INSTRUCTION MANUAL

NCR and NC Series

CONAIR™

UGG018-0506

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Conair

DANGER!
Read the instruction manual before installing and using the machine.

This instruction manual applies to Conair's series NCR & NC(S) granulation mills. There are three granulator granulator variants, model numbers 69, 614 and 617

Certain functions differ between the three variants, which is noted in the text. All illustrations in the instruction manual refer to the NCR unless otherwise specified.

The instruction manual contains instructions for installation, operation and service.

- Chapter 6 contains instructions which are aimed at service personnel.
- Chapter 7 contains optional equipment for the machine.
- Other chapters contain instructions for the operator.

The granulator is supplied with an instruction manual and a tool bag.

If there are any questions, please contact Conair's local distributor or Conair's head office.

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1. TECHNICAL DESCRIPTION

2. SAFETY RULES

3. TRANSPORT/MACHINE LIFTING

4. INSTALLATION

5. OPERATION

6. MAINTENANCE/SERVICE

7. OPTIONS

8. ELECTRICAL

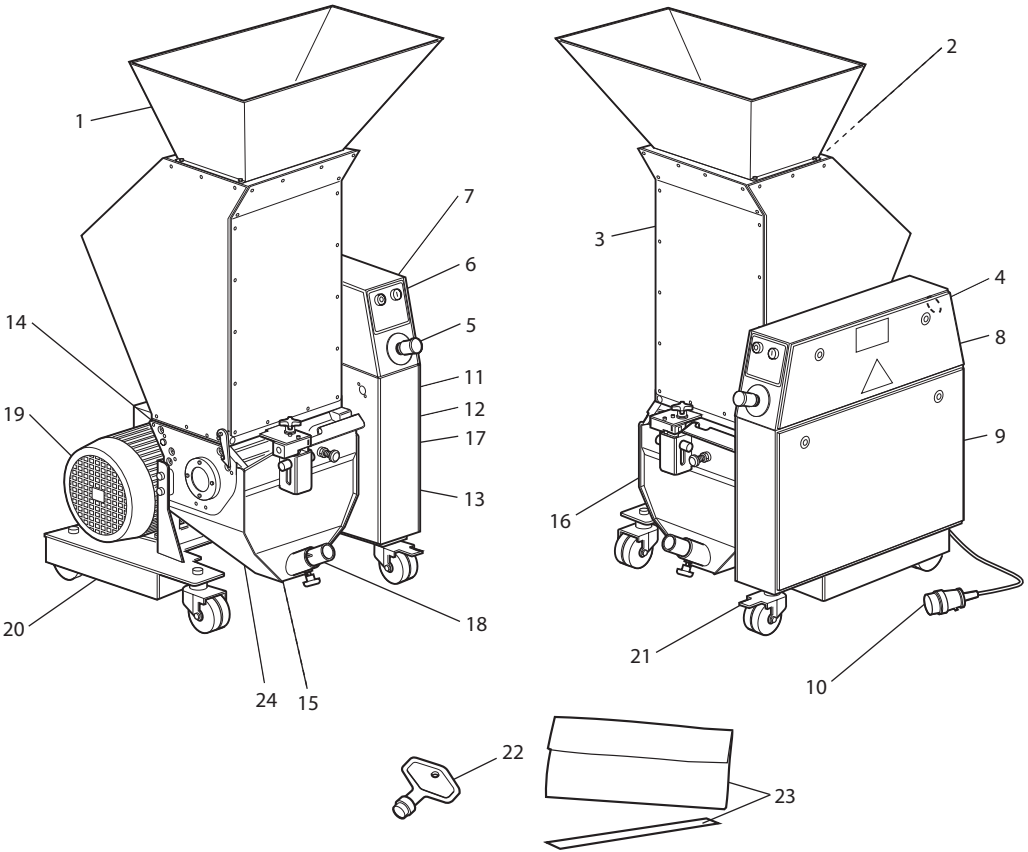
9. TROUBLESHOOTING

10. SPARE PARTS

11. SCHEDULE MAINTENANCE/ SERVICE

1.1 Overwiew

1.1 Introduction
1. Hopper funnel
2. Flap in hopper mouth
3. Hopper
4. Main switch
5. Emergency stop
6. Start button
7. Stop button
8. Electrical cabinet
9. Transmission
10. Connector
11. Star knob
12. Safety switch
13. Breaking key
14. Cutter housing
15. Screen box
16. Granulate box
17. Catch, granulate box
18. Suction pipe, outlet
19. Motor
20. Stand
21. Brake arm, wheel
22. Key, electrical cabinet & transmission door
23. Tool box with feeler gauge 0.20 mm
24. Tipping catch, hopper (option)



1.2 Technical data

Cutter housing

Cutter housing opening
NC(R)-69(S).....150 x 205 mm
NC(R)-614(S).....150 x 345 mm
NC(R)-617(S)..... 150 x 415 mm

Screen, hole diameter
Standard ..... Ø 5 mm
Options ..... Ø 3, 4, 6, or 8 mm

Motor

NCR
Motor power..... Cutter rpm
2.2 kW ..... 195 rpm
4.0 kW ..... 290 rpm

NC(S)
Motor power..... Cutter rpm
2.2 kW ..... 210 rpm

Knives

Rotating knives, disposable
NC(R)-69(S).....9 pcs. (3 x 3)
NC(R)-614(S)..... 15 pcs. (5 x 3)
NC(R)-617(S)..... 18 pcs. (6 x 3)

Fixed knives, disposable
NC(R)-69(S), 614(S) and 617(S) pcs. (2 x 1)
Knife clearance ..... 0.15 – 0.20 mm

Tightening torque
Rotating knives ..... 38 Nm
Fixed knives ..... 38 Nm

Drive belt

Setting values for belt tension, please refer to the Belt Tension table heading in Chapter 6.4, Transmission

Noise level

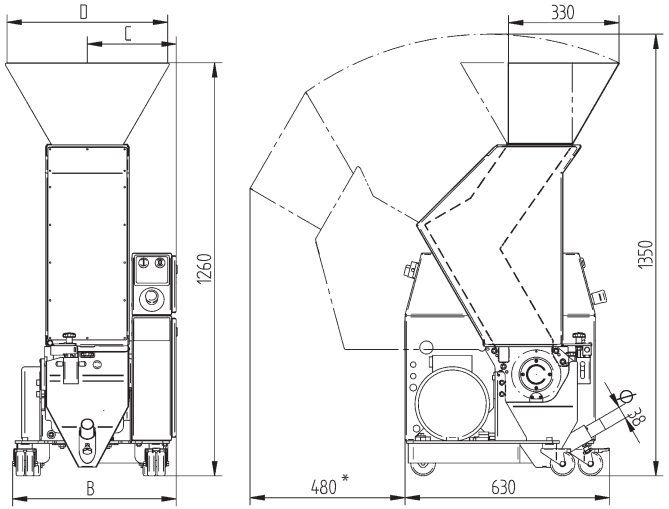
NC(R)-69(S).....app. 77* dBA
NC(R)-614(S),617(S).... app. 78* dBA
* Depending on material, capacity, temperature etc.

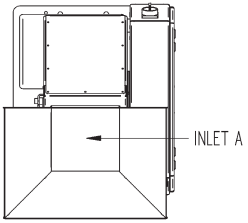
Weight

NCR
Motor power..... 2.2 kW..... 4.0 kW
NCR-69..... 175 kg..... 190 kg
NCR-614..... 205 kg..... 220 kg
NCR-617..... 220 kg..... 235 kg

NC-69S, 614S and 617S
Motor power ..... 2.2 kW
NC-69S ..... 160 kg
NC-614S ..... 200 kg
NC-617S ..... 220 kg

1.3 Layout





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* Dimension for NC-69S, NC-614S, NC-617S

	NCR-69	NCR-614	NCR-617
A	8.1 x 5.9"	13.6 x 5.9"	16.3 x 5.9"
B	19.7"	25.2"	28.0"
C	10.6"	13.4"	14.8"
D	19.3"	24.8"	27.6"

2.1 General

Conair granulation mills are designed for grinding injection molded, blow molded or extruded plastics waste.

Granulator size and performance has been designed and adapted to the type of plastics waste that the customer has specified before ordering.

Any modification or conversion of the granulator must be approved by Conair's head office. This condition is intended to prevent damage and injury, that the warranty should be valid and manufacturer's liability.

This Conair granulator is designed for granulating injection molded, blow molded and extruded plastics waste for professional use. The plastics waste must be free from contamination such as metals and substances which are poisonous, flammable, explosive or hazardous in other ways.

If other products or materials are to be granulated, approval must be obtained from head office for the warranty conditions to be valid.

Grinding of wood products, household and garden waste, pharmaceuticals or hazardous substances is not permissible, unless this has been approved in writing by the machine supplier.

The granulator has been designed so that cleaning, maintenance and service can be done quickly and simply, both routine maintenance and material change.

Operation and daily maintenance can be done by an operator, but all service must be done by trained service personnel.

The granulator has safety equipment which is described in chapter 5.2.

2.2 Warning signs on granulator


DANGER!
Risk for cutting or pinch injuries!
This sign must be placed anywhere there is a risk of cutting or pinch injuries.


DANGER!
Dangerous voltage! This sign is on the electrical cabinet door and any junction boxes.


DANGER!
Read the instruction manual before installing and using the machine.

2.3 Warnings in manual

The following warning levels are included in the manual:

 DANGER!
This text is used where there is a risk of personal injury.
The symbol inside the triangle can have different appearances, depending on the type of danger.
Please refer to the symbols in chapter 2.2 Warning Signs on the granulator.

 Important!
This text is used where there is a risk of machinery damage.

 Information!
This text is used where the personnel must be alerted to the way that work can be made easier.

2.4 Danger of injury

Before starting the granulator

- The granule bin is part of the granulator's safety equipment. The granule bin must always be installed during operation.
- The granulator can not be started before the hopper and granule bin are securely closed.
- The granulator must never be started if the electrical cabinet or transmission door is open. The key must be kept by the person who is responsible for the safety, service and maintenance of the granulator.
- The granulator must not be started without the hopper funnel. If the hopper funnel is not installed, the cutter is accessible through the hopper, and can cause personal injury.

When working while the granulator is operating

- The doors for the electrical cabinet and transmission must always be securely installed, closed and locked when the granulator is operating. The doors must not be opened when the granulator is opening.
- Use ear protection during all granulation work. Loud noise can occur, which can cause hearing damage.
- Use protective goggles during all granulation work.

When working on opening/ closing the granulator

- Never work alone beside the granulator to avoid personal injury.
- Stop the granulator before the granulator is opened for service or maintenance. Move the main switch to position 0 (Off) and remove the granulator's main plug from the electrical outlet.
- Never insert any part of your body into any opening in the granulator, unless the main switch is in position 0 (Off) and granulator's main plug has been pulled out from the electrical outlet.
- There is a pinch risk when the hopper, granule bin and screen box are opened and closed. Be careful.
- The machine contains rotating knives. They are sharp and can cause injury, even when they are not rotating.
- If the rotor has to be turned manually, do this with the greatest care.
- Use protective goggles and gloves when cleaning the granulator.

Working with electricity

- The machine's electrical cabinet contains dangerous high voltage.
- Electrical installation, all electrical maintenance and service, must be done by a qualified electrician.
- The electrical cabinet door must always be securely closed and locked when the granulator is operating! Never start the granulator if the electrical cabinet door is open.
- The key for the electrical cabinet door is a safety component. The key must be kept by the person who is responsible for the granulator's safety, service and maintenance.

During knife changes

- Knife changes must only be done by trained personnel.
- Use protective gloves when changing knives.
- Be careful, the knives are very sharp.
- Turn the rotor manually with great care.
- The granulator cutter will want to rotate by itself when rotating knives are removed or installed. For this reason, always lock the cutter to the cutter housing with a piece of wood to stop the cutter from rotating by itself.

2.5 Danger of machinery damage

General

- If incorrect material is granulated in the granulator.
- If belt tension is incorrect or if the belts are worn.
- If the screen in the screen box is worn or wrongly installed.
- If the knife retaining screws are tightened with the wrong torque.
- If the knives are blunt.
- If the plummer blocks are not blown clear with compressed air via the blue screws.
- If the protective grid (option) or the pipes adjacent to the outfeed/granule bin is removed.

3.1 Transport

General

The machine must only be transported and lifted by trained personnel. All instructions must be observed to avoid damage and personal injury. Read through all of chapter 3 before transporting/lifting the machine.

Transport outdoors

If the machine is to be transported so that it is exposed to weather and wind, all un-painted surfaces must be treated with VpCl-369D rustproofer.

After this, the machine must be wrapped in plastic foil and fixed to a transport pallet with a PET strap or tension strap.

Transport indoors

The machine can be transported for shorter distances on an even, dry surface using its own transport wheels.

Two of the machine's transport wheels can pivot, which facilitates transport.

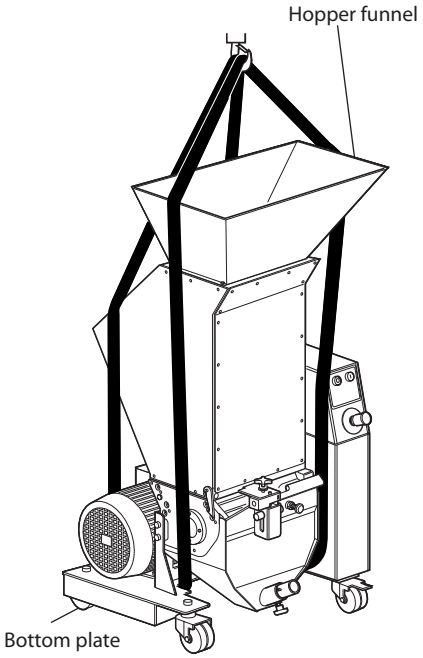
If the machine is to be transported for a longer distance, it should be fixed to a transport pallet with a PET strap or tension strap. After this, it can be transported with a forklift truck or travelling crane.

3.2 Lifting the machine

Important!
Before the machine is lifted. Check that the star knob between the hopper and the granule bin is securely screwed tight.

Important!
Be careful, make sure that no electric cables or safety components are crushed during the lift.

- Including packaging, the machine weighs about 330 - 550 lbs.
- The machine must be lifted with a double lifting strap. The length of the lifting strap should be at least 4 metre (8 metre circumference).
- The strap must be installed so that the granulator can not overbalance when lifted. Make sure that the lifting strap is applied under the granulator bottom plate and that it runs round the hopper funnel as shown in the illustration.
- Use a travelling crane or fork-lift truck and then lift the machine as shown in the illustration.



3.3 Storage

The following applies when the granulator is put into storage for a long period of time:

- Store the machine in a dry area with even temperature.
- Treat all unpainted surfaces on the machine with rust preventer, VpCl-369D, which protects the machine for up to 36 months.
- Rotate the granulator rotor manually every 3 months.

4.1 Before/during installation

General

The machine must be installed by trained personnel.

All instructions must be observed in the correct order to avoid damage and personal injury.

Read through all of chapter 4 before installing the machine.

Reception inspection

The machine is delivered wrapped in protective plastic foil, fixed to a transport pallet with PET straps. Do not remove the packaging from the machine before it has been transported to the place where it will be installed.

- Check the dispatch note to ensure that the delivery is complete.
- Check that the machine has not been damaged during transport.

Information!
Any damage must be reported to the forwarding agents.

Lifting and transporting to installation site

Space required, please refer to chapter 1.3, Layout

Please refer to chapter 3.2, Lifting the Machine, for instructions about lifting the machine.

Installation at installation site

- Check that the floor is horizontal. Put the granulator in place and check that it stands horizontal and steady.
- The unpainted components on the machine have been coated with a protective oil film before delivery and transport. Clean the rust preventer off the granulator before it is taken into service. Use Cortec VpCl-414 or a low-aromatic alkaline degreaser. Then wipe it clean with lint-free rags.
- Lock the wheels, press the wheel brakes down with your foot.

4.2 Electrical connection

General

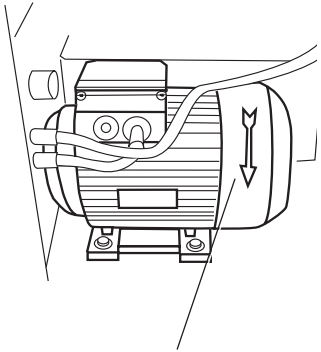
DANGER!
The granulator must only be connected by a qualified electrician.

DANGER!
The keys for the electrical cabinet and transmission doors are safety components. The key must be kept by the person who is responsible for the safety, service and maintenance of the granulator.

- Connecting the granulator to the mains. The granulator's electrical schedule specifies the machine's connection voltage (Volt) and fuse size (Ampere).
- The granulator is connected for a right-hand turning field on delivery.
- Check the phase sequence of the electric mains with a phase sequence display and use a mains plug to connect the granulator to the mains.

Check the direction of rotation of the granulator motor

1. Check that the screen box, granule bin and hopper are securely closed. The star knob between the hopper and the granule bin must be securely screwed in.
2. Connect the mains plug to the mains outlet.
3. Move the main switch to position 1 (On).
4. Check that the direction of rotation of the granulator motor coincides with the arrow on the motor housing. Start the motor with the start button and stop it immediately again with the stop button. Before the engine has had time to stop – carefully insert a tie wrap backwards into the motor ventilation hole and carefully feel to see in which direction the motor is rotating.



Arrow, direction of rotation

If the direction of rotation of the motor is incorrect:

1. Stop the granulator, press the stop button.
2. Move the main switch to position 0 (Off) and remove the granulator's mains plug from the electrical outlet.
3. Switch over two incoming phase conductors in the mains plug.

4.3 Measures before continual operation

General

Check the knife clearance and tightening torque of the knife retention screws.

Please refer to chapter 6.3, Knife Changing, to check the knife clearance and tightening torque of the knife retention screws.

 Information!
Sign the completed installation in chapter 11 of the instruction manual.

Two hours after first start

Re-check the knife clearance and the tightening torque of the knife retention screws. Check both the fixed and rotating knife retention screws.

 Information!
Sign the completed check in chapter 11 of the instruction manual.

Four hours after first start

 Information!
The drive belt tension and condition must be checked for the first time after 4 hours of operation at full load.

Inspection and adjustment of drive belt tension is described in this instruction manual, please refer to chapter 6.4, Transmission.

 Information!
Sign the completed check in chapter 11 of the instruction manual.

5.1 Function description

The granulator is designed for granulating injection molded, blow molded or extruded plastics waste.

The plastics waste must be free from contamination such as metals and substances which are poisonous, flammable, explosive or hazardous in other ways.

The granulator is started and stopped by pressing buttons on the control panel.

Plastics waste is fed into the hopper funnel and falls down through the hopper into the cutter housing, where rotating knives cut the plastics material to granulate against the fixed knives.

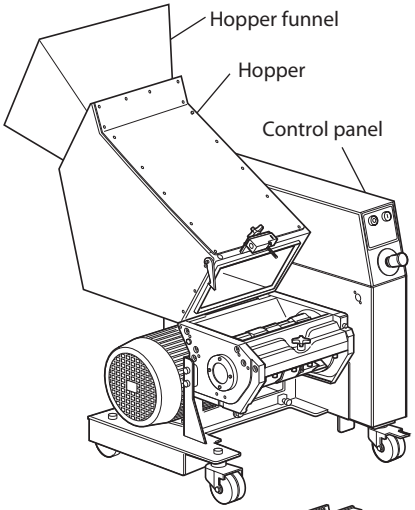
A perforated screen determines the size of the granulate. The standard screen has Ø 5.0 mm holes. The screen is installed in the screen box and can easily be changed to give the required granulate size.

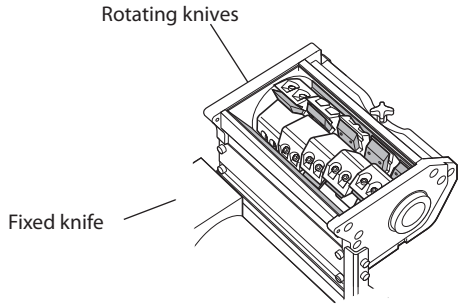
The granulate passes through the screen into the granule bin, which collects the finished granulate.

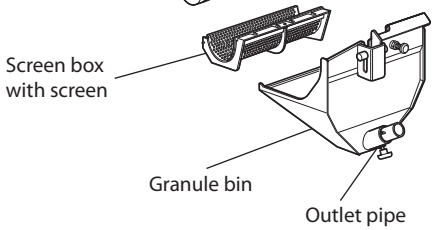
The granule bin can be emptied through the outlet pipe by air suction.

The finished granulate can be re-used at once in the production machinery. Alternatively, the granulate can be transported to a collection bin for later use.

The standard version of the cutter housing has a multi-stage cutter with rotating knives and two fixed knives. Both the rotating knives and the fixed knives are disposable, and are changed as necessary. The granulator must never be used with blunt knives. Blunt knives cause abnormal wear and damage the granulator.







5.2 Safety equipment

General

The knives rotate at high speed inside the granulator. For this reason, there is safety equipment which is intended to prevent access to hazardous components during operation.

The safety equipment consists of:

- Main switch
- Emergency stop
- Safety system with safety switches
- Hopper
- Hopper funnel
- Granule bin

⚠ DANGER!
All these components must be securely installed before the granulator may be started.

- In addition, the keys for the electrical cabinet and transmission door form part of the granulator's safety equipment.

The safety equipment must not be changed or modified under any circumstances. If any of the granulator's safety equipment is changed or modified, the machine can be dangerous to use, entailing a risk of serious personal injury. If any of the granulator's safety equipment is changed, Conair's responsibility under the Machinery Directive ceases to apply.

All maintenance and service related to the granulator's safety equipment must be done by personnel with the necessary knowledge.

No part of the safety equipment may be replaced by components other than spare parts supplied by Conair.

Main switch

The main switch is located on the rear of the electric cabinet and cuts all 3 phases of the incoming current.

Emergency stop

An emergency stop button is located on the control panel. The granulator may also be equipped with more emergency stop buttons.

Activate the emergency stop by pressing the button in. Reset by pulling the button out again.

Safety system

Read the following section (page 5:4).

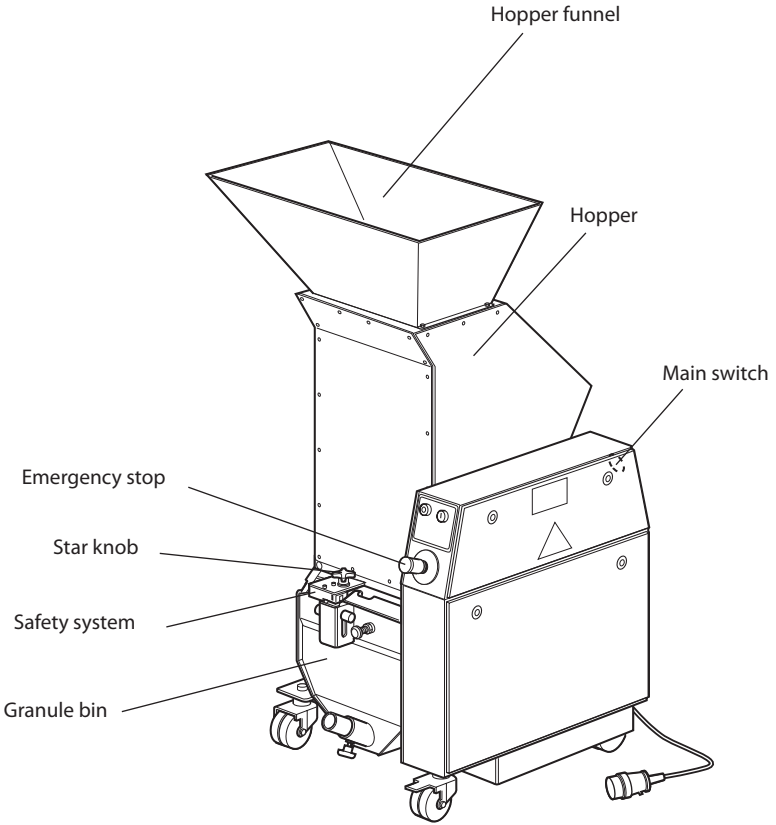
Hopper, hopper funnel and granule bin

The hopper, hopper funnel and granule bin are safety components and must be securely closed, to allow the granulator to start.

Key for electrical cabinet and transmission door

During operation, the doors for the electrical cabinet and transmission must be securely installed, closed and locked.

DANGER!
The keys for the electrical cabinet and transmission doors are safety components. The key must be kept by the person who is responsible for the safety, service and maintenance of the granulator.



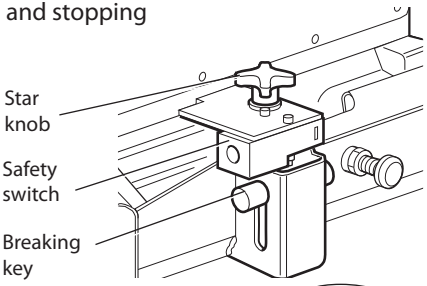
Safety system

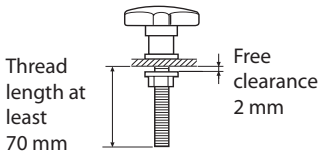
General

This granulator has a safety system which is located between the hopper and the granule bin.

The safety system consists of a star knob with a long screw and a safety switch with a circuit-breaking key.

Important!
The granulator must never be regularly stopped by using the safety system. Read how to stop the granulator in chapter 5.3 Starting and stopping





Star knob, circuit breaking key and safety switch.

The star knob on the hopper is an important component of the granulator's safety system. When the star knob on the hopper is undone, the position of the circuit breaking key is changed. The safety switch then cuts the current and the granulator stops. The safety switch also means that the granulator can not be started, as long as any hazardous component in the granulator is accessible.

Installation/removal of the star knob

The star knob screw has a thread length of at least 70 mm, see figure. The screw is this length, so that it will take such a long time to undo the star knob, that the granulator will have time to stop before the knives become accessible. When the star knob is installed, there must be a 2 mm free gap between the locknut and the panel, see figure.

A star knob with worn threads must only be replaced by a new one supplied by Conair. Please refer to chapter 10, Spare Parts.

Checking the safety system

The granulator safety system must be checked regularly. The check must be made when the granulator is operating.

- Start the granulator. To start and stop the granulator, please refer to chapter 5.3, Starting and stopping.
- Unscrew the star knob and check that the granulator stops (that the safety switch cuts the current) before the star knob has been unscrewed 3 full turns.
- If the granulator does not stop before the star knob has been unscrewed 3 full turns (i.e. the safety switch does not cut the current):

- Stop the granulator with the stop button in this case, move the main switch to position 0 (Off) and pull the granulator's mains plug out of the electrical outlet. Contact Conair There is a serious risk of personal injury.

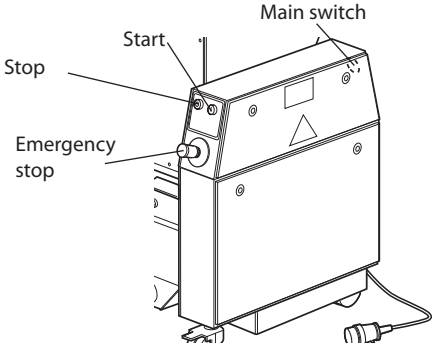
5.3 Starting and stopping

General

Starting and stopping is controlled from the control panel.

Preparations before starting

- The screen box, granule bin and hopper are installed and closed.
- The star knob between the hopper and the granule bin has been fully screwed down.
- The doors on the electric cabinet and transmission are installed, closed and locked.
- The granulator is firmly installed against the plastic machine.
- The wheels are locked.



Start the granulator.

DANGER!
Read the safety rules in chapter 2 before starting work!

Important!
Never stop the granulator before all material in the hopper and cutter housing has been fully granulated.

- The granulator can not be started if there is material left in the hopper and cutter housing. The granulator cutter will then be braked on starting, the motor will be overloaded, and the overload protection will trip. Before the granulator can be started it must first be cleaned. Please refer to chapter 6.2, Cleaning.

1. Connect the mains plug to the mains outlet.
2. Move the main switch to position 1 (On).
3. Check that the emergency stop button is not depressed.
4. Press the start button.

Stopping the granulator

Important!
Never stop the granulator before all material in the hopper and cutter housing has been fully granulated.

1. Stop feeding material into the granulator and wait until all material has been fully granulated in the granulator.
2. Stop the granulator with the stop button.
3. Move the main switch to position 0 (Off).
4. Press the emergency stop button in.
5. Pull the granulator's mains plug out of the electrical outlet.

5.4 Open the granulator

General

DANGER!
Read the safety rules in chapter 2 before starting work!

DANGER!
Be careful when the hopper, granule bin and screen box are open. The knives are then accessible, and they are very sharp!

DANGER!
Pinch risk when opening/closing the granulator!

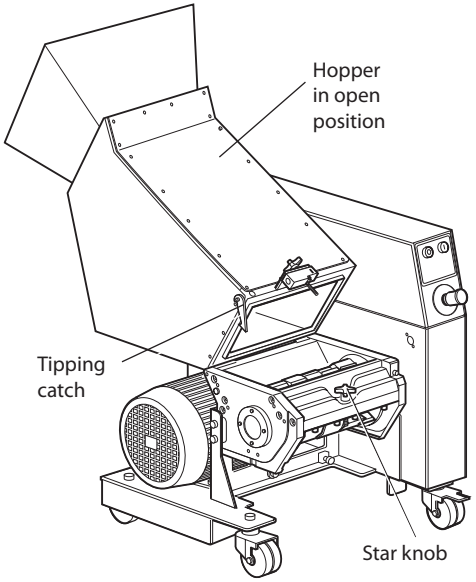
Preparations before the granulator is opened

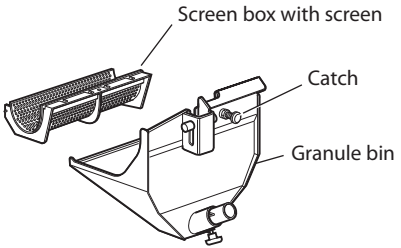
- Stop the granulator with the stop button.
- Move the main switch to position 0 (Off).
- Press the emergency stop button in.
- Pull the granulator's mains plug out of the electrical outlet.

Unlocking the safety system

- Unscrew the star knob until the circuit breaking key is released. Continue to unscrew the knob.

The safety system between the hopper and the granule bin ensures that the granulator can not be started when the hopper is open.





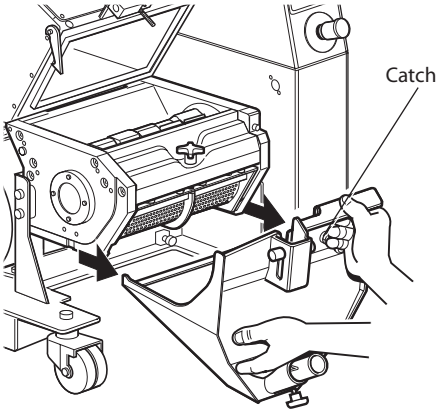
Opening the hopper

DANGER!
Check that there is no obstruction behind the granulator when you fold the hopper down. Hold the hopper securely when you fold it backwards.

- If the hopper has a tip catch: Release the tip catch.
- Fold the hopper backwards.
- The hopper remains open against a stop heel.

Open the granule bin

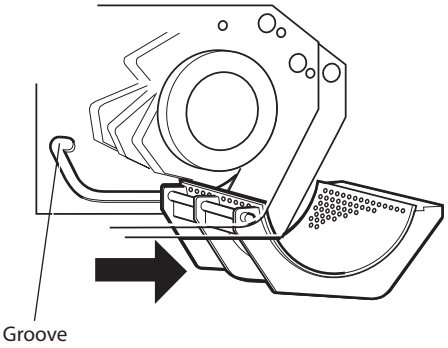
1. Hold the handle with your right hand and pull out the granule bin catch with your left hand.
2. First move the front edge of the granule bin forwards and slide it backwards (to unhook it), then down and towards you.



Open the screen box

Information!
Hold the screen box so that it does not fall down unchecked.

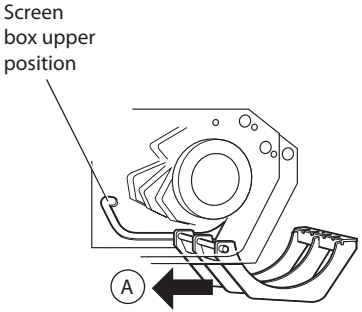
1. Undo the star knob by the screen box.
2. Fold the screen box down and remove the screen.
3. Pull the screen box out in the grooves in the cutter housing.

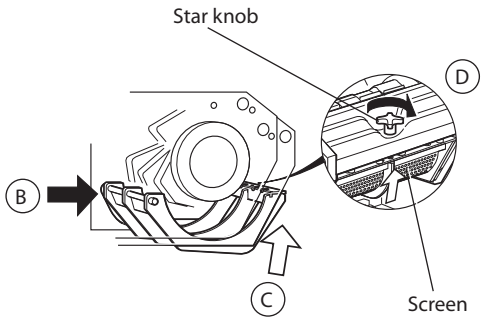


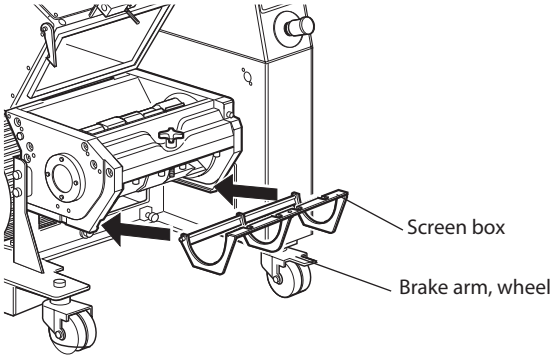
5.5 Closing the granulator

Installing the screen box

1. Move the screen box along the grooves in the cutter housing, up to the upper position, see figure A.
2. Pull the box towards you to hook it on, see figure B.
3. Let the screen box hang while you put the screen in place, so that it fits in the milled grooves.
4. Fold the screen box up, see figure C.
5. Screw the star knob in firmly until it stops, see figure D.







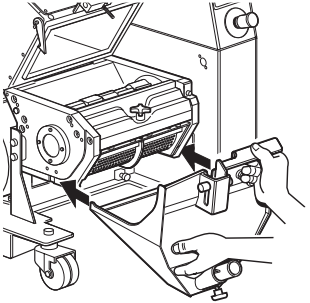
Install the granule bin

1. Install the granule bin by holding your right hand on the handle and your left hand underneath, to hold the box up, see figure A.
2. Insert the granule bin into the grooves in the cutter housing, see figure B.

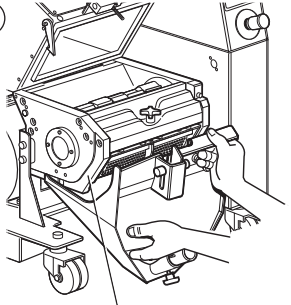
When the bin reaches its rearmost position, lift the rear up to hook it in place, see figure C.

3. Angle the front of the bin up, so that the catch engages, see figure D.

A

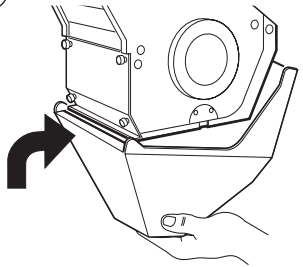


B

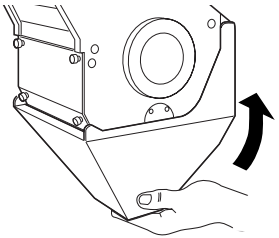


Grooves in cutter housing

C



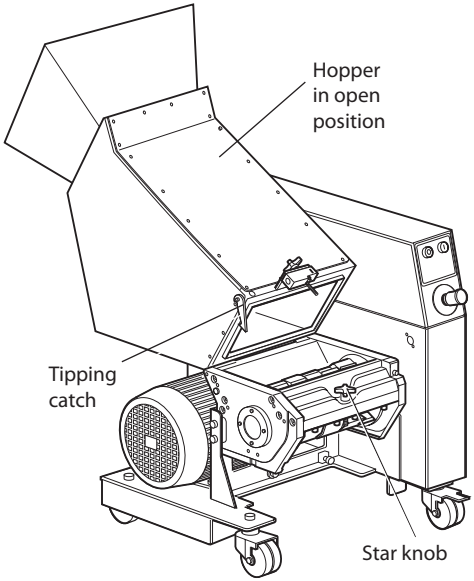
D



Closing the hopper

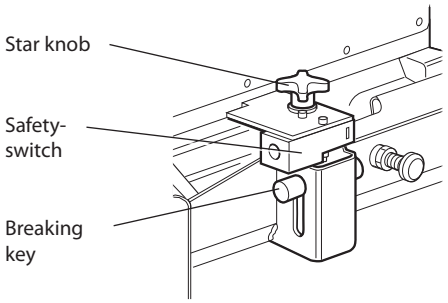
- Fold the hopper forwards.
- If the hopper has a tip catch:

Check that the tip catches engages on and locks the hopper.



Locking the safety system

- Pull the circuit breaking key upwards and hold it in place.
- Screw the star knob in until you feel that the circuit breaking key engages, then you can release the circuit breaking key.
- Continue to screw the star knob all the way in until it stops.



6.1 Inspection

General

There must not be any material residue left in the granulator during inspection.

Information!
Sign the completed checks in chapter 11 of the instruction manual.

Inspection schedule

Interval	Done by	Check
Daily	Operator	• Emergency stop • Flap • Granule bin
Once/week	Trained personnel	• Electrical components • Safety switch
Once/month	Operator	• Knife sharpness and knife clearance • Screen in screen box • Roll out time • Tipping catch, if installed
Every 6 months or after 1000 hours of operation	Trained personnel	• Drive belt • Belt tension

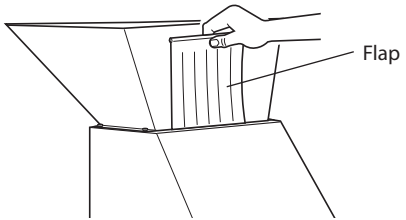
Inspection description

Emergency stop

Check the emergency stop function, start the granulator and then emergency stop it with the emergency stop button. Reset the emergency stop by pulling the button out again.

Flap

Check that the flap in the hopper is intact. If the flap is damaged, material can be thrown out backwards. Change a damaged flap at once.



Granule bin

Check that the granule bin emptying function works.

Electrical components

Check all the cables in the machine. There must never be any damaged cables, loose cables, connectors or components. Call a qualified electrician at once to have the damage rectified.

Safety system with safety switches

This granulator has a safety system with a safety switch between the hopper and the cutter housing. Check the safety system function, please refer to chapter 5.2, Safety Equipment.

DANGER!
Components and components in the machine's safety system must only be replaced by spare parts supplied by CONAIR.

Knife sharpness and knife clearance

Please refer to chapter 6.3, Knife Changing

Screen in screen box

Change the screen when the holes begin to assume a teardrop shape.

Roll out time

Roll out time is the time from when you press the stop button until the cutter stops rotating. If the cutter is still rotating when the hopper is opened, this must be fault traced, please refer to chapter 9, Troubleshooting.

Tipping catch

Only some hopper variants have a tipping catch. Check the tipping catch function.

Drive belt and belt tension

Please refer to the Checking the Drive Belt heading in chapter 6.4, Transmission. To install a new drive belt, please refer to the Installing a New Drive Belt heading in the same chapter.

6.2 Cleaning

General

DANGER!
Be careful when the hopper, granule bin and screen box are open. The knives are then accessible, they are sharp and can cause personal injury.

DANGER!
Be careful when you rotate the cutter manually! The knives are sharp and can cause personal injury.

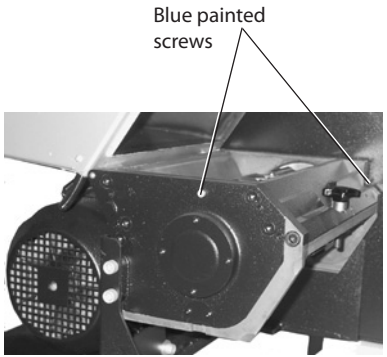
DANGER!
Pinch risk during cleaning.

DANGER!
Use protective goggles and gloves!

DANGER!
Granulate and plastics residue on the floor can make the floor slippery!

Cleaning schedule

Interval	Done by	Clean
During color change *or* Once /month *or* At least once/300 hours	Operator	• Hopper • Granule bin • Screen box with screen • Plummer block (blue painted screws) • Cutter housing



Cleaning

1. Check that the hopper is empty.
2. Open the cutter housing, please refer to chapter 5.4, Opening the cutter housing
3. Clean the hopper, granule bin, screen box and screen with compressed air, both inside and outside.
4. Clean the bearing housings by undoing and removing the two blue-painted screws, see fig. Blow clean through the holes with compressed air and rotate the cutter at least one rotation.
5. Clean the cutter housing with compressed air, both inside and outside.
6. Reinstate, re-install all components in inverse order, see chapter 5.5, Closing the Cutter Housing.

Important!
Make sure that no material blows into the safety system.

Important!
Make sure that all plastics material has been removed from the cutter housing before re-starting.

6.3 Knife change

General

DANGER!
Knife changes must be done by trained personnel, to avoid personal injury and machinery damage!

DANGER!
Read the safety rules in chapter 2 before starting work!

DANGER!
The granulator cutter will want to rotate by itself when rotating knives are removed or installed. Always lock the cutter against the cutter housing with a piece of wood, to avoid self-rotation.

Information!
Check screen wear at the same time as the knives are changed. Change the screen when the holes begin to assume a teardrop shape.

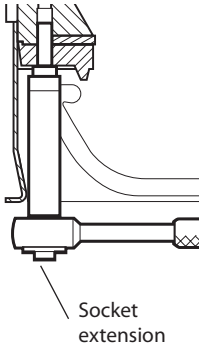
Disassembling rotating knives

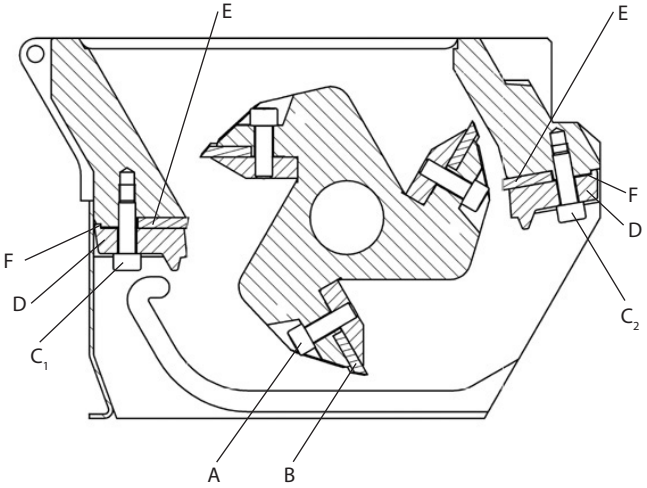
- Make sure that the hopper and cutter housing are empty.
- Open the cutter housing, please refer to chapter 5.4, Opening the cutter housing

1. Undo screw A about two turns.
2. Remove the rotating knives B (number, see chapter 1.2, Technical Data).

Disassembling fixed knives

3. Undo and remove screws C1 and C2. Use a socket extension to undo C1.
4. Remove support rules D and knives E.





Installing fixed knives

1. Clean the fixed knives E thoroughly.
2. Clean the knife seats for the fixed knives.
3. Press the fixed knives in towards the stop screws F.

Information!
The stop screws are set when the cutter housing is manufactured. Stop screw settings must not be changed.

4. Install support rules D for each fixed knife.

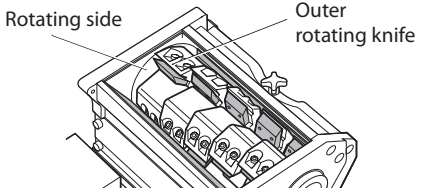
Information!
Every second time the fixed knives are changed, the knives must be installed with new screws C1 and C2.

5. Tighten screws C1, use a socket extension and C2 and torque to 38 Nm.

Installing rotating knives

6. Clean the rotating knives B thoroughly.
7. Clean the knife seats for the rotating knives.
8. Install one rotating knife B at a time.

Information!
The cutter's outer rotating knives should be seated tight against the rotating sides.



9. Press the rotating knife securely against the bottom of the knife seat.
10. Install screws A and fix the rotating knife loosely.

Information!
Every second time the rotating knives are changed, the new knives must be installed with new screws. A.

DANGER!
Rotate the cutter carefully and check that the rotating knife can freely pass both the fixed knives.

11. Check the knife clearance (= distance between fixed and rotating knives) with a feeler gauge against both fixed knives E. Knife clearance should be 0.15 - 0.20 mm.
12. Fix the rotating knife with screws A. Tightening torque 38 Nm.
13. Install the remaining knives in the same way.
14. Re-check the knife clearance. Knife clearance should be 0.15 - 0.20 mm.

Information!
Use a marker pen when installing the rotating knives and mark each knife as follows:

◯	= Knife clearance is correct.
⊘	= Knife retaining screws are torqued to the correct torque.
⊗	= Knife clearance is re-checked and OK.

6.4 Transmission

General

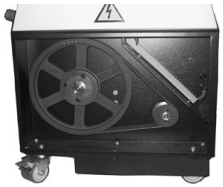
NCR: The machine is driven by a vee-belt.

NC(S): The machine is driven by three vee-belts. These belts must always be checked/changed together and are referred to in the text as one belt.

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

Information!
The drive belt tension and condition must be checked for the first time after 4 hours' operation at full load.
Then check drive belt condition and belt tension every 1000 hours of operation or every 6 months.

NCR



NC(S)

Preparations before checking/ adjusting the drive belt

- Check that the hopper is empty.
- Stop the granulator, see chapter 5.3 Starting and stopping.
- Open the transmission door on the side of the granulator. The key for the door is enclosed on delivery in the granulator tool bag.

Check the drive belt condition

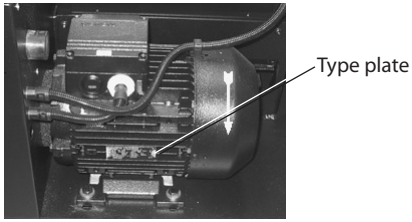
DANGER!
Pinch risk between pulley and drive belt.

- Rotate the pulley with drive belt a few turns. Check that the drive belt is intact and does not have any cracks. Change the drive belt as necessary.

Check the drive belt tension

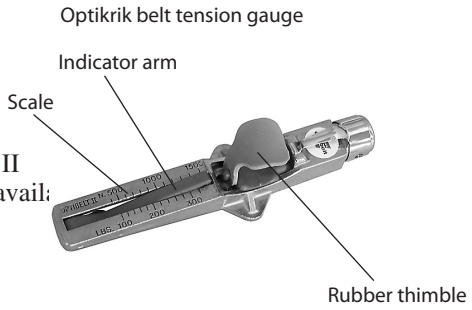
DANGER!
Pinch risk between pulley and drive belt.

1. Check the granulator motor size; kilowatt (kW) and frequency in Hertz (Hz), see the type plate on the motor.
2. Check the granulator variant you have: NCR or NC(S).
3. There are two different methods for checking drive belt tension. Method 1 Optikrik gauge and Method 2 Deflection with a pre-load gauge. Choose the method and follow the instructions below.



Method 1 Optikrik gauge

The method involves loading the drive belts with an Optikrik belt tension gauge. There are two variants of Optikrik, I and II, and the only difference is the reading scale. Optikrik I is used for NC(S) Models and Optikrik II is used for NCR. A belt tension gaugeis availa is available as an optional accessory.



1. Rotate the cutter pulley with drive belt a few turns.
2. Press the belt tension gauge indicator arm down so that it lies below the surface of the scale.
3. Position the belt tension gauge centrally between the cutter and motor pulleys, parallel to the belt, with one finger on the rubber thimble.
4. Press with one finger until a ”Click” is heard.
5. Check where the indicator arm intersects the scale surface and read off the belt tension.

Method 2 Deflection with a pre-load gauge.

The method involves loading the belt centrally between the two pulleys with a certain force and then reading off the deflection. For NC(S), deflect one belt at a time.

Belt tension table

You can read the tension that the drive belts should have in the two tables below.

First, choose the table you should read, depending on the method of measurement chosen. Optikrik or Deflection method. In the first line of each table, you choose the granulator variant, NCR or NC(S).

On line two, you choose the motor size (motor power). On the third line, you choose whether it is a new belt or re-adjustment of an old belt.

If you choose the deflection method, you will see the deflection force on the fourth line that you should use during measurement.

Then read off the relevant belt tension / relevant deflection, depending on the type of motor. 50 or 60 Hz, IEC or NEMA/USA.

Method 1:	Optikrik II NCR				Optikrik I NC(S)	
	Motor 2.2 kW		Motor 4.0 kW		Motor 2.2 kW	
	New belt	Re-adjustment	New belt	Re-adjustment	New belt	Re-adjustment
50 Hz typ IEC	680 N	680 N	960 N	740 N	210 N	160 N
60 Hz typ IEC	680 N	680 N	960 N	740 N	210 N	160 N
60 Hz typ NEMA/USA	680 N	680 N	930 N	720 N	210 N	160 N

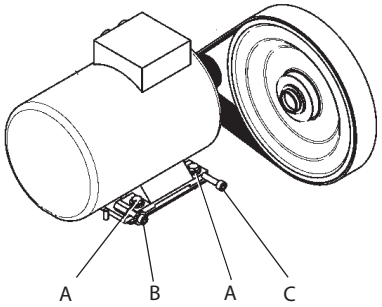
Method 2:	Deflection force NCR				Deflection force NC(S)	
	Motor 2.2 kW		Motor 4.0 kW		Motor 2.2 kW	
	New belt	Re-adjustment	New belt	Re-adjustment	New belt	Re-adjustment
Nedböjnings-kraft	105 N	105 N	105 N	105 N	17.1 N/ rem	13,2 N/ rem
50 Hz typ IEC	7 mm	7 mm	6 mm	7 mm	3.7 mm	3.7 mm
60 Hz typ IEC	7 mm	7 mm	6 mm	7 mm	3.7 mm	3.7 mm
60 Hz typ NEMA/USA	7 mm	7 mm	6 mm	7 mm	3.7 mm	3.7 mm

Adjusting the belt tension

1. Remove the granule bin, see chapter 5.4 Opening the Cutter Housing
2. Undo the 4 screws A which hold the motor to the locking bars.
3. Relevant belt tension values are found in the tables above in this chapter.
4. To increase/reduce belt tension: Turn the screws on the motor bars B and C the same amount inwards/outwards.
5. Tension the belts and check that the pulleys are in line (tolerance 0.5 mm) and parallel.
6. Fix the 4 screws A which hold the motor to the locking bars. Tightening torque 40 Nm.
7. Check that the pulleys are still in line (tolerance 0.5 mm) and parallel.
8. Install the granule bin. See chapter 5.5 Closing the Cutter Housing.
9. Close the transmission door on the side of the granulator.

Information!

If the drive belt tension is adjusted, the belt condition and tension must be checked after 4 hours of operation at full load.



Installing a New Drive Belt

1. Stop the granulator, see chapter 5.3 Starting and stopping.
2. Open the transmission door on the side of the granulator. The key for the door is kept by the person responsible for maintenance.
3. Remove the granule bin, see chapter 5.4 Open the granulator.
4. Undo the 4 screws A which hold the motor to the locking bars.
5. Undo the two screws for motor bars B and C the same amount.
6. Remove the old drive belt and install a new one.
7. Adjust the belt tension, please refer to the Adjusting the Belt Tension heading.

6.5 Lubrication

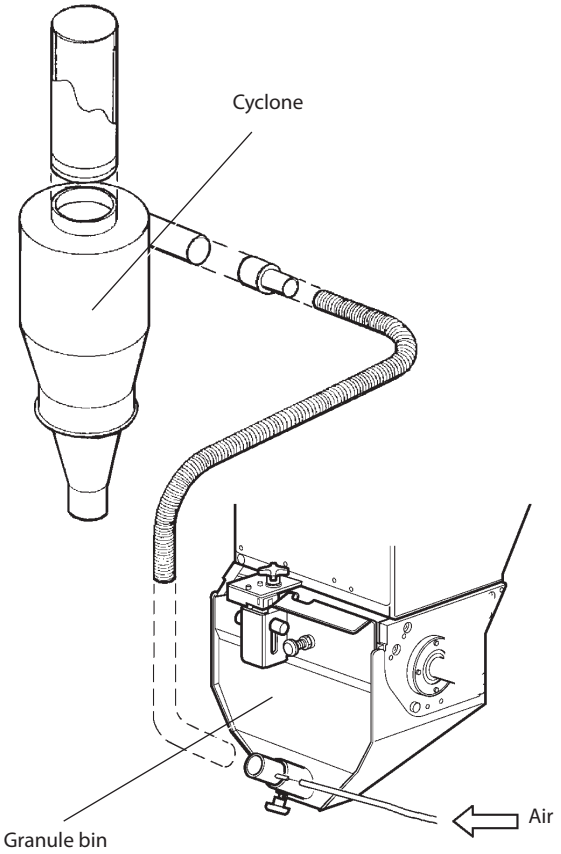
All bearings in the granulator are lubricated for life and can not be re-greased.

7.1 Air veyor

The Air veyor is a practical, simple accessory that allows the granule bin to be continually emptied with a pulse of compressed air.

A pulse relay controls the Air veyor compressed air pulse and pause time.

Set the pulse relay up, following the description below, and the Air veyor will continually empty the granule bin.

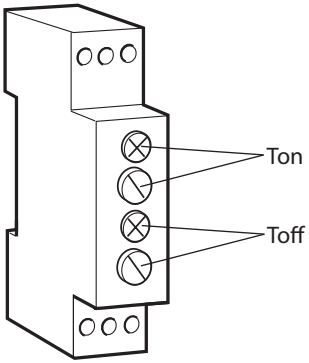


Pulse relay, Air veyor

The pulse relay is not pre-set on delivery.

The pulse relay has to be set up individually, to suit the volume of plastics material to be granulated, granulator size and screen hole dimension.

Set the relay so that the compressed air pulse continually empties the granule bin.



Setting the pulse relay

Ton - shows the time unit for ”Working Time” (compressed air pulse), i.e. the time when the vacuum evacuator is switched on.

1. Select the time interval on the white knob;

 1 s, 10 s, 1 min, 10 min, 1 h, 10 h or 100 h.

2. Choose the time factor on the blue knob, between 1 and 10.

Toff - shows the time unit for ”Pause time”, i.e. the time when the vacuum evacuator is switched off.

3. Select the time interval on the white knob;

 1 s, 10 s, 1 min, 10 min, 1 h, 10 h or 100 h.

4. Choose the time factor on the blue knob, between 1 and 10.

Example:

Ton time interval = 10 s, time factor = 5

Toff time interval = 1 min, time factor = 2

The vacuum evacuator will be switched on for 10 x 5 s = 50 s and the vacuum evacuator will pause for 1 min x 2 = 2 min.

When the granulator starts, vacuum evacuator is always switched on.

Average 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 (m3/h)	**1.3**	**2.0**	**2.6**	**4.0**

7.2 Level indicator

General

The granule bin can be equipped with an optional, capacitative level indicator. The level indicator senses material which is not electrically conductive.

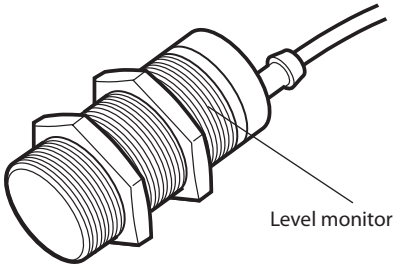
When the level in the granule bin is so high that the level indicator is affected, the granulator stops. Indication can be done with a lamp or buzzer, if this has been ordered as optional equipment. The level indicator can have other customer-specific functions, please refer to the relevant wiring schedule for these functions.

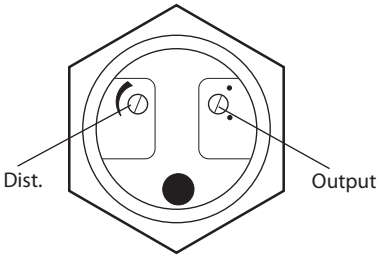
Re-start the granulator with the start button.

Setting the level indicator sensitivity

The level indicator is supplied with a pre-set sensitivity of 16 mm. Sensitivity can be adjusted between 2 and 16 mm. Use a screwdriver to adjust sensitivity on the left-hand screw (Distance).

The right-hand screw (Output) is set so that the level monitor is normally closed. The level indicator is delivered with this setting, and it should not be changed.

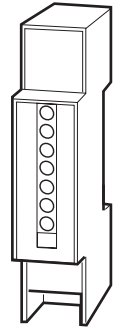




7.3 Hours counter

General

The hours counter is installed in the electrical cabinet and only counts the time that the granulator cutters are moving. The hours counter does not have a re-set function.



Hours counter

8.1 Electricity

General

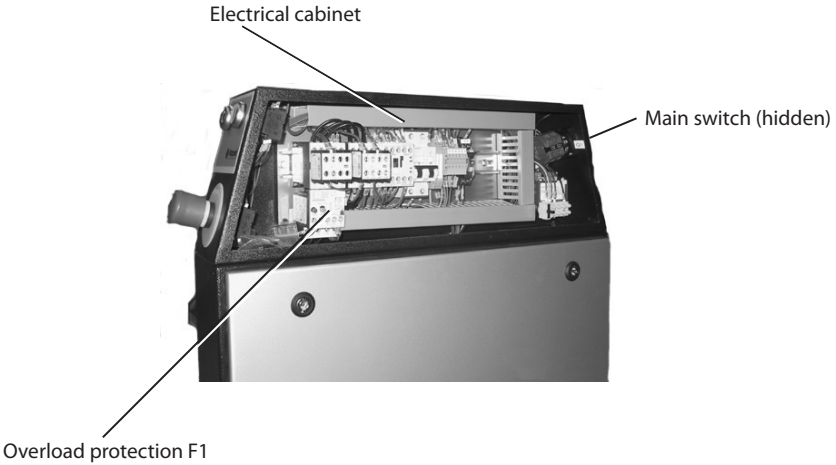
DANGER!
Read the safety rules in chapter 2 before starting work!

Electrical installation, all electrical maintenance and service, must be done by personnel with the appropriate competence.

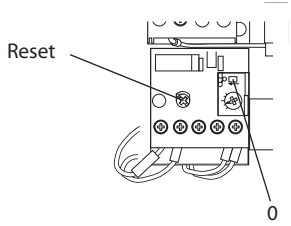
Never modify the basic electrical settings of the granulator without first asking Conair's service department for advice.

If the basic electrical settings of the granulator are modified or changed, the machine can be seriously damaged.

If the basic electrical settings of the granulator are changed, the machinery warranty and Conair's manufacturer liability cease to be valid.



9.1 Troubleshooting schedule

Problem	Probable cause	Actions taken
The granulator does not start.	Emergency stop activated (button is depressed).	Reset by pulling the button out again.
	The granulator is not connected to the mains.	Connect the granulator mains plug to the electrical outlet.
	The main switch is in position 0 (Off).	Move the main switch to position 1 (On).
	The star knob on the hopper and the granule bin are not securely screwed in until they stop. (The safety switch will then cut the current.)	Screw the star knob in until it stops.
	The granulator's overloading protection has tripped after a stop and the granulator has been overloaded. 	Overloading protection F1 is located inside the electrical cabinet. The small window will show 0 after an overload. The overloading protection is automatically re-set after about 2 minutes. Alternatively, reset it manually by pressing the Reset button. Clean the granulator, read chapter 6.2 Cleaning.

Problem	Proable cause	Actions taken
The granulator does not start after normal fault tracing.		Move the main switch to position 0 (Off). Press the emergency stop button in. Pull the granulator's mains plug out of the electrical outlet. Contact the responsible contact person for maintenance and service. DANGER! All electrical installation must be done by an electrician with the appropriate formal competence.
The granulator stops unexpectedly	The hopper or granule bin has changed position. The safety switch cuts the current.	Close the hopper and granule bin, and screw the star knob in firmly until it stops.
A granulator with level monitor stops unexpectedly.	The granulate level in the granule bin is too high.	Empty the granule bin and re-start the granulator. Adjust the level monitor sensitivity if necessary, please refer to chapter 7.2, Level Monitor.
	The level monitor plug is not properly inserted in the outlet.	Insert the level monitor plug in the outlet.
The cutter still rotates when the hopper is opened.	Faulty belt tension or worn drive belts.	Adjust the belt tension or possibly change the drive belts, please refer to the Adjusting Belt Tension or Installing a New Drive Belt headings in chapter 6.4 Transmission.

10.1 Ordering spare parts

General

Only use Conair's Original Spare Parts when changing machinery components.

Orders should be sent to the sales representative in the country where the machine was purchased.

The order must include:

- Serial number on the machine's type plate.
- Machine designation on the machine's type plate.
- Part number(s) as in this spare parts catalogue
- Quantity as in this spare parts catalogue.

Information!

Some of the spare parts for NCR and NC are not identical.
The part numbers of these spare parts are found in different columns in the spare parts catalogue.

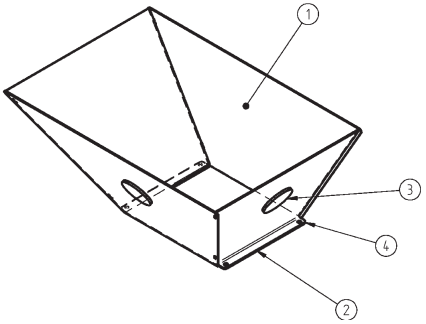
Information!

A * in the spare parts catalog indicates a more durable version of the spare parts.

Summary

The granulator is sub-divided into the following standard modules:

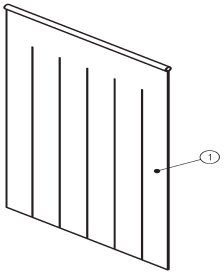
Funnel



Pos	SE	ENG	DE	FR	Mod No	Art No	Qty
1	Tratt	Funnel	Eingabetrichter	Entonnoir	NC(R)-69(S) NC(R)-614(S) NC(R)-617(S)	3-050677 3-050694 3-050707	1 1 1
	Tratt Z	Funnel Z	Eingabetrichter Z	Entonnoir Z	NC(R)-69(S) NC(R)-614(S) NC(R)-617(S)	3-050636 2-050550 2-050553	1 1 1
2	Dämpare	Damper	Dämpfer Z	Amortisseur	All Models	4-050581	2
	Dämpare Z	Damper Z	Dämpfer Z	Amortisseur Z	All Models	4-050582	2
3	Ljud absorbent	Sound absorber	Schallschutz	Isolant phonique	All Models	4-036673	4
4	Skruv M6	Screw M6	Schraube M6	Vis M6	All Models	940616	4

All Models = NC(R)-69(S), 614(S), 617(S)

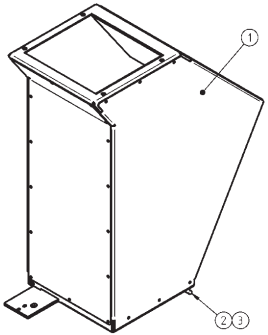
Flap

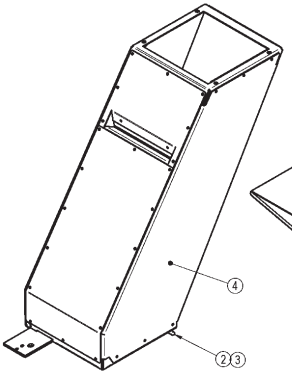


Pos	SE	ENG	DE	FR	Mod No	Art No	Qty
1	Klaff	Flap	Klappe	Volet	NC(R)-69(S) NC(R)-614(S) NC(R)-617(S)	3-050617 3-050641 3-050617	1 1 2
	Klaff bak	Flap back	Klappe hintere	Volet arriè	NC(R)-69(S) NC(R)-614(S) NC(R)-617(S)	3-050617 3-050641 3-050617	2 2 4

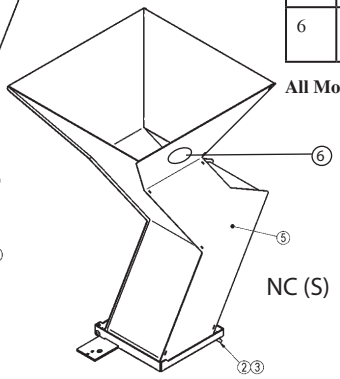
Hopper

Top NCR





Back NCR



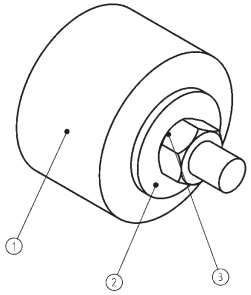
NC (S)

Pos	SE	ENG	DE	FR	Mod No	Art No		Qty
						NCR	NC	
1	Inmatning Top	Hopper Top	Trichter Top	Alimentation Top	NCR-69 NCR-614 NCR-617	2-050667 2-050687 2-050700		1 1 1
	Inmatning Top Z	Hopper Top Z	Trichter Top Z	Alimentation Top Z	NCR-69 NCR-614 NCR-617	2-050626 2-050536 2-050543		1 1 1
2	Gångjärn	Hinge	Scharnier	Charnière	All Models	950715	950715	2
3	Skruv M5	Screw M5	Schraube M5	Vis M5	All Models	941021	941021	4
4	Inmatning bak	Hopper back	Trichter hinterer	Alimentation arriè	NCR-69 NCR-614 NCR-617	2-050713 2-050736 2-050745		1 1 1
5	Inmatning	Hopper	Trichter	Alimentation	NC-69S NC-614S NC-617S		2-050682 2-050697 2-050710	1 1 1
6	Ljud absorbent	Sound absorber	Schallschutz	Isolant phonique	All Models		4-036673	4

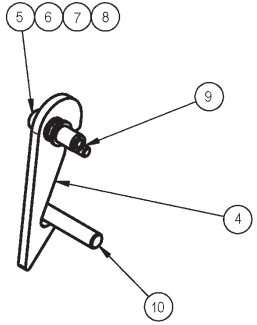
All Models = NC(R)-69(S), 614(S), 617(S)

Hopper device

Hopper device



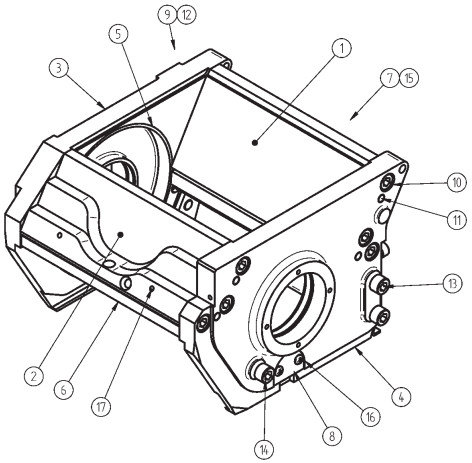
Hopper device back



Pos	SE	ENG	DE	FR	Mod No	Art No		Qty
						NCR	NC	
1	Dämpare	Damper	Dämpfer	Amortisseur	All Models	950726		1
2	Bricka	Washer	Scheibe	Rondelle	All Models	940592		1
3	Mutter M8	Nut M8	Mutter M8	Ecrou M8	All Models	940045		1
4	Spärr inmatning bak	Catch hopper back	Sperre Trichter hinterer	Verrou alimentation arriè	All Models	3-050442		1
5	Skruv M6	Screw M6	Schraube M6	Vis M6	All Models	940348		1
6	Mutter M6	Nut M6	Mutter M6	Ecrou M6	All Models	950241		1
7	Mutter M6	Nut M6	Mutter M6	Ecrou M6	All Models	940767		1
8	Bricka	Washer	Scheibe	Rondelle	All Models	940169		2
9	Spännstift	Tightening pin	Spannstift	Goupille de serrage	All Models	950493		1
10	Spännstift	Tightening pin	Spannstift	Goupille de serrage	All Models	950730		1
11**	Plugg	Plug	Stecker	Bouchon	All Models	950608		1
12**	List	List	Leiste	Baguette	All Models	970317		1

All Models = NC(R)-69(S), 614(S), 617(S). **** Visas ej på illustration** **** Not shown in illustration**

Cutterhousing

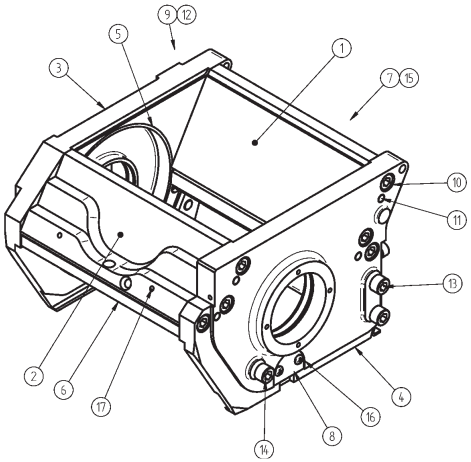


Pos	SE	ENG	DE	FR	Mod No	Art No	Qty
1	Baksida	Back side	Rückseite	Partie arrière	NC-69S NCR-69* NC-614S NCR-614* NC-617S NCR-617*	2-050300 4-050526 1-050309 4-050527 1-050313 4-050528	1 1 1 1 1 1
2	Frontsida	Front side	Vorderseite	Partie frontale	NC-69S NCR-69* NC-614S NCR-614* NC-617S NCR-617*	2-050301 4-050529 1-050310 4-050530 1-050314 4-050531	1 1 1 1 1 1
3	Sida vänster	Side left	Seite links	Côté gauche	NC-69S NCR-69* NC-614S NCR-614* NC-617S NCR-617*	1-050302 3-050532 1-050302 3-050532 1-050302 3-050532	1 1 1 1 1 1
4	Sida höger	Side right	Seite rechts	Côté droit	NC-69S NCR-69* NC-614S NCR-614* NC-617S NCR-617*	1-050303 3-050533 1-050303 3-050533 1-050303 3-050533	1 1 1 1 1 1
5	Ring fast	Ring fixed	Ring fest	Ring fixed	All Models	3-050304	2
6	Stödlinjal fast	Support rule fixed	Klemmleiste fest	Règle d'appui fixed	NC-69S NCR-69* NC-614S NCR-614* NC-617S NCR-617*	3-050305 4-050523 2-050311 4-050524 2-050315 4-050525	2 2 2 2 2 2

All Models = NC(R)-69(S), 614(S), 614(S)

*** = Härdat Stål** *** = Hardened steel** *** = Gehärtet Stahl** *** = Acier trempé**

Cutterhousing

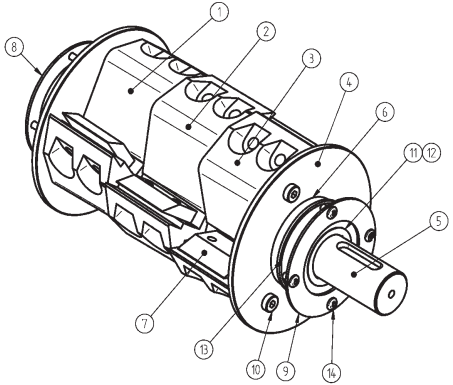


Pos	SE	ENG	DE	FR	Mod No	Art No	Qty
7	Hållare granulat	Holder granulate	Halter Mahlgut	Suporte granulés	NC(R)-69(S) NC(R)-614(S) NC(R)-617(S)	3-050306 3-050312 3-050316	1 1 1
8	Lock	Cover	Deckel	Couvercle	All Models	4-050307	2
9	Distans kvarnhus	Distance cutter house	Abstandstücke Mahlgehäuse	Entretoise chambre de broyage	All Models	4-050308	1
10	Skruv M10	Screw M10	Schraube M10	Vis M10	All Models	941013	12
11	Fjäderpinne	Spring pin	Feder	Ressort	All Models	950079	8
12	Skruv M10	Screw M10	Schraube M10	Vis M10	All Models	941014	2
13	Skruv M10	Screw M10	Schraube M10	Vis M10	All Models	941012	2
14	Skruv M10	Screw M10	Schraube M10	Vis M10	All Models	941011	1
15	Skruv M8	Screw M8	Schraube M8	Vis M8	All Models	941008	4
16	Skruv M5	Screw M5	Schraube M5	Vis M5	All Models	941007	4
17	Stoppskruv S6SS	Grub screw S6SS	Anschlag-schraube S6SS	Vis d'arrêt S6SS	NC(R)-69(S) NC(R)-614(S) NC(R)-617(S)	940988 940988 940988	4 4 6

All Models = NC(R)-69(S), 614(S), 617(S)

*** = Härdat Stål** *** = Hardened steel** *** = Gehärtet Stahl** *** = Acier trempé**

Cutter

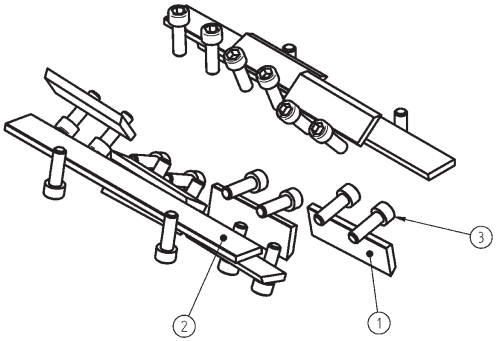


Pos	SE	ENG	DE	FR	Mod No	Art No	Qty
1	Segment vänster	Segment left	Segment links	Segment gauche	All Models	2-050321	1
2	Segment mitt	Segment middle	Segment Zentrum	Segment centrum	NC(R)-69(S) NC(R)-614(S) NC(R)-617(S)	2-050322 2-050322 2-050322	1 3 4
3	Segment höger	Segment right	Segment rechts	Segment droit	All Models	2-050323	1
4	Sida	Side	Seite	Côté	All Models	3-050328	2
5	Kutteraxel	Rotor shaft	Rotorwelle	Arbre de rotor	NC(R)-69(S) NC(R)-614(S) NC(R)-617(S)	3-050329 3-050444 3-050500	1 1 1
6	Distans segment	Distance segment	Abstandstücke segment	Entretoise segment	All Models	4-050330	1
7	Stödlinjal	Support rule	Klemmleiste	Règle d'appui	NC-69S NCR-69* NC-614S NCR-614* NC-617S NCR-617*	3-050331 4-050522 3-050331 4-050522 3-050331 4-050522	9 9 15 15 18 18
8	Lock lagerhus vänster	Cover bearing house left	Deckel Lagergehäuse links	Couvercle boîtier de palier gauche	All Models	4-022722	1
9	Lock lagerhus höger	Cover bearing house right	Deckel Lagergehäuse rechts	Couvercle boîtier de palier droit	All Models	4-026453	1
10	Skruv M8	Screw M8	Schraube M8	Vis M8	All Models	940579	6
11	Lager	Bearing	Lager	Palier	All Models	960004	2
12	Tätningsring	Sealing ring	Dichtungsring	Bague d´étanchéité	All Models	960228	2
13	Spårring	Retaining ring	Führungsring	Circlip, jonc d'arrêt	All Models	993484	2
14	Skruv M5	Screw M5	Schraube M5	Vis M5	All Models	941007	8

All Models = NC(R)-69(S), 614(S), 617(S)

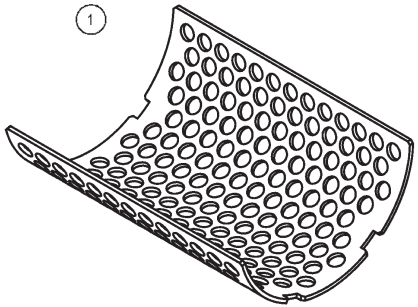
*** = Härdat Stål** *** = Hardened steel** *** = Gehärtet Stahl** *** = Acier trempé**

Knives



Pos	SE	ENG	DE	FR	Mod No	Art No	Qty
1	Kniv roterande	Knife rotating	Rotormesser	Couteaux rotatifs	NC(R)-69(S) NC(R)-614(S) NC(R)-617(S)	4-018362 4-018362 4-018362	9 15 18
	Kniv roterande, avrundad egg	Knife rotating, smooth edge	Rotormesser, smooth edge	Couteaux rotatifs, smooth edge	NC(R)-69(S) NC(R)-614(S) NC(R)-617(S)	4-042143 4-042143 4-042143	9 15 18
2	Kniv fast	Knife fixed	Statormesser	Couteaux fixe	NC(R)-69(S) NC(R)-614(S) NC(R)-617(S)	4-022224 3-050423 3-050501	2 2 2
	Kniv fast, avrundad egg	Knife fixed, smooth edge	Statormesser, smooth edge	Couteaux fixe, smooth edge	NC(R)-69(S) NC(R)-614(S) NC(R)-617(S)	4-044299 4-050601 4-050603	2 2 2
3	Skruv M8	Screw M8	Schraube M8	Vis M8	NC(R)-69(S) NC(R)-614(S) NC(R)-617(S)	940778 940778 940778	22 38 44

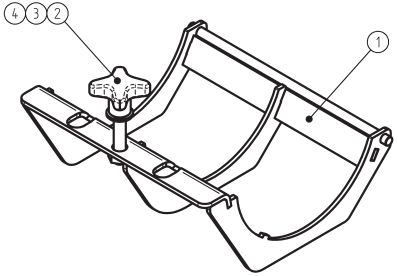
Screen



Pos	SE	ENG	DE	FR	Mod No	Art No **	Qty
1	Galler Ø 3,4,5,6,8	Screen Ø 3,4,5,6,8	Sieb Ø 3,4,5,6,8	Grille Ø 3,4,5,6,8	NC(R)-69(S) NC(R)-614(S) NC(R)-617(S)	2-050350-** 2-050351-** 2-050352-**	1
	Galler stick-reducerande Ø 3,4,5,6,8	Screen stich-reducing Ø 3,4,5,6,8	Sieb Stich-reduzierende Ø 3,4,5,6,8	Grille Éclat réductrices Ø 3,4,5,6,8	NC(R)-69(S) NC(R)-614(S) NC(R)-617(S)	2-050356-** 2-052247-** 2-052248-**	1

**** Exemple NC(R)-69(S): Ø 3 =2-050350-03 Ø 4=2-050350-04 Ø 5=2-050350-05 Ø6=2-050350-06 Ø8=2-050350-08**

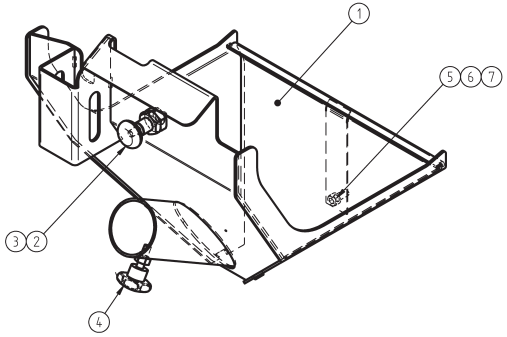
Screenbox



Pos	SE	ENG	DE	FR	Mod No	Art No	Qty
1	Gallerlåda	Screen box	Siebkasten	Boîte de tamisage	NC(R)-69(S) NC(R)-614(S) NC(R)-617(S)	2-050340 2-050427 2-050505	1 1 1
2	Stoppskruv M10	Grub screw M10	Anschlag-schraube M10	Vis d'arrêt M10	All Models	941023	1
3	Stjärnvred	Star knob	Sterngriff	Poignée étoilée	All Models	950393	1
4	Bricka	Washer	Scheibe	Rondelle	All Models	940031	1

All Models = NC(R)-69(S), 614(S), 617(S)

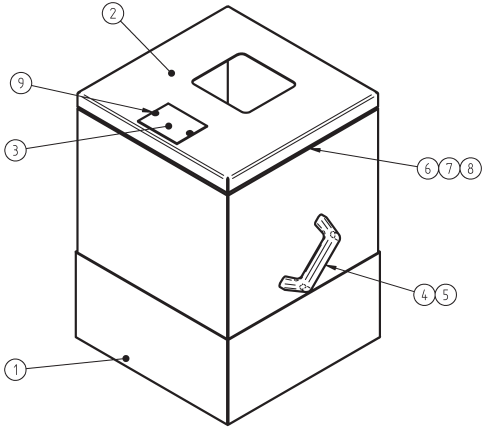
Granule bin



Pos	SE	ENG	DE	FR	Mod No	Art No	Qty
1	Granulatlåda	Granule bin	Mahlgutkasten	Bac à granulès	NC(R)-69(S) NC(R)-614(S) NC(R)-617(S)	2-050345 1-050431 1-050506	1 1 1
	Granulatlåda, låg	Granule bin, low	Mahlgutkasten, niedrig	Bac à granulès, bas	NC(R)-69(S) NC(R)-614(S)	2-050360 2-050435	1 1
2	Inställnings-bult M12	Positioning bolt M12	Einstellbolz M12	Boulon de réglage M12	All Models	950720	1
3	Knopp	Knob	Knopf	Bouton	All Models	950721	1
4	Stjärnvred	Star knob	Sterngriff	Poignée étoilée	All Models	950413	1
5	Fjäder	Spring	Feder	Ressort	All Models	4-050583	1
6	Mutter	Nut	Mutter	Ecrou	All Models	940316	1
7	Skruv	Screw	Schraube	Vis	All Models	940921	1

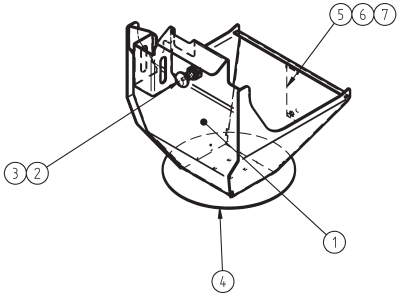
All Models = NC(R)-69(S), 614(S), 617(S)

Granule bin 45 l



Pos	SE	ENG	DE	FR	Mod No	Art No	Qty
1	Granulatlåda 45l	Granule bin 45l	Mahlgutkasten 45l	Bac à granulès 45l	All Models	2-019610	1
2	Lock	Cover	Deckel	Couvercle	All Models	3-050499	1
3	Container manuell	Container manual	Container Manuell	Container manuel	All Models	4-019398	1
	Vakuumsug	Hopper loader	Vakuumsaug	Vakuumsaug	All Models	4-019588	1
	Stjärnvred	Star knob	Sterngriff	Poignée étoilée	All Models	950413	1
4	Handtag	Handle	Griff	Poignée	All Models	950235	2
5	Skruv M8	Screw M8	Schraube M8	Vis M8	All Models	940225	4
6	Excenterlås	Eccentric lock	Exzenterschloß	Verrou excentrique	All Models	950212	2
7	Hake	Clasp	Haken	Crochet	All Models	950227	2
8	Popnit	Pop-rivet	Niet	Rivet	All Models	940263	8
9	Skruv M5	Screw M5	Schraube M5	Vis M5	All Models	941007	2

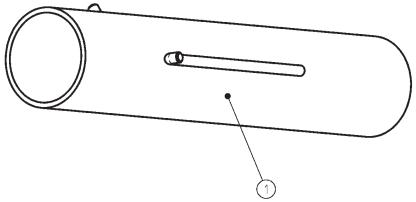
Granule bin Container



Pos	SE	ENG	DE	FR	Mod No	Art No	Qty
1	Granulatlåda	Granule bin	Mahlgutkasten	Bac à granulès	NC(R)-69(S) NC(R)-614(S) NC(R)-617(S)	2-050492 2-050571 2-050576	1 1 1
2	Knopp	Knob	Knopf	Bouton	All Models	950721	1
3	Inställningsbult M12	Positioning bolt M12	Einstellbolz M12	Boulon de réglage M12	All Models	950720	1
4	Container	Container	Behälter	Conteneur	All Models	970084	1
	Säckhållare	Sack holder	Sackhalter	Support de sac	All Models	920540	1
5	Fjäder	Spring	Feder	Ressort	All Models	4-050583	1
6	Skruv	Screw	Schraube	Vis	All Models	940921	1
7	Mutter	Nut	Mutter	Ecrou	All Models	940316	1

All Models = NC(R)-69(S), 614(S), 617(S)

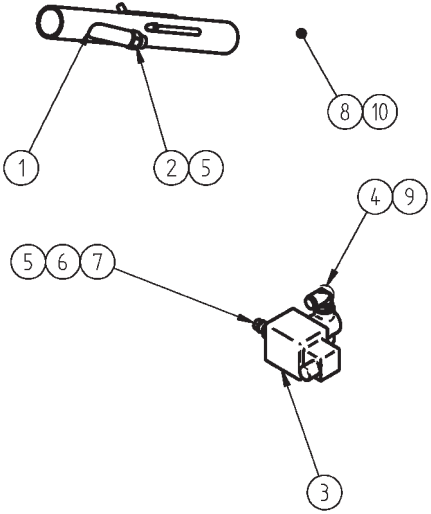
Suction pipe



Pos	SE	ENG	DE	FR	Mod No	Art No	Qty
1	Sugrör	Suction pipe	Saugrohr	Tuyau d'aspiration	All Models	3-050387	1

All Models = NC(R)-69(S), 614(S), 617(S)

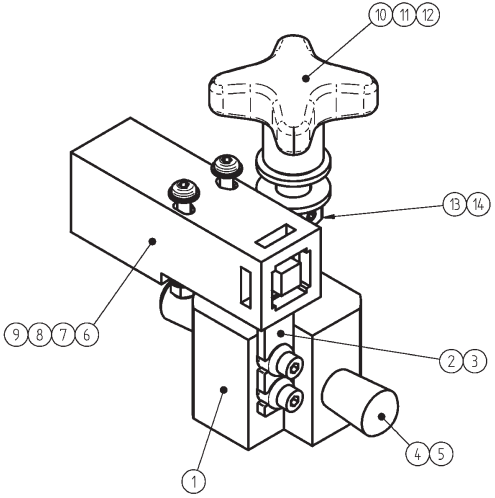
Ejector



Pos	SE	ENG	DE	FR	Mod No	Art No	Qty
1	Ejektor	Ejector	Injektor	Ejecteur	All Models	3-050376	1
2	Munstycke	Nozzle	Mundstück	Buse, gicleur	All Models	4-020180	1
3	Magnetventil	Solenoid valve	Magnetventile	Électroaimant	All Models	921022	1
4	Anslutning	Connection	Anschluß	Connexion	All Models	920786	2
5	Anslutning	Connection	Anschluß	Connexion	All Models	920270	2
6	Skott-genomgång	Through bulkhead fitting	Through bulkhead fitting	Through bulkhead fitting	All Models	921021	1
7	Nippel	Nipple	Nibbel	Raccord	All Models	920651	1
8	Slang	Hose	Schlauch	Tuyau	All Models	920236	1
9	Skruv M5	Screw M5	Schraube M5	Vis M5	All Models	941007	2
10	Genomföring	Bushing	Durchführung	Passe-câble	All Models	950119	1

All Models = NC(R)-69(S), 614(S), 617(S)

Safety

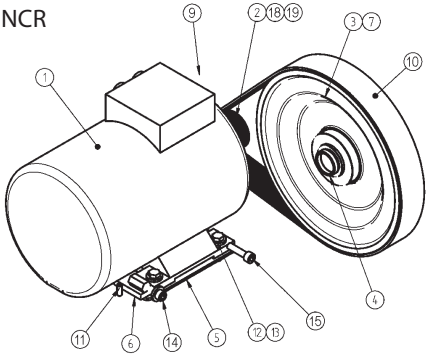


Pos	SE	ENG	DE	FR	Mod No	Art No	Qty
1	Låskolv säkerhet	Latch safety	Lock piston Sicherheit	Contre-écrou de securrité	All Models	3-050366	1
2	Nyckel	Key	Schlüssel	Clé	All Models	4-050332	1
3	Skruv M4	Screw M4	Schraube M4	Ecrou M4	All Models	941018	2
4	Stoppskruv M10	Grub screw M10	Anschlagschraube M10	Vis d'arrêt M10	All Models	941024	1
5	Knopp	Knob	Knopf	Bouton	All Models	950722	2
6	Säkerhets-brytare	Safety switch	Sicherheits-schalter	Disjoncteur de securité	All Models	911973	1
7	Skruv M4	Screw M4	Schraube M4	Ecrou M4	All Models	941026	2
8	Bricka	Washer	Scheibe	Rondelle	All Models	940244	4
9	Mutter M4	Nut M4	Mutter M4	Ecrou M4	All Models	940315	2
10	Stjärnvred	Star knob	Sterngriff	Poignée étoilée	All Models	950393	1
11	Stoppskruv P6SS	Grub screw P6SS	Anschlagschraube P6SS	Vis d'arrêt P6SS	All Models	941022	1
12	Bricka	Washer	Scheibe	Rondelle	All Models	940031	2
13	Låsbult	Locking bolt	Sperrbolzen	Boulon de verrouillage	All Models	4-019396	1
14	Stoppskruv M4	Grub screw M4	Anschlagschraube M4	Vis d'arrêt M4	All Models	940586	1

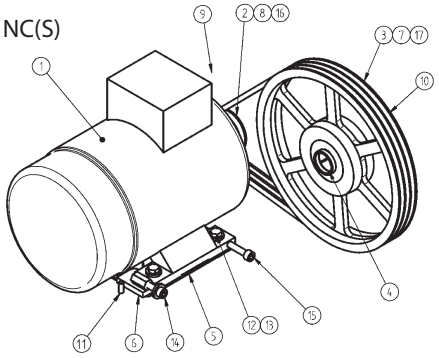
All Models = NC(R)-69(S), 614(S), 617(S)

Transmission

NCR



NC(S)



Pos	SE	ENG	DE	FR	Mod No	Art No		Ant
						NCR	NC(S)	
1	Motor	Motor	Motor	Moteur	150XX	All Models		1

All Models = NC(R)-69(S), 614(S), 617(S)

(Pos 1 Art No NCR)

Motor (kW)	200-219 V 50 Hz	200-230 V 60 Hz	220-240 V 50 Hz	380 V 60 Hz	380-420 V 50 Hz	440-480 V 60 Hz
2,2	911329	911329	911169	911329	911169	911169
4,0	911351	911351	911241	911351	911241	911241

(Pos 1 Art No NC)

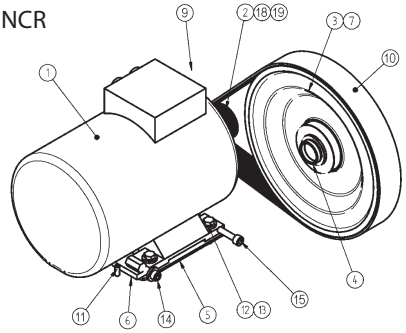
Motor (kW)	200-219 V 50 Hz	200-230 V 60 Hz	220-240 V 50 Hz	380 V 60 Hz	380-420 V 50 Hz	440-480 V 60 Hz
2,2	-	-	911972	-	911972	911972

Pos	SE	ENG	DE	FR	Mod No	Art No		Ant
						NCR	NC(S)	
2	Motor-remskiva	Motor pulley	Motorriemen-scheibe	Poulie de moteur	All Models	9-30242	930285	1
3	Kutter-remskiva	Cutter pulley	Rotorriemen-scheibe	Poulie de rotor	All Models	9-30243	930287	1
4	Distans	Distance	Abstandstücke	Entretoise	All Models	4-050367	4-050367	1

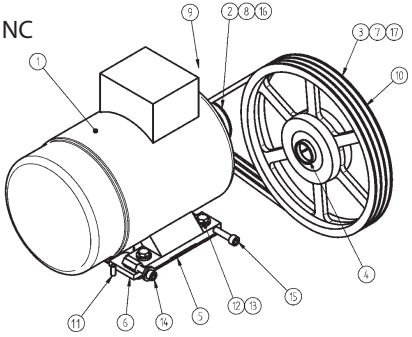
All Models = NC(R)-69(S), 614(S), 617(S)

Transmission

NCR



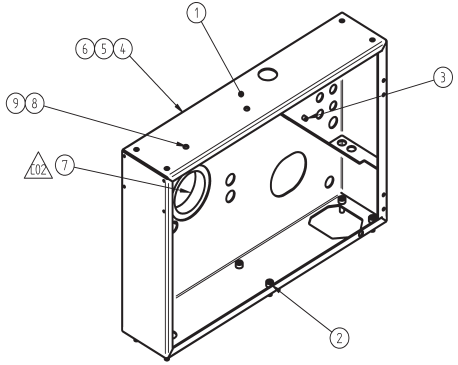
NC



Pos	SE	ENG	DE	FR	Mod No	Art No		Qty
						NCR	NC(S)	
5	Motorfäste	Bracket motor	Motor-befestigung	Support de motor	All Models	4-050368	4-050368	1
6	Remsträckare motor	Belt strecher motor	Keilriemen-spanner Motor	Tendeur de courroie moteur	All Models	4-050333	4-050333	1
7	Kläm-bussning	Expanding bushing	Klemmbüchse	Coussinet de serrage	All Models	930190	930288	1
8	Kläm-bussning	Expanding bushing	Klemmbüchse	Coussinet de serrage	All Models	-	930286	1
9	Ring	Ring	Ring	Bague	All Models	970143	970143	1
10	Kilrem	V-belt	Keilriemen	Courroie trapézoïdale	All Models	930257	930289	1 3
11	Spännstift	Tightening pin	Spannstift	Goupille de serrage	All Models	950494	950494	1
12	Skruv M10	Screw M10	Schraube M10	Vis M10	All Models	941009	941009	4
13	Bricka	Washer	Scheibe	Rondelle	All Models	940117	940117	5
14	Skruv M10	Screw M10	Schraube M10	Vis M10	All Models	941016	941016	1
15	Skruv M10	Screw M10	Schraube M10	Vis M10	All Models	941015	941015	1
16	Kil	Key	Keil	Clavette	All Models	-	4-050377	1
17	Kil	Key	Keil	Clavette	All Models	-	950729	1
18	Distans	Distance	Abstandstücke	Entretoise	All Models	4-035998	-	1
19	Skruv M10	Screw M10	Schraube M10	Vis M10	All Models	941012	-	1

All Models = NC(R)-69(S), 614(S), 617(S)

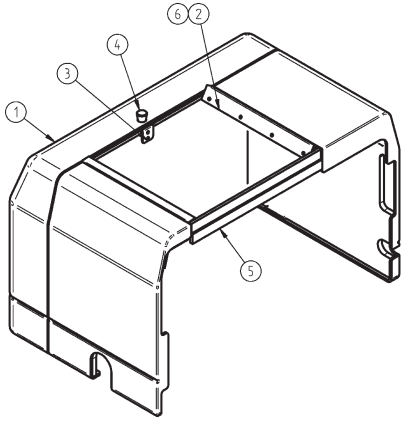
Transmission cover



Pos	SE	ENG	DE	FR	Mod No	Art No	Qty
1	Kåpa transmission	Cover transmission	Haube Transmission	Capot transmission	All Models	2-050380	1
2	Skruv M8	Screw M8	Schraube M8	Vis M8	All Models	941017	6
3	Mutter M5	Nut M5	Mutter M5	Ecrou M5	All Models	950269	3
4	Plugg D=19/15	Plug D=19/15	Stecker D=19/15	Bouchon D=19/15	All Models	950430	3
5	Plugg D=28/24	Plug D=28/24	Stecker D=28/24	Bouchon D=28/24	All Models	950727	1
6	Plugg D=25/21	Plug D=25/21	Stecker D=25/21	Bouchon D=25/21	All Models	950728	2
7	Ring	Ring	Ring	Bague	All Models	970143	1
8	Skruv M5	Screw M5	Schraube M5	Vis M5	All Models	941007	2
9	Mutter	Nut	Mutter	Ecrou	All Models	940267	2

All Models = NC(R)-69(S), 614(S), 617(S)

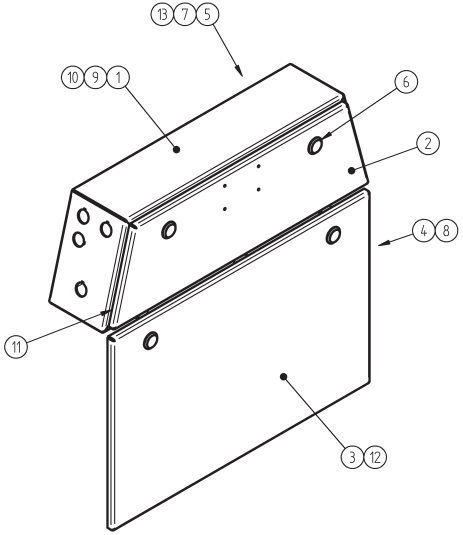
Enclosure



Pos	SE	ENG	DE	FR	Mod No	Art No	Qty
1	Kåpa	Cover	Haube	Capot	NC(R)-69(S)	1-050560	1
2	Styrning	Guide	Lenker	Guide	NC(R)-69(S)	3-050462	2
3	Fäste	Bracket	Befestigung	Fixation	NC(R)-69(S)	4-050422	1
4	Knopp	Knob	Knopf	Bouton	NC(R)-69(S)	950713	1
5	Tätning	Sealing	Dichtung	Joint d'étanchéité	NC(R)-69(S)	4-050569	2
6	Popnit	Pop-rivet	Niet	Rivet	NC(R)-69(S)	940973	10

All Models = NC(R)-69(S), 614(S), 617(S)

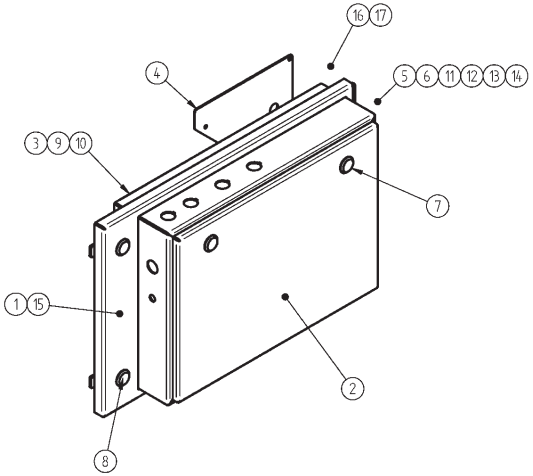
Electrical cabinet



Pos	SE	ENG	DE	FR	Mod No	Art No	Qty
1	Elskåp	Electrical cabinet	Schaltschrank	Armoire électrique	All Models	3-050390	1
2	Elskåpslucka	Electrical cabinet door	Schaltschrank-tür	Porte, Armoire électrique	All Models	3-050392	1
3	Transmissions-lucka	Transmission door	Riementrieb-tür	Porte de transmission	All Models	3-050384	1
4	Förstärkning	Reinforcement	Verstärkung	Renforcement	All Models	3-050383	1
5	Montageplåt	Mounting plate	Montageplatte	Plaque de montage	All Models	3-050395	1
6	Lås	Lock	Schloss	Verou	All Models	950707	2
7	Mutter M5	Nut M5	Mutter M5	Ecrou M5	All Models	950269	4
8	Popnit	Pop-rivet	Niet	Rivet	All Models	940261	2
9	Skruv M8	Screw M8	Schraube M8	Vis M8	All Models	940225	4
10	Bussning	Bushing	Büchse	Douille, bague	All Models	950716	1
11	List	List	Leiste	Baguette	All Models	950613	3
12	Skruv M5	Screw M5	Schraube M5	Vis M5	All Models	941020	4

All Models = NC(R)-69(S), 614(S), 617(S)

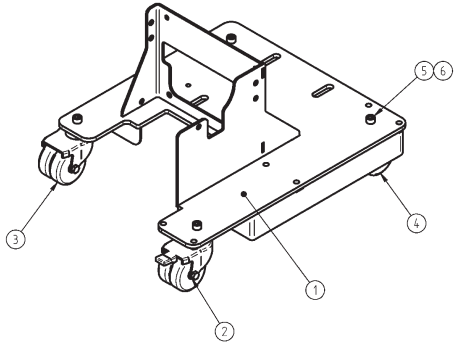
Electrical cabinet Lowbuilt / Auger



Pos	SE	ENG	DE	FR	Mod No	Art No	Qty
1	Elskåp, låg/ Auger	Electrical cabinet low/Auger	Schaltschrank niedrig/Auger	Armoire électrique bas/Auger	All Models	3-050451	1
2	Elskåpslucka	Electrical cabinet door	Tür Schaltschrank	Armoire électrique	All Models	3-050454	1
3	Montageplåt	Mounting plate	Montageplatte	Plaque, montage	All Models	3-050457	1
4	Montageplåt	Mounting plate	Montageplatte	Plaque, montage	All Models	4-050458	1
5	Gångjärn	Hinge	Scharnier	Charnière	All Models	950715	2
6	Gångjärn	Hinge	Scharnier	Charnière	All Models	950719	2
7	Lås	Lock	Schloß	Verrou	All Models	950707	2
8	Lås	Lock	Schloß	Verrou	All Models	950723	2
9	Mutter M5	Nut M5	Mutter M5	Ecrou M5	All Models	950269	4
10	Skruv M5	Screw M5	Schraube M5	Vis M5	All Models	941020	7
11	Skruv M5	Screw M5	Schraube M5	Vis M5	All Models	940794	4
12	Mutter M5	Nut M5	Mutter M5	Ecrou M5	All Models	940267	4
13	Skruv M5	Screw M5	Schraube M5	Vis M5	All Models	940378	4
14	Skruv M6	Screw M6	Schraube M6	Vis M6	All Models	940039	1
15	List	List	Leiste	Baguette	All Models	950613	3
16	Plugg	Plug	Stecker	Bouchon	All Models	950641	1
17	Plugg	Plug	Stecker	Bouchon	All Models	950608	4

All Models = NC(R)-69(S), 614(S), 617(S)

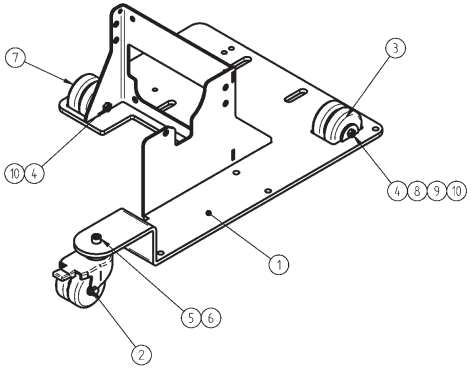
Stand



Pos	SE	ENG	DE	FR	Mod No	Art No	Qty
1	Bottenplåt	Bottom plate	Bodenblech	Plaque de fond	NC(R)-69(S) NC(R)-614(S) NC(R)-617(S)	2-050378 2-050439 2-050510	1 1 1
2	Hjul låsbart	Castor lockable	Rad verschliessbar	Roulette, verrou	All Models	950708	1
3	Hjul vridbart	Castor movable	Rad, drehbar	Roulette pivotante	All Models	950709	1
4	Hjul fast	Castor fixed	Rad fest	Roulette fixe	All Models	950710	2
5	Skruv M10	Screw M10	Schraube M10	Vis M10	All Models	941013	4
6	Mutter M10	Nut M10	Mutter M10	Ecrou M10	All Models	940015	4

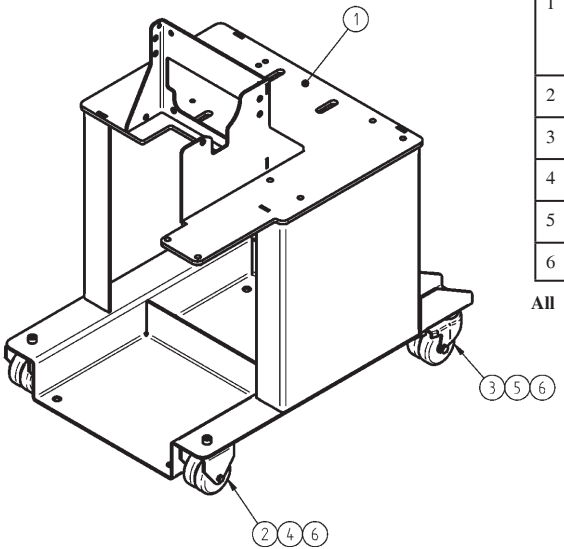
All Models = NC(R)-69(S), 614(S), 617(S)

Stand lowbuilt



Pos	SE	ENG	DE	FR	Mod No	Art No	Qty
1	Bottenplåt, låg	Bottom plate low	Bodenblech niedrig	Plaque de fond bas	NC(R)-69(S) NC(R)-614(S)	2-050370 2-050445	1 1
2	Hjul låsbart	Castor lockable	Rad verschliessbar	Roulette, verrou	All Models	950708	1
3	Hjul	Castor	Rad	Roulette	All Models	950711	4
4	Axel hjul	Shaft castor	Achse Rad	Arbre roulette	All Models	950712	2
5	Skruv M10	Screw M10	Schraube M10	Vis M10	All Models	941013	1
6	Mutter M10	Nut M10	Mutter M10	Ecrou M10	All Models	940015	1
7	Skruv M8	Screw M8	Schraube M8	Vis M8	All Models	940112	1
8	Stoppskruv P6SS	Grub screw P6SS	Anschlagschraube P6SS	Vis d'arrêt P6SS	All Models	940991	1
9	Mutter M8	Nut M8	Mutter M8	Ecrou M8	All Models	940016	1
10	Bricka	Washer	Scheibe	Rondelle	All Models	940162	2

Stand highbuilt



Pos	SE	ENG	DE	FR	Mod No	Art No	Qty
1	Stativ högt Stativ	Stand high	Gestell hoch	Fondation / Bâti haut	NC(R)-69(S) NC(R)-614(S) NC(R)-617(S)	2-050481 2-050660 2-050663	1 1 1
2	Hjul fast	Castor fixed	Rad fest	Roulette fixe	All Models	950710	2
3	Hjul låsbart	Castor lockable	Rad verschliessbar	Roulette, verrou	All Models	950708	2
4	Skruv M10	Screw M10	Schraube M10	Vis M10	All Models	941012	2
5	Skruv M10	Screw M10	Schraube M10	Vis M10	All Models	941015	2
6	Mutter M10	Nut M10	Mutter M10	Ecrou M10	All Models	940015	4

All Models = NC(R)-69(S), 614(S), 617(S)

11.1 General

Always make a note of maintenance done. This chapter contains an example of how maintenance can be noted. It is also important to monitor that checks and service are done in accordance with the instructions in this chapter.

If there are any questions, please contact Conair's local distributor or Conair's head office.

Headquarters:

Conair
One Conair Drive
Pittsburgh, PA 15202
Phone 412-312-6000
Fax 412-312-6227

Machine data

Machine type: NC/NCR.....

Serial number .....

Wiring schedule:.....

Motor: ..... V .....Hz

..... kW

Year of manufacture: 20 .....

Person responsible for safety, maintenance and service

Responsible contact person for granulator safety, maintenance and service:

Name: .....

Phone: .....

Name: .....

Phone: .....

Name: .....

Phone: .....

Name: .....

Phone: .....

11.2 Verification of checks made

General

DANGER!
Read the instruction manual before doing any maintenance or service.

DANGER!
All maintenance and service must be done by trained personnel.

Information!
The machine must be checked by both the operator and by trained personnel. Please read chapter 6.1 in this instruction manual.

Installation inspection

DANGER!
Electrical installation must be done by an electrician with the appropriate formal competence.

The machine has been installed in accordance with chapter 4 in this instruction manual.

Date: ..... / ..... 20 .....

Name: .....

Two hours after the first start, the knife clearance and tightening torque of the knife retention screws have been checked in accordance with chapter 6.3 of this instruction manual.

Date: ..... / ..... 20 .....

Name: .....

Four hours after the first start, the drive belt tension and condition have been checked in accordance with chapter 6.4 of this instruction manual.

Datum: ..... / ..... 20 .....

Namn: .....

Daily inspection

Daily inspection is done by the operator, please refer to chapter 6.1, Inspection

- Emergency stop
- Flap
- Granule bin

Signature, approved inspection If there is any deficiency or fault, immediately contact the person responsible for safety, maintenance and service.

Date: ..... / ..... 20 .....

Name: .....

Date: ..... / ..... 20 .....

Name: .....

Date: ..... / ..... 20 .....

Name: .....

Weekly inspection

Weekly inspection is done by trained personnel, please refer to chapter 6.1, Inspection

- Electrical components
- Safety switch

Signature, approved inspection If there is any deficiency or fault, immediately contact the person responsible for safety, maintenance and service.

Date: ..... / ..... 20 .....

Name: .....

Date: ..... / ..... 20 .....

Name: .....

Date: ..... / ..... 20 .....

Name: .....

Date: ..... / ..... 20 .....

Name: .....

Monthly inspection

Monthly inspection is done by the operator, please refer to chapter 6.1, Inspection.

- Knife sharpness and knife clearance
- Screen in screen box
- Roll out time
- Tipping catch (only some hopper variants have a tipping catch).

Signature, approved inspection If there is any deficiency or fault, immediately contact the person responsible for safety, maintenance and service.

Date: ..... / ..... 20 .....

Name: .....

Date: ..... / ..... 20 .....

Name: .....

Date: ..... / ..... 20 .....

Name: .....

Inspection every 6 months or 1000 hours of operation

Inspection every 6 months or 1000 hours of operation is done by trained personnel, please refer to chapter 6.1, Inspection

- Drive belt and belt tension

..... / ..... 20 ..... OK ..... Verified .....

Changed ..... Re-checked after 4 hours.....

Note: ..... Signature:.....

..... / ..... 20 ..... OK ..... Verified .....

Changed ..... Re-checked after 4 hours.....

Note: ..... Signature:.....

..... / ..... 20 ..... OK ..... Verified .....

Changed ..... Re-checked after 4 hours.....

Note: ..... Signature:.....

11.3 Verification, other items

Knife changes

...... / ..... 20 .... Fixed knives ....

Rotating knives ....

Note: .... Signature: ....

...... / ..... 20 .... Fixed knives ....

Rotating knives ....

Note: .... Signature: ....

...... / ..... 20 .... Fixed knives ....

Rotating knives ....

Note: .... Signature: ....

...... / ..... 20 .... Fixed knives ....

Rotating knives ....

Note: .... Signature: ....

Malfunctions

...... / ..... 20 .... Signature: ....

Faultl: ....

Actions taken: ....

...... / ..... 20 .... Signature: ....

Faultl: ....

Actions taken: ....

.... / ..... 20 .... Signature: ....

Faultl: ....

Actions taken: ....

.... / ..... 20 .... Signature: ....

Faultl: ....

Actions taken: ....

Other faults

...... / ..... 20 .... Signature: ....

Faultl: ....

Actions taken: ....

...... / ..... 20 .... Signature: ....

Faultl: ....

Actions taken: ....

.... / ..... 20 .... Signature: ....

Faultl: ....

Actions taken: ....

.... / ..... 20 .... Signature: ....

Faultl: ....

Actions taken: ....