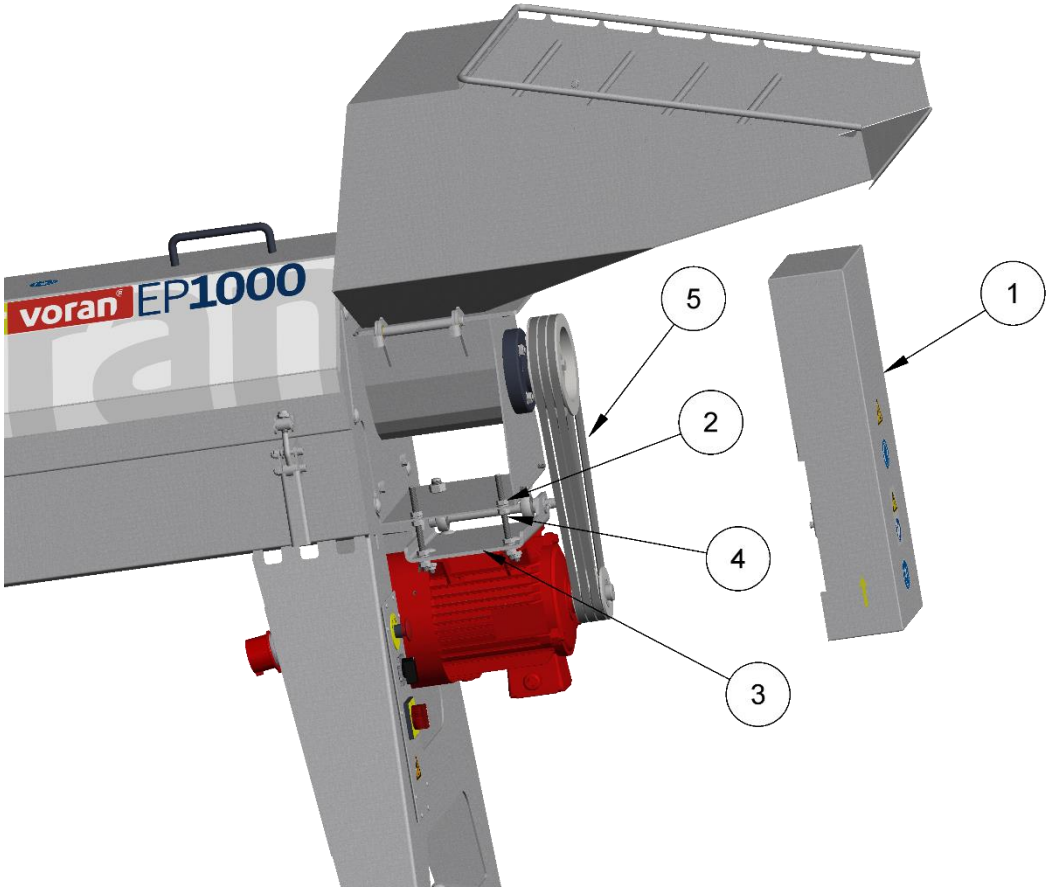
WARNING AGAINST GENERAL DANGERS

	After the checks have been carried out all safety devices must be fitted back in place again immediately!



Picture 4.3-1) Checking strap tension

4.4 Tightening the V-strap



Picture 4.4-1) Checking the strap tension

1) Remove protective cover (Fig.Pos.1).

2) Loosen lock nut (Fig.Pos.2).

3) Adjust motor cradle (Fig.Pos.3) using the tightening screw (Fig.Pos.4).
The motor will move up or down depending on the direction the tightening screw is turned in and the strap (Fig.Pos.5) will be tightened or slackened as a result.

4) Check strap tension.

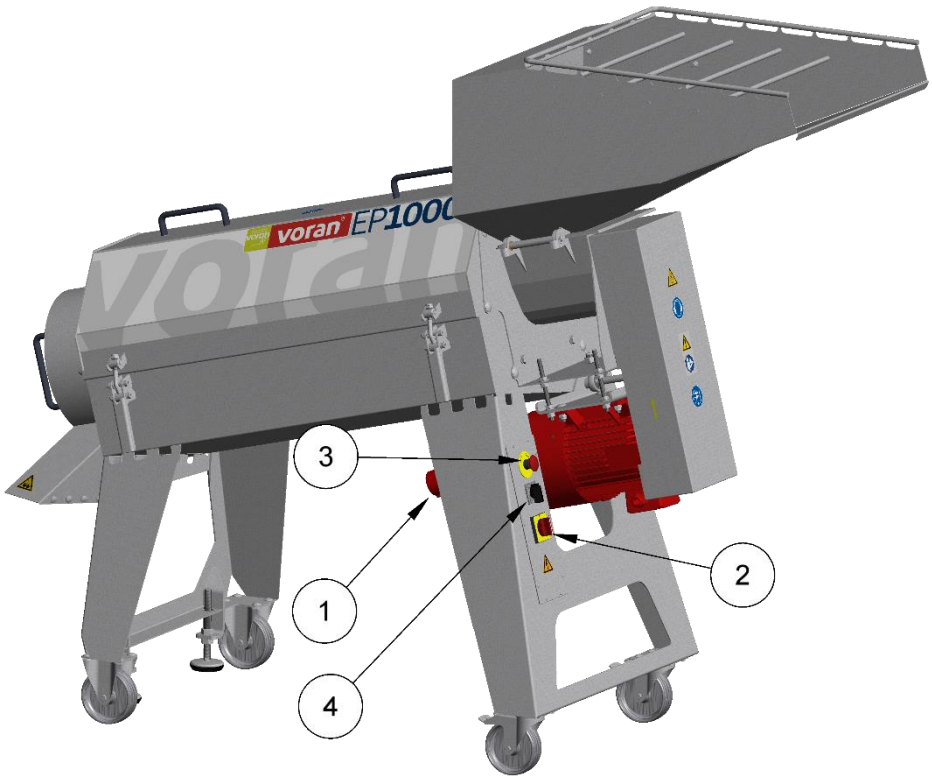
5) If necessary slacken the strap again – to do this repeat step 3.

6) Tighten screw nut (Fig.Pos.2) again.

7) Replace the protective cover (Fig.Pos.1).

5 Operation

5.1 Operation of the Stone Removal Unit EP1000



Picture 5.1-1) Operation

Switch on the machine at the star-delta switch (item no.2 in figure).
Move the switch to Y and then after 2 – 3 seconds move the switch further to the delta mark △
By turning the starter in the other direction or pressing the emergency stop button, the device is switched off.

1) Connect the machine to the available power network (Fig. Pos.1).

2) Release emergency stop button (Fig. Pos.3) by turning.

3) Switch on the main switch (Fig. Pos.2).

4) Switch on the machine and check the direction of rotation. (Rotation direction arrow on strap protection cover; make a visual check feed hopper top → worm screw direction of rotation).

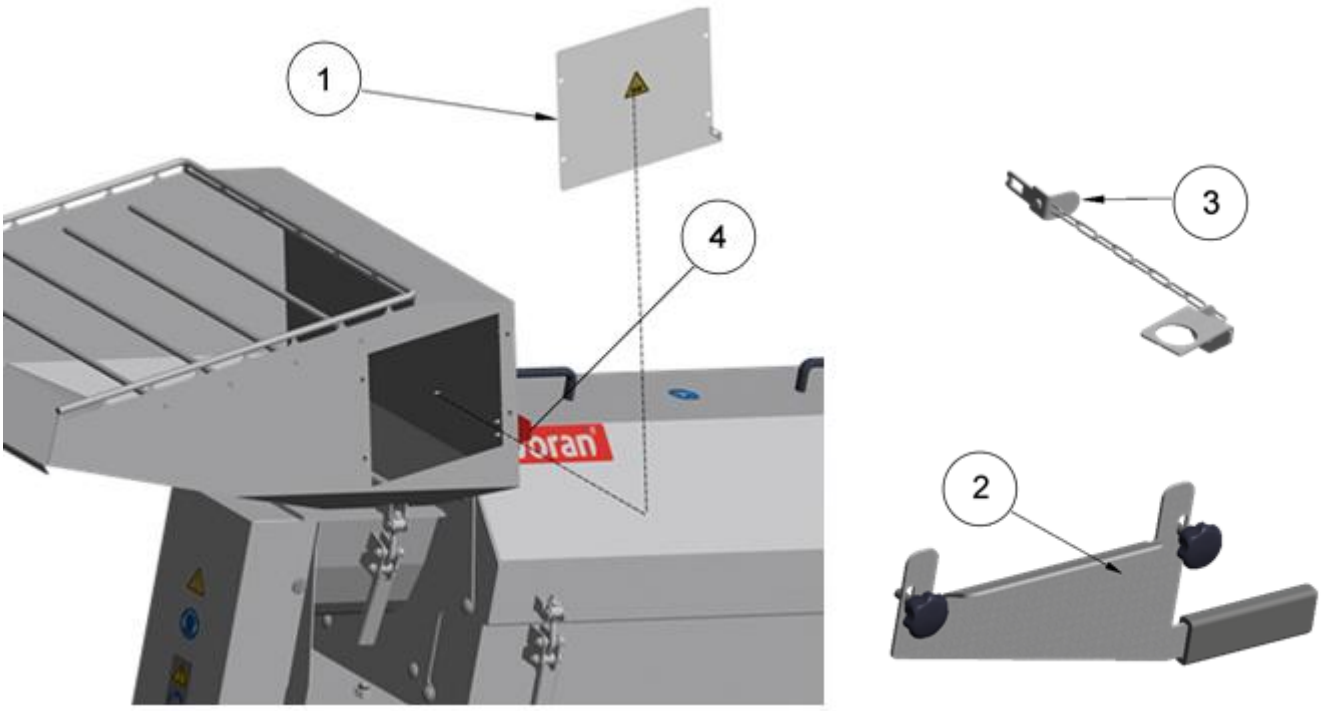
5) It must be ensured that only fully ripe fruit that is processed.

6) When processing stone fruit it must be ensured that the fruit is cleaned, prepared with a grater and conducted to a stone removal machine by a mash pump.

7) Without a mash pump the fruit is to be tipped into the feeder hopper as continuously as possible to prevent motor overload.

8) The machine must continue to run until all the fruit is out of the machine before switching off.

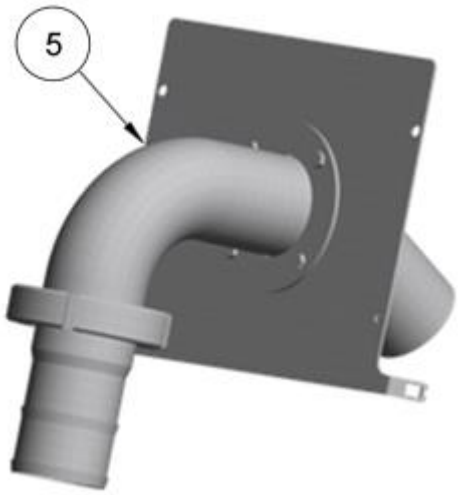
5.1.1 EP1000 in combination with an elevator SARM



Picture 5.1.1-1) Operation De-stoning machine EP 1000

When using the De-stoning machine with an elevator SA200RM, the cover plate (Fig. Pos. 1) is unscrewed and replaced by the fixing set (Fig. Pos. 2). The actuator (Fig. Pos. 3) must be inserted in the safety switch (Fig. Pos. 4) so that the De-stoning machine can be switched on.

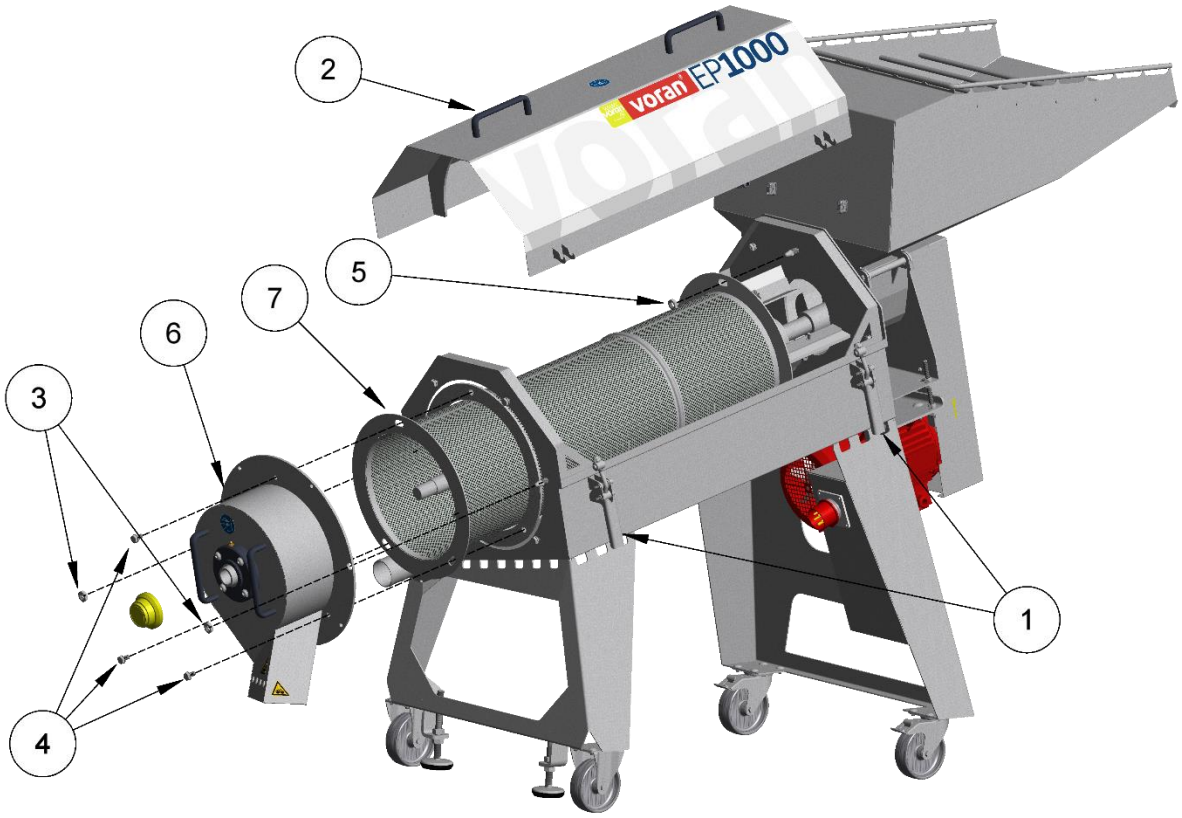
5.1.2 EP1000 in combination with a mash pump



Picture 5.1.2-1) Operation De-stoning machine EP 1000

When using the De-stoning machine with a mash pump, the connection plate for mash pumps (**option**) (Fig. Pos. 5) is screwed on instead of the cover plate (Fig.Pos.1).

5.2 Changing the screen



Picture 5.2-1) Changing the screen

BEFORE OPENING UNPLUG!

	Interrupting your work on the machine power supply and secure against accidental before reconnecting it and turning. **Non compliance can mean severe personal injury.**

1) The screen cover (Fig.Pos.2) can be removed when the two clasps (Fig.Pos.1) are opened.
2) Open the screw nuts (Fig.Pos.3) and the screws (Fig.Pos.4) in order to remove the bearing cover (Fig.Pos.6)
3) The screen (Fig.Pos.7) can be pulled out downwards after screwing out the securing screw nut (Fig.Pos.5)
4) The machine is to be screwed back together again after the screen change has been completed.

5.3 Screen dimensions

The diameter of the screen holes depends on the type and the size of the fruit processed

- screen hole diameter 3mm. Cherries
- screen hole diameter 5mm. Plums
- screen hole diameter 8mm. peaches, apricots

5.4 Setting the stone removal rotor blades

Standard settings: screen / rotor blade

Screen ∅3mm drum diameter **A** = 300mm / setting **B** = 146mm

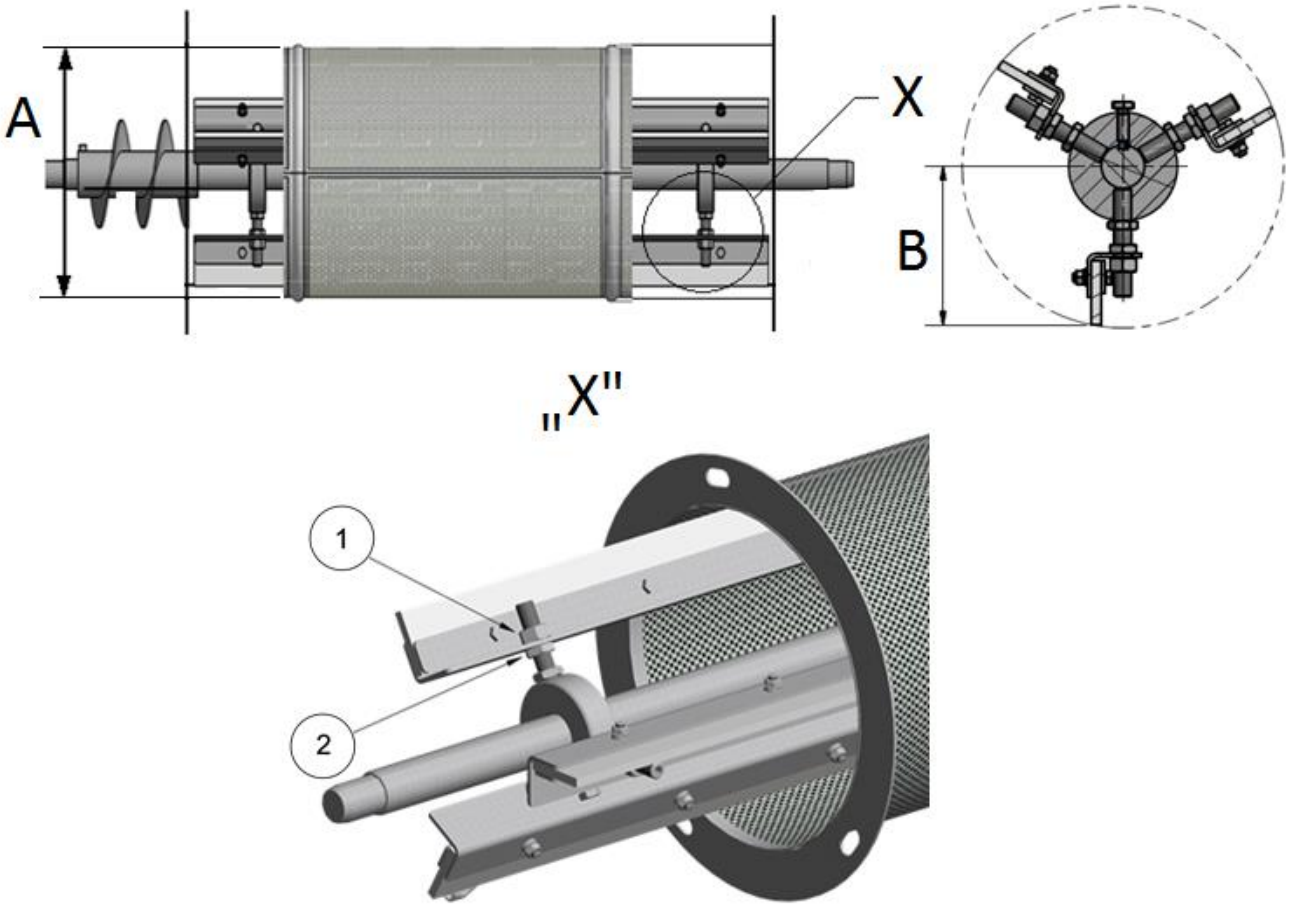
Screen ∅5mm drum diameter **A** = 310mm / setting **B** = 146mm

Screen ∅8mm drum diameter **A** = 320mm / setting **B** = 146mm

Screen ∅10mm drum diameter **A** = 320mm / setting **B** = 146mm

Depending on the size of the stone, the rotor must be adjusted as required.

The distance between rotor blades and screen must be at least stone thickness + 1 to 2 mm to avoid crushing the stones.

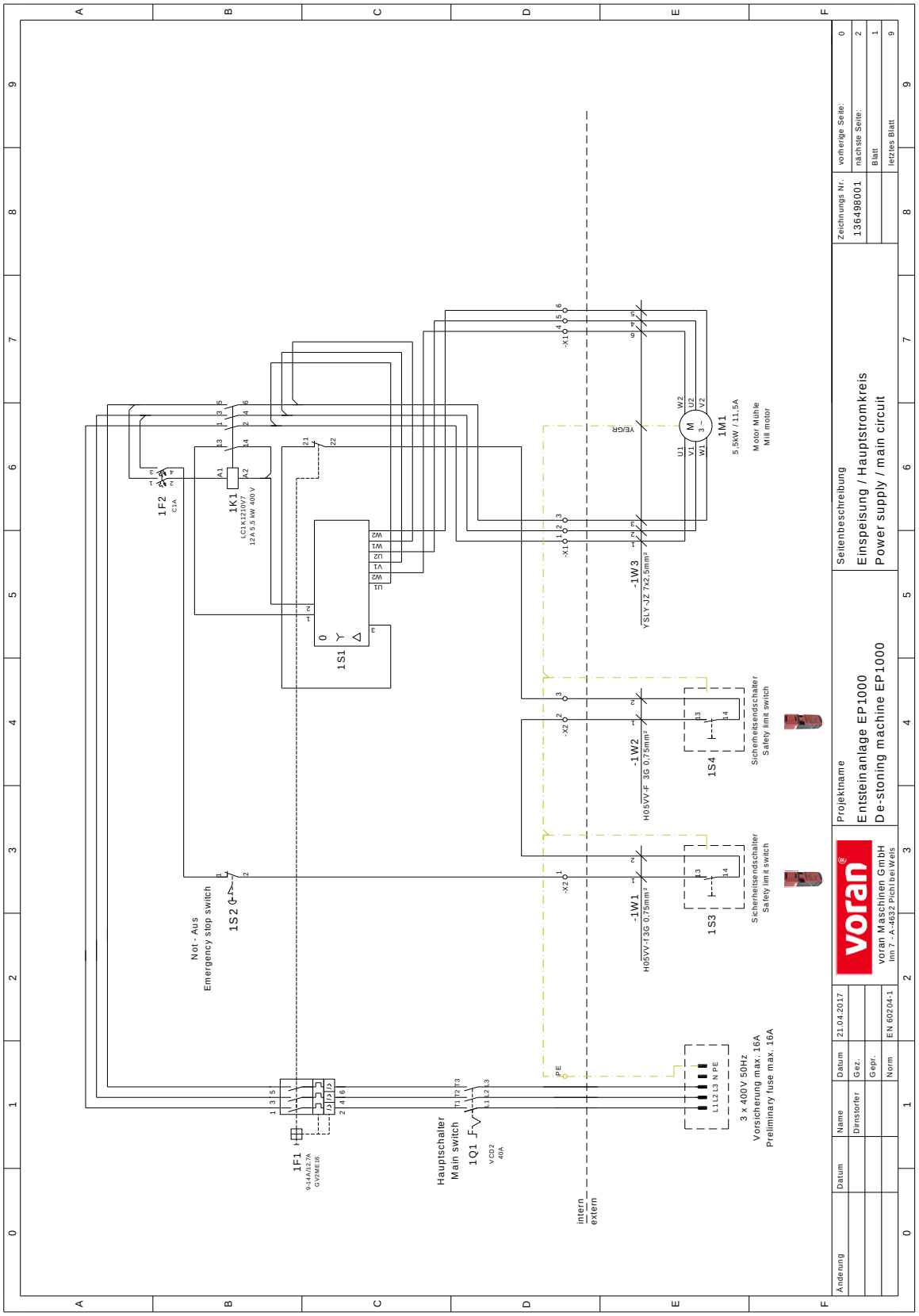


Picture 5.4-1) Setting the stone removal rotor blades

1) Loosen the lock nuts (Fig.Pos.1).
2) The rotor blade using the threaded screw (Fig.Pos.2).
3) Tighten the lock nuts (Fig.Pos.1) again.

6 Electicity

6.1 Circuit diagram



Picture 6.1-1) Circuit diagram

6.2 List of materials

Pieces	Name	Item number	Reference.	Name oft he marker
1	VCD02 E-stop main switch 40A	120600001	-1Q1	Schneider Electric
1	Y-Dr-Switch	120101303	-1S1	Danninger GesmbH
1	ZB4-BS54 mushroom switch (E-stop) rt 40mm	160700005	-1S2	Schneider Electric
1	ZB4BZ102 bottom part 1NC installation	160700016		
2	XCSPA592 Safety limit switch	121000520	-1S3, -1S4	Schneider Electric
1	LC1K1210V7 contactor 12A 5,5 kW 400 V	160300094	-1K1	Schneider Electric
1	GV2ME16 Motor prodection switch 9,0 - 14,0 A	160300051	-1F1	Schneider Electric
1	GVAE11 Hilfsschalter S + Ö Frontanbau	160300059		
	M9F22201 C60SP, 2P, 1A C LS-Switch	160300132	-1F2	Schneider Electric
1	E-Motor BG. 112 M 4-pol. B3 5,5 kW	105401130	-1M1	Moll - Motor

7 Fault and error analysis - machine/line components

7.1 General

WARNING AGAINST GENERAL DANGERS

	In faults trouble shooting the safety instructions described in the chapter "Basic safety principles" must be followed without fail!

INFORMATION!

	When faults tables on the separate machine/line parts are not otherwise given, you can find further information on the precise settings in the chapter "Controls and settings work before first starting up/re-starting of line". The precise replacement work is described in the chapter "Servicing and Repairs".

7.2 Fault and error analysis - machine/line components

Error/malfunction	Possible cause	Trouble shooting
Motor does not start up	Electrical defect	Check the electrical connections, links, switches, drives and fuses
	Main switch is defect	Control the mainswitch if it is defect change it
Efficiency of the machine is too low	Wrong direction of the motor rotation	Change the direction of the motor rotation
Stones in the mash	Wrong screen hole diameter	Change screen
Damaged stones	Distance between rotor and screen is too low	Set rotor

8 Servicing and Repairs

8.1 General

The mechanical and electrical equipment requires regular servicing if it is to fulfil its tasks satisfactorily at all times.

The general safety notes the documentation/Operating Manual must be adhered to without fail.

The component-specific notes listed below must be observed!

Before taking the machine/line apart into its components the Operating Manual including all drawings, must be carefully studied!

The machine/line is constructed so as to require very little servicing. The servicing work required is concentrated on the few activities listed in the Operating Manual at the intervals as given.

The machine/line is to be checked regularly in compliance with operational experience. Parts that are recognisably damaged are to be replaced at an early date to avoid subsequent damage and down-time.

WARNING AGAINST GENERAL DANGERS

	Servicing is a preventative measure. The not maintaining of instructions and intervals can put persons at risk, Reduce the efficiency of or damage the machine/line or of the machine/line parts. Before assembly or dis-assembly is begun on the machine/line, the safety instructions that are described in the chapter "Safety requirements for the operating state" must be followed without fail.

BEFORE OPENING UNPLUG!

	Interrupting your work on the machine power supply and secure against accidental before reconnecting it and turning. **Non compliance can mean severe personal injury.**

WARNING AGAINST GENERAL DANGERS

 	Before starting work on parts of the electrical system measures must be taken to ensure that it is not live. the order of the safety rules is as follows: 1.) clearing by interrupting the electrical circuit 2.) secure against switching on by unauthorised persons 3.) place appropriate warning notices 4.) ensure that power supply is switched off 5.) effectively isolate any neighbouring live parts from the working area The above mentioned measures are then ended in reverse order, when the maintenance work is completed.

Electrical equipment such as for example:

- switch and transmission devices such as e.g. mechanical limit switches
- energy supply cables
- any relevant operating points on location

are in principle free from maintenance. They should be checked on a monthly basis, however, and should be cleaned insofar as this is necessary. Damaged parts must be replaced at once.

Changes in comparison with normal operation such as

- higher capacity feeding
- higher noise development
- higher acceleration or delay, higher vibration amplitudes
- unusual noises or unusual smells
- response of the safety devices without a motivational cause

are grounds for recognising that the function of the line/machine is impaired.
Detrimental effects such as this or similar are to be immediately reported by the operator to the person responsible.

NOTE!

	The line/machine must in general be regularly cleaned and tidied.

Checks must be carried out at regular intervals in order to assure an operation of the machine/line without faults.
Differentiation is made here between:

- safety checks
- functional checks
- sight checks

safety checks

the relevant statutory safety regulations must be followed (both regional and also international) must be observed.
also see the chapter "Safety requirements for the operating state".

functional checks

The functional checks result from the tasks of the devices applied in accordance with the operational processes of the machine/line. This checking also includes testing the fixtures and clamps of devices and cables as well as checking temperatures and for noises.

Fixtures and clamps must be tightened. Should the tightening of fixtures and clamps no longer be possible, they must be replaced.

Defective devices must be replaced at once!

Electrical devices are often cooled with air. If coolers are provided their cooling effect must be tested!

sight checks

The general state of the machine must be tested (condition of the weld and screw connections and of the electrical connections, corrosion points, tears etc.) and the degree of soiling must be assessed.
The checks comprise the checking of the notices on the machine/line and the checking of the labelling of electrical devices (these must be placed in an orderly manner and they must be legible). Loose clamps must be tightened at once. Cables and clamps with signs of melting must be replaced at once.
Soiled devices must be cleaned. Defective parts must be replaced.

INFORMATION!

	The carrying out of servicing work must be documented for warranty claims and the following data given: - Date - machine/line area - activity carried out - name and signature of the person who performed the work The documents are to be added to this Operating Manual and presented to the manufacturer on request.

Spare parts

It is essential that spare parts should be stored on site to assure a high machine/line availability.
The spare parts recommended by the manufacturer are listed in the chapter "Spare parts documentation" of this Operating Manual .
When ordering spare parts please follow the instructions in the chapter "Spare parts documentation - general".

Customer Service

Please apply to the machine/line supplier for questions on inspection, servicing and installation or for a servicing visit (Customer Service data see the chapter "Spare parts documentation - general").

Replacement of parts that are still under warranty

When you replace parts and wish to have these exchanged by the manufacturer on the basis of the warranty, it is a basic requirement that the replaced parts are made available to the maker.
A further requirement is the documentation of when, where and by whom the parts were replaced (see the chapter "Servicing and repairs reporting").
If possible, the presumed cause of the defect should be given.

8.2 Lubricants Overview

Machine part	Aral	Castrol	Lubricant type
Bearings	standard commercial, foodstuff compatible grease		Grease

INFORMATION!

	You can basically use any standard commercial, foodstuff compatible grease. Voran recommends " **LF10 (H1**)".

8.3 Cleaning

BEFORE OPENING UNPLUG!

	Interrupting your work on the machine power supply and secure against accidental before reconnecting it and turning. **Non compliance can mean severe personal injury.**

The machine should be cleaned each day.
Particularly the product touched parts have to be cleaned with a disinfecting clean agent or clear water.

NOTE!

	– **Use for the daily cleaning process commercial cleaning and caring (qualified for food and disinfectant)**

PROTECTIVE GLOVES and WEAR EYE PROTECTION!

 	Always wear protective gloves and goggles when using cleaning agents. Failure to comply may result in severe burns!

NOTE!

	**Voran prefers:** BTS 3300 - DVG Active chloride foaming disinfectant concentrate for food industry **Usage:**

Process	Concentration	Dwell time	Temperature
Frothing	**2 – 5 %**	**15-20 Minutes**	**5-30° C**

All electrical parts (electric control box, motor, switch, …) have the type of minimum protection IP54(dust protected against splashing water) but it should be cleaned just with a humid rag or sponge.

NOTE!

	**Beware also for cleanliness on the floor and area around the unit !**

After using the clean agent the machine has to be washed very well with clear water.

NOTE!

	If you use clean agents mind the environmental details, and also the disposal instructions of them!

8.4 Servicing and repairs reporting

Operator	
Street/building no.	
Zip code/city	
country	
Product name	

Date: _____

time: from _____ to_____

Fault dealt with:

.....

.....

.....

.....

Used spare parts		**Further supply Yes/no**
ID number	Name	

Clearly visible faults:

.....

.....

.....

.....

NOTE!

	You will find notes on the ordering of spare parts and on customer service in the chapter "Spare parts documentation".

8.5 Servicing intervals

Servicing interval	A	B	C
1 shift operation	Before start of work	Monthly	Annual
2 shift operation	Before start of work	Weekly	Monthly
3 shift operation	--	--	--

NOTE!

	The intervals given in the servicing table are standard values for normal operating conditions. The intervals are to be shortened appropriately under more intensive working conditions, multiple shift operation and longer working times. Safety devices are to be tested monthly.

INFORMATION!

	If not otherwise stated in the separate servicing tables, more precise information on the exact settings is to be found in the chapter "Controls and settings work before first starting up/re-starting of line". The precise replacement work is described in the chapter "Servicing and Repairs".

Servicing intervals - E-motor 5,5kW and motor safety switch star-delta

Work to be performed	A	B	C
Checking of the electrical connections, cable links, switches, drives and fusing		X	
Check strap pulleys for visible signs of damage		X	
Check that the fixture screws are tight		X	

Servicing intervals – stoning blades

Work to be performed	A	B	C
Check rotor blades for visible signs of damage		X	
Check strap pulleys for visible signs of damage		X	
Check that the fixture screws are tight		X	

Servicing intervals – bearings

Work to be performed	A	B	C
Check bearings for visible signs of damage		X	
Grease lubricate bearings		X	
Check that the fixture screws are tight		X	

9 Spare parts documentation

9.1 General

Use only original spare parts. The use of other spare parts can lead to the loss of your warranty claims.
Regard the recommended piece numbers as minimum piece numbers.
If the spare parts are not obtained from the manufacturer, the machine/line supplier accepts no responsibility for errors of type data or for wrong or late deliveries.
The right to introduce construction and model changes is reserved.

NOTE!

	Please observe the applicable regional requirements and legislation without fail in disposing of used or defective parts!

Ordering of spare parts

We advise you to keep a stock of the listed spare parts without fail.
If you fail to keep a stock of the listed spare parts despite our recommendation, we are under no obligation to resort to special measures for the free provision of the required parts even during the warranty period.
Store the spare parts as close as possible to the line so as not to waste valuable time should they be needed (line/machine availability!).

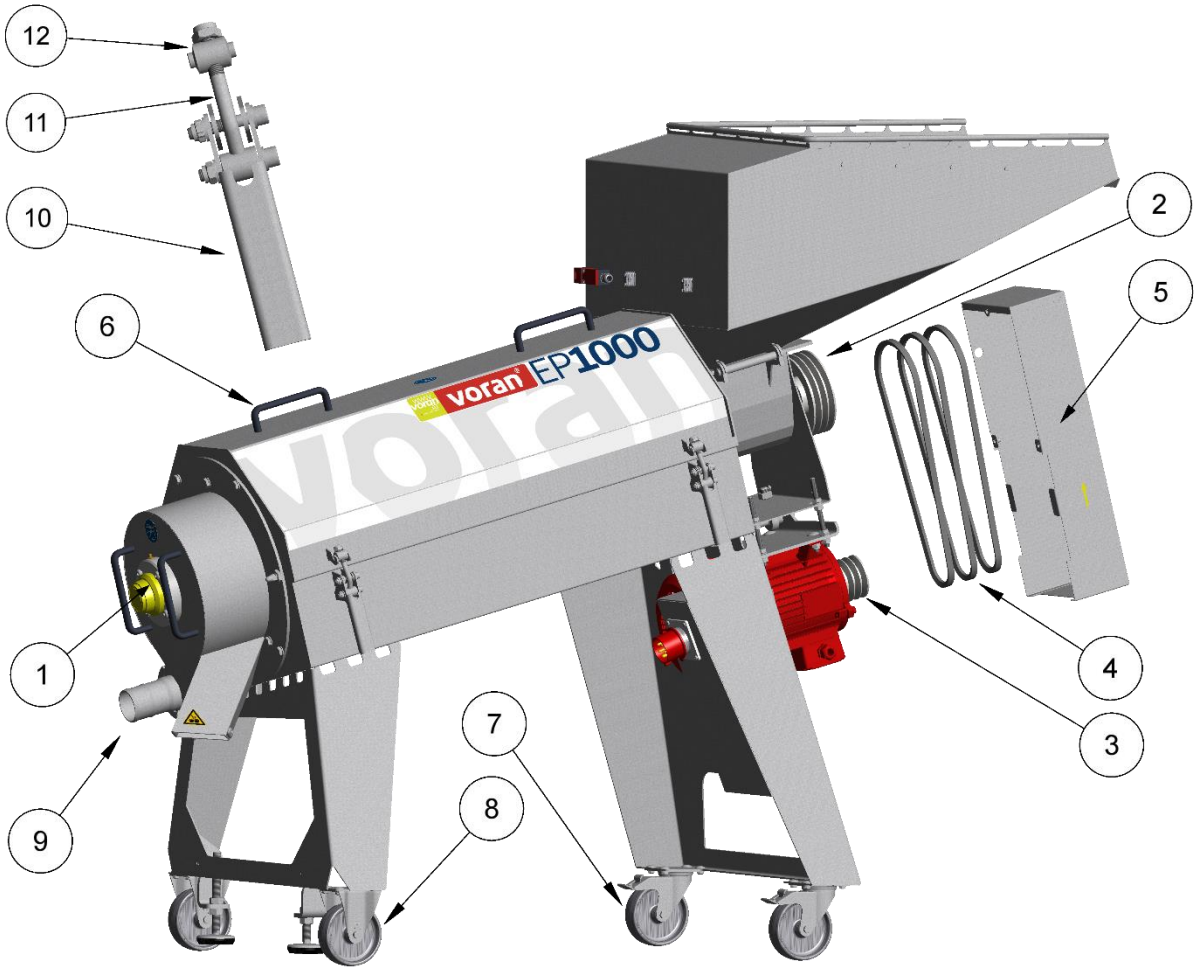
Customer Service

company name	Voran Maschinen GmbH
Contact partner	Service
Road	Inn 7
Zip code/city	A 4632 Pichl bei Wels, Austria
Phone/Fax	+43 (0)7249 444-200 / +43 (0)7249 444-888
E-mail	service@voran.at

Order details

Please give us the following information in order to help us deal with your requirement as quickly as possible:
- Name of the machine/line (as on the cover of this documentation)
- Spare Parts Number (as on the spare parts list/drawing/piece list)
- Name and type of the relevant spare parts (write down the numbers if possible from the part to be replaced)
- Order quantity
- Your name/dept./Phone/Fax
- Precise despatch address with contact partner/dept. Phone/Fax

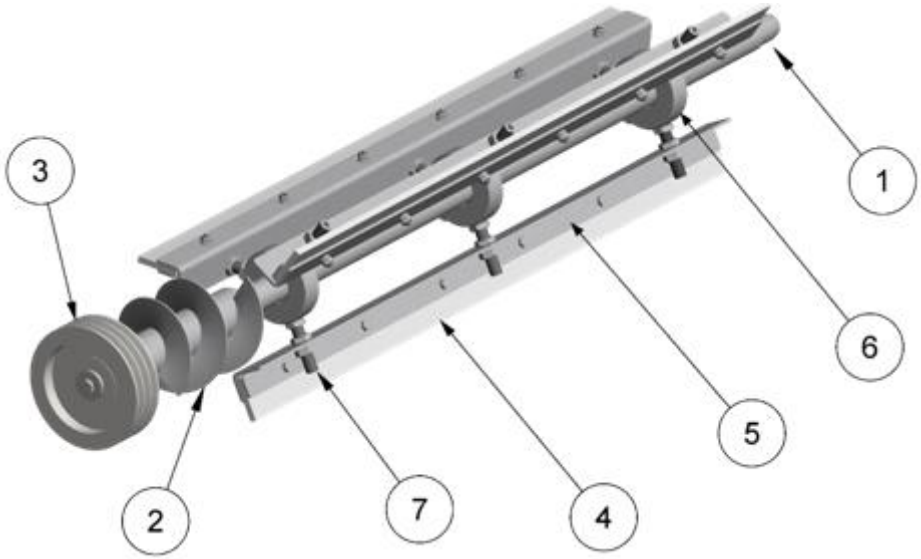
9.2 Spare parts list – Stone removal unit EP 1000



Picture 9.2-1) Picture with key [Spare parts list – Stone removal unit]

Pos. number	Pieces	Name	KDEtNr
1	2	Flange bearing housing unit UCFC-Y207	220503504
	2	shaft seal 40-72-7 SL NBR	812004003
2	1	KR washer DW 160/2 SPA 13 TAPER without flange sleeve	13612199
3	1	KR washer DW 80/3 SPA 13 TAPER without flange sleeve	070400004
	1	TAPER Spannb. Bg. 28 mm Type 1210	070800002
4	3	V-strap XPA x 1157 Lp.	021201157
5	1	V-strap cover	10028655
6	2	U-handle GN 565 - 20 - 160 black	800800100
7	2	Castor LEX-PO 125 G-FI	400501300
8	2	Castor BEX-PO 125 G-FI	400501400
9	1	Screw connection 2/3 for eccentric pump	190003003
	1	Seal ring DIN11851	821000140
10	1	Holder 3x133x160 - 1.4301	145150144
11	1	Polt Ø20x31 - 1.4305	321089054
12	1	Clip	145150005

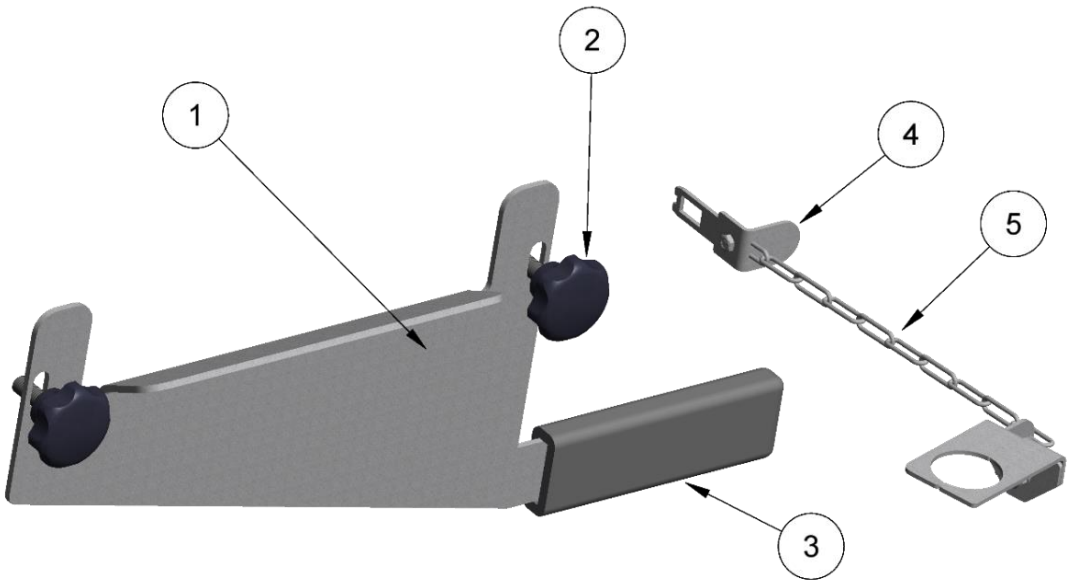
9.2.1 Spare parts list – Rotor



Picture 9.2.1-1) Picture with key [Spare parts list – rotor complete]

Pos. number	Pieces	Name	KDEtNr
1	1	Shaft Ø40x1512	13612105
2	1	Auger	136120002
	4	Feather A8 x 7 x 25 DIN6885	040100609
3	1	v-belt pulley DW-160/3 SPA	13612199
4	3	Rotor rubber	13612125
5	3	Retainig letge t 699x55x2	13612130
6	3	Adjustment sleeve Ø60x25lg	13612210
7	9	Threaded rod M 16 x 100 DIN 913 V2A	304308502

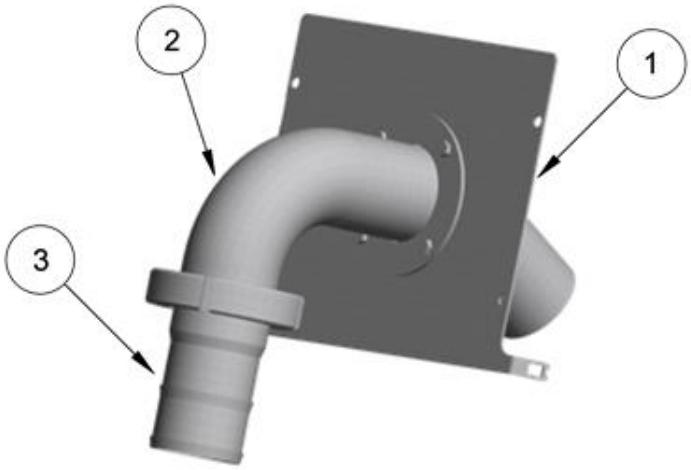
9.2.2 Spare parts list – Fixing set SA200



Picture 9.2.2-1) Picture with key [Spare parts list – Fixing set]

Pos. number	Pieces	Name	KDEtNr
1	1	Cover pnael f. EP,SA 3x164x400	10030552
2	2	Star knob KU-40-M8x20 GN6336.5	800100500
3	4	Handle sleeve f. Fl 30 x 6 x 120 mm Kunstst.	800700200
4	1	Actuator	10028744
5	3	Chain stainless steel	S3950005

Option:



Picture 9.2.2-2) Picture with key [Spare parts list – Fixing set]

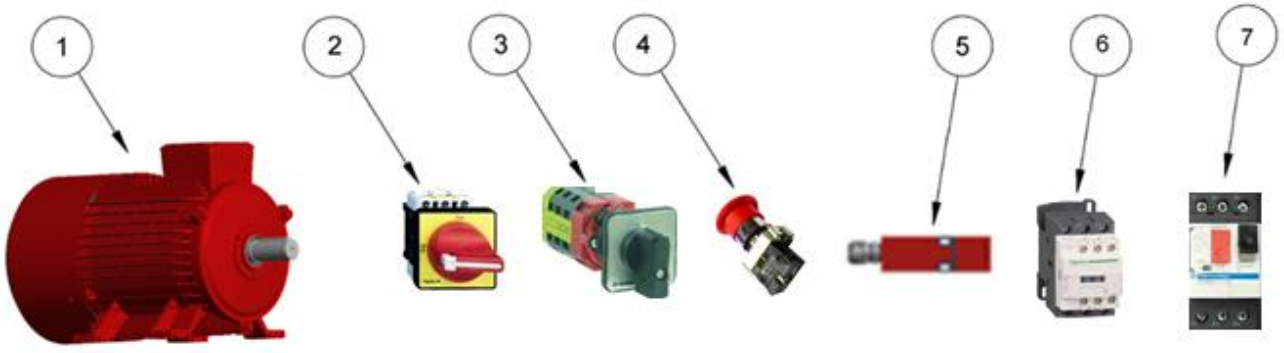
Pos. number	Pieces	Name	KDEtNr
	1	Cover w. actuator f. M-Pump compl.	10030513
1	1	Cover w. actuator f. M-Pump	10030515
2	1	Connecting pipe	10030520
3	1	Screw connection 2/3 f. eccentric pump SP 5/6	190003003

9.2.3 Spare parts list – Screens

Picture 9.2.3-1) Picture with key [Spare parts list – screens]

Pos. number	Pieces	Name	KDEtNr
	1	Screen Ø1mm EP1000	136167001
	1	Screen Ø1,5mm EP1000	136168001
	1	Screen Ø2mm EP1000	136155000
	1	Screen Ø3mm EP1000	136151001
	1	Screen Ø5mm EP1000	136152001
	1	Screen Ø8mm EP1000	136150001
	1	Screen Ø10mm EP1000	136163001

9.2.4 Spare parts list – Electric



Picture 9.2.4-1) Picture with key [Spare parts list – electric]

Pos. number	Pieces	Name	KDEtNr
1	1	E-Motor BG. 112 M 4-pol. B3 5,5 kW 50 Hz	105401220
2	1	VCD02 E-stop main switch 40A	120600001
3	1	Star-delta switch	120101303
4	1	ZB4-BS54 mushroom switch (E-stop) rt 40mm	160700005
	1	ZB4BZ102 bottom part 1NC installation with clamping pl.	160700016
5	2	XCSPA592 Safety limit switch	121000520
6	1	LC1K1210V7 contactor 12A 5,5 kW 400 V	160300094
7	1	GV2ME16 Motor prodection switch 9,0 - 14,0 A	160300051

9.2.5 Pictogram

Pos. number	Pieces	Name	KDEtNr
	1	Voran data plate-adhesive silver	889000001
	2	Decal "Direction of rotation"	889000013
	1	Decal “wear ear muffs”	889000047
	2	Decal “Warning: rotating tools”	889000049
	1	Decal "Warning: Electrical voltage"	889000052
	2	Decal "Before opening unplug"	889000064
	1	Decal “Refer to operating instructions”	889100001

10 CE Declaration of Conformity

CE Declaration of Conformity
in accordance with EU directive 2006/42/EC, annex II A

The manufacturer and authorized representative for the technical documentation

VORAN Maschinen GmbH
A-4632 Pichl bei Wels, Inn7

declares as sole party responsible that the product:

Product: De-stoning machine EP1000-1364
Type: EP1000-1364
Function: Separation of core and fruit
or passing of fruit

to which this declaration relates, fully complies with the relevant health and safety specifications laid down in EU directive 2006/42/EC as well as the requirements in other relevant EU directives:

2006/42/EC	Machinery directive
1935/2004/EC	Food contact materials and articles
2006/95/EC	Devices and protective systems for the designated use in explosion-threatened areas
2004/108/EC	Electromagnetic compatibility

The latest versions of the following standard(s) and/or technical specification(s) have been applied to ensure proper and thorough implementation of the health and safety regulations stipulated in the EU directives:

EN ISO12100-1	Safety of machinery - Basic concepts; general principles for design Part 1: Basic terminology and methodology
EN ISO12100-2	Safety of machinery - Basic concepts; general principles for design Part 2: Technical principles
EN ISO 12100	Safety of machinery - Basic concepts; general principles for design - risk assessment and mitigation
EN 60204-1	Safety of machinery - Electrical equipment of machines - Part 1: General requirements
EN ISO 13850	Safety of machinery - Emergency stop - Principles for design
EN 1037	Safety of machinery - Prevention of unexpected start-up
EN 1672-2	Food processing machinery - Basic concepts - Part 2: Hygiene requirements
EN 61310-1	Safety of machinery - Indication, marking and actuation

Pichl bei Wels, 04 April 2016

Robert Schachinger
Technical documentation

11
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