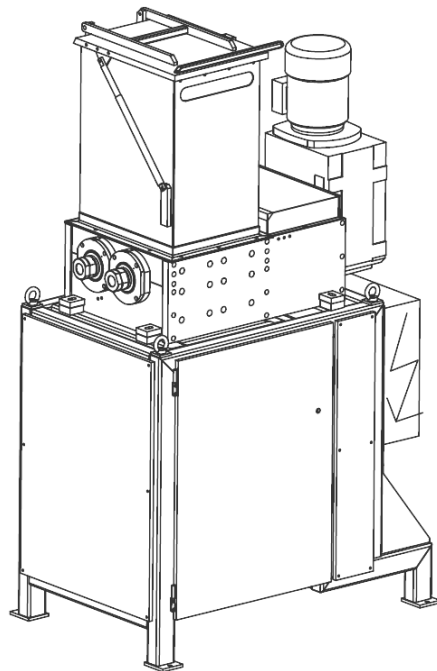




HDD Granulator

Operating Instructions

GB



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Before operating carefully read the Operating Instructions!

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1. Important safety notes

These operating instructions contain information essential for safe and trouble-free machine operations. For this reason read it thoroughly before beginning machine operations!

Persons which are younger than 16 years must not operate the machine.

Keep children away from the machine! Children must not get into the working area around the machine, as long as it is ready for operation. The design of the machine (service openings, feeding openings, housing, safety installations) depends on a safe operation for adults only.

The operator is responsible in the working area of the machine also against other persons.

The operator must be trained in the use of the machine and has to wear the necessary personal protection clothing.

The machine must be operated only by one person at a time.

Before leaving the machine switch main switch off and secure main switch with padlock against switching on by unauthorised personnel.

Service and cleaning work as well as dismantling of parts of the housing or safety installations must only be done, if the drives are stopped and the main switch is in "off"-position and secured against switching on by other persons.

Safety installations which are supplied with the machine need to be used

During operation of the machine no other work (cleaning, service, repairs,..) must be executed at the machine.

Do not reach into the cutting zone. There is danger of serious injury or death!

In case of danger stop machine via main switch or emergency-stop-switch or interrupt power supply.

Dangerous goods and parts which are not suited for shredding have to be sorted out before shredding and have to be disposed separately (e.g. cans with flammables, explosives, ...)

Waste which may create loops must be prepared separately in a matter to prevent creating of loops, to avoid danger of loops pulling the operators extremities into the cutting zone and subsequent dismemberment.

The machine must be installed stable on even and solid subsoil.

Additionally local safety prescriptions or legislation have to be obeyed.

2. Function of the machine

The individually exchangeable hardened knife-discs are mounted on two counter rotating steel shafts. The knife-discs are fixed to the shafts with multiple keys.

Due to the specially designed and precisely manufactured knives, the material is drawn into the machine and is cut into defined pieces.

The drive and cutting unit are overload-protected by an electronic torque limitation with auto-reverse.

3. Technical data

	400 V machine	230 V machine
Type	HDD Granulator 38/50	HDD Granulator 38/50
Cutting zone	380 x 500 mm	380 x 500 mm
Cutting cylinders	2	2
Cutting width	30 mm	30 mm
Drive	4 kW - 400V/50Hz - 3ph+N+PE	4 kW - 230V/50Hz - 3ph+PE
Fusing	25A slow blow	32A slow blow
Sound level	approx. 70 dBA in idle run	approx. 70 dBA in idle run
Weight	approx. 1,090 kgs	approx. 1,090 kgs

4. Shreddable material

Shredding of released materials like Hard Disk Drives, magnet tapes, plastic cards, CD-ROM's, DVD's, floppy-discs, Video-cassettes and ZIP's is possible with this machine. **Please note** that processing of metal like HDD's - especially when using a screen - will result in a high temperature of the cutting unit. When feeding plastic material then, it may happen that the plastic starts to smelt. After stopping operation of the machine and cooling down of the cutting block it may be necessary to remove the plastic residues manually prior to further operation.

Do not process material which contains poisonous or caustic substances or substances which develop corrosion or which are combustible or thick or hardened metal parts.

Dangerous goods and parts which are not suited for shredding have to be sorted out before shredding and have to be disposed separately (e.g. cans with flammables, explosives, ...)

Waste which may create loops must be prepared separately in a matter to prevent creating of loops, to avoid danger of loops pulling the operators extremities into the cutting zone and subsequent dismemberment and to prevent damages to the machine.

Attention: No warranty applies, if other than the released materials are shredded (even in small amounts)!

In case of special application please contact Intimus to avoid the loss of warranty.

5. Transportation and storage

Transportation or relocation

The machine may only be transported with fork lift trucks or pallet trucks with sufficient lifting capacity as well as with other suitable lifting devices. Weight of the machine is 1,060 kgs.

The transportation and lifting devices may only be used at the corresponding spots of either the wooden crate or the machine itself.

Local prescriptions or legislation have to be obeyed.

Storage

The machine has to be stored dry and dust free. Big differences in temperature cause steam and are therefore prohibited. The electronics might else be damaged. Parts that are not protected against corrosion can get rusty as well.

6. Installation

6.1 Preconditions

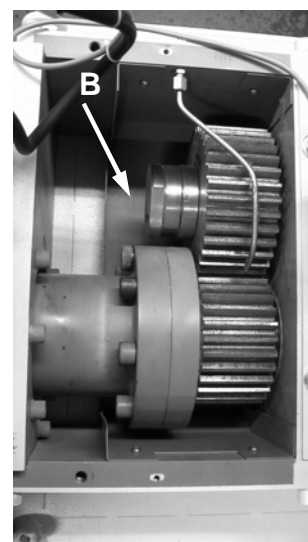
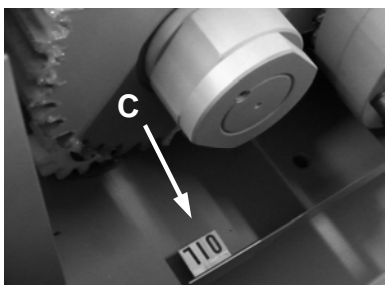
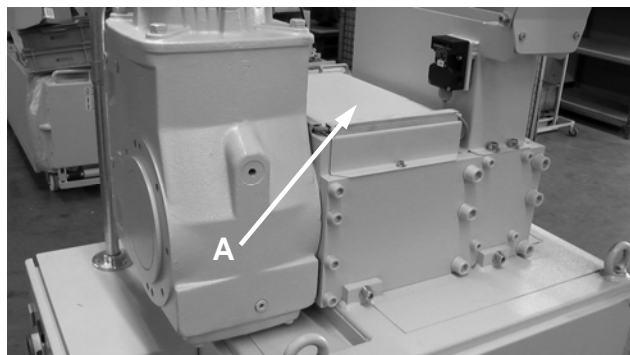
1. Place the shredder on stable and solid ground. For transportation use a forklift truck or pallet truck. For further information please refer to chapter "transportation". It is imperative, that the maximum permissible floor load is not exceeded, as the unit can reach a total weight of up to 1,090 kgs, depending on execution. Additional anchoring of the unit to the floor is recommended but not imperative
2. **Caution: the unit must be operated indoors only and at moderate ambient (10-40° C) temperatures!**
3. A threephase current outlet must be available with 400 V / 50 cycles per second, protected with a slow blow, fuse (required capacity see chapter 3). Differing voltage can cause electronic faults or loss of performance. The loop resistance of the mains supply at location of connection must not exceed 0.5 Ohms. The metallic section of the electrical supply at location of connection must be designed in a way that if the machine is blocked the voltage is not reduced by more than 15% (blocking current of machine is app. 6 times nominal current).

6.2 Assembly of the Shredder

1. Study the operation manual and the security information thoroughly and act according to them
2. Remove the packaging material and the wooden transportation base
3. Install the machine according to the local regulations. Remove the black transportation bar behind the door (allen head key size 6)
4. Check voltage and strength of current before connecting the machine to the power source to ensure that it is matching with the machines execution to avoid injuries and damage to the machine. Plug in CEKON-CEE 16 A plug of power supply to a matching outlet (execution of outlet see chapter 6.3)
5. Check the proper function of all safety devices. Pushing the emergency stop button, opening the access door to the bin, opening the cover of the hopper and switching the main switch off must cause an immediate stop of all functions of the machine. If not, immediately disconnect machine from power supply, make sure that it cannot be connected by anybody else and contact the manufacturer.
6. Open the door, put a suitable collecting bin with approx. 240 l capacity into the chassis and close the door again.

7. Add oil to the oil-pan (B): There is a canister of oil supplied with the machine. This is used as emergency lubrication of the spur gears of the cutting block. First remove the sheet steel cover of the gearing section of the cutting block (A) by disassembling its two allen head bolts.

Since the rim of the oil pan is lower under the spur gears (where it cant be seen) than at the front, it is important to not top up to the full height. Please fill in oil up to the mark (C) - if existing - or fill in approx. 10 mm high. Then make sure that no one reaches into the spur gears and start the machine. Let it run for half a minute and watch the spur gears. If oil is applied to them, the filling level is ok. If no oil appears on the spur gears, top-up further 2 to 3 mm oil. Let the machine run again and proceed as prescribed until oil is applied onto the spur gears. Then close the cover again and fix it with the two bolts.



6.3 Checking the operating direction

1. Switch the main switch on (position "1")
2. Release the emergency stop button if pressed and operate the start-button.
3. Check the operating direction of the shredder. The rotation of the cooling fan of the main drive must comply with the arrow on the fan shroud. If necessary, correct by altering the phase at the terminals of the mains supply (L1 , L2, L3).

Caution: Alteration of the phase at the mains supply cord must only be carried out by a qualified electrician and with the power supply to the machine disconnected.

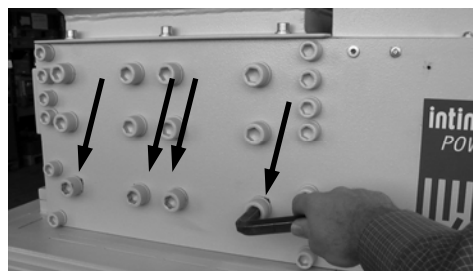
4. After all installation and connection work has been carried out, operation can be started.

Important note: To ensure safe operation of this unit without malfunctions, the operating instructions must be read first carefully.

6.4 Installing / Changing the Optional Screen

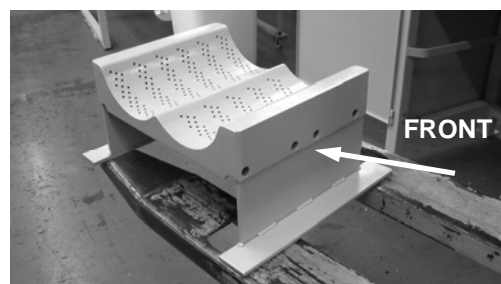
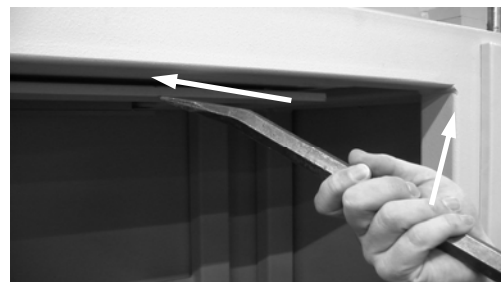
For perfect adaptation of the machine to various materials and security requirements, the machine can be equipped with an additional screen with 10, 8 or 6 mm wide holes. This screen is installed underneath the cutting block and will keep all shredding particles within the cutting block until they are cut to a size that will fit through the holes of the screen so that they can drop into the collecting bin. To **remove** the screen proceed as follows:

1. Open the door, remove the collecting bin and clean the chassis of the cutting block and the screen from metal and magnetic parts. Wear thick protective gloves to avoid injuries.
2. Put a suitable wooden pallet on a fork lifter and bring the pallet in position under the screen. Ensure the fork lifter and pallet can cope with the weight of the screen of some 50 kgs.
3. Loosen the 4 bolts on the front of the cutting block and appropriate 4 bolts on the rear side (allen head size 17).
4. Let the fork and pallet down by some 50 mm to check if the screen slides down automatically. If not, use a thin stick of aluminium, put it from above in an edge of the cutting zone in a gap between the chassis and the cutters until it touches the screen under the cutters. Use a plastic hammer to hammer the screen with the stick down. Do so regularly in all 4 edges to avoid canting until the screen sits freely on the wooden pallet.



Alternatively you can use a crowbar (naildrawer / assembly lever), attach it between the foot of the screen and the chassis of the machine and pull the screen down.

5. Bring the fork down until the screen is completely free. **Attention: do not bring the fork down too much, take care for the door-switch and the guide-bars for the collecting bin!** Now remove the fork lifter from the machine. Clean the screen and also clean the chassis of the cutting block and the cutting cylinders thoroughly from any residues, especially the magnetic particles and dust.
6. To install the screen, put it on a wooden pallet or wooden bars on the fork of the fork lifter. Make sure that the chassis of the cutting block and the screen are both level, which will help to easier fit the screen into the machine again. **Attention: please check the screen for the mark "FRONT" (see arrow on the picture to the left). This side must be installed towards the front side (door) of the machine.** Install the screen by following the points 5 to 1 in the opposite way. **Attention: bring the fork with the screen up so that the fork is above the door switch and the guide bars of the collecting bin, but also ensure that the screen is low enough to match under the chassis.** Then carefully position the screen so that it matches with the opening of the cutting block and carefully lift it into the cutting block. Finally it will get in touch with the combs within the cutting block. **At the feet there will remain a gap towards the chassis, so do not try to lift the screen any further, else you will lift the complete machine.** Then the holes in the cutting block should match with the treads in the screen so that you can assemble the 4 large allen head bolts at the front and rear side of the cutting block. First tighten the 4 bolts at the front carefully, then the 4 bolts at the rear. Then you can remove the fork lifter carefully.



7. Operating the Machine

Make sure that an empty collecting bin is in the chassis of the machine and that, if required for the actual shredding job, the appropriate screen is installed in the machine. Open the top cover and make sure, that no waste or unsuitable shredding material is put on the cutting shafts. Connect the machine with the power supply and switch the main switch on.

7.1 Suggested Feed Rates

Suggested Feed Rates

For 3.5" HDD's up to 520 grams weight

- 1 HDD every 3 minutes with 6 or 8 mm screen
- 1 HDD every 2 minutes with 10 mm screen
- 1 HDD every 75 seconds with 12 mm screen
- 1 HDD every 45 seconds with 14 mm screen

For 3.5" HDD's up to 620 grams weight

- 1 HDD every 190 seconds with 6 or 8 mm screen
- 1 HDD every 150 seconds with 10 mm screen
- 1 HDD every 90 seconds with 12 mm screen
- 1 HDD every 55 seconds with 14 mm screen

For 3.5" HDD's with hot swap tray caddy

- 1 HDD every 280 seconds with 6 or 8 mm screen
- 1 HDD every 215 seconds with 10 mm screen
- 1 HDD every 130 seconds with 12 mm screen
- 1 HDD every 80 seconds with 14 mm screen

(for smaller HDD's and lighter media shorter intervals may be chosen according to the actual load level)

7.2 Feeding in Batch Mode

When operating the machine without a screen and with light shredding material like CD's, floppy disks, video cassettes and the like, it will provide for high throughput capacities and cope with larger quantities of shredding material. Open the top cover of the feed hopper with the handle, then feed a larger quantity of shredding material into the hopper in one go. **Please note:** To avoid jamming start with smaller quantities and increase them step by step until you have established the maximum amount of material the machine can cope with. Close the top cover of the hopper after feeding and then press the start-pushbutton of the machine. It will start operation and process the material in the feed hopper. When you hear by the sound of the machine, that it has processed most or all of the shredding material, you can open the top cover (which will switch off the machine immediately for safety reasons), feed further material and then proceed as prescribed before.

7.3 Feeding single Data Carriers

When operating the machine with a screen and with heavy shredding material like HDD's, it will provide for low throughput capacities and cope with single or very few data carriers at a time. Press the start-button of the machine and then put one data carrier after the other into the feed slot in the top cover of the hopper. **Please note:** To avoid jamming feed only one data carrier at a time. With the 6 mm screen installed, drop one HDD every 3 minutes maximum. Although the HDD may have disappeared earlier, there will be still a lot of pieces between the cutting shafts and the screen which need to be processed further until the next HDD can be feeded. Feeding HDD's in a faster cycle may generate a jam of the machine.

7.4 Checking the Filling Level of the Waste Bin

Regularly check the filling level of the waste bin to ensure that it is not overfed or getting too heavy. Open the door (which will stop operation of the machine immediately for safety reasons) and pull out the waste bin a little. Check if the bin can still cope with the weight of the collected metal scrap and that the operator or any involved transport- or handling equipment can still handle the bin properly and that it still provides for sufficient collecting capacity for further operation. If any of the before mentioned does not apply, bring the bin to the appropriate place and empty it. Put the empty bin into the chassis, close the door and start operation by pressing the start-pushbutton again.

8. Cleaning

The shredding unit must be cleaned once per week. Before cleaning make sure, that the main switch of the machine is switched off and is secured against switching on by e.g. a padlock. Wear protective gloves during the cleaning work to avoid injuries by sharp metal pieces that may stick between the cutters, combs and in the screen. To reduce the high wear when processing HDD's it is important to remove as much of the magnetic particles and dust as possible, since this provokes most of the wear. We strongly recommend to remove the optional screen (see chapter 6 for correct procedure) for cleaning to allow for a perfect access to all parts of the cutting unit.

9. Change of lubricants

Gearbox

All geared drives need a minimum of maintenance only. It is restricted to a regular check of the level of the lubricant every 10,000 working hours or every 2 years latest. In case synthetic lubricants are used the figures mentioned before can be doubled. Should the working conditions be quite difficult (e.g. high humidity, aggressive surrounding, intense fluctuations of temperature) the change of lubricants shall be done more often.

Bearings are filled with grease and should be cleaned after approx. 10,000 working hours latest and should then be equipped with new grease (details see maintenance instruction of geared drive in appendix)

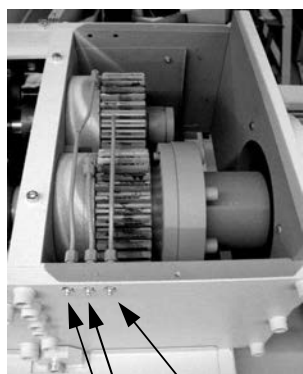
Attention: Synthetic lubricants must never be mixed with mineral lubricants!

Spur gears

Lubricate once a week with universal grease (temperature range -30 up to +60°C) via the greasing nipple on the side of the cutting unit. As emergency lubrication an oil bath can be established in the pan underneath the spur gears. Please use gear oil and top up as described in chapter 6.2.7 until the fluid level reaches the plastic application gear. This gear will continuously apply a little oil onto the spur gears. Check the oil level on a half years basis and change oil every 2 years latest. Change the oil more often if a lot of dirt is generated during the shredding process.

10. Lubricant and service manual

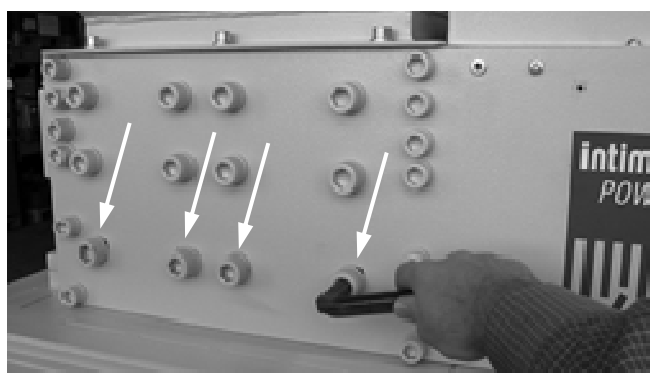
servicing periods	working steps	recommended lubricants
Every week or 40 working hours		
A synchronizing gears cutting unit	greasing	5
B bearings cutting unit	greasing	8
C cutting unit	cleaning from magnetic waste	
D screen	disassembly and cleaning	
Every 6 months or 500 working hours		
A synchronizing gears cutting unit	checking oil level, checking for oil leaks	6
E cutting shafts	check for wear	-
F screen	check for wear	-
G gearbox of main drive checking for oil leaks	checking oil level, synthetic 6	mineral 1
Every 2 years or 10,000 working hours		
A synchronizing gears cutting unit	changing oil	1 , 6
G gearbox of main drive	changing oil	mineral 1 synthetic 6
B bearings cutting unit	exchange grease	7 , 8



Step B A









Step B



Step D

Lubricant recommendation

kind of use	kind of lubricant	surrounding temperature °C	kin. viscosity at 40°C (cST) mm²/s							
synchronizing gears, gearbox motors	oil	1 + 40 to 0	242 to 198	ARAL Degol BG 220	BP Energol GR-XP-220	SPARTAN EP 220	MOBILGEAR 630	SHELL Omala Öl 220	Meropa 220	
		2 + 25 to - 15	165 to 90	ARAL Degol BG 100	BP Energol GR-XP-100	SPARTAN EP 150	MOBILGEAR 629	SHELL Omala Öl 100	Meropa 150	
		3 + 10 to - 30	74,8 to 13,5	ARAL Degol BG 46	BP Energol GR-XP-68	ESSO Automatic Transmission Fluid	MOBIL D.T.E. 15	SHELL Tellus T 32	Meropa 68	
		4 - 20 to - 50	16,5 to 13,5	ARAL Vitamol 1010	BP Bartran HV 15	UNIVIS J 13	MOBIL D.T.E. 11	SHELL Tellus T 15	Aircraft Hydraulic Oil 15	
	grease 5 + 40 to - 15		ARAL Aralub FDP 00	BP Energrease HAT-EP 00	FIBRAX EP 370	MOBILPLEX 44	SHELL Grease Alvania GL 00	Multifak EP 0		
common use	synth. 6 oil	+ 80 to - 25	352 to 198	ARAL Degol GS 220	BP Energol SG-XP-220		MOBIL Glygoyle 80	SHELL Tivela S220		
	synth. 7 grease	+ 60 to - 20				Getriebe-fließfett S 420	RR.103B Glygoyle Grease 00	SHELL Tivela GL00		
bearings for	common	grease 8 + 60 to - 30		ARAL Aralub HL 3	BP Energrease LS 3	ESSO Mehrzweckfett BEACON 2	MOBILUX EP 2	SHELL Alvania RL3 (alt: R3 oder G3)	Glissando FT 3	Glissando FT 3
		gearing	9 + 80 to - 40				MOBILTEMP SHC 100			
	motor	synth. 10 grease	+ 60 to + 100				ESSO Unirex N 3			
		11 - 30 to - 45		ARAL Aralub SKL 2		Beacon 325	MOBIL THERM p SHC 32	AERO SHELL Grease 16 AERO SHELL Grease 7		

Service / cleaning of the cutting units

The shredding unit must be cleaned once per week. Before cleaning make sure, that the main switch of the machine is switched off and is secured against switching on by e.g. a padlock. Wear protective gloves during the cleaning work to avoid injuries by sharp metal pieces that may stick between the cutters, combs and in the screen. To reduce the high wear when processing HDD's it is important to remove as much of the magnetic particles and dust as possible, since this provokes most of the wear. We strongly recommend to remove the optional screen (see chapter 6.4 for correct procedure) for cleaning to allow for a perfect access to all parts of the cutting unit.

11. Reference to product liability

According to EC-Regulations, effective since January 1st, 1990, the manufacturer is only liable for his product, when all parts are originally supplied or are released by the manufacturer. Furtheron the parts have to be mounted and operated by a specialist.

When using external additions or spare parts from other sources, the product liability of the manufacturer will not be effective either partially or in total. In extrem cases the use of the complete machine can be denied by the officials.

12. Reference to inexperienced use of the machine

In case of inexperienced use of the machine the product liability of the manufacturer expires. This applies for instance if other than the released material is processed (see chapter 4).

13. Electrical installation

13.1 Wiring Diagrams

13.2 List of Electrical Components

13.3 Documentation of Function Control



Eaton "Easy 512" PLC Control for HDD Granulator Program Version V1.6

intimus International GmbH
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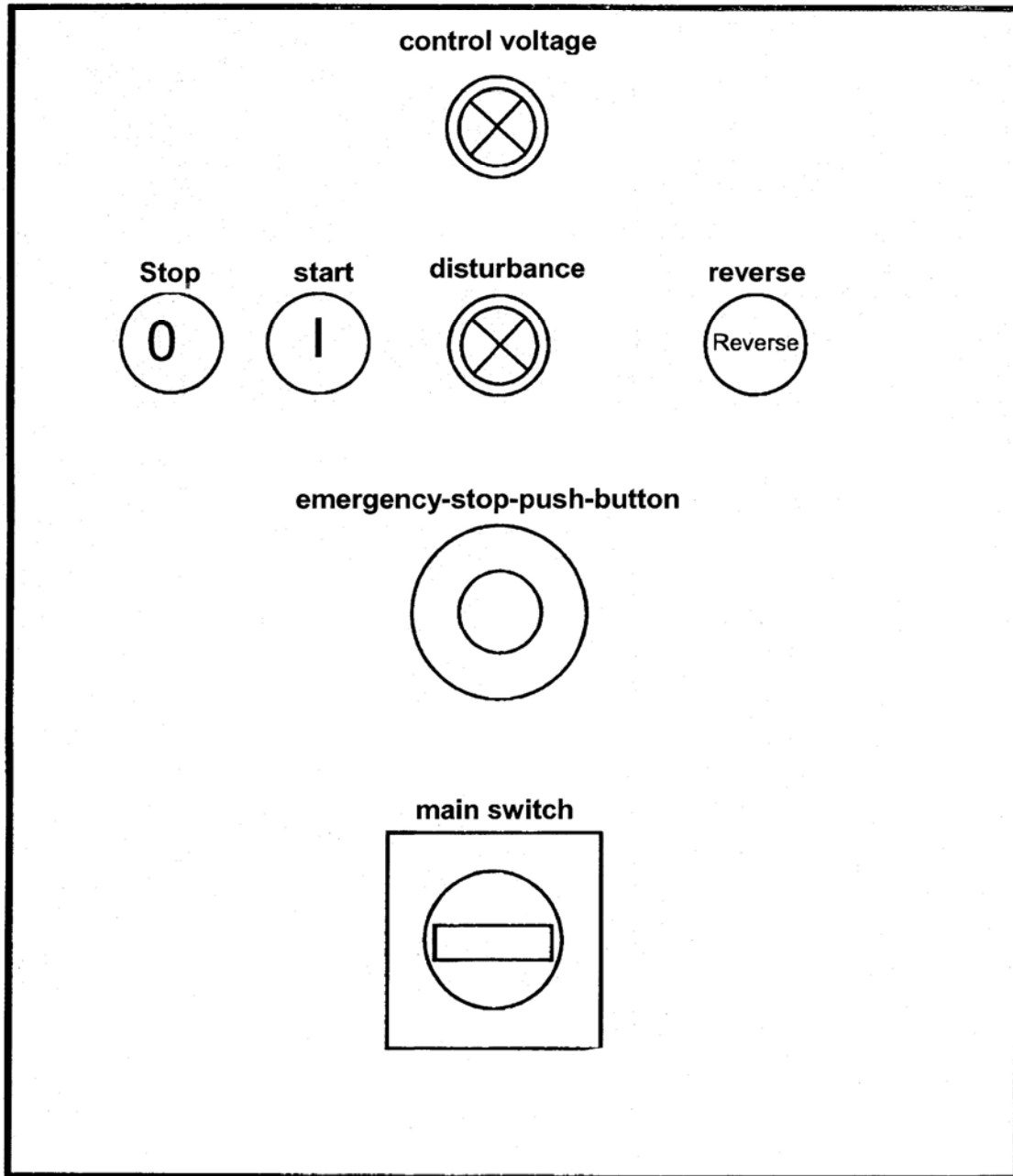
Tel.: ++49 (0)7544 / 60-0
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e-mail: sales.de@intimus.com

Before operating carefully read the Operating Instructions!

I. Description of control system and operation of the plant

1. Switch on the machine with the main switch, indicator lamp P0 "24V" displays that control voltage is available.
2. Check the emergency-stop-chain: both emergency-stop buttons S15 and S16 at the control cabinet must be unlocked, the safety switch S17 at the door for the waste bin and the safety switch S18 at the cover of the hopper must be closed.
3. The shredder can be started by pressing the button S101 "start". The cutting cylinders start rotating. For a perfect cutting result, especially when using the optional screen, the machine will switch to reverse mode after a certain time T14 for a short while and then go back to the normal shredding mode again
4. To stop the machine please press the push-button S102 "Shredder stop". All functions are stopped.
5. To restart the plant pursue the advice starting with point 2.
6. Pressing the "emergency-stop"-push-button, opening the door for the bin and opening the cover of the hopper (safety devices) immediately stop all functions of the machine.
7. The push-button S30 "reverse" enables a manual reversing of the cutting cylinders. It is equipped with a tapping function, so that the reverse function is only activated, as long as the operator actuates the push-button. To prevent the machine from damages the function is only available directly after having switched on the main switch or after having pushed and released the emergency stop button.

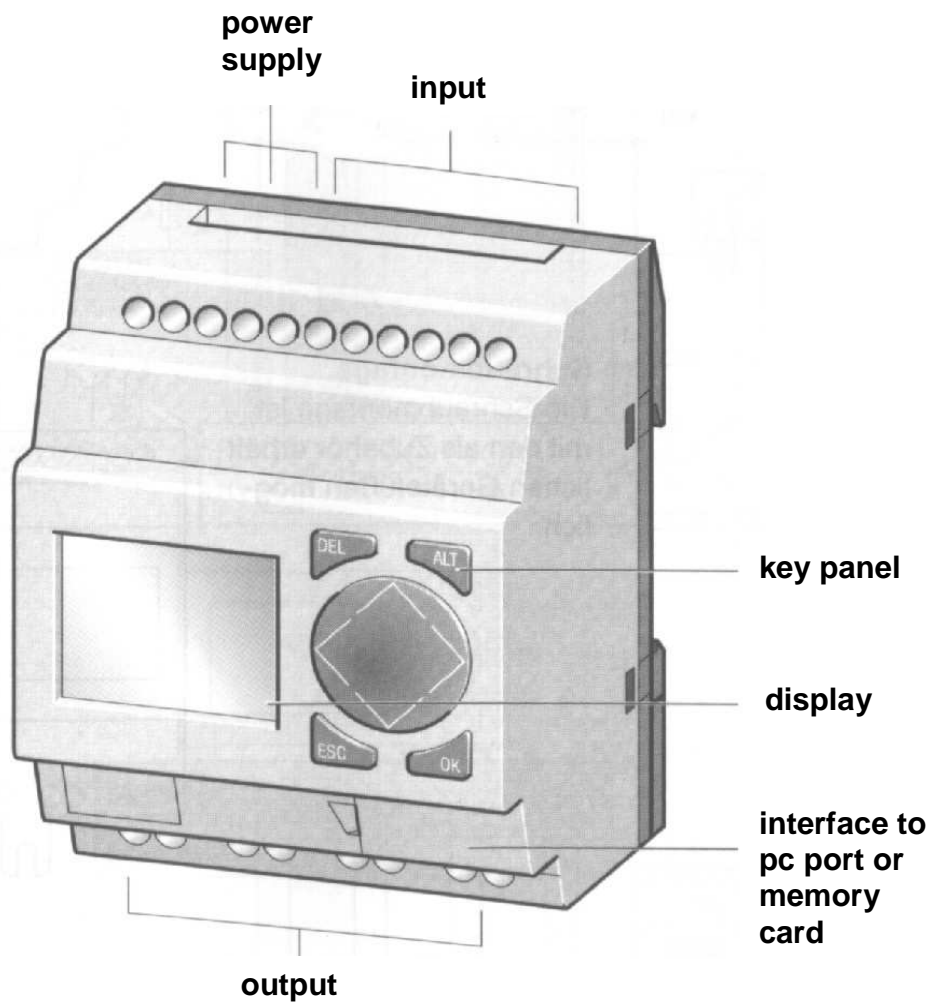
Control cabinet



II. Explanation of the program

1. Mode of operation of the current measurement at geared drive

- At the **measuring transformer B1** an AC voltage is generated, which is rectified in the **electric rectifier A1** and smoothed by the **capacitor C1**.
- Thus generated DC voltage now is monitored continuously from the PLC. When the voltage exceeds a programmed analogue value, the control **switches off forward rotation** and switches automatically into **reversed rotation**.
- Reversed rotation holds on for a programmed period of time (approx. 1.5 seconds), then forward rotation is switched on automatically again.
- After having **four times reverted** within two minutes time the control switches the machine off. Indicator light "**disturbance**" shows. If that has happened the contents of the funnel shall be checked for presence of unsuitable materials (thick metal parts,..) to prevent the cutting cylinders from being destroyed. The **disturbance is deleted** by pressing the push-button "stop". The lamp "**disturbance**" goes off. Now you can commence operation again by pushing the "start"-button.
- You can activate a time-deactivation of the machine via the switch "**time-deactivation**" if it is idling. When the timer switch (S4 in the cabinet, left of the Easy - control relay) is switched into "on"-position, the "time-deactivation" is activated. If material is cut, a rise of the current can be measured, which shows that the machine is in shredding process. To prevent ineffective idling (wear, power consumption) the machine now will be stopped after idling for 3 minutes. As soon as the machine is idling, the timer begins to count down 3 minutes time. Is the shredder fed within this period of time, the PLC resets the timer automatically. If the machine is idling, it stops operation after 3 minutes of idle run.
- If the switch "**time-deactivation**" is switched to position "off", the machine may idle until the shredder is **switched off** by pushing the push-button "**stop**" manually.
- An **optional sensor** can be connected to survey the filling level of the collecting bin and switch off the machine when the bin is full.



2. Change of parameters at the "Easy" pilot relay

The parameters in the Easy pilot relay are adjusted from the manufacturer to provide the optimal functionality of the system. If it should be necessary however, due to changed requirements, to change parameters please find a short guidance below.

Note: Misadjustment may cause malfunctions e.g. frequent releasing of motor-protection or increased wear. If changes in adjustment are carried out without release of the manufacturer the claim of warranty expires.

Changing the menu language:

The Easy 512 PLC provides for five standard menu languages:

GB = English

D = German

F = French

E = Spanish

I = Italian

These can be set via the system menu as follows:

1. Press "DEL" and "ALT" to select the system menu
2. The language selection for the first entry "GB" is displayed
3. Select "GB", "D",... via pressing the cursor keys ▲ or ▼ as required to modify the menu language
4. Confirm by pressing "OK".
5. Easy will show now the new menu language.
6. Press "ESC" to return to the Status display.

Methodology when changing parameters:

1. Switch off main switch and then switch on again
2. Press push-button "OK"
3. In the now showing menu select "parameter" and acknowledge with "OK"
4. In the parameter menu the appropriate parameter can be selected with the cursor keys "←" or "→" and changed with the cursor keys "↑" or "↓". Subsequently, acknowledge the modification with "OK" or retain the previous setting by pressing "ESC"
5. By pressing 2 times "ESC" you get back again to the status indication

3.0 List of the in- and outputs of A1/EASY 512-DC-RC version V1.6

IN-/OUTPUT	DESCRIPTION
I1	machine start (S101)
I2	machine stop (S102)
I3	machine backwards (S30)
I4	time-deactivation on (S4)
I5	filling level hopper (B105) (option)
I6	filling level collecting bin (B106) (option)
I7	
I8	analogue value for load monitoring (B1 via electric rectifier)
Q1	drive forward (K10)
Q2	drive backward (K31)
Q3	indication light. Showing=disturbance / flashing=bin full (P50)
Q4	feed conveyor belt (option)

3.1 List of the parameters on EASY 512

Parameter	description	default value no screen (7,5kW)	default value with screen	FU-Option
T01	Load detection is not active due to startup of the knife rotation	0.35s	0.35s	0.50s
T02	Load detection is not active due to startup of the knife rotation	0.35s	0.35s	0.50s
T03	Delay time of the overload detection	0.50s	0.50s	0.50s
T04	Delay time between switching forward and backward turning of the knives.	1s	1s	1s
T05	Duration of the reverse mode, overload or autoreverse	2s (3s)	20s	20s
T06	Time to shred one hard drive in a machine with screen (time to open the hopper again)	10s	10s	10s
T07	Duration magnetic coil is active to unlock the hopper	1s	1s	1s
T08	Startup delay for FU option	0.5s	0.5s	1.5s
T11	If there is no material running thru the machine, it will stop after this time. For automatic stop S4 has to be switch on.	5min	5min	5min
T12	Timeout for resetting reverse mode counter C1. If there are more reverse mode cycles during this time, than set in C1, the machine reports a disturbance.	30s	30s	30s
T14	Automatic reverse after	99min0 1s	1min01s	99min 30s
T16	Level detection outlet box, delay of the detection	15s	15s	15s
C01	Anzahl Reversierungen bis zur Störmeldung	4	4	8
A01 (I8)	Load measurement for automatic shutdown. If there is a higher load than the value adjusted here, the counter for the automatic shutdown will be reset.	1,2V	1,2V	2,0V
A02 (I8)	Threshold for overload detection.	3,5V	3,5V	3,5V

3.2. Fault clearance

Malfunction	Reason	Clearance
Lamp control voltage "24V" does not show	Power is missing Fuse F9.1, F9.2 is defective	Check mains fuses. Check fuse 9.1, 9.2, if necessary renew
Lamp "disturbance" shows continuously	Cutting block switched off automatically after four times of reverting within 2 minutes time Or Drives are overloaded. Motor protection switch is released.	press push-button "stop" to delete fault signal, additionally press the push-button "reverse". Switch off machine and check contents of the hopper above the cutting cylinders for unsuitable shredding material. Check the drives. After short cooling break switch on the motor protection F1 again
Lamp "disturbance" flashes (with optional filling level sensor only)	Collecting bin full	Clear the collecting bin
System cant be started	Easy in "stop"-mode. Emergency-stop activated Collecting bin full (option)	Switch easy-control on ("run") Check all emergency-stop-devices Clear the collecting bin and press stop-button
Cutting cylinders rotate in the wrong direction	Phase is wrong	Change phases (may be executed only by an electrical specialist)
The engine is growling, but not rotating.	One phase is missing	Check the power supply (mains fuses)

3.3 Messages on the EASY display

Message	Meaning	Remarks
STOP MODE PON #####h STRT#####h	Machine is stopped	PON = Power ON: Working hours (main switch „on“) STRT = Start: Working hours (machine working)
RUN MODE Load#####	Machine is running	„Load“ indicates actual load level of the machine. Maximum value = 400, equals 100%
REVERSE MODE H ##### L ##### Revers Cnt	Machine is reversing (cutters rotate backwards)	Shows total quantity of reverse actions
Reverse Mode Too Many Retries	Disturbance due to too many reverse actions	Clean cutting block
Check Outlet Container Full S6/B106	Optional filling level sensor (Sensor S6) of the collecting bin reports „bin full“	Clear the collecting bin and press the stop button.

14. Certificate of CE – Conformity

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:	HDD Granulator
Typ / Type / Type / Tipo:	555
Artikel-Nr. / item number / numéro d'article / número de la pieza:	5552xx
Serien-Nr. / serial number / numéro de série / número de serie:	5552xx.000xx.xxx
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** einschließlich allen bis heute veröffentlichten Änderungen bzw. Nachträgen entspricht. 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** including all changes and addendums to date thereto. 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**, ci-inclus toutes les modifications ainsi que tous les suppléments publiés jusqu'à ce jour. Le produit mentionné correspond aux normes citées ci-après:

Confirmamos que los productos arriba citados cumplen las exigencias de las **directivas 2006/42/CEE**, incluidas todas las modificaciones publicadas hasta la fecha. Los productos citados corresponden con las siguientes normas:

Harmonisierte Normen / harmonized standards
normes harmonisées / normas armonizadas

EN ISO 12100
EN ISO 13857
EN ISO 14121-1
EN 60204

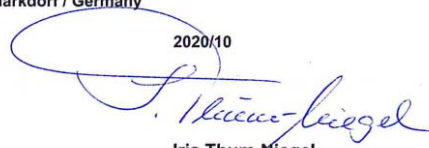
Nationale Normen / national standards
normes national / normas nacional

CE-Bevollmächtigter / authorized person of CE / personne autorisée de la CE / persona autorizada por CE:
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2020/10



Iris Thum-Niegel
Geschäftsführerin
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15. Mechanical Spare Parts List

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