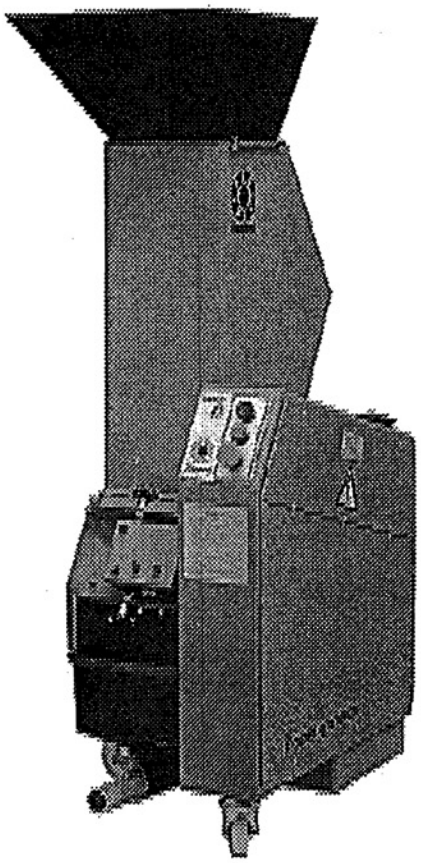
MANUAL

15-range



⚠ **WARNING - Reliance on this Manual Could Result in Severe Bodily Injury or Death!**

This manual is out-of-date and is provided only for its technical information, data and capacities. Portions of this manual detailing procedures or precautions in the operation, inspection, maintenance and repair of the product forming the subject matter of this manual may be inadequate, inaccurate, and/or incomplete and cannot be used, followed, or relied upon. Contact Conair at info@conairgroup.com or 1-800-654-6661 for more current information, warnings, and materials about more recent product manuals containing warnings, information, precautions, and procedures that may be more adequate than those contained in this out-of-date manual.

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1. Introduction

To avoid personal injury and damage to the machinery, you should study this manual carefully before installing and using the equipment.

Always take great care when the knives are within reach, since they are very sharp and can cause personal injury.

RAPID granulators in the 15 series are built for granulation of injection moulded or extruded plastic waste where the rotor's size and performance corresponds to the waste. For any other products or materials, approval must be obtained from the dealer or head-office in order for the conditions of the guarantee to be valid.

The 15 series is adapted for quick and simple cleaning of the rotor when changing colour or material.

This manual is for the 15 series.

All servicing work should be carried out by a person with technical training or corresponding professional experience. The manual contains instructions for both handling and servicing the rotor. Chapter 7, which contains servicing instructions, is intended for service engineers. Other chapters contain instructions for the daily operator.

Delivered with the rotor are a tool kit, manual, and touch-up paint.

Any modifications, changes, or rebuilding of the rotor must be approved by RAPID in order to avoid personal injury and damage to machinery and to ensure that the documentation remains correct.

If you have any questions, please contact your local dealer or our head-office in Sweden.

Head-office:

Maskin AB Rapid

S-330 10 Bredaryd

Sweden.

2. Technical specifications

2.1 Dimensions

See chapter 10, Layout

2.2 Data

Dim. (mm)\ Rotor Type	Knife fixed	Knife rot.	Motor power (kW)	RPM	Sound level dBA*	Weight kg
1514 standard	2 x 1	3 x 2	1,5	190	80	160
1514: 2,2 kW	2 x 1	3 x 2	2,2	195	80	175
1521 standard	2 x 1	3 x 3	2,2	195	81	175
1521: 4 kW	2 x 1	3 x 3	4	290	81	190
1528 standard	2 x 1	3 x 4	2,2	195	82	190
1528: 4 kW	2 x 1	3 x 4	4	290	82	205
1535 standard	2 x 2	3 x 5	2,2	195	82	205
1535: 4 kW	2 x 2	3 x 5	4	290	82	220
1542 standard	2 x 2	3 x 6	2,2	195	82	220
1542: 4 kW	2 x 2	3 x 6	4	290	82	235

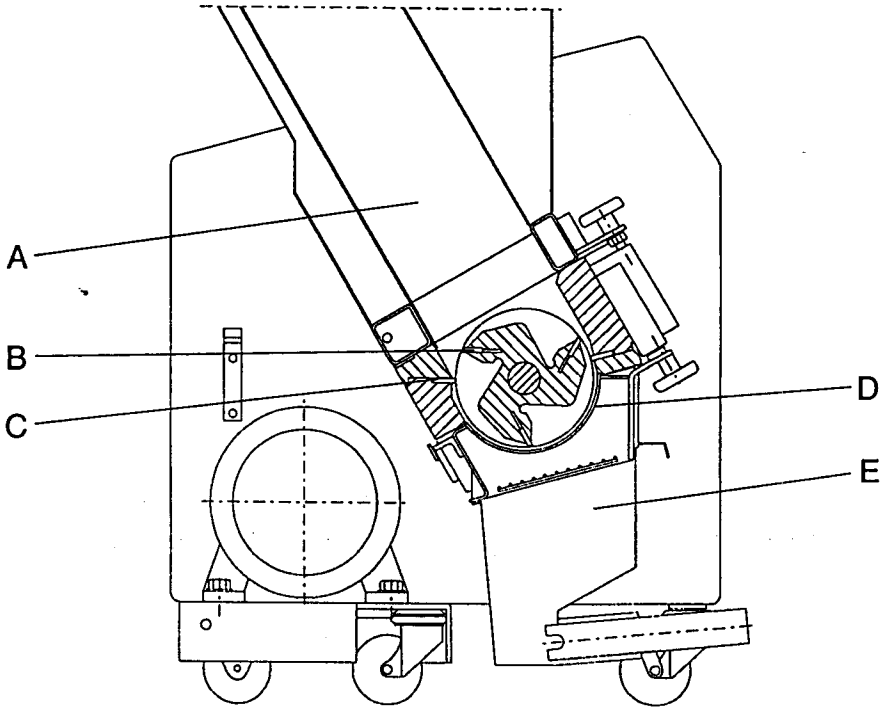
* Values measured using sound-intensity meter B&K2225 by sampling for 60 seconds at a distance of 1.5 m from the machine when grinding polyethylene (PE) capsules.

3. Function description

3.1 Overview

Granulators in the GK15 series are designed for grinding different types of plastic waste.

The granulator is controlled from a front panel with a start/stop function and an emergency stop button.



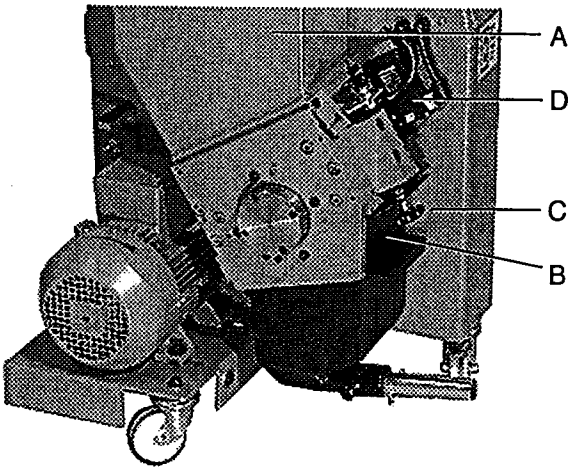
The material is fed in via a funnel (A) and falls down to the rotor. The rotor's knives (B) grind the material against the fixed knives (C) in the cutter housing. Both the fixed and rotating knives can be changed when necessary.

Underneath the rotor is a screen (D) which the granulate passes through before it is gathered in the granule bin (E). The standard hole size is 5 mm.

The granule bin, screen and screen box are designed for easy removal when cleaning. The hopper can be opened up to provide improved access for cleaning and maintenance.

3.2 Safety system

The ganulator has a safety system to prevent access to hazardous components during operation.



Knives rotate inside the granulator at high speed. For this reason, the granulator is equipped with an emergency stop and safety switches to avoid personal injury.

Emergency stop: A red button at the top of the control panel of the machine. Press it to stop the granulator. Re-set it by turning the button in the direction indicated by the arrow (anticlockwise).

The granulator may be equipped with more than one emergency stop.

Safety Switches! The granulator has safety switches which consist of a microweitch and a screw as the position idication device.

– If a secure position is changed or if a position indicator is undone, the current is cut and the granulator will stop.

Function: To open hopper (A) or screen box (B), unscrew screws (C). This causes the safety switches (D) to open the circuit and the granulator is prevented from starting.

The screws and locknuts are part of the safety system and must not be replaced by anything except spare parts provided by Rapid.

The threaded length of the screws and the location of the lock nuts is designed so that the granulator will have stopped before the screws are undone and the hopper or screen box can be opened.

Note: The granulator must not be routinely stopped by means of the emergency switches under any circumstances. Cut the current with the main switch and the control switch before any cleaning or service is done.

Before start, make sure that:
The hopper and screen box are securely closed, i.e. the safety screws must be fully tightened. The braces must be regularly checked as in chapter 6.2.

4. Safety regulations

RAPID granulators are designed for granulating injection moulded, blow moulded and extruded plastic waste.

The specific technical data for this machine, concerning power and performance etc. is described in detail in chapter 2.

The granulator is equipped with safety switches, which are described in chapter 3.2.

The following safety measures shall always be followed when handling the granulator.

WARNING!
Hazardous voltage!
This sign is on the door of the electrical cabinet and any junction boxes.

WARNING!
Cut and pinch risk.
This sign is installed if there is a risk of injury by cutting or crushing.

NOTE!

This symbol is installed where special attention is needed.

There is danger

- **The machine contains rotating knives. They are sharp and can cause injury, even when they are not rotating.**
- **There is a pinch risk when the hopper and screen box are opened or closed.**

- **The electrical cabinet of the machine contains hazardous high voltage.**
- **Granulators with band conveyor! Be careful to ensure that a band conveyor with rib does not catch on clothes, arms or feet. Remove its power connector during maintenance work.**

Note

- **Electric installation must <u>only</u> be done by <u>authorised personnel</u>!**
- **Before the granulator is opened for service and maintenance, the current must always be broken with both the main switch and the control switch.**
- **Never allow any part of your body to enter openings in the granulator, unless both the main switch and the control switch have been put in the "Off" (0) position.**
- **If the rotor has to be rotated manually, do this very carefully!**
- **It must not be possible to start the granulator before the hopper and the screen box are securely shut.**
- **Never remove protective gratings or pipes adjacent to the material extractor/granulate box.**

5. Installation

All instructions must be carried out in the order described, to prevent personal injury or damage to machinery.

Always take great care when handling the knives since they are very sharp and can cause personal injury.

The granulator should be connected to the mains supply by an authorised electrician.

5.1 Pre-start checks

- Before the granulator is installed, the rust preventive should be carefully cleaned from the parts which are not painted or rustproof.
- Lock the wheels by stepping on the arm of the foot-operated brake on each wheel.
- Check the knife clearance and tightening torque on the attachment bolts for the knives.

5.1.1 Two hours after first start

Check the knife clearance again and tightening torque of the attachment screws for knives; check the attachment screws for both the fixed and rotating knives.

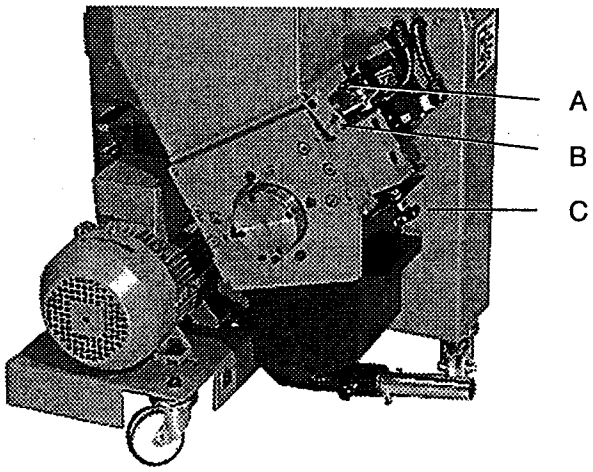
5.2 Opening and closing the hopper and screenbox

Opening

– Cut the current with **both** the main switch and the control switch.

– Undo the safety screws on the safety switches of the hopper and screen box.

– Open the hopper or screen box.



Closing:

Warning, pinch risk!

– Fold the hopper back to the stop (B).

Move the stop away and continue to fold it so that the screw threads on the star knob engage.

– Tighten the star knobs for the safety switches on both the hopper (A) and screen box (C) by turning them anti-clockwise as far as they go.

5.3 Electrical connection

The granulator should be connected up by an authorised electrician.

- Connect the granulator to the mains supply. See Electrical scheme, chapter 9, connecting (Q1).

Check the granulator motor's rotation direction as follows:

- Switch the main circuit-breaker (on top of the stand) to position (1) = "On".
- Check the emergency stop switch is not activated. It can be reset by turning the knob in the direction of the arrow (anti-clockwise).
- Check that the break screws to the two safety switches are completely tightened.
- Press in the change-over button "START".
- Check the granulator motor's rotation direction is consistent with the arrow on the hood.

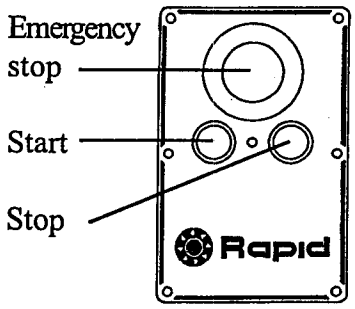
If the rotation direction is not correct:

- Change the incoming phases.

6. Operation and daily maintenance

6.1 Starting and stopping

The start and stop functions are controlled by change-over button on the front panel.



NOTE: The granulator should not be stopped until it has finished grinding all the material in the hopper and cutter housing. Any remaining material can slow down the rotor when it is re-started which can overload the motor and trigger the overload protector. (See 6.4)

6.2 Inspection

There should **not** be any material in the granulator when the inspection is to be carried out.

6.2.1 Daily inspection

- **Flaps in the hopper**. Check that the flaps are not damaged. Damaged parts should be replaced immediately to prevent bits of the flaps from falling into the cutter housing and damaging the knives.
- **Emergency stop**. Check the emergency stop function by starting the granulator and then stopping it using the emergency stop button. The emergency stop is reset by turning the emergency stop button in the direction of the arrow, after which the machine can be re-started by pressing "START".

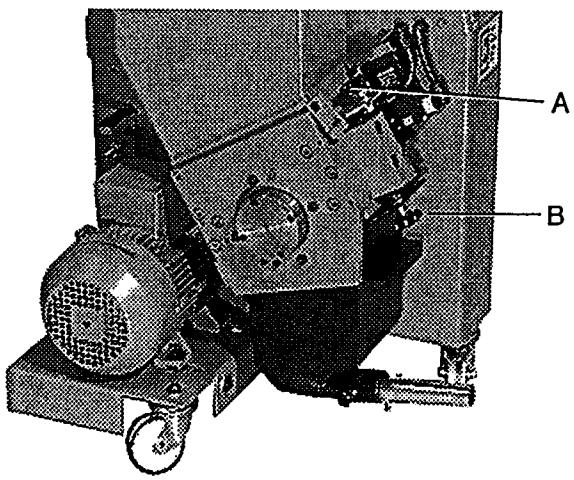
6.2.2 Weekly inspection

- **Cables**. Check all cables in the machine for abrasion and other damage. Damaged components must be changed for reasons of industrial safety.
- **Safety switch**. There are 2 safety switches, 1 on the hopper (A) and 1on the screen box (B).

Check the safety switches as below – be careful!

1. Tighten star knobs A and B fully.
2. Start the granulator
3. Unscrew the star knob and check that the safety switches cut the current after no more than 5 turns.

If the current is not cut until later, or not at all, turn the current off and contact authorised service personnel. There is a serious risk of personal injury.



6.3 Cleaning

Before the granulator is opened for service and maintenance, the current must always be cut by both the control switches and the main switch of the granulator.

1. Pull out the granule box (A)
2. Loosen the locking screw (B)
3. Pull out the screenbox with the screen (C)
4. Lift out the screen (D)
5. Loosen the locking screw for the hopper (E)
6. Open up the hopper. The granulator is now ready for cleaning.

Always take great care when handling the knives since they are very sharp and can cause personal injury.

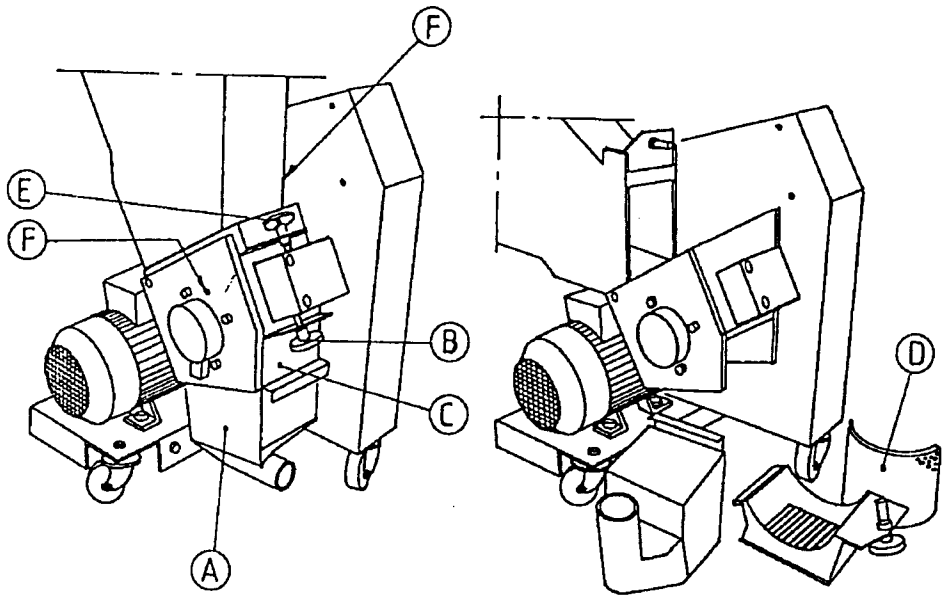
7. Remove the blue-painted screws (F) to the cleaning hole.

NOTE: Use protective glasses!

8. Using compressed air, blow through the hole to clean the cutter while it rotates completely at least once. Make sure that no material gets blown into the safety switches.

Note: Steps 7 - 8 should be carried out every time the machine is cleaned, or at least once every 300 hours.

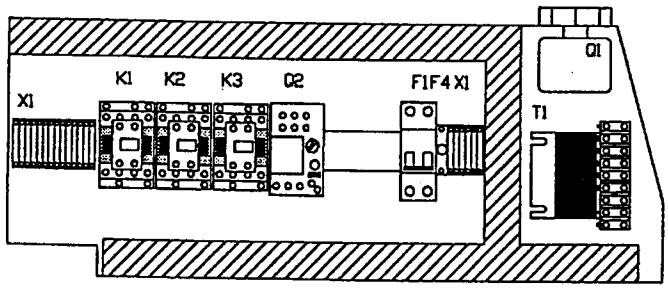
9. Replace all parts in reverse order.



6.4 Trouble-shooting

6.4.1 If the rotor does not start

- Check that the saftey switches' star knobs are turned fully clockwise. It is not possible to start the granulator unless the star knobs are screwed in.
- Check that the emergency stop is not activated. It can be reset by turning the button in the direction of the arrow.
- The safety disconnection switche (Q2) in the electrical cabinet, according to the diagram below, are released if you press stop or overload the granulator. The safety disconnection switche are reset automatically after approximately two minutes.



NOTE: Switch off the main circuit-breaker when cleaning the granulator. Empty the granulator of all material before restarting it.

7. Servicing

All servicing work should be carried out by a qualified service engineer and in the order described, to prevent personal injury or damage to machinery.

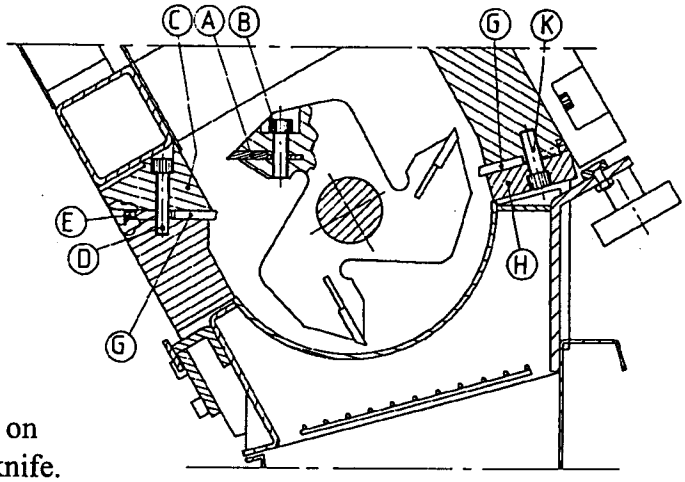
Before the granulator is opened for service and maintenance, the current must always be cut by both the control switches and the main switch of the granulator.

7.1 Changing the knives

When changing the knives, also check for any wear to the screen. For safety reasons, this should be replaced when the holes in the screen become drop-shaped.

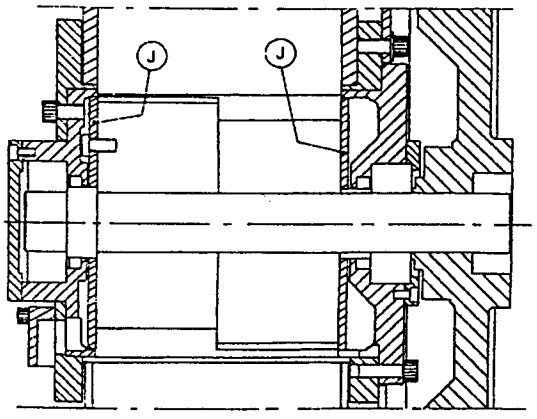
Always take great care when handling the knives since they are very sharp and can cause personal injury. Use protective gloves!

7.1.1 Changing the rotating knives

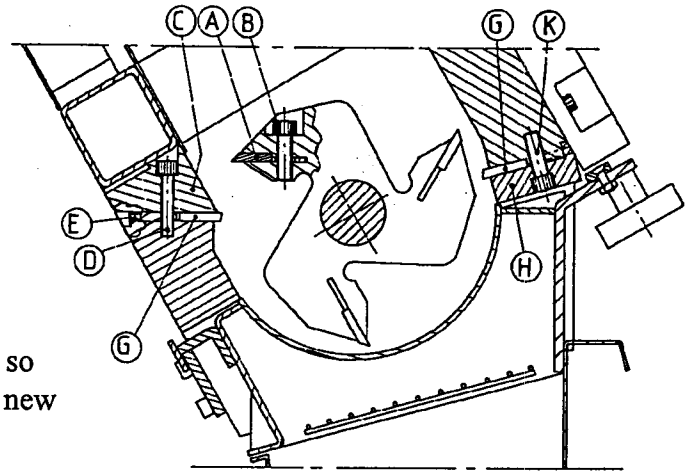


1. Loosen the screws (B)
2. Remove the knife (A). If the knife does not come loose, tap it gently on the top.
3. Make sure that the new knife is free from grease and impurities.
4. Clean any plastic waste and so on from the location for the new knife.
5. Push the new knife down to the bottom.
   NOTE: The outer knives must sit tight against the ring (J).
6. Screw in and tighten the fastening screws (B) with the correct torque: 38 Nm.

   For safety reasons, damaged screws *must* be replaced.
7. Turn the rotor and change the other rotating knives in the same way.



7.1.2 Changing the fixed knives



1. Loosen and remove the screws (D), (K).
2. Remove the retaining rulers (C), (H).
3. Remove the knives (G).
4. Make sure that the new knives are free from grease and impurities.
5. Clean any plastic waste and so on from the location for the new knives.
6. Locate the knife against the stop screws (E).

NOTE: The stop screws are pre-installed at the factory and must not be changed.

7. Locate the retaining rulers (C), (H) on the knife.
8. Screw in the screws (D), (K).

For reasons of safety, damaged screws should be replaced!

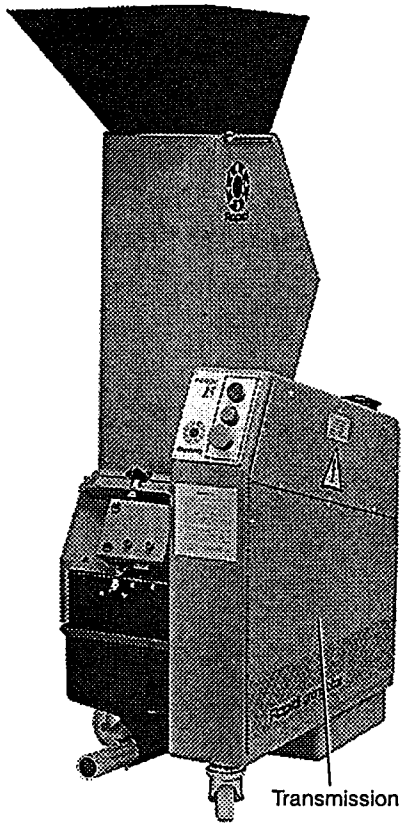
9. Push the knife in against the stop screws (E) and tighten the screws (D) and (K) with a torque of 38 Nm.

CHECK THAT ALL KNIVES MOVE FREELY BY ROTATING THE CUTTER.

7.2 Transmission

The machine is driven by an Optibelt drive belt.

The type of drive belt depends on the size of the granulator motor; kilowatt (kW) and mains frequency in Hertz (Hz).



7.2.1 Checking the drive belt

NOTE! Do a first check of drive belt tension and condition after 4 hours of operation at full load.

Then check the drive belt tension and condition after every 1000 hours of operation or every 6 months.

Check the drive belt condition

NOTE! Switch the main switch "off".

- Undo the screws and take off the protective panels above the transmission on the side of the granulator.
- Rotate the pulley a number of times by pulling on the drive belt.

  Check that the drive belt is intact and does not have any cracks. Replace the drive belt as necessary.

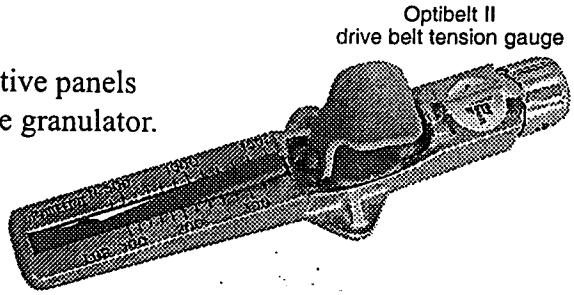
WARNING! Pinch risk between pulley and drive belt.

Check the drive belt tension

NOTE! Switch the main switch "off".

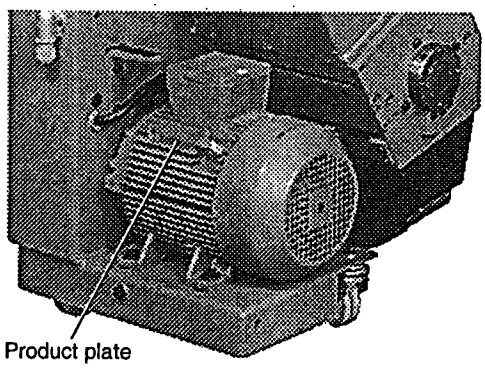
- Undo the screws and take off the protective panels above the transmission on the side of the granulator.
- Check belt tension by loading the drive belt with an "Optibelt II" drive belt tension gauge.

  A drive belt tension gauge is included in the tool kit of the granulator.

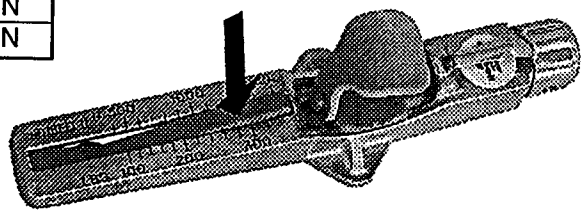


- Check the granulator motor size; kilowatt (kW) and frequency in Hertz (Hz). These are on the product plate on the motor.
- The table below shows the drive belt tension in Newton (N) when checked.

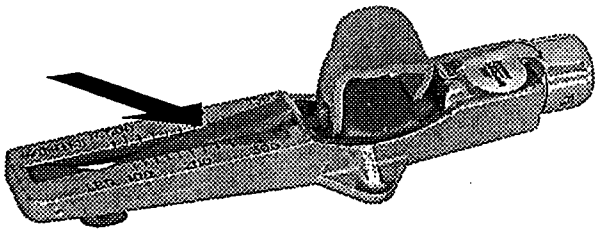
Motor	1,5 kW	2,2 kW	4,0 kW
50 Hz IEC type	750 N	750 N	850 N
60 Hz IEC type	750 N	750 N	850 N
60 Hz NEMA/USA type	750 N	750 N	750 N

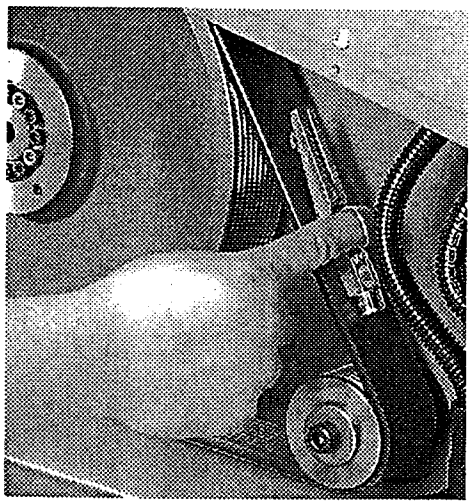


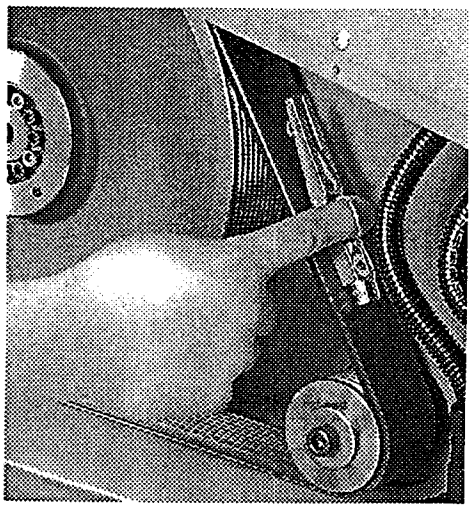
- Press down the belt tension gauge indicator arm so that it is below the level of the scale.



- Install the belt tension gauge centrally between the cutter and motor pulleys, parallel with the belt, with one finger on the rubber thimble.
- Press with your finger until you hear a "click".
- Check where the indicator arm intersects the scale surface and read off the belt tension.





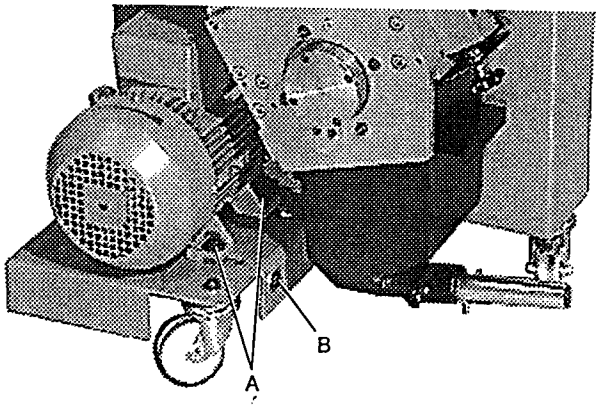


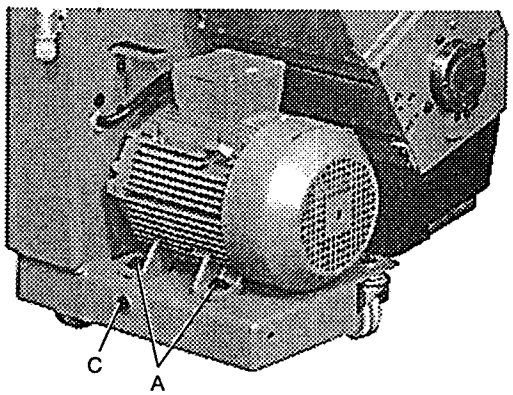
Adjusting the drive belt tension

Undo the 4 screws (A) which hold the motor on the locking arms.

Increase belt tension

- Undo screws (B) on the motor arm.
- Tighten screws (C) on the motor arm to the same extent that screws (B) are loosened.
- Check the belt tension as above.





Reduce belt tension

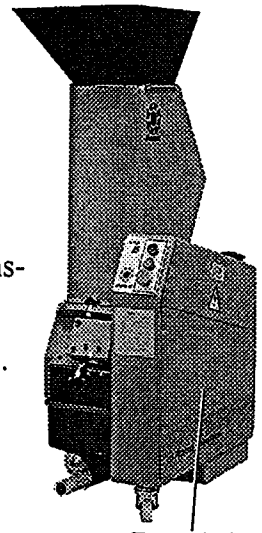
- Undo screws (C) on the motor arm.
- Tighten screws (B) on the motor arm to the same extent that screws (C) are loosened.
- Check the belt tension as above.

Torque the 4 screws (A) which hold the motor on the locking arms. Torque 40 Nm.

Install the protective panel over the transmission, on the side of the granulator.

NOTE! If the drive belt tension is adjusted, check the drive belt tension and condition after 4 hours of operation at full load.

7.2.2 Changing the drive belt

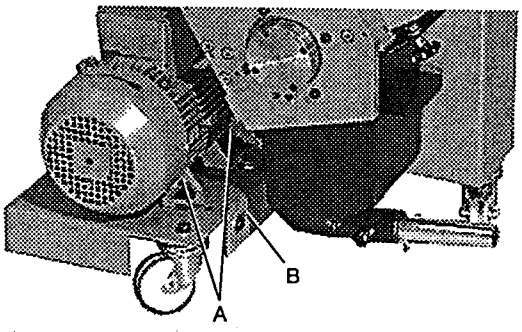


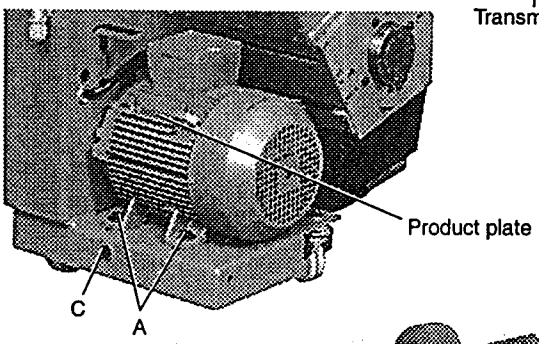
The machine is driven by an Optibelt drive belt.

The type of drive belt depends on the size of the granulator motor and mains frequency in Hertz (Hz).

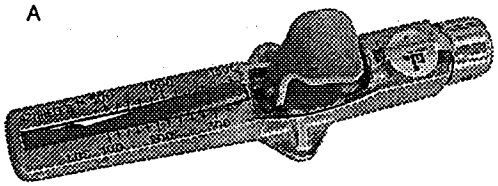
NOTE! Switch the main switch "off".

- Undo the screws and take off the protective panels above the transmission on the side of the granulator.
- Undo the 4 screws (A) which hold the motor on the locking arms.
- Undo screws (C) on the motor arm.
- Tighten screws (B) on the motor arm to the same extent that screws (C) are loosened.





Change the drive belt



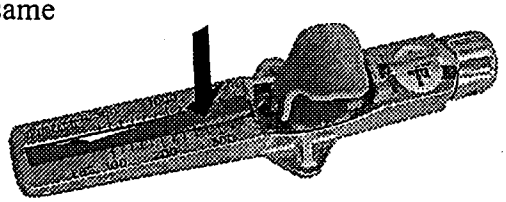
- Set belt tension by means of an "Optibelt II" drive belt tension gauge.

  A drive belt tension gauge is included in the tool kit of the granulator.
- Check the granulator motor size; kilowatt (kW) and frequency in Hertz (Hz). These are on the product plate on the motor.
- The table below shows the drive belt tension in Newton (N) when a new drive belt is installed

Motor	1,5 kW	2,2 kW	4,0 kW
50 Hz IEC type	900 N	900 N	1050 N
60 Hz IEC type	900 N	900 N	1150 N
60 Hz NEMA/USA type	900 N	900 N	950 N

Increase belt tension

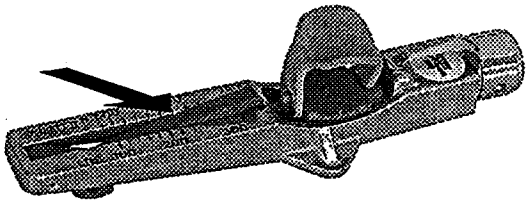
- Undo screws (B) on the motor arm.
- Tighten screws (C) on the motor arm to the same extent that screws (B) are loosened.
- Check the belt tension
- Press down the belt tension gauge indicator arm so that it is below the level of the scale.



- Rotate the pulley a number of times by pulling on the drive belt.

WARNING! Pinch risk between pulley and drive belt.

- Install the belt tension gauge centrally between the cutter and motor pulleys, parallel with the belt, with one finger on the rubber thimble.
- Press with your finger until you hear a "click".
- Check where the indicator arm intersects the scale surface and read off the belt tension.

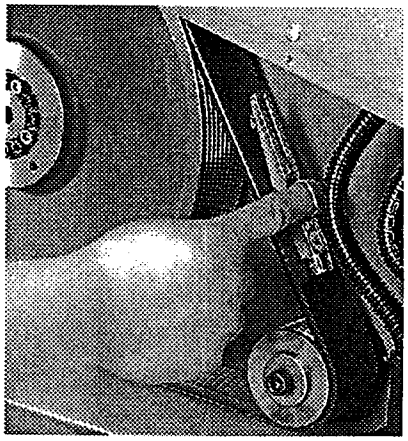


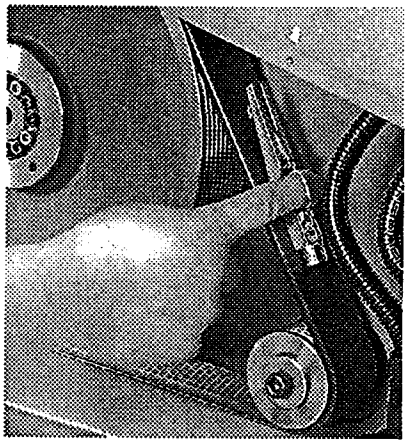
- Adjust, rotate the pulley a number of times by pulling on the drive belt, and check until the belt tension is correct.

Torque the 4 screws (A) which hold the motor on the locking arms. Torque 40 Nm.

NOTE! When a new drive belt is installed, check the drive belt tension after 4 hours of operation at full load.

Install the protective panel over the transmission, on the side of the granulator.



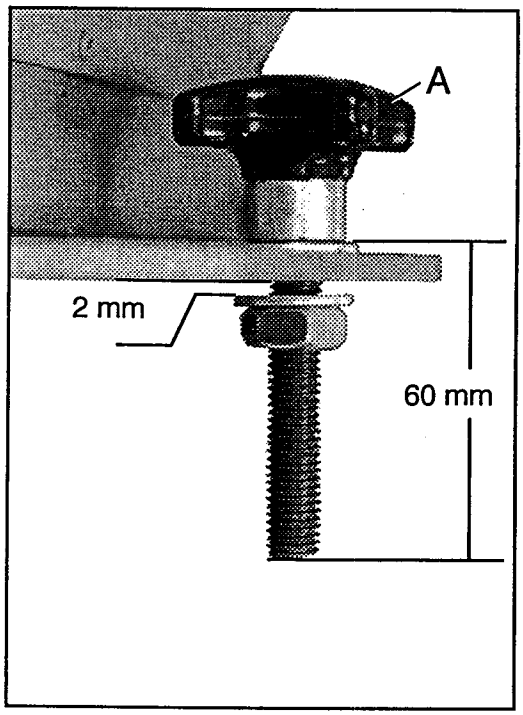


7.4 Checking the safety screws and switches

The safety screws are part of the safety system of the granulator. Their thread lengths have been chosen so that the mill will have stopped when the screws are undone, and the knives are accessible.

The length of the screws on this granulator should be 60 mm. Worn screws must be replaced by new ones, which should be ordered from Rapid (see 8.2.3 and 8.2.5).

When the screws have been installed in the screen box and the hopper, the free clearance between the lock nut and the panel should be 2 mm.



Check the safety switches as below – be careful!

1. Screw the star knobs A and B in fully.
2. Start the granulator
3. Unscrew the star knobs and check that the safety switches cut the current after no more than 5 turns.

If the current is not cut until later, or not at all - turn the current off and contact Rapid. There is a serious risk of personal injury.

7.4 Lubrication

7.4.1 Granulator

All bearings in the granulator have been lubricated, and cannot be re-lubricated.

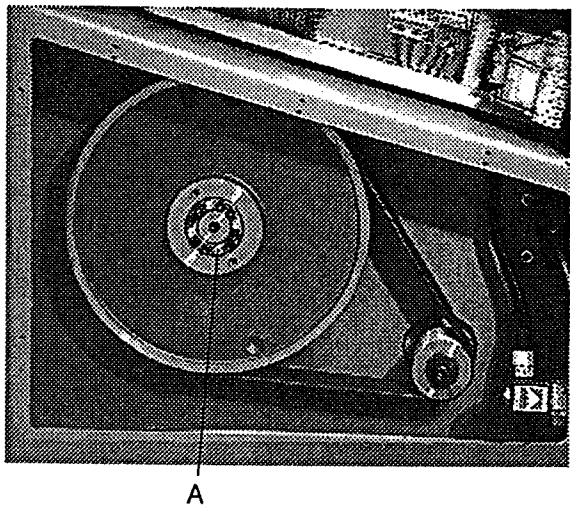
7.5 Mounting/demounting the rotor pulley

NOTE: Switch off both the control switch and the main switch!

To be able to mount/demount the rotor pulley, the lower-right side plate must first be removed.

7.5.1 Demounting

1. Loosen the belt according to 7.2.2
2. Loosen the 12 screws (A) on the tension element.
   Carefully tap the screws so that the element comes loose.
3. Remove it.
4. Remove the pulley.



7.5.2 Mounting

1. Mount the pulley tightly against the bearing.
2. Mount the tension element.
3. Carefully screw the 12 screws (A) crosswise.
4. Tighten the screws with a torque of 15 Nm.
   It is very important that the screws are tightened crosswise.
5. Tension the belt according to 7.2.2.

8. Spare parts list

8.1 Overview

The spare parts list is divided into modules. Each module illustrates a particular part of the granulator.

All spare parts are specified with their article number and quantity.

8.2 Granulator modules

The granulator is divided into the following modules:

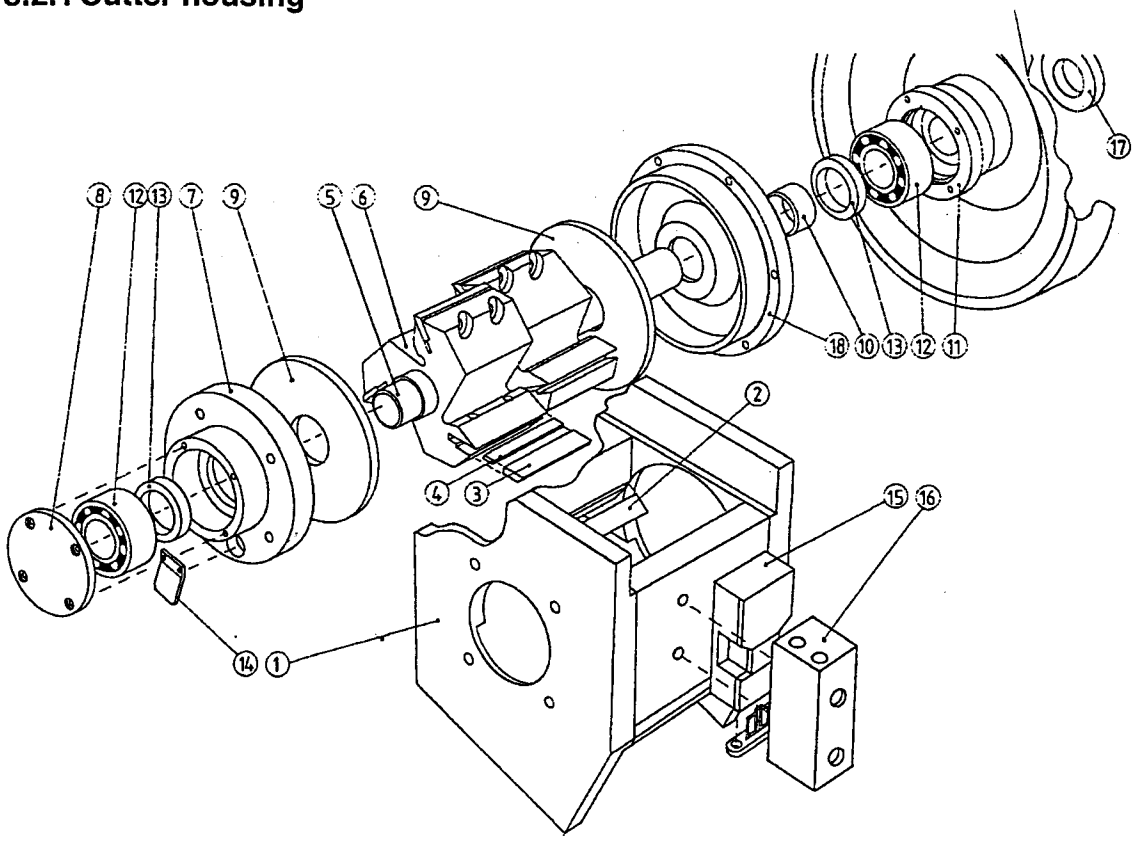
8.3 Ordering spare parts

Only use spare parts from RAPID when replacing machine parts. Orders should go to the representative in the country where the machine was purchased.

When ordering, the following should be specified:

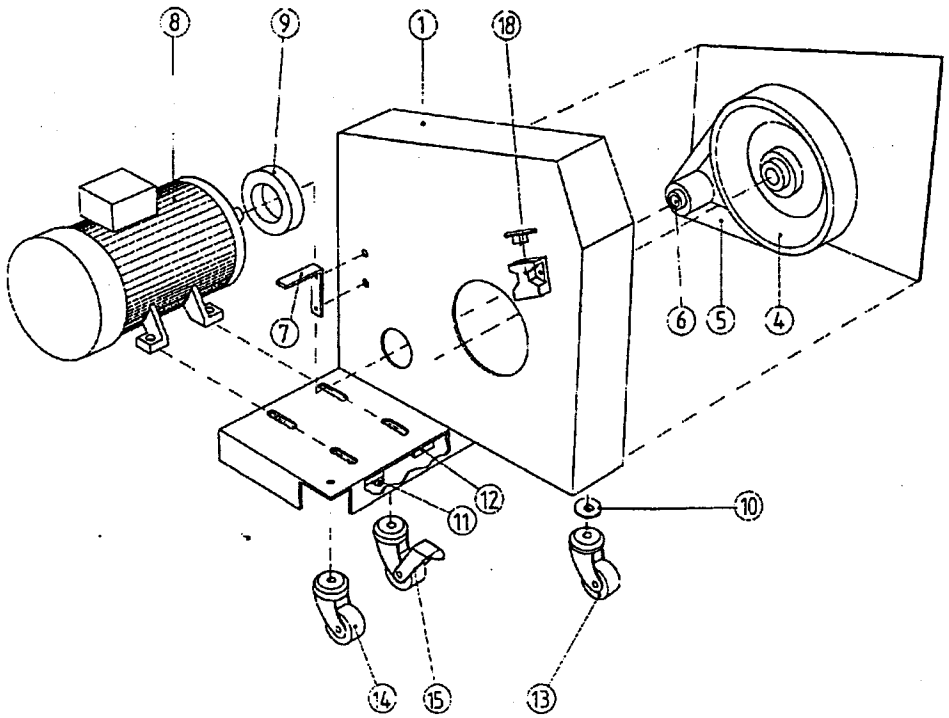
- machine designation, as specified on the machine plate
- serial number, as specified on the machine plate
- article number, as specified in the spare parts list
- quantity, as specified in this spare parts list.

8.2.1 Cutter housing



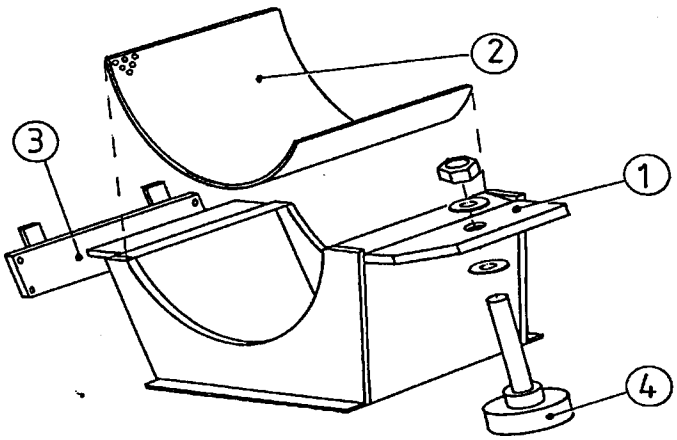
Pos	1514	Qty.	1521	Qty	1528	Qty	1535	Qty.	1542	Qty
1	4-22102	1	4-22103	1	4-22104	1	4-22105	1	4-23214	1
2	4–19212	2	4-19213	2	4-19214	2	4-20398	4	4-22224	4
3	4–18362	6	4–18362	9	4–18362	12	4–18362	15	4–18362	18
4	4–17158	6	4–17158	9	4–17158	12	4–17158	15	4–17158	18
5	3–18395	1	3–18396	1	3–18397	1	3–20396	1	3–22222	1
6	2–18388	2	2–18388	3	2–18388	4	2–18388	5	2–18388	6
7	3–18384	1	3–18384	1	3–18384	1	3–18384	1	3–18384	1
8	9-40644	1	9-40644	1	9-40644	1	9-40644	1	9-40644	1
9	3–18389	2	3–18389	2	3–18389	2	3–18389	2	3–18389	2
10	4–18391	1	4–18391	1	4–18391	1	4–18391	1	4–18391	1
(11)	~~9-40702~~	1	~~9-40702~~	1	~~9-40702~~	1	~~9-40702~~	1	~~9-40702~~	1 — 4-26453-05
12	9–60149	2	9–60149	2	9–60149	2	9–60149	2	9–60149	2
13	9–60148	2	9–60148	2	9–60148	2	9–60148	2	9–60148	2
14	4–26380	1	4–26380	1	4–26380	1	4–26380	1	4–26380	1
15	9–11002	1	9–11002	1	9–11002	1	9–11002	1	9–11002	1
16	3–22126	1	3–22126	1	3–22126	1	3–22126	1	3–22126	1
17	9–30190	1	9–30190	1	9–30190	1	9–30190	1	9–30190	1
18	2–26454	1	2–26454	1	2–26454	1	2–26454	1	2–26454	1

8.2.2 Stand with transmission



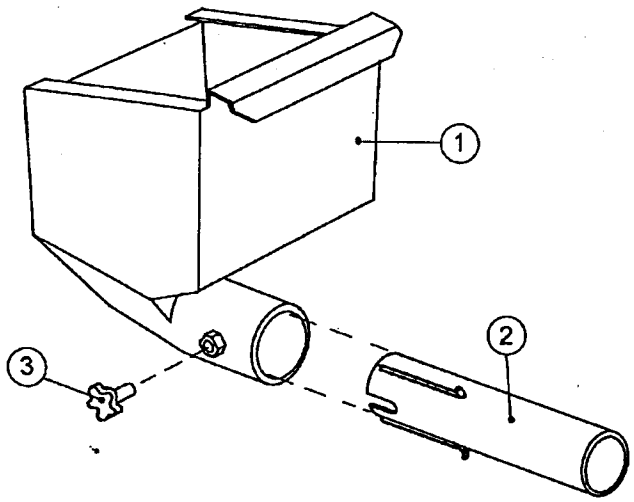
Pos	Qty	1514	1521	1528	1535	Qty	1542	Qty
1	1	1–22100	1–22100	1–22100	1-22101	1	1-22101	1
4	1	9–30187	9–30187	9–30187	9–30187	1	9–30187	1
5	1	9–30189	9–30189	9–30189	9–30189	1	9–30189	1
6	1	9–30188	9–30188	9–30188	9–30188	1	9–30188	1
7	1	4–19543	4–19543	4–19543	4–19543	1	4–19543	1
8	1	9–10815	9-10651	9-10651	9-10651	1	9-10651	1
9	1	9–70143	9–70143	9–70143	9–70143	1	9–70143	1
10	1	9-40648	9-40648	9-40648	9-40648	1	9-40648	1
11	1	3–17161	3–17161	3–17161	3–17161	1	3–17161	1
12	1	3–16818	3–16818	3–16818	3–16818	1	3–16818	1
13	1	9–50410	9–50410	9–50410	9–50410	2	9–50410	2
14	1	9–50411	9–50411	9–50411		0		0
15	1	9–50412	9–50412	9–50412	9–50412	2	9–50412	2
18	1	9–11002	9–11002	9–11002	9–11002	1	9–11002	1

8.2.3 Screenbox



Pos	Qty	1514	1521	1528	1535	1542
1	1	1-22110	1-22111	1-22112	1-22113	1-23217
2	1	3-18417	3-18418	3-18419	3-20402	3-22228
3	1	4-18496	4-18497	4-18498	4-20399	4-22225
4	1	4-31193	4-31193	4-31193	4-31193	4-31193

8.2.4 Granule bin

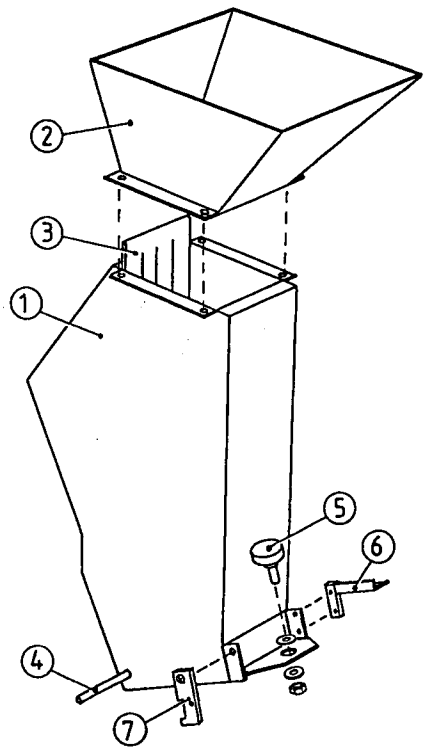


Pos	Qty	1514	1521	1528	1535	1542
1	1	2-18422	2-18509	2-18513	1-20405	1-22231
2	1	3-18390	3-18390	3-18390	3-18390	3-18390
3	1	9-50413	9-50413	9-50413	9-50413	9-50413

8.2.6 Hopper with funnel

- The funnel (2) to the hopper (1) can be mounted in two ways. Changing between these two alternatives is done by unscrewing the funnel's four fastening screws (4 x M6) and turning the funnel 180°.

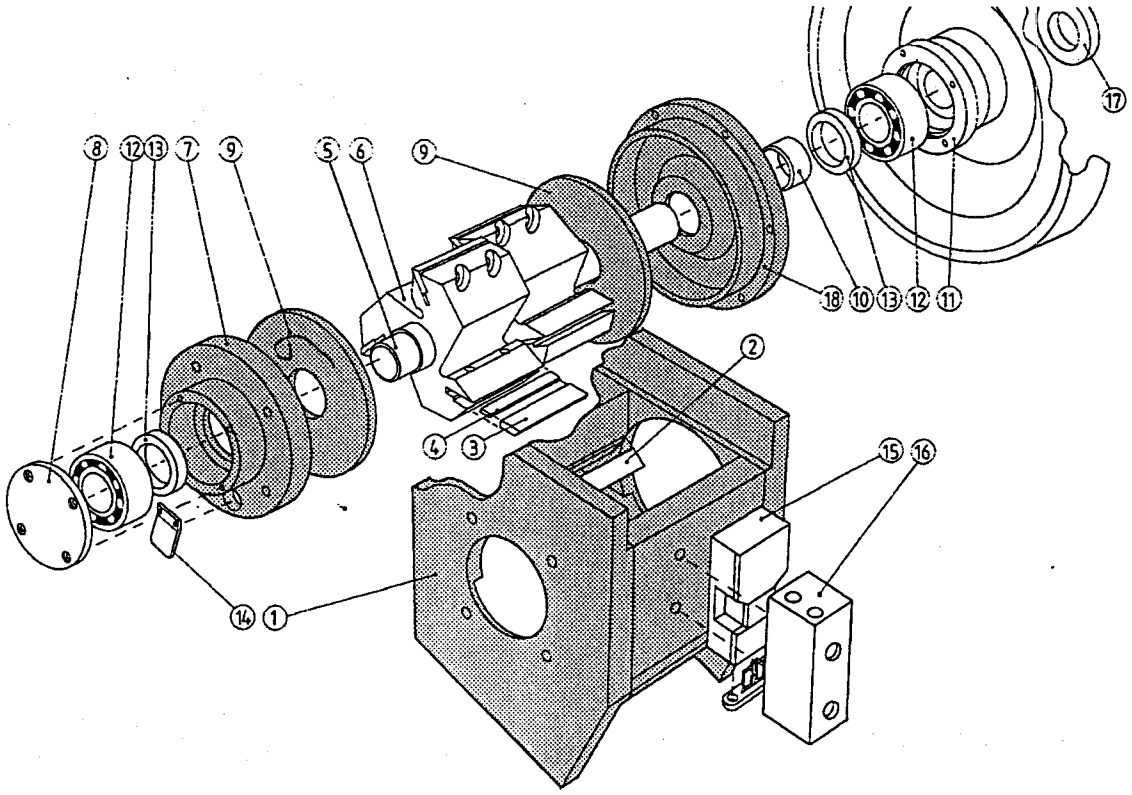
  Note: The valve (3) should be mounted between the funnel and hopper.



Pos	1514	Qty	1521	Qty	1528	Qty	1535	Qty	1542	Qty
1	1-22114	1	1-22115	1	1-22116	1	1-22117	1	1-23108	1
2	2-18409	1	2-18410	1	2-18411	1	2-20412	1	2-22196	1
3	4-19196	1	4-19197	1	4-19196	2	4-19196	1	4-19197	2
							4-19197	1		
4	4-18490	1	4-18491	1	4-18492	1	4-20397	1	4-22223	1
5	4-31193	1	4-31193	1	4-31193	1	4-31193	1	4-31193	1
6	4-22130	1	4-22130	1	4-22130	1	4-22130	1	4-22130	1
7	4-25842	1	4-25842	1	4-25842	1	4-25842	1	4-25842	1

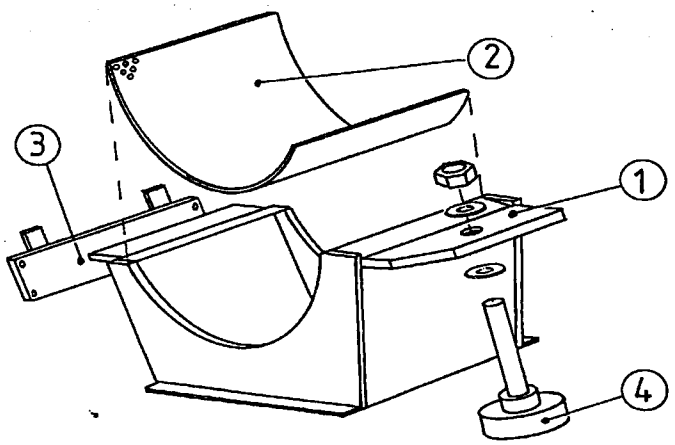
11.2 Cutter housing, hardened version, spare parts list

11.2.1 Cutter housing, hardened version



Pos	1514	Qty.	1521	Qty.	1528	Qty.	1535	Qty.	1542	Qty.
1	4-23207	1	4-23208	1	4-23215	1	4-23257	1	4-25962	1
2	4-19212	2	4-19213	2	4-19214	2	4-20398	4	4-22224	4
3	4-18362	6	4-18362	9	4-18362	12	4-18362	15	4-18362	18
4	4-17158	6	4-17158	9	4-17158	12	4-17158	15	4-17158	18
5	3-18395	1	3-18396	1	3-18397	1	3-20396	1	3-22222	1
6	2-18388	2	2-18388	3	2-18388	4	2-18388	5	2-18388	6
7	3-19573	1	3-19573	1	3-19573	1	3-19573	1	3-19573	1
8	9-40644	1	9-40644	1	9-40644	1	9-40644	1	9-40644	1
9	3-19575	2	3-19575	2	3-19575	2	3-19575	2	3-19575	2
10	4-18391	1	4-18391	1	4-18391	1	4-18391	1	4-18391	1
11	9-40702	1	9-40702	1	9-40702	1	9-40702	1	9-40702	1
12	9-60149	2	9-60149	2	9-60149	2	9-60149	2	9-60149	2
13	9-60148	2	9-60148	2	9-60148	2	9-60148	2	9-60148	2
14	4-26380	1	4-26380	1	4-26380	1	4-26380	1	4-26380	1
15	9-11002	1	9-11002	1	9-11002	1	9-11002	1	9-11002	1
16	3-22126	1	3-22126	1	3-22126	1	3-22126	1	3-22126	1
17	9-30190	1	9-30190	1	9-30190	1	9-30190	1	9-30190	1
18	2-26677	1	2-26677	1	2-26677	1	2-26677	1	2-26677	1

11.2.2 Screen box, hardened version

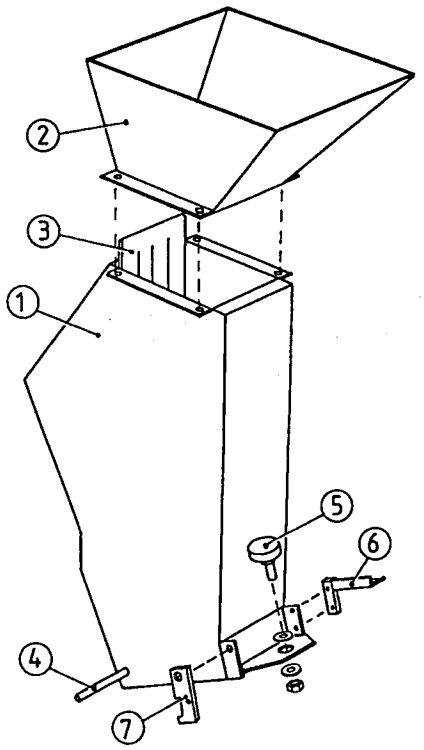


Pos	Qty.	1514	1521	1528	1535	1542
1	1	1-22110	1-22111	1-22112	1-22113	1-23217
2	1	4-19579	4-19580	4-19581	4-22443	3-22228-05N
3	1	4-18496	4-18497	4-18498	4-20399	4-22225
4	1	4-31193	4-31193	4-31193	4-31193	4-31193

11.2.3 Hopper, reinforced, for hardened version

- The funnel (2) to the hopper (1) can be mounted in two ways. Changing between these two alternatives is done by unscrewing the funnel's four fastening screws (4 x M6) and turning the funnel 180°.

  Note: The valve (3) should be mounted between the funnel and hopper.



Pos	1514	Qty.	1521	Qty.	1528	Qty.	1535	Qty.	1542	Qty.
1	3-23118	1	3-23119	1	3-23120	1	3-23812	1	3-25963	1
2	2-18409	1	2-18410	1	2-18411	1	2-20412	1	2-22196	1
3	4-19196	1	4-19197	1	4-19196	2	4-19196	1	4-19197	2
							4-19197	1		
4	4-18490	1	4-18491	1	4-18492	1	4-20397	1	4-22223	1
5	4-31193	1	4-31193	1	4-31193	1	4-31193	1	4-31193	1
6	4-22130	1	4-22130	1	4-22130	1	4-22130	1	4-22130	1
7	4-25842	1	4-25842	1	4-25842	1	4-25842	1	4-25842	1

11.3 Fixed hopper connected to auxiliary equipment

Installation

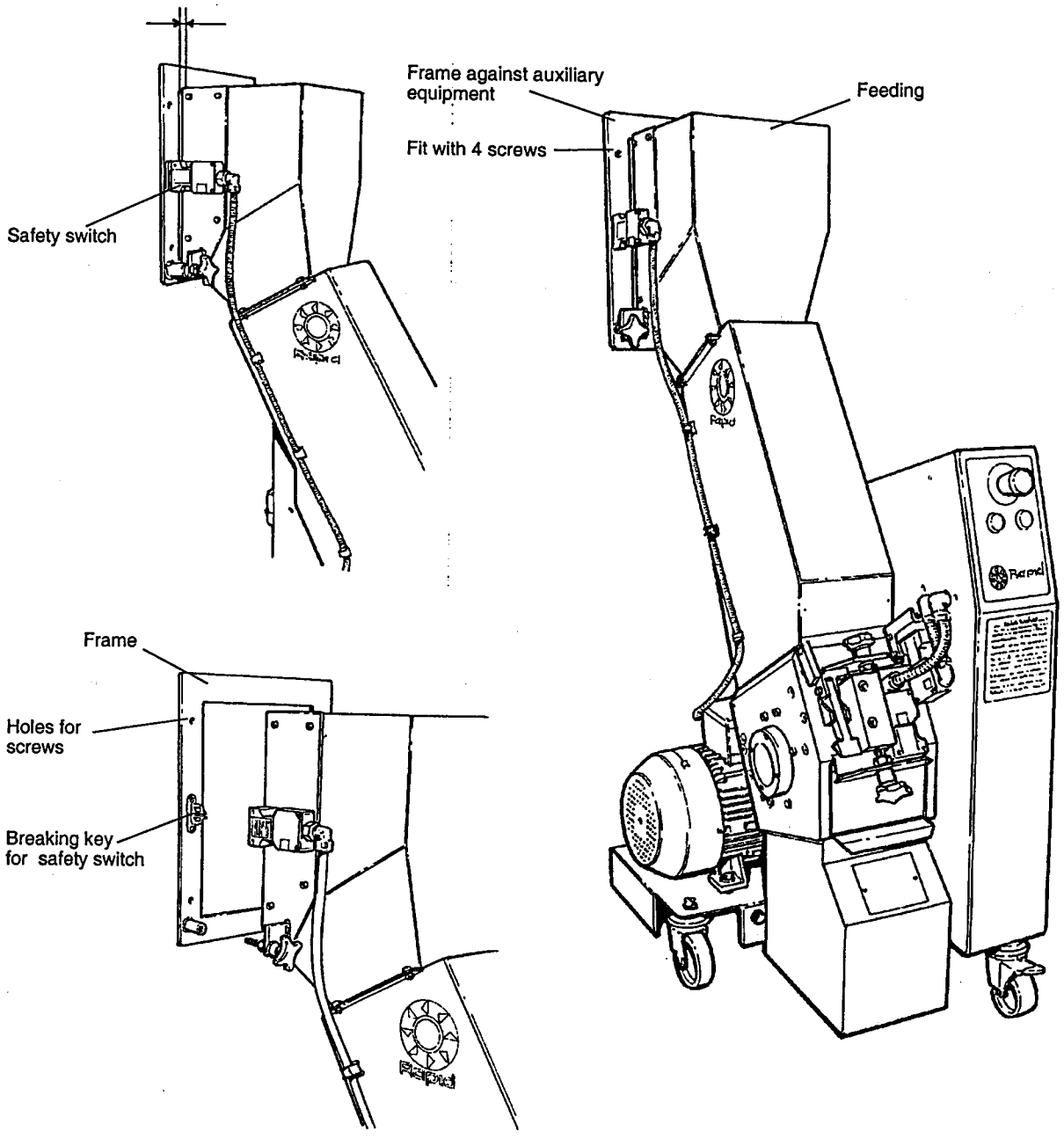
By usage with fixed connection towards auxiliary equipment- feeding hopper directly connected to the auxiliary equipment.

Place the feeding entrance of the granulator towards the auxiliary equipment and secure the frame with four bolts. The frame has got a safety/limit switch that ensures that the granulator only can run when fixed to the auxiliary equipment.

Safety

The width of gap between the frame and feed opening must not exceed 20 mm.

The safety distance between auxiliary equipment and the frame must not exceed 120 mm, according to safetynorm EN 294



9. Wiring diagram

Never change or modify the basic electrical settings of the granulator, without first obtaining permission from the RAPID Head Office.

If the granulator settings are changed, the machine can be seriously damaged.

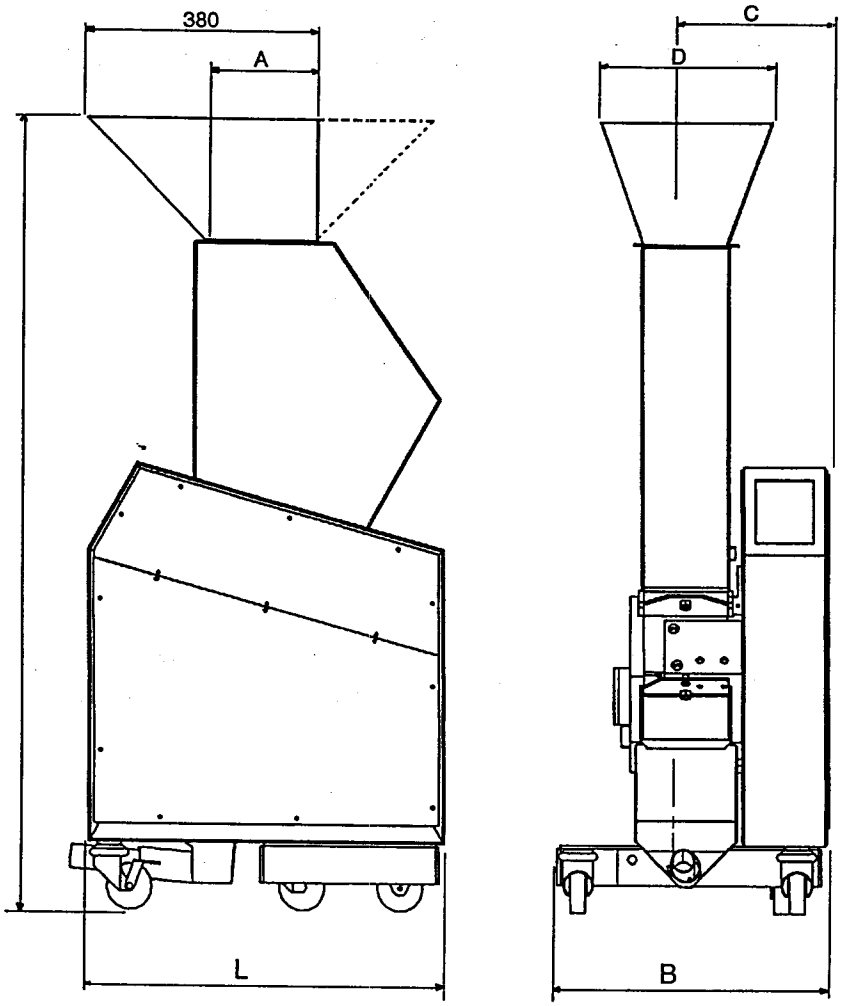
All Warranties and Rapid's Product Liability will be void, if the basic settings of the granulator are changed.

All maintenance and service work must be done by trained and competent personnel!

Electrical installation must only be done by a competent electrician!

10. Layout

10.1 Dimensions



10.2 Data

Dim. (mm)	A	C	D	L	B	H
1514	150x140	240	280	600	455	1300
1521	150x210	275	350	600	475	1300
1528	150x280	310	420	600	500	1300
1535	150x350	345	490	600	620	1300
1542	150x420	380	560	600	660	1300

11. Options

Ordering spare parts

Only use Rapid original spares when you replace machinery components. Orders should be sent to the representative in the country where the machine was purchased.

When you order spare parts, please specify:

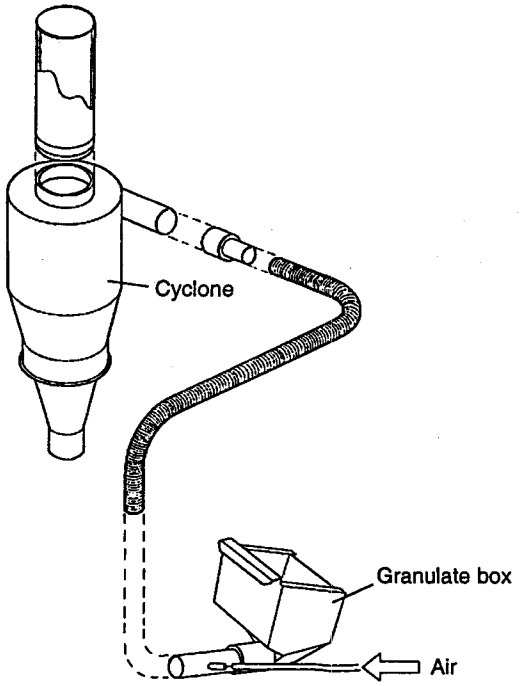
- Machine type/designation, on the sign on the machine.
- Serial number, from the sign on the machine.
- Part number, from this parts list.
- Number of components, as shown on this spare parts list.

11.1 Air veyor

The AirVeyor is a practical accessory which permits you to empty the granulate box in a simple manner by means of a blast of compressed air.

A pulse relay or level monitor controls the air flow of the AirVeyor.

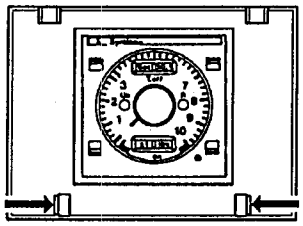
Set the pulse relay in accordance with the description below, to prevent over-filling of the granulate box.



11.1 Pulse relay, AirVeyor

The relay is not pre-set on delivery.

Depending on the mill speed and granulate size, adjust the relay to prevent the granulate box from overflowing.

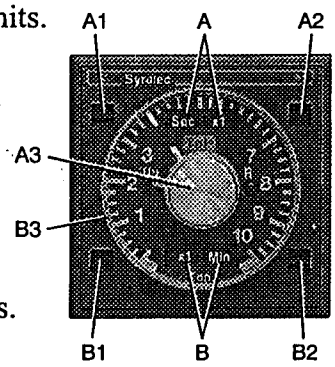


Setting

Open the protective lid over the relay, press both the spring-biased catches towards the centre at the same time, and open the lid.

A Shows the time unit for the "Pause time".

- Select the time unit - seconds, minutes or hours, by means of A1
- Then select time unit "**x1**" or "**x0.1**" by means of A2.
- Then set the pause time with knob A3.
  The white line on the disk shows the number of time units.



B Shows the time unit for the "Working time" (compressed air blast).

- Select the time unit - seconds, minutes or hours, by means of B2
- Then select time unit "**x1**" or "**x0.1**" by means of B1.
- Then set the working time by turning disk B3.
  The red line on the disk shows the number of time units.

Example:

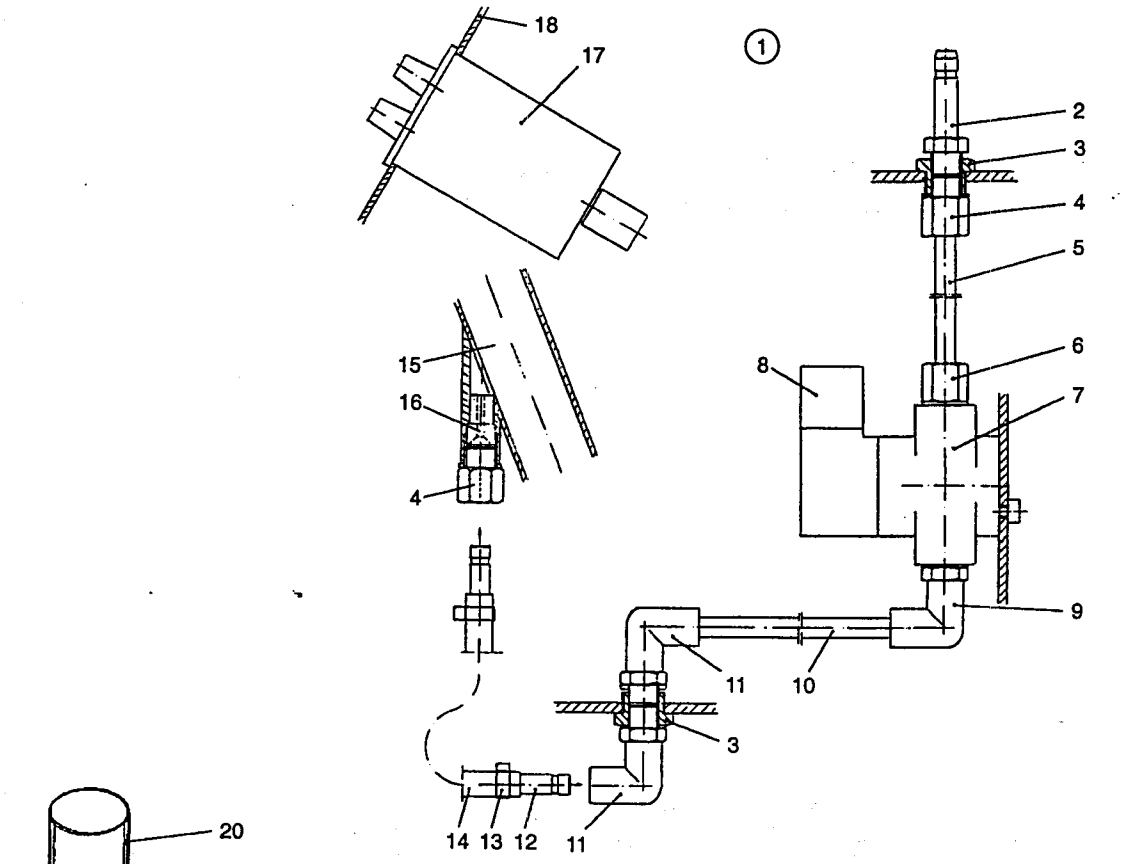
Pause time: (A1 "sec") x (A2 "x1") x (A3 scale - white line)
- The "white line" shows the pause time in seconds.

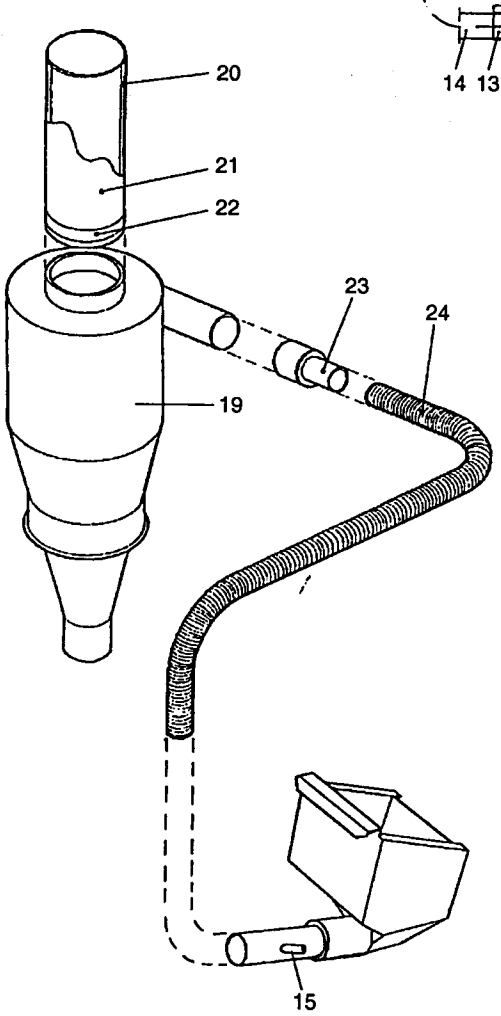
Time for compressed air blast: (B2 "sec") x (B1 "x1") x (B3 scale - red line)
- The "red line" shows the duration of the compressed air blast in seconds.

Air consumption:

Air consumption				
Granulate (kg/h)	25	25	50	50
Air pressure (bar)	4	6	4	6
Transport distance (m)	5	10	5	10
Air consumption (m^3/h)	1,3	2,0	2,6	4,0

11.1.2 Spare parts list, AirVeyor





Pos	Qty.	Art. No.	Description
1		2-19404	AirVeyor
2	1	9-202143	Hose nipple
3	2	9-20226	Muff 3/8" / 1/4"
4	2	9-20270	Union, straight
5	1	9-20236	Nylon pipe
6	1	9-20268	Union, straight
7	1	9-20262	Solenoid valve
8	1	9-20488	Cable terminal
9	1	9-20265	Union, angled
10	1	9-20236	Nylon pipe
11	2	9-20299	Union, angled
12	2	9-20245	Hose union
13	2	9-20543	Hose clamp
14	1	9-20642	Hose
15	1	3-20178	Ejector
16	1	4-20180	Air nozzle
17	1	9-10439	Relay
18	1	4-19535	Control panel
19	1	3-11772	Cyclone
20	1	2-10593	Filter holder
21	1	9-20480	Filter
22	1	3-10589	Tensioner strap
23	1	4-05894	Hose stub, inlet
24	4 m	9-20258	Hose