

OPERATING MANUAL FOR DISINTEGRATOR INTIMUS DIS 150/230

Machine type	:	550
Machine no.	:	HM 1798-17
Year of construction	:	2017
Drive motor	:	VEM
Motor no.	:	1437848002170
Motor output	:	6 4,0 kW
Operating voltage	:	400 V
Control voltage	:	230 V
Frequency	:	50 Hz
Circuit diagram	:	See appendix
Accessories	:	-

Important !

Please read this manual through thoroughly before initial commissioning, and comply with the safety instructions!

The operating manual contains important information for operation, maintenance, care and safety of the machine to guarantee the best possible preservation of your investment.

Subject to changes in design, features and accessories in the interests of on-going developments. It is therefore not possible to derive any claims from the data, illustrations and descriptions contained in the manual.

Subject to errors.

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1 Foreword

Congratulations on your purchase of a intimus cutting mill

Model intimus DIS 150/230

Only original intimus replacement parts respectively purchased parts complying with the original state may be used.

Guarantee claims are only valid if no changes are made to the original state of the cutting mill.

We assume no liability for damage caused by failure to comply with these instructions or by inappropriate behaviour.

This technical manual may not be duplicated or passed on to third parties, either totally or partially.

1.1 Supplied technical documentation

The following documentation was supplied together with the machine:
Operating manual for the cutting mill, including

- Electrical circuit diagram
- Replacement parts lists
- Operating manual for the purchased parts (motor, safety switch, ...)

1.2 Factory number

The machine number is located on the nameplate on the right of the upper part.
This machine number must be stated when making any technical inquiries.

1.3 Declaration of conformity

Valid accident prevention regulations for the plastics industry VBG 4, VBG 5, VBG 22 and valid standards DIN EN 292 Parts 1+2, DIN EN 953, DIN EN 954 Part 1, DIN EN 1050, DIN EN 1088, DIN EN 12012-1, DIN VDE 0113 Part 1 and DIN VDE 0113 have been taken into consideration.
EC Machine Directive (2006/42/EC)



Konformitätserklärung
Certificate of Conformity
Attestation de Conformité
Certificado de Conformidad

Bezeichnung der Maschine:	Spezialshredder
Type of machine:	Special Shredder
Description de la machine:	Destructeur spécial
Descripción de la máquina:	Destructora especial
Modell / Model / Modèle / Modelo:	Disintegrator intimus DIS 150/230
Typ / Type / Type / Tipo:	550
Artikel-Nr. / item number / numéro d'article / número de la pieza:	55010x
Serien-Nr. / serial number / numéro de série / número de serie:	550A0x.000xx.Oxx
Baujahr / year of manufacture / année de production / año de producción:	siehe Typenschild / see type plate / voir plaque d'identification / mirar la placa de identificación

Hiermit wird bestätigt, dass vorgenanntes Produkt den Anforderungen der **Maschinen-Richtlinie 2006/42/EG** sowie der **EMV-Richtlinie 2004/108/EG** einschließlich allen bis heute veröffentlichten Änderungen bzw. Nachträgen entspricht. Der oben beschriebene Gegenstand der Erklärung erfüllt die Vorschriften der **Richtlinie 2011/65/EU** des Europäischen Parlaments und des Rates vom 8. Juni 2011 zur Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten. Das vorgenannte Produkt entspricht folgenden harmonisierten bzw. nationalen Normen:

We do hereby certify that the above mentioned product meets the requirements set forth in **EEC-Guidelines 2006/42** and **EMC 2004/108/EEC** including all changes and addendums to date thereto. The object of the declaration described above is in conformity with **Directive 2011/65/EU** of the European Parliament and of the Council of 8 June 2011 on the restriction of use of certain hazardous substances in electrical and electronic equipment. The above mentioned product meets the following harmonized and national standards:

Nous Vous Confirmons que le produit cité ci-dessus correspond aux **exigences des directives 2006/42/CEE** ainsi qu' à la **directive CEM 2004/108/CEE**, ci-inclus toutes les modifications ainsi que tous les suppléments publiés jusqu'à ce jour. L'objet de la déclaration décrit ci-dessus est conforme à la **directive 2011/65/UE** du Parlement européen et du Conseil du 8 Juin 2011 sur la limitation de l'utilisation de certaines substances dangereuses dans les équipements électriques et électroniques. Le produit mentionné correspond aux normes citées ci-après:

Confirmamos que los productos arriba citados cumplen las exigencias de las **directivas 2006/42/CEE** y **CEM 2004/108/CEE**, incluidas todas las modificaciones publicadas hasta la fecha. El objeto de la declaración descrita anteriormente es conforme a la **Directiva 2011/65/UE** del Parlamento Europeo y del Consejo, de 8 de Junio del 2011, sobre restricciones a la utilización de determinadas sustancias peligrosas en aparatos eléctricos y electrónicos. Los productos citados corresponden con las siguientes normas:

Harmonisierte Normen / harmonized standards
normes harmonisées / normas armonizadas

EN ISO 12100:2011-03
EN ISO 13857:2008
EN 349:1993+A1:2008
EN 953:1997+A1:2009
EN 1088:1995+A2:2008
EN 12012-1:2007+A1:2008
EN 60204-1:2006+A1:2009
EN 61000-4-2:2009
EN 61000-4-5:2006

Nationale Normen / national standards
normes national / normas nacional

DIN 45635 T1

CE-Bevollmächtigter / authorized person of CE / personne autorisée de la CE / persona autorizada por CE:
intimus International GmbH; Bergheimer Straße 6-12; D-88672 Markdorf / Germany



Postfach / p.o.box 1420
D-88672 Markdorf / Germany

2017/06

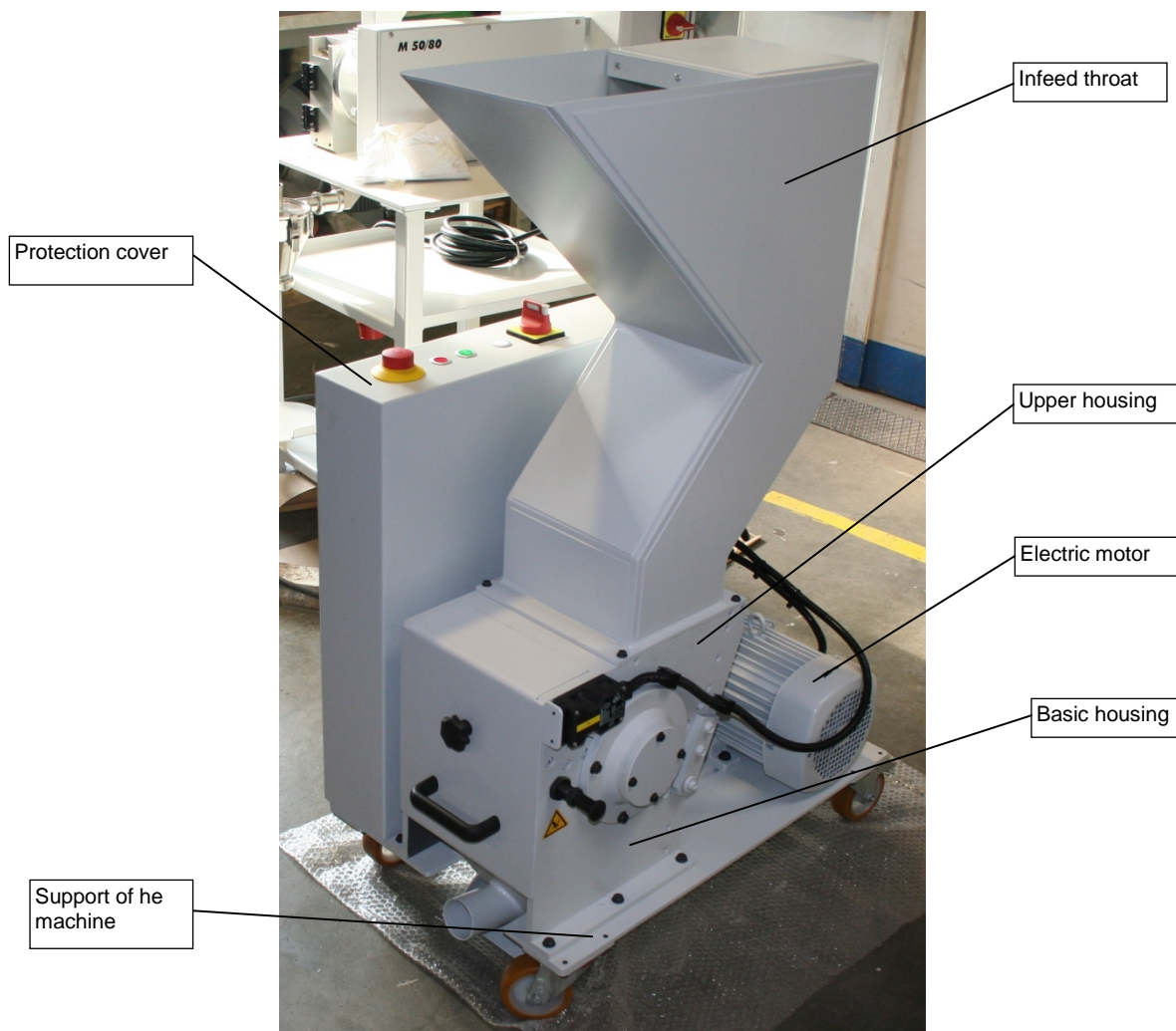

Javier Ortiz de Zárate
Geschäftsführer
Managing director
Directeur général
Director General

2 Description and proper use of the cutting mill

2.1 Description of the cutting mill

This cutting mill is intended for the crushing of..... HIPS, ABS, PP,...plastics and feuilles
with an output of max..... 20 - 60 kg/h
for a sieve of.....6 mm

The cutting mill consists essentially of upper housing, basic housing, infeed throat, support of the machine, protection cover and electric motor according to the following picture.



2.2 Proper purpose

The cutting mill is suitable only for crushing thermomer, elastomer and duromer plastics.

The works guarantee becomes null and void if any other materials are processed. The responsible operating staff must be informed about the output capacity of the cutting mill and ensure that the machine does not exceed the stated output limits.

2.3 Improper purpose



No other kinds of material may be fed into the machine. If any other kinds of material are fed into the machine, this can cause major accidents or damage to the cutting mill.

In addition, plastics containing additives such as flammable or corrosive substances etc. may not be crushed with the cutting mill. The material being crushed may not be easily flammable or toxic.

Hollow bodies may not be pressurised and must be completely empty before being crushed.

3 Safety instructions

3.1 General safety instructions

The cutting mill has been manufactured using state-of-the-art engineering and technology and complies with the valid safety requirements of EU directive 98/37/EG on the point in time of delivery. The accident prevention regulations of the plastics industry VBG 4, VBG 5, VBG 22 and valid standards DIN EN 292 T1+T2, E DIN EN 954 T1, DIN VDE 0113 T1 and E DIN VDE 0113 valid at the point in time of delivery have been taken into account in manufacturing the machine.

The cutting mill may only be started up when it is guaranteed that the machine into which the cutting mill is possibly going to be installed also complies with the regulations of the national standards and the EU directive (2006/42/EC).

The original state of the machine may not be changed. Safety devices may not be changed, removed or bridged. All maintenance and repair work may only be carried out by qualified staff when the machine is at a standstill and disconnected from the power supply.

3.2 Safety symbols



Failure to comply with the sections of text marked in this way result in danger. Injuries are possible. Damage to the mill and accessories is possible, special care is required.



This symbol marks instructions for correct execution of certain jobs of work, e.g. that the work may only be carried out by an electrician.



Symbol for supplementary information and remarks.

3.3 Safety clothing

When feeding plastic into the cutting mill and during maintenance and repair work, safety gloves, safety boots and goggles must be worn.

3.4 Requirements made of the operating staff

The operating staff at the machine must always use the personal safety gear prescribed by law and provided by the employer. The staff responsible for operating and maintaining the machine must be trained and suitable for these jobs of work. Precision and safety in machine checks must be guaranteed. The responsible staff must have read and understood this operating manual.

There is an added risk of accidents during maintenance and servicing work. This is why all jobs of work must be carried out with the machine at a standstill by experienced and skilled staff capable of taking the necessary safety precautions for major maintenance work.

The machine may only be operated, maintained and repaired by trained staff. In particular, these people must have read and understood the complete operating manual in the interests of all those involved. This is the only way to guarantee safe, trouble free operation.

3.5 Initial commissioning



Remove the preservative (see chapter 5.5). Always wear safety gloves to prevent cuts and injuries.

Initial commissioning only by a qualified fitter. Electrical connection by an electrician. Only switch the cutting mill on when it is empty.



Open the cutting chamber (chapter 7.3) and check whether any foreign bodies, for example tools or other items, have been left in the cutting chamber or intake opening. Close the cutting chamber (chapter 7.4) again. Bring the cutting mill directly to its operating position.

3.6 Cleaning



Observe the same safety precautions as for maintenance! Always open the cutting chamber up to the trip dog. Switch off the cutting mill before cleaning, safeguard the main switch. Do not use corrosive, easily flammable substances as cleaning agents. Wear safety gloves as protection from cuts or injuries.

3.7 Maintenance



To be carried out only by qualified staff (see also 3.4). Wear safety gloves. Switch machine off, open the cutting chamber up to the trip dog, safeguard main switch.

After maintenance, fit all the safety devices back in their correct positions and check that they function properly.

Check every week:

- State and proper fastening of the knives
- Functions of the limit switches (only by the company electrician, see chapter 6)
- Condition of the sieve.

3.8 Emergency-off function

In the case of an emergency, put the main switch in the "off" position immediately.

3.9 Description of the safety closures

See chapter 6.

3.10 Remaining dangers



During operation of the cutting mill always wear safety gloves and goggles. Never keep hands, head or other extremities into the infeed throat. Do not force in clogged or stranded material with long parts (risk of back kicks). Always keep a foam or powder fire extinguisher in clear visibility and in easy reach. Don't keep the hands in the cutting chamber when closing the upper part.

4 Electrical equipment of the cutting mill

4.1 Electrical safety



In the case of malfunctions, interrupt the power supply immediately and secure it to prevent the machine being switched on again. Only use the fuses stated in the circuit diagram. Connection, maintenance and servicing should only be carried out by an electrician.

4.2 Electrical connection

Operating voltage	:	400 V
Control voltage	:	230 V
Frequency	:	50 Hz
Drive motor	:	VEM
Motor output	:	4,0 kW
Rated speed	:	1455 rpm

The electrical connection should generally be carried out by an electrician. The motors are supplied by intimus ready mounted. The works guarantee becomes null and void when the motors are mounted by the customer.

The motors are connected up according to the operating manual of the motor manufacturer. The machine must be grounded, with the cable cross section for grounding corresponding to the power lead.

When wiring the machine, pay attention to the direction of rotation of the rotor. When the machine is slowing down, when looking at the motor the fan blade must turn clockwise. In addition, the direction of rotation is marked by an arrow on the motor respectively on the safety hood.



**These jobs of work may only be carried out by qualified staff. The connections must be completed carefully. Errors can pose a mortal danger. The connection regulations of the responsible power utility company must be observed.
In addition, the operating and installation instructions of the suppliers are to be observed!**

- Connect up the machine according to the circuit diagram.
- Ground the machine (upper infeed throat) and check the grounding. The protective conductor cross section should be the same as the main lead but not larger than 16 mm².
- For star-delta starting, set max. 58% of the rated motor current at the motor protection switch.
- Check safety fasteners.

Star-delta starting:

Set max. 58 % of the rated motor current at the motor protection switch.

Power lead as per VDE specification (DIN VDE 0113 T1 respectively EN 60204).
The minimum cable cross sections for the motor outputs listed below are:

Comply with the following when making the connection:

Motor output kW	Operating voltage 400 V, 50 Hz	Lead cross section mm ²
1.5	3,40 A	1.5
2.2	4,85 A	1.5
3.0	6,65 A	1.5

4.3 Electrical circuit diagram

See appendix.

5 Transport and erection of the cutting mill

5.1 General transport information

Guarantee or compensation claims are null and void when the damage has been caused by improper transport, improper handling or erection of the rotary cutter.

Examine the cutting mill for any signs of transport damage immediately after transport, have any such damage acknowledged in writing by the carrier, inform the insurance company and the supplier.

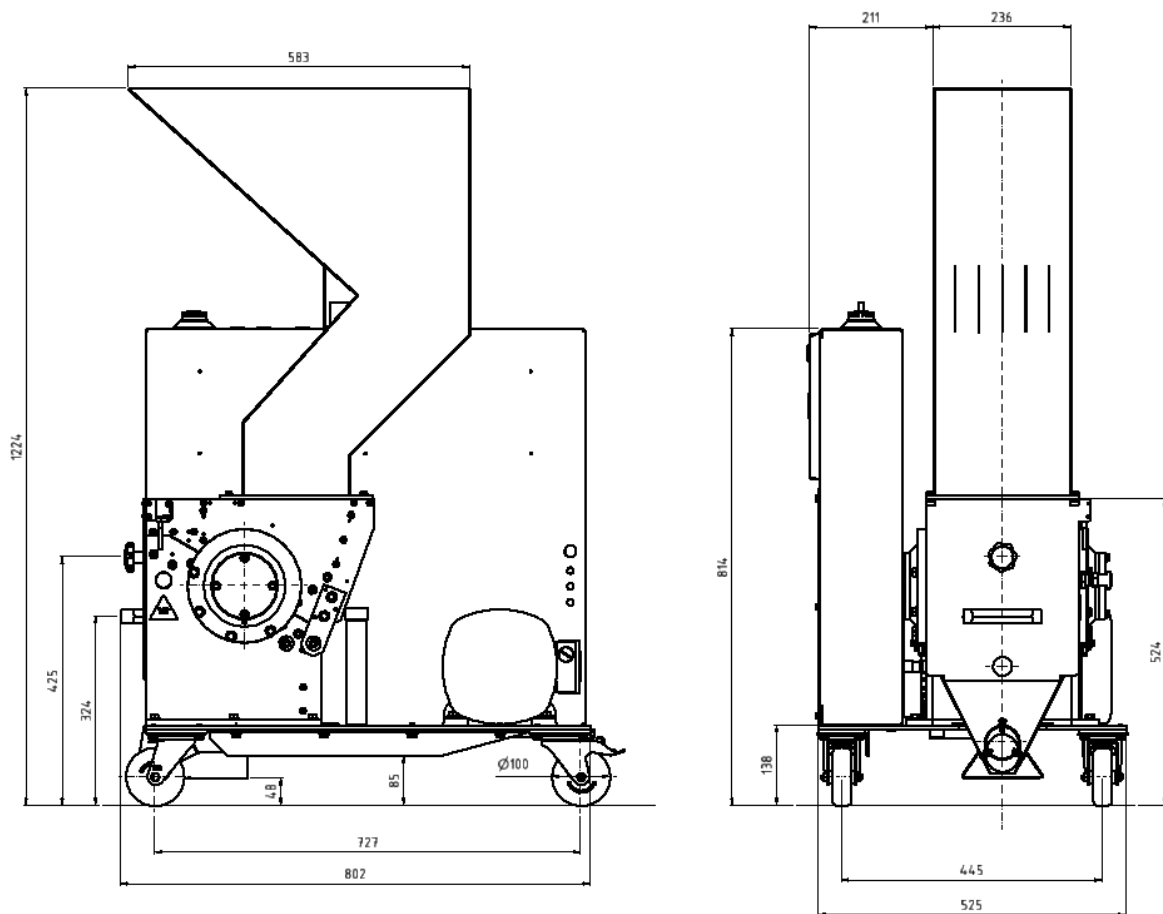
Transport of the cutting mill on a pallet by forklift



Fasten the cutting mill on the pallet with tension straps. Insert the forks completely. Ensure that the mill is not top-heavy on the pallet. Move the forklift at the lowest speed, only lift the load as far as absolutely necessary.

5.2 Weight, dimensions

Cutting mill weight approx. 230 kg, without pallet.



5.3 Erection and assembly

Some types of infeed throats have to be fixed on the upper part with 4 screws M6 x 12 DIN 151-8.8. Ensure that the interior walls of the infeed throat flush with the interior walls of the upper part. At protruding edges material can get jammed.

After assembly, check as follows:

- Check all fixing screws
- Check all safety fasteners, and remove any foreign bodies from the cutting chamber.

Check electric system (only by an electrician)

- Operating voltage using a voltmeter
- Electrical fuses
- Check electric cables for any signs of damage
- Check connections
- Check safety closures (when the closure flap is open, it must not be possible to switch on the rotary cutter)



After assembly has been completed, check whether the rotor can be turned by hand (always wear gloves). The knives may not knock into each other. The cutting gap should be approx. 0,1-0,2 mm.

5.4 Erection site

The machine can directly be erected on the floor of the workshop, if this shows an appropriate bearing surface. A solid bearing surface is the most important mark of a good foundation. By this any deformation of the machine will be avoided.

The following points must be observed at the erection site of the machine:

- A constant temperature must be guaranteed. It should not be under +5°C or above +50°C.
- The humidity may not exceed 85% continuously.
- The emergency-off (main switch) of the cutting mill must be freely accessible

5.5 Removing the preservative

Blank parts such as rotor, blade, inside parts of the housing etc. are covered with preservative before delivery. This preservative is wiped off with a clean, dry cloth. Do not use any rough materials. Never use compressed air or pressurised liquids.



Caution, it is easy to cut yourself on the knives! Always wear safety gloves. Comply with all the accident prevention regulations!

5.6 Taking the cutting mill into storage

The cutting mill is to be stored in a dry room. Protect from the damp, from a corrosive atmosphere and from temperatures below +5°C and above +50°C.

6 Safety devices



The electrical safety closure may never be bridged or dismantled. Improper handling can cause major accidents!

The safety closure of the cutting mill safeguards the cutting chamber and protects the operating and maintenance staff from dangerous operating conditions. It consists of the following devices:

6.1 Mechanical opening device

The mechanical opening device (knob + closure flap + knob) delays the opening of the machine. It may never be removed or changed. It ensures that the rotor has finished moving before the upper part can be swivelled open.

6.2 Electrical limit switch

This limit switch prevents any access to the closure screws of the cutting chamber and the sieve frame.

The machine can be stopped using the main switch in every operating mode and condition.



Limit switch with actuator

7 Operating the cutting mill

7.1 First steps



Electrical connection only by electrician. Check operating voltage. Ground the rotary cutter. Check the safety closures.

The motor is mounted by intimus. The works guarantee is null and void if the customer mounts the motor.

Comply with the operating manual issued by the motor manufacturer.

Check the cutting mill for foreign bodies.

Only start the machine in no-load state.

Check all safety elements.

7.2 Switching the machine on and off

Switch the mill on as follows:

1. Main switch to position 1
2. Push green button (release key, green lamp is on)
3. Start cutting mill by press key 1

The cutting mill must be fed with material quickly and evenly. The best grinding performance is reached when there is a constant flow of grinding material. Do not "overfeed" the cutting mill.

If the rotor stops because of too much material, proceed as follows:

1. Stop cutting mill using the off switch (0)
2. Put main switch in position 0.
3. Open machine upper part (see 7.3).
4. Clean grinding chamber thoroughly.
5. Close mill again in reverse order.
6. The company electrician should unlock the motor protection switch if this was triggered automatically.
7. Put main switch in position 1
8. Start mill

7.3 Opening the cutting mill

Proceed as follows to open the machine:

1. Switch machine off.
2. Switch main switch off and secure it.
3. Wait until the rotor has finished moving.
4. Loosen the knob of the collecting bin and put out the bin, this activates the limit switch. The knobs for the upper part and the sieve frame are now accessible, loosen the knobs.
5. Swivel the upper part and the infeed throat backwards by hand. The sieve frame can be swivelled downwards, the sieve can be put out.



Knob
collecting bin



Knob upper
part

7.4 Closing the cutting mill

1. Clean the machine
2. Swivel the sieve frame with sieve up (see chapter 8.1) and fasten with knob.
Swivel upper part until closed, checking that the grinding housing is clean and that no granulate can get jammed.
3. Lock upper part with the second knob.
4. Put in the collecting bin.
5. Screw in knob of the collecting bin.

7.5 Lubrication of the cutting mill

Only use the grease stated in the lubrication section. Never mix several grades of grease. Grease used on delivery: OKS 420

(The following grease may be used: "SHELL"-Alvania EP2, "BP"-LS EP2, "ESSO"-Beacon EP2 and "TEXACO" –Multifak EP1). The grease is to be renewed completely after 20,000 operating hours at the latest or after 4 years. Lubricate the electric motors according to the manufacturer's instructions.



Always arrange for the company machine fitter to proceed with lubrication!

Lubrication intervals

Lubricating the	No. of operating hours
rotor bearing	every 2000 h
motor bearing	acc. manufacturer
closure spindle	oil every week

7.6 Maintenance



All tasks stated below may only be performed by a qualified machine fitter.

Lubrication see lubrication table.

To be checked every week:

- Cutting rails
- Check wear of safety curtain

V-belt tension and wear should be checked once a month.

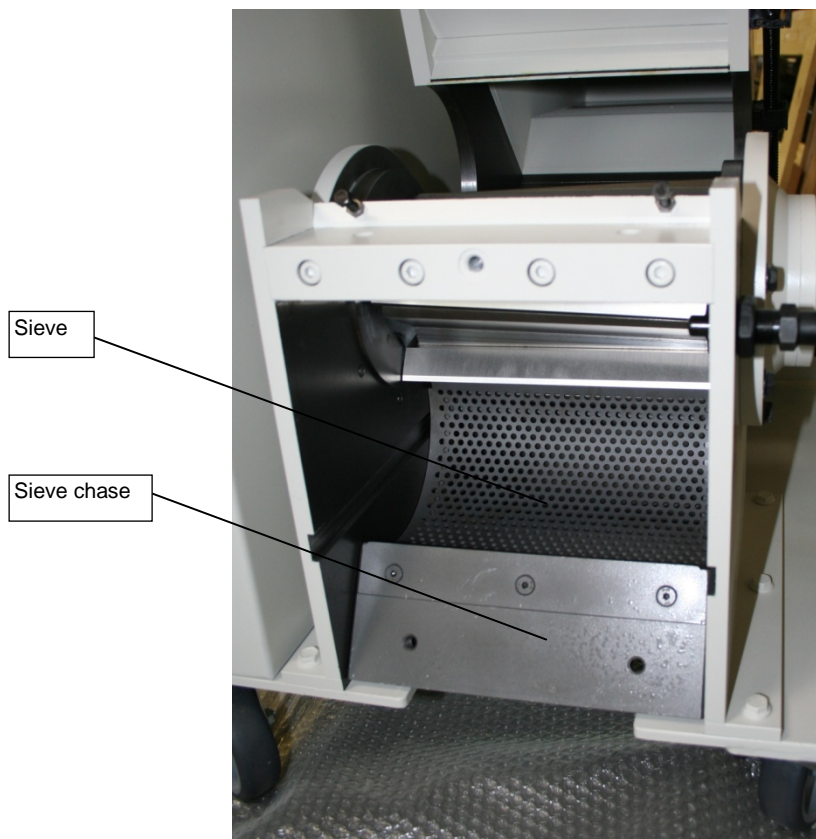
8 Handling the sieve

8.1 Fitting and removing the sieve



Always wear protective gloves for these tasks!

- Open machine as described in chapter 7.3.
- Loosen knob screws, hold sieve frame and then swivel downwards.
- Reach under the sieve and unhook it.
- Take sieve out to the front.
- When fitting the sieve, ensure that the sieve frame contact surfaces are clean.



8.2 Cleaning the sieve



Always wear safety gloves for these jobs of work! Only brush the sieve clean. Never use compressed air. Press jammed parts through from behind.

9 Handling the knives

9.1 Inserting and removing the knives



Caution, it is easy to cut yourself on the knives. Always wear safety gloves.

Always mount the knives with the following tightening torques.

Screws rotor knife	Tightening torque	Screws stator knife	Tightening torque
M 12x25 DIN 912-12.9	110 Nm	M 10x30 DIN 933-10.9	67 Nm

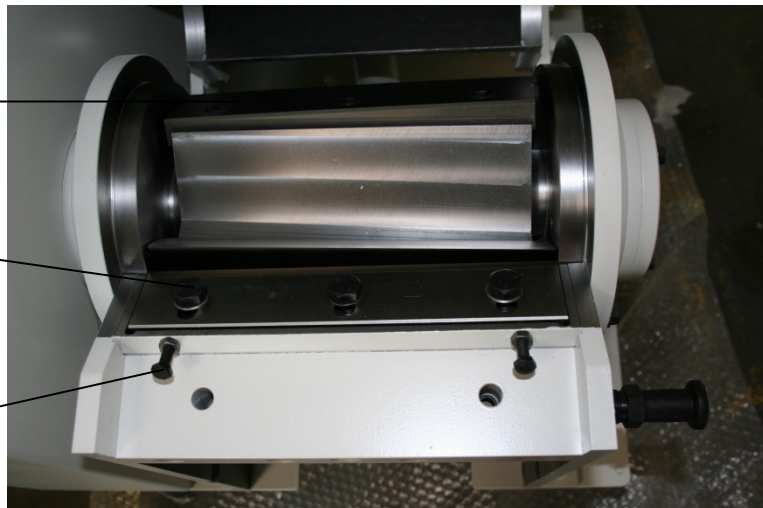
Insertion:

1. Open the machine as described in chapter 7.3.
2. Press the knives sharpened in sets against the back of the machine and tighten the cylinder head screws hand tight (3 each M12x25 DIN 912-12.9).
3. Tighten the screws with a torque of 110 Nm using a torque wrench.
4. Tighten the stator knife slightly with hexagonal screws (3 each M10x30 DIN 933-10.9).
5. Now move the stator knife using the adjusting screw (figure) toward the rotor knife until there is a gap of approx. 0,1 – 0,2 mm between the rotor and the stator knife. Check the gap by feeler gauge.
6. Tighten the screws with a tightening torque of 67 Nm.
7. Lock the adjusting screws with nuts.
8. Turn the rotor slowly and check once again that all cutting knives run without any collisions.

Rotary knife with 3
cylinder head screws
M 12 x 25 DIN 912-12.9

Stationary knife with 2
hexagonal screws
M 10 x 30 DIN 933-10.9

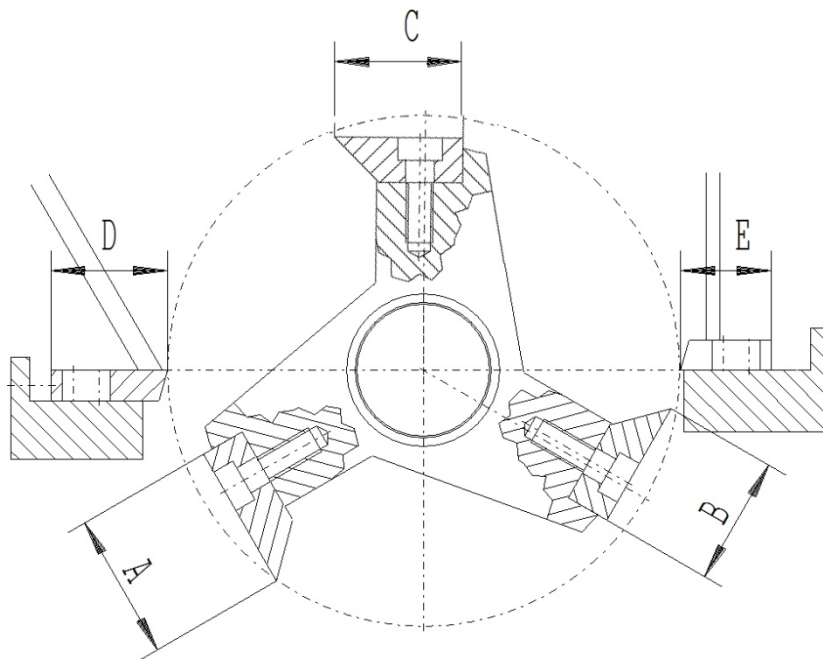
Adjusting screw for
stationary with 2
Hexagonal screws
M 6 x 20 DIN 933-8.8



9.2 Sharpening the blades

The rotating cutting rails are always to be sharpened to the same extent and should therefore only be sharpened a set at a time. The cutting angle corresponds to grind 2. The rotor cutting rail is 60 mm wide in new condition (size A) and can be sharpened down to a width of 48 mm (size C). Once size C has been reached, the cutting rail is no longer suitable for use.

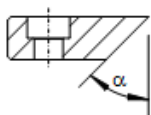
The fixed cutting rail is sharpened individually as required. It has a cutting angle of 75° (grind 3) and a new dimension of 47 mm (size D). This cutting rail can be sharpened down to 36 mm (dimension E), after which it



must be replaced.

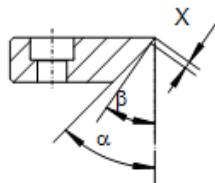
Use a soft grinding wheel with good liquid cooling to sharpen the blades. We recommend sending your cutting rails in to our factory for sharpening to ensure that this is carried out properly.

Sharpening shapes:



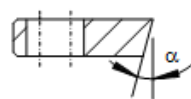
Grind 1

$\alpha=45^\circ$



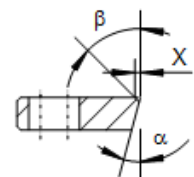
Grind 2

$\alpha=45^\circ$
 $\beta=35^\circ$
 $x=3\text{ mm}$



Grind 3

$\alpha=15^\circ$



Grind 4

$\alpha=15^\circ$
 $\beta=45^\circ$
 $x=3\text{ mm}$

10 Tightening the V-belts

Check the V-belt tension after the first 2 - 10 operating hours. Correct V-belt tension is incredibly important. Overtension causes damage to the bearings and inadequate tension causes premature failure of the belts. If one or several V-belts fail, then a complete new set must be fitted. Never put different makes together to make up a set.

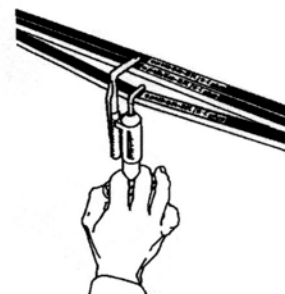
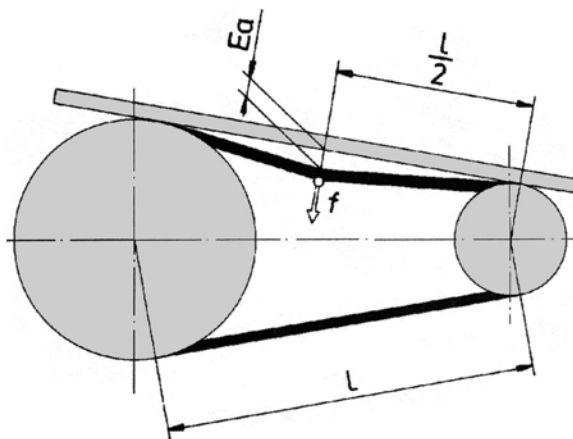
Checking the V-belt pre-tension:

- Dismantle the safety hood
- Place a ruler over both pulleys
- Pull one of the middle belts down at right angles to the tension line using the stated testing force and measure the sag "Ea".
- If the belt pre-tension is incorrect, correct the axle spacing by shifting the motor.
- To do so, loosen the fastening screws of the guide rail and shift the motor using the adjusting screws.
- Check the belt tension again and tighten the fastening screws again.



Shift the motor parallel and check that the V-belts are in line.

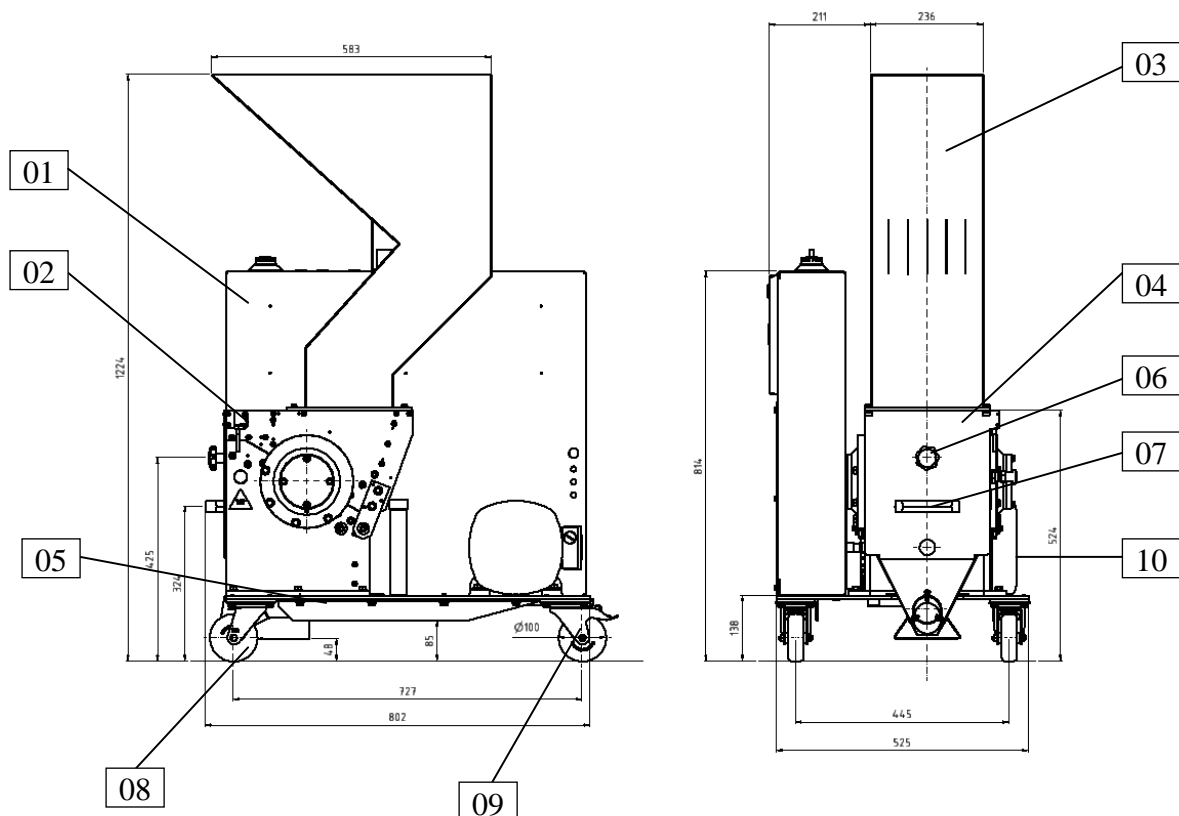
Testing force:	$f = 25 \text{ N}$
Sag during first assembly:	$E_a = 9 \text{ mm}$
Sag during re-tightening:	$E_a = 10 \text{ mm}$



11 Replacement parts lists

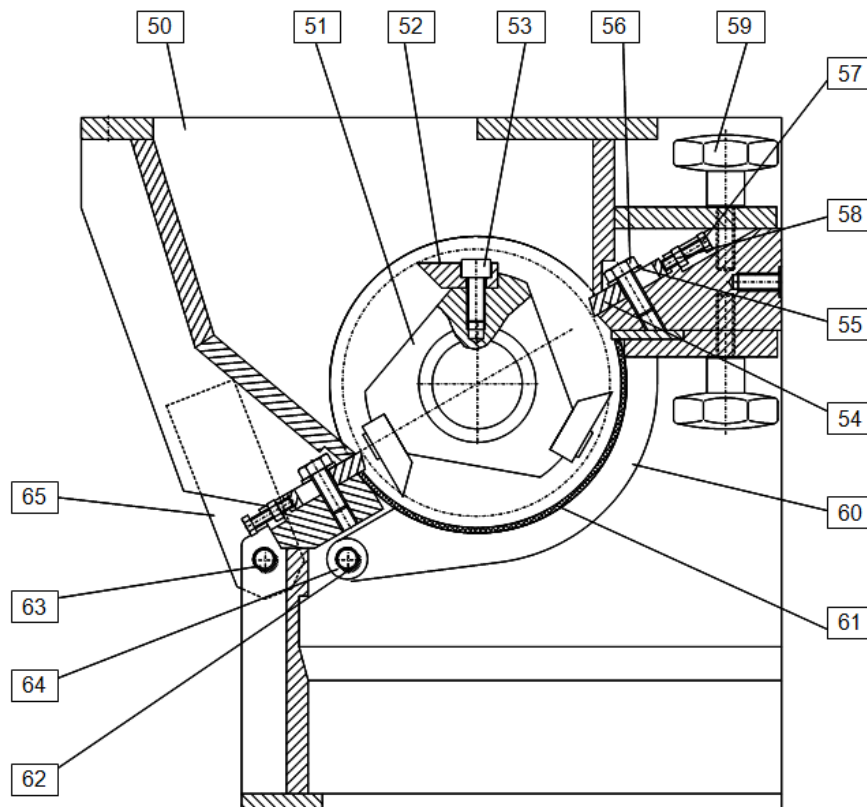
11.1 Cutting mill

Item	Quantity	Designation	Article number
1	1	Safety hood and electric	00002138
2	1	Limit switch – upper part	00002149 / 00002150
3	1	Infeed throat	00002167
4	1	Collecting bin	00004050
5	1	Support of machine	00004056
6	1	Knob	00002120
7	1	Curved handle	00000017
8	2	Caster wheel	00002365
9	2	Caster wheel with stopper	00002367
10	1	Drive motor	00003426



11.2 Cutting chamber

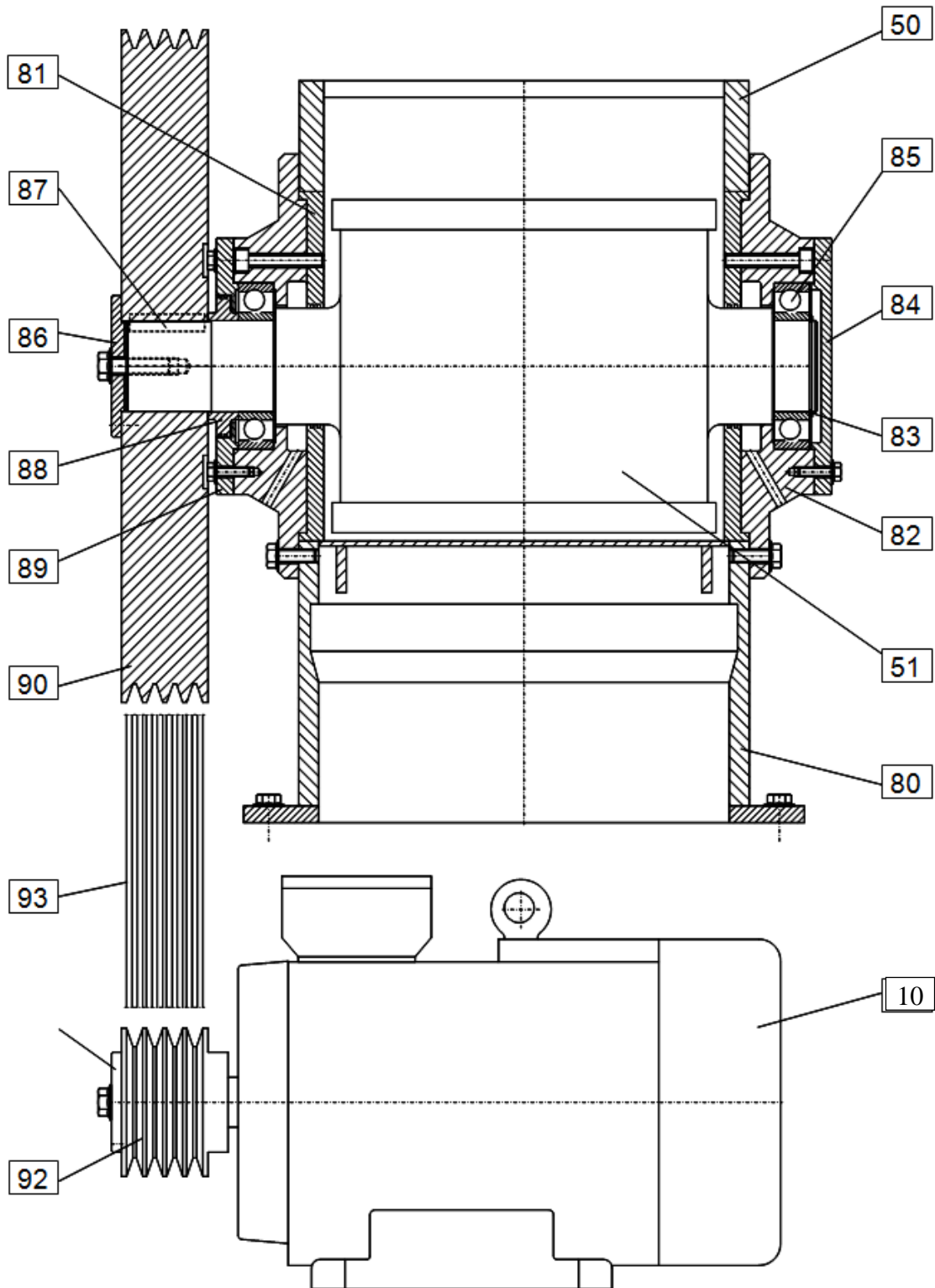
Item	Quantity	Designation	Article no.
50	1	Upper part	00002096
51	1	Rotor	00002209
52	3	Rotor knife	00002126
53	9	Cylinder head screw	M 12 x 25 DIN 912-12.9
54	2	Stator knife	00002110
55	4	Washer	DIN 125 – A10,5
56	4	Hexagonal screw	M 10 x 30 DIN 933-10.9
57	4	Hexagonal screw	M 6 x 20 DIN 933-8.8
58	4	Hexagonal nut	M 6 DIN 934-8
59	2	Knob	00000011
60	1	Sieve frame	00002194
61	1	Sieve	00002451
62	1	Axle – sieve frame	00002181
63	1	Axle – upper part	00002073
64	4	Sliding bearing	00001597
65	2	Articular lever	00002083/00002084



11.3 Rotor assembly

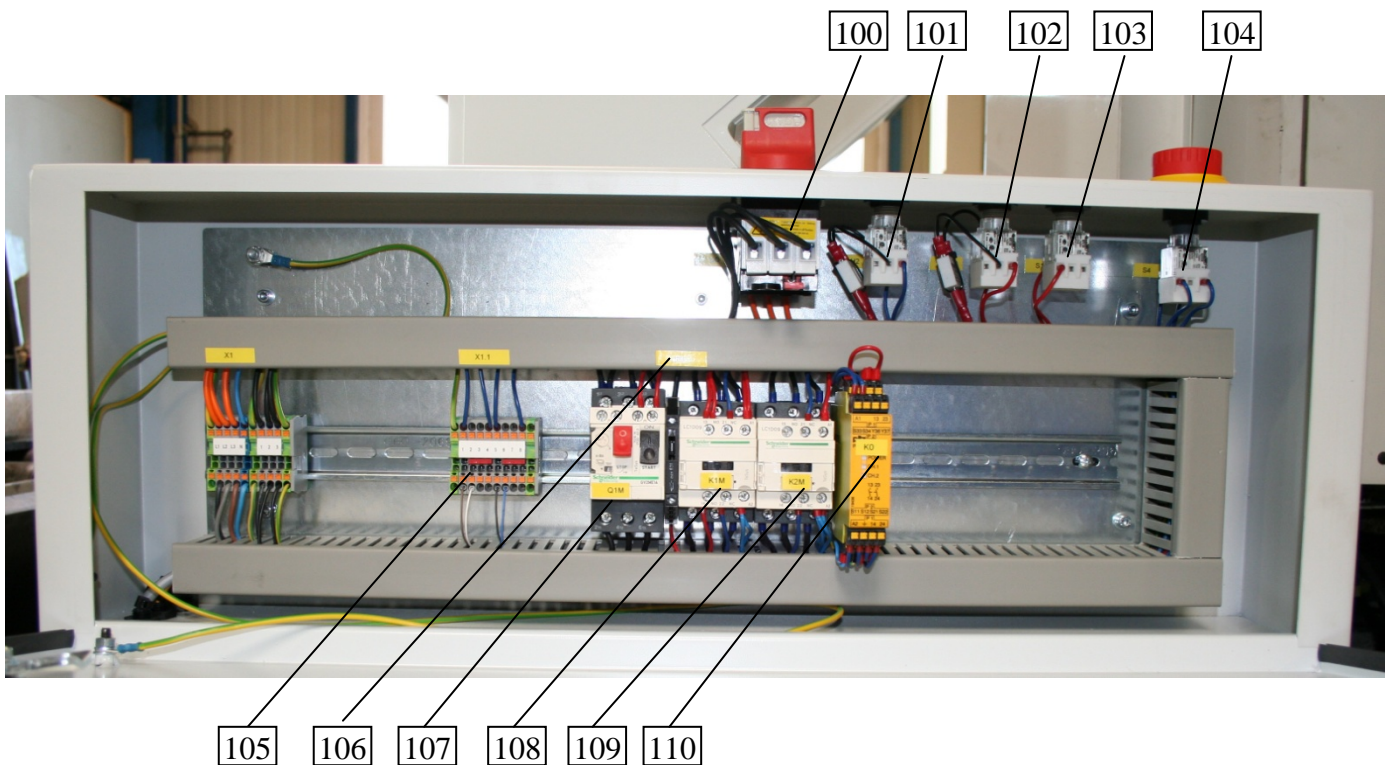
Item	Quantity	Designation	Article number
10	1	Drive motor	00003426
50	1	Upper Part	00002096
51	1	Rotor	00002209
80	1	Basic housing	00002045
81	2	Bearing halt	00002204
82	2	Cover disk rotor pulley	00002206/00002205
83	1	Shaft safety clasp	DIN 471 – 45 x 1,75
84	1	Cover B-side	00002203
85	1	Ball bearing with gasket	SKF 6209-2Z
86	1	Cover rotor	00002200
87	1	Feather key	DIN 6885 – A12 x 8 x 45
88	1	Raceway A-Side	00002202
89	1	Cover A-side	00002201
90	1	Rotor pulley	00002199
92	1	Motor pulley	00002213
93	3	V-Belt	XPZ 1512

Replacement parts drawing on the following side.



11.4 Electric assembly

Item	Quantity	Designation	Article number
100	1	Main switch 20A	VCF-01
101	1	Push-button with white LED	RQJT / L5,5K24UW
102	1	Push-button with green LED	RQJT / L5,5K24UG
103	1	Push-button with red cap	RQJT / T22RRRT
104	1	Emergency stop	RRJUV
105	3	End clamp	AB1AB8M35
106	3	Fuse holder	AB1FUSE435U5X
107	1	Protect switch 6,3-10A 3,0kW	GV2 ME14
108	1	Contactora 4,0kW	LC1-D09
109	1	Contactora 4,0kW	LC1-D09
110	1	Safety relays	PNOZ X2P



12 Error identification

	Error	Possible cause	Elimination
1	Mill doesn't start.	Emergency-off-switch engaged. (Option) Rotor is blocked and safety switch has switched off. Locking spindle not closed, limit switch not released. Fan not switched on. Exhausting collector not put in correctly. (Only at pull out collector) Limit switch is defect. Drive motor is defect.	Release emergency-off-switch. Clean the mill and release the safety switch again. (Only by electrician) Close the locking spindle completely. Switch on fan. Put in exhausting collector correctly. Change the limit switch. Check the drive motor, if necessary change it.
2	Sieve can't be inserted	Sieve inserted wrong. Plastics remains rest in the cutting chamber.	Mark has to be in front. Clean cutting chamber again.
3	Closure door can't be closed	Plastics remains rest in the cutting chamber.	Clean cutting chamber.
4	Quality of granulated material not satisfactory.	Blades blunt. Gap to wide.	Sharpen the blades. Adjust the stator knife anew.
5	Mill doesn't reach the quoted output.	Blades bunt. Gap to wide. Collector always full. V-belts slide.	Regrind the blades. Adjust the stator knife anew. Check exhausting system. Check exhausting cycle. Tighten V-belts, change if necessary.
6	Grinding noises from grinding plant during idle running.	Bearing damage at the rotor bearing.	Change bearing.
7	Grinding noises from motor during idle running	Bearing damage at the motor.	Change bearing.
8	V-belts slide.	Check the wearing. Check tension of v-belts.	Change V-belts set. Never change single belts. Tighten V-belts.

13 Attachment

- Circuit diagram
- Technical documentation power engine