

HANSA C3e

Operation, maintenance and safety manual

Original Instructions



All operators must fully read and understand this operator's manual before using the chipper. Keep this manual for future reference.



3 YEAR | **GLOBAL WARRANTY**

Register your Hansa chipper to qualify
www.hansaproducts.com/registration

MANUFACTURER: HANSA NEW ZEALAND



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www.hansaproducts.com

REST OF WORLD:

Please refer to www.hansaproducts.com for a current list of our authorised dealers and contact details relevant to your territory

TABLE OF CONTENTS

SAFETY	1
OPERATOR COMPETENCY	1
AMBIENT CONDITIONS	1
WORK AREA SAFETY	1
ELECTRICAL SAFETY.....	1
PERSONAL SAFETY.....	1
MACHINE USE AND CARE	2
SERVICE.....	2
IDENTIFYING HAZARDS AND RISKS.....	2
WHAT CAN MY HANSA CHIPPER PROCESS?	3
INTENDED USES OF THE CHIPPER	3
RECEIVING YOUR HANSA CHIPPER	4
CHIPPER COMPONENTS.....	4
ASSEMBLY.....	6
<i>Attach the wheels.....</i>	<i>6</i>
<i>Fit the inlet chute</i>	<i>7</i>
<i>Attach the (optional) chip catcher bag</i>	<i>8</i>
OPERATION	8
SAFE SETUP PROCEDURE	9
SAFE OPERATING PROCEDURE.....	9
POWER SUPPLY	10
START/STOP	11
PROCESSING FIBROUS MATERIAL	11
TRANSPORTATION	12
STORAGE.....	12
DISPOSAL	12
TROUBLESHOOTING	13
WHAT TO DO IF:.....	13
MAINTENANCE.....	13
KNIFE RE-SHARPENING AND KNIFE REPLACEMENT	14
REMOVE THE KNIFE FOR SHARPENING.....	14
SHARPEN THE KNIVES.....	15
REINSTALL THE KNIVES.....	15
BOLT TORQUE	18
SPECIFICATIONS	19
SAFETY LABELS	20
SAFETY LABEL LOCATIONS	20
SAFETY LABEL EXPLANATIONS.....	20
HANSA GLOBAL INDUSTRIAL LIMITED WARRANTY	22
COMMISSIONING CHECKLIST AND REGISTRATION	25
SOUND OUTPUT INFORMATION	25
EC DECLARATION OF CONFORMITY	26

Safety

Preventing accidents is the responsibility of every equipment operator. The operator is responsible for any accidents or hazards occurring to people or their property. Ensure every operator is familiar with the safe operation procedures and controls of the machine, how to identify hazards, and the steps required to avoid injury while handling and operating the chipper. Relevant information is contained in this manual.

- ❌ **Do NOT** modify the design of the chipper.

Operator competency

- ✅ Ensure that every person operating the chipper understands and follows the safe operating and maintenance procedures as detailed in this manual.
- ❌ **Do NOT** allow persons below the age of 18 to operate the chipper. Additionally, local regulations may restrict the age of the operator.
- ❌ **Do NOT** allow persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge to operate the machine.

Ambient Conditions

Only use the C3e in an environment that is between -5°C and 40°C. Do not use the C3e in the rain or in wet environments.

Work area safety

- a) **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- b) **Do not operate machines in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Machines create sparks which may ignite the dust or fumes.
- c) **Keep children and bystanders away while operating a machine.** Distractions can cause you to lose control.

Electrical safety

- a) **Machine plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) machines.** *Unmodified plugs and matching outlets will reduce risk of electric shock.*
- b) **Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.** *There is an increased risk of electric shock if your body is earthed or grounded.*
- c) **Do not expose machines to rain or wet conditions.** *Water entering a machine will increase the risk of electric shock.*
- d) **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the machine. Keep cord away from heat, oil, sharp edges or moving parts.** *Damaged or entangled cords increase the risk of electric shock.*
- e) **When operating a machine outdoors, use an extension cord suitable for outdoor use.** *Use of a cord suitable for outdoor use reduces the risk of electric shock.*
- f) **If operating a machine in a damp location is unavoidable, use a residual current device (RCD) protected supply.** *Use of an RCD reduces the risk of electric shock.*

Personal safety

- a) **Stay alert, watch what you are doing and use common sense when operating a machine. Do not use a machine while you are tired or under the influence of drugs, alcohol or medication.** *A moment of inattention while operating machines may result in serious personal injury.*
- b) **Use personal protective equipment. Always wear eye protection.** *Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.*
- c) **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the machine.** *Carrying machines with your finger on the switch or energising machines that have the switch on invites accidents.*
- d) **Remove any adjusting key or wrench before turning the machine on.** *A wrench or a key left attached to a rotating part of the machine may result in personal injury.*
- e) **Do not overreach. Keep proper footing and balance at all times.** *This enables better control of the machine in unexpected situations.*
- f) **Dress properly. Do not wear loose clothing or jewelry. Keep your hair and clothing away from moving parts.** *Loose clothes, jewelry or long hair can be caught in moving parts.*
- g) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** *Use of dust collection can reduce dust-related hazards.*

h) **Do not let familiarity gained from frequent use of machines allow you to become complacent and ignore machine safety principles.** *A careless action can cause severe injury within a fraction of a second.*

Machine use and care

a) **Do not force the machine. Use the correct machine for your application.** *The correct machine will do the job better and safer at the rate for which it was designed.*

b) **Do not use the machine if the switch does not turn it on and off.** *Any machine that cannot be controlled with the switch is dangerous and must be repaired.*

c) **Disconnect the plug from the power source and/or remove the battery pack, if detachable, from the machine before making any adjustments, changing accessories, or storing machines.** *Such preventive safety measures reduce the risk of starting the machine accidentally.*

d) **Store idle machines out of the reach of children and do not allow persons unfamiliar with the machine or these instructions to operate the machine.** *Machines are dangerous in the hands of untrained users.*

e) **Maintain machines and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the machine's operation. If damaged, have the machine repaired before use.** *Many accidents are caused by poorly maintained machines.*

f) **Keep cutting machines sharp and clean.** *Properly maintained cutting machines with sharp cutting edges are less likely to bind and are easier to control.*

g) **Use the machine, accessories and machine bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** *Use of the machine for operations different from those intended could result in a hazardous situation.*

h) **Keep handles and grasping surfaces dry, clean and free from oil and grease.** *Slippery handles and grasping surfaces do not allow for safe handling and control of the machine in unexpected situations.*

Service

a) **Have your machine serviced by a qualified repair person using only genuine replacement parts and accessories.** *This will ensure that the safety of the machine is maintained.*

Identifying hazards and risks

Identify hazards and risks, and take preventative steps to avoid accidents and minimise risk. Possible hazards include, but are not limited to, moving parts, thrown objects, weight of chipper and components, and the operating environment.

Below is a list of hazards and actions required to prevent injury.

 Hazard	Risk	Corrective action
 Dust	Injury or irritation of the eyes Respiratory irritation	Wear safety glasses Process freshly cut materials and/or wear a dust mask
 Electric cable	Electric shock	Ensure you use a residual current device (RCD). Ensure power supply cords are in good condition
 Cutting rotor and knives	Pinching, crushing, cutting, severing	Keep your face and body out of the inlet chute  Do not extend hands/arms past the rubber flap  Use a stick to push materials into the inlet chute  Do NOT push the stick beyond the rubber flap
 Sound	Damage to hearing	Always wear hearing protection when operating the machinery
 Discharge material	Eye injury, minor cuts	Always wear safety glasses when operating the machinery  Do NOT put body parts in front of the outlet chute  Do NOT put the machinery in a place where the outlet chute is directed on a hard surface
 Feeding material	Cuts and scrapes	Wear safety gloves Wear tight fitting long sleeves and pants to cover bare skin when

operating the machinery

⚠ Weight of the chipper

Straining, crushing

Place the machinery on firm level ground

What can my Hansa chipper process?

Intended uses of the chipper

The Hansa C3e chipper is built to process organic material including wooden branches not exceeding 40 mm in diameter. It is designed for intermittent use by the suburban gardener. **Do NOT** use the chipper for any other purpose.

Organic wastes include:

- ✓ Prunings, stalks, roots, vegetable matter, hay, grass, bark
- ✓ Dry manure
- ✓ Branches
- ✓ Palm fronds
- ✓ Dead and hard timbers (Note: these will dull the knives faster)
- ✓ Paper or cardboard



Do NOT process:

- ✗ Bones
- ✗ Soil, root balls, sand, grit, stones, metal

If you have any questions, contact your authorised dealer.

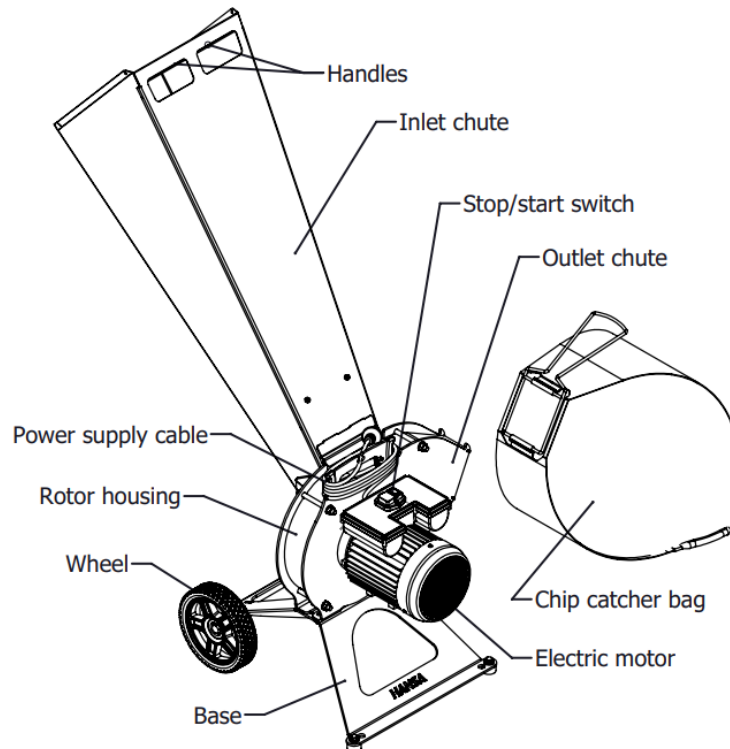


Do NOT exceed 40 mm branch diameter

Receiving your Hansa chipper

You may receive your chipper assembled from your dealer or it may be packaged in two boxes. Assembly takes approximately 30 minutes, two people working together will make the assembly easier.

Chipper components



Note: Your Hansa C3e may not come with the chip catcher bag. The chip catcher bag must be purchased separately.

Tools required for assembly (not supplied)

- A knife to cut open the box
- Two 13 mm spanners - to tighten the inlet chute and wheels
- 18 mm spanner to attach the wheels



All the C3e parts in two separate boxes

Box 1 contains:

- ✓ The chipper body
- ✓ Two wheels
- ✓ A cardboard block for support of the chipper body for wheel attachment



CAUTION: The chipper body weighs 42 kg; it is recommended to cut the box open rather than lifting the body out.



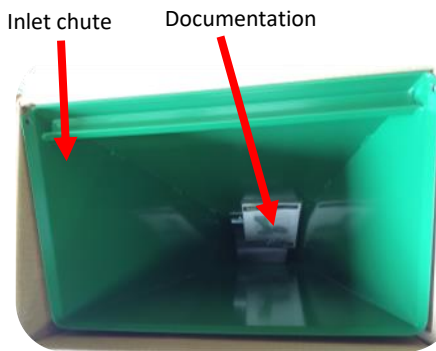
Wheels and cardboard block



Chipper body

Box 2 contains:

- ✓ The inlet chute
- ✓ A fastener pack containing parts required for assembly
- ✓ Documentation (Hansa operations manual, warranty card and Honda motor manual)



Contents in box 2



Fastener pack

Item no. Fastener pack contents (in box 2)

1



Two **bolts** to attach the inlet chute.

2



Two **heavy washers** to attach the inlet chute.

3



Two **spring washers** to attach the inlet chute.

4



Two **nuts** to attach the inlet chute.

Assembly

Attach the wheels

1

It is recommended but not required to place a cardboard block (or suitable alternative) underneath the chipper body - this makes it easier to attach the wheels.

2



Insert the axle shaft through the wheel, then slide the washer on.

3



Slide the axle shaft through the holes in the base of the chipper body.

4



Screw the nyloc nut onto the end of the axle shaft. Tighten the axle shaft using an 18 mm and 13 mm spanner.

Fit the inlet chute

5



Fix the inlet chute – Slide the tab at the base of the inlet chute over the tab at the top of the rotor housing. Adjust the inlet chute until the holes at the back of the rotor housing line up with the holes on the back of the inlet chute.

6



Line up the holes and insert the bolts (item no. 1), heavy washers (item no. 2), spring washers (item no. 3), and nuts (item no. 4). Ensure that the heavy washer is touching the chipper body (top) and the spring washer is touching the nut (bottom).

Attach the (optional) chip catcher bag

7



Hook the lower bar of the chip catcher bag into the slot underneath the outlet chute.

8



Slide the top bar of the chip catcher bag up and over the hooks on the top of the outlet chute.

9



This is how it should look when properly attached. To remove the chip catcher bag, repeat steps 7 and 8 in reverse order.

Operation

The chipper is self-feeding and has a large inlet opening. It can process:

- Prunings, stalks, vines, leaves, roots and vegetable matter, paper and cardboard
- Freshly cut material is better to process than dry material
- Maximum capacity is 40 mm diameter branches

It is helpful (but not required) to keep a wooden stick handy, approx. 40 mm diameter x 600 mm long for:

- Pushing in short, brushy and very leafy materials
- Keeping the inlet chute clear



Safe setup procedure

Before you start:

- ✔ Ensure the chipper is positioned in an open area and on firm level ground.
- ✔ Ensure the outlet chute is discharged onto soft ground (e.g. grass)
 - ✘ **Do NOT** allow the outlet chute to discharge chip onto hard surfaces (such as paved or gravel surfaces)
 - ⇒ Ejected material can rebound and cause injury
- ✔ Keep children, pets, and spectators clear of the work area at all times
 - ✘ **Do NOT** operate the chipper where there is a hazard to onlookers
 - ✘ **Do NOT** allow any person under the age of 18 to operate the chipper
- ✔ Check:
 - ✔ That all screws, nuts, bolts, and other fasteners are properly secured
 - ✔ That the power source has an RCD
 - ✔ That the supply and extension cord are in good condition with no nicks or abrasions
 - ✔ That the inlet chute and housing are clear of any leftover material
 - ✔ That all chipper components are in place and in good condition
 - ⇒ If any parts are worn or damaged, contact Hansa for replacements
 - ✔ That all labels are in good condition and easily legible
 - ⇒ Replace damaged or unreadable warning labels
 - ⇒ View photos of labels in the 'Decals' section

Safe operating procedure



- ✔ **Wear safety equipment:** Safety glasses, hearing protection and protective gloves must be worn at all times. - ensure that the gloves fit tightly.
- ✔ Tie long hair up
 - ⇒ Long hair could be pulled into the chipper
- ✔ Wear clothes that sit tightly
 - ⚠ Avoid wearing scarves or any item that can get caught in the chipper
- ✔ Wear substantial footwear and long trousers while operating the machine
 - **Do NOT** operate the machine when barefoot or wearing open footwear
- ✔ Keep your face and body away from the inlet chute
- ✔ Stand clear of the discharge zone, even when no material is being fed into the machine
- ✔ Keep proper balance and footing at all times and stand at the same level as the chipper
 - ✘ **Do NOT** overreach
 - ✘ **Do NOT** run near the machine
- ✔ Feed only freshly cut material into the chipper
 - ✘ **Do NOT** feed in materials covered in gravel, stones and dirt as this can rebound, injure the operator and damage the machinery
- ✔ Prune to a size that suits the chipper's capabilities
- ✔ Pre-cut side branches
 - ⇒ Branches will 'self-feed' more efficiently
- ✔ Keep the motor clean of debris and other accumulations
 - ⚠ Doing so reduces the risk of fire and prevents damage to the motor
- ✔ Feed limbs and branches through butt end first, leaving the foliage on
 - ⇒ This helps guide the limb down the inlet chute
 - ⇒ It reduces spinning and the occurrence of ejection of small pieces back up the inlet chute
- ✔ Hold larger branches back and feed the chipper with care until you are familiar with its capacity
 - ⇒ The motor will slow down or stall if the branch is too large
- ✔ Feed longer pieces together with short stubby pieces
- ✔ Feed soft materials intermittently with branches
 - ⇒ The wood chips tend to clean out any soft residue left in the chipper
 - ⇒ The chipper can clog up with soft, wet or fibrous materials
- ✔ Keep the outlet free of blockage
 - ⇒ If a blockage occurs, turn the motor off, disconnect the power supply and wait for rotor to stop spinning. Attempt



to free any blocked material via the outlet opening

⚠ Be mindful of the sharp knife inside the housing while doing so

- ✔ As the discharge material piles up
 - ⇒ Move the chipper to direct the outlet chute away from the pile, or move the processed material to avoid blocking. Ensure the chipper is turned off before moving
- ✔ Turn the motor off and disconnect the power supply before removing/attaching the optional bag attachment
- ✔ Turn the motor off and disconnect the power supply whenever you leave the work area

DO NOT:

- ✘ Operate the chipper wearing loose clothing and untied long hair
- ✘ Operate the chipper with the motor electrical enclosure open
- ✘ Stand at a higher level than the base of the chipper when feeding material into it
- ✘ Use the chipper in wet weather conditions
- ✘ Process old materials such as dried wooden branches
 - ⇒ They get very hard and springy when dried out
 - ⇒ They are more awkward to handle
 - ⇒ The knives dull much quicker
- ✘ Feed short, stubby pieces of wood into the chipper
 - ⇒ They bounce and spin in the inlet chute
 - ✔ Feed short stubby pieces together with longer pieces
- ✘ Put soil, sand, grit, stones, glass, pieces of metal or other foreign objects into the chipper
 - ⇒ This will damage the sharp edge of the cutting knives and can rebound and injure the operator
- ✘ Put root balls and dead wood into the chipper
 - ⇒ This dulls the knives quickly
- ✘ Overload the chipper by feeding too much material
 - ⇒ The motor operates optimally at high RPM. Overloading the chipper can result in damage to the motor. **Never** overload the chipper
 - ✔ If you can hear the motor starting to slow down, wait for the motor speed to recover and feed the material in slower
 - ✔ If the speed of the motor is dropping more so than usual when feeding material, check if there is any blockages in the housing, and check the condition of the blade.
- ✘ Allow processed material to build up in the discharge area as this can:
 - ⇒ Prevent proper discharge
 - ⇒ Result in kickback of material through the feed opening
- ✘ Transport the chipper while the motor is running
- ✘ Remove the catcher bag while the motor is running
- ✘ Operate the chipper with blunt knives
 - ⇒ This causes excessive vibration which may result in damage to the chipper
- ✘ Move or tilt the chipper while it is running
- ✘ Touch any guards or stick hands between guards while the machine is on or connected to a power supply
- ✘ Put hands or any other part of the body or clothing:
 - ⇒ Inside the feed chute past the rubber flap
 - ⇒ Inside or near the opening of the discharge chute
- ✘ Leave the chipper on while it is unattended

Power supply

The C3e requires a 220-240V AC 50Hz earthed power connection. The C3e is rated at 8.4 A. It is recommended that the C3e is only connected to a power socket which is protected by a circuit-breaker that would activate with a residual current not more than 30 mA. It is also recommended that the C3e is always used with an RCD (residual current device) having a rated residual current of 30 mA or less. Always check and test your RCD every time you use it.

If extension cords are used, they must meet these requirements:

- ✔ Rated at 10 A minimum
- ✔ Minimum conductor cross section is:
 - Cord length up to 20m: 1.5mm²
 - Cord length 20m to 40m: 2.5mm²
- ✔ Maximum length of all cords connected must be less than 40 m
- ✔ Comply with H05VV-F or H07VV-F
- ✔ Be in good condition
- ✔ Used away from sharp edges and water
- ✔ Ensure the power supply cable is kept away from moving hazardous parts
- ✔ Ensure the power supply cable is kept away from any sources of water
- ✘ If the power supply cable becomes damaged, **do NOT** attempt to operate the chipper
- ✘ If the power supply cable becomes damaged, **do NOT** touch the damaged cable unless it has been disconnected from its power source
- ✘ **Do NOT** attempt to repair any damaged cables unless you are competent to do so

Start/Stop

Before proceeding, ensure the 'safe setup procedure' has been followed on page 7 of this manual.

Plug the power supply cable into a suitable power socket and press the green power button to start the chipper. To stop the chipper, press the red stop button. Note that the cutting rotor will take approximately 30 seconds to fully stop.

Be sure to stop the machine, remove the plug from the socket, and check that all moving parts have come to a complete stop:

- Whenever you leave the machine
- Before clearing blockages or unclogging the chute
- Before checking, cleaning or working on the machine



Processing fibrous material

The C3e can process palm fronds, flax, cabbage tree leaves and other similar fibrous material. The reason the C3e can process this type of fibrous material without damaging the machine is due to its cantilevered cutting disk – it is supported on the engine side with two bearings, therefore there is no risk of anything fibrous wrapping around the shaft and working its way into the bearings. However, the output is not as consistent as that of branch material due to the fibrous nature. When processing fibrous material, take note of the following points:

- ✔ Blades must be sharp to process fibrous material
- ✔ Fibrous material is best introduced to the machine as a bundle
- ✔ Fibrous material should be introduced slowly into the machine. Hold material back while feeding it into the cutting mechanism, ensuring it is being cut properly
- ✘ **Do NOT** extend hands past the rubber flap while doing so
- ✔ Fibrous material is processed more effectively when it is green rather than when dried

Transportation

The C3e is designed to be moved by one person using both handles at the top of the inlet chute to lean the chipper backwards and transfer its weight onto the wheels. The chipper can then be wheeled to and from the work location. The chip catcher bag should be removed from the chipper when transporting or moving to avoid damage to the bag.

- ⚠ Take care when moving the C3e up and down stairs or kerbs
 - The wheels can be damaged by the shock loading caused by uncontrolled ascent/descent
 - The chipper is heavy and the operator can lose control of the machine
- ❌ **Do NOT** move the chipper while it is running

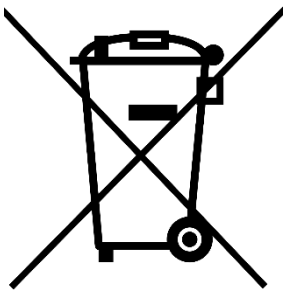


Handles

Storage

- ✔ Always allow the chipper to cool before storing
- ✔ Store the chipper out of the reach of children
- ✔ Store the chipper out of the rain
 - ⇒ Water can rust the steel body of the chipper

Disposal



If your C3e becomes irreparably damaged, or has reached the end of its useful lifespan, it must **NOT** be disposed of as unsorted municipal waste. The Hansa C3e is regarded as Waste Electrical and Electronic Equipment (WEEE), and it should be collected separately for treatment, recycling and/or environmentally sound disposal.

If you need to dispose of your C3e, you may contact your local authority to learn about disposal and recycling. Your C3e can be taken to your local collection point for recycling, free of charge (contact your dealer if you cannot find one).

By recycling, you are helping to protect the environment, human health, raw material supplies and maintain sustainable development.

The symbol to the left is located on the motor of your C3e. This symbol means that the machine should not be disposed of as unsorted municipal waste.

Troubleshooting



What to do if:

- ? The chipper won't start
 - The power source might be switched off
 - ✓ Check that the power supply cable is plugged in and switched on
 - ✓ Check that the power supply cable is undamaged
 - ✗ Do NOT attempt to use the chipper if the cable is damaged.
- ? The chipper slows down and stalls
 - The chipper is clogged up
 - ✓ Turn the motor off, disconnect the power supply, ensure that the cutting rotor has completely stopped, then remove debris/empty chip catcher bag
- ? Discharge slows down
 - The chipper is clogged up
 - ✓ Turn the motor off, disconnect the power supply, ensure that the cutting rotor has completely stopped, then remove debris/empty chip catcher bag
- ? The chipper is slowing down
 - The chipper can't process the amount of material fed into it
 - ✓ Feed the material in slower
 - ✓ Reduce material volume
- ? The chipper will not self-feed
 - ⇒ The knife and/or anvil might be blunt
 - ✓ Inspect and sharpen or replace the knife and/or anvil as required. Ensure correct clearances between the knife and anvil
- ? The material is ejected in long strips
 - The knife and/or anvil might be blunt
 - ✓ Inspect and sharpen or replace the knife and/or anvil as required. Ensure correct clearances between the knife and anvil
- ? The chipper is clogged
 - ✓ Turn the motor off, disconnect the power supply, ensure rotor has completely stopped and remove debris. You may need to disassemble the housing in order to remove the debris. See step 10 of 'Remove the knife for sharpening' on page 15 for more details on this process
- ? The chipper starts making unusual noise, the cutting rotor strikes a foreign object or the chipper starts to vibrate
 - ✓ Turn the motor off, disconnect the power supply, ensure that the cutting rotor has completely stopped, then inspect for damage
 - ✓ Replace or repair any damaged parts
 - ✓ Check for and tighten any loose parts
 - ✗ Do NOT attempt to repair the chipper unless you are competent to do so

Maintenance

Maintain the chipper with care and keep it clean at all times.

To service or inspect the equipment, or to change an accessory, you must:

- ✓ Switch the motor off and unplug the power supply cable
- ✓ Allow the chipper to cool before any inspections or adjustments are made
- ✓ Wait until the cutting rotor and motor are at a complete standstill before opening the cutting rotor housing

Initially after 2 working hours:

- ✓ Check for any loose nuts and bolts

Every 20 working hours:

- ✓ Check for any loose nuts and bolts
- ✓ Check the sharpness of the knife

Knife re-sharpening and knife replacement

How do I know that the knives need re-sharpening?

- ⇒ Chipper loses its self-feeding action with blunt knives
- ⇒ Material has to be pushed in
- ⇒ Material comes out in long strips



WARNING! Do NOT operate your chipper with blunt knives.

- ⇒ Blunt knives will cause excessive vibration
- ⇒ Blunt knives result in damage to the chipper

How to re-sharpen the knives:

If you don't have a surface grinder or are unsure how to re-sharpen the knives, contact a professional saw doctor or Hansa to arrange re-sharpening.



WARNING! Be careful when working around the sharp knives. Be aware that even though the power source is unplugged, the cutting means can still move.

Tools and materials required for re-sharpening (approx. 40 mins):

- 2 x 13 mm spanners
- 2 x 16 mm spanners
- 5 mm hexagonal Allen key
- Nylon hammer (recommended)
- Surface grinder
- Coolant

Remove the knife for sharpening

1



Remove the inlet chute - use two 13 mm spanners to remove the nuts and bolts holding the inlet chute on.

2



Tilt the chipper body so that the motor is resting on the floor. Using a 13 mm spanner, remove the two smaller bolts which hold the base onto the chipper body.

3



Open the cutting rotor housing by removing the four housing bolts using two 16 mm spanners.

4



Using a nylon hammer (or suitable alternative), gently dislodge the housing from its grooves and remove it.

5



Use a 13 mm spanner to remove the knives from the rotor. There are three nuts you must remove to do so.

⇒ If the bolt head turns, hold it with a 5 mm hexagonal Allen key

Note: **Do NOT** try to loosen the bolt with the hexagonal Allen key

6



Measure the width of the knife and check that it will be at least 35 mm after sharpening.

If the knife will be shorter than 35 mm, then the knife should be replaced. Please contact your nearest Hansa dealer.

Sharpen the knives

7



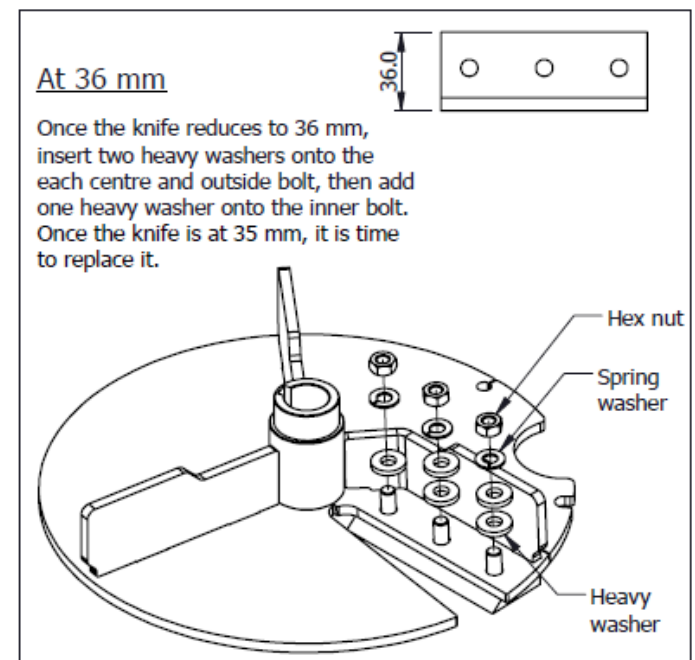
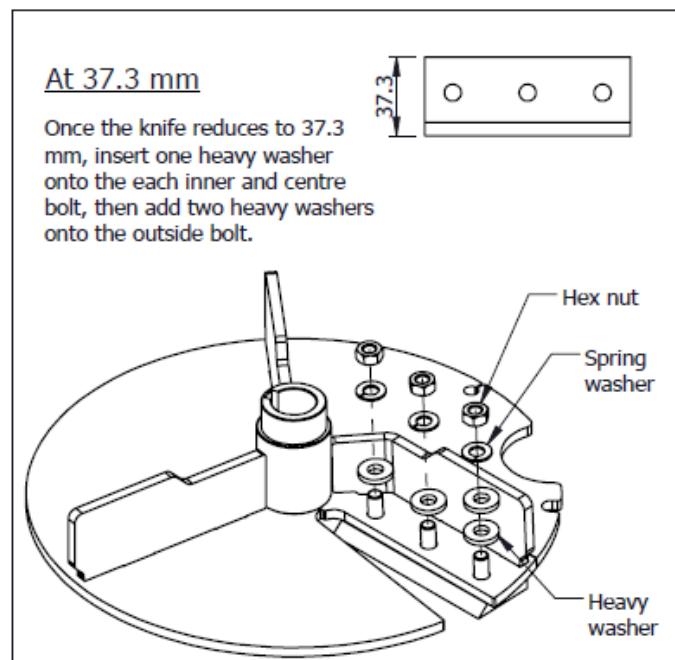
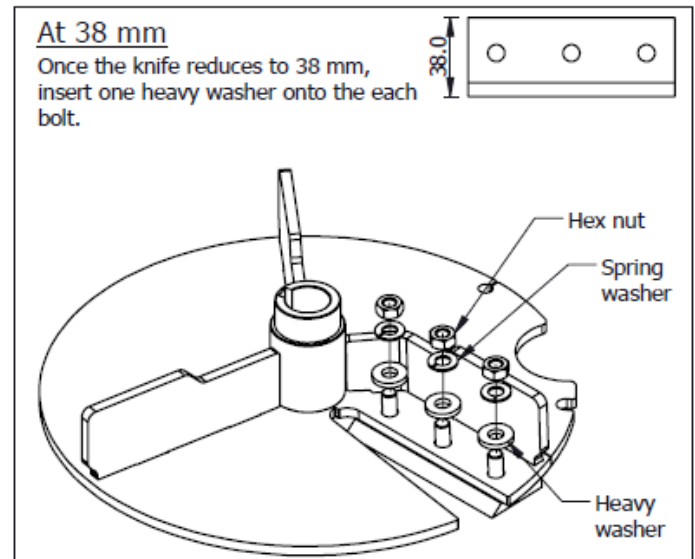
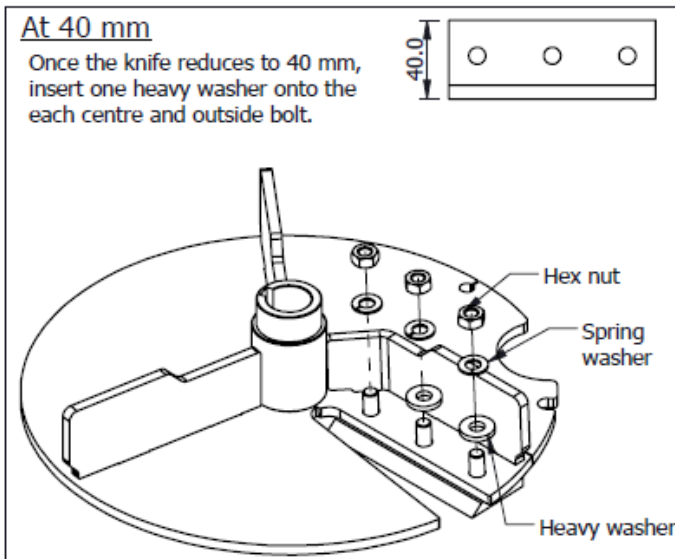
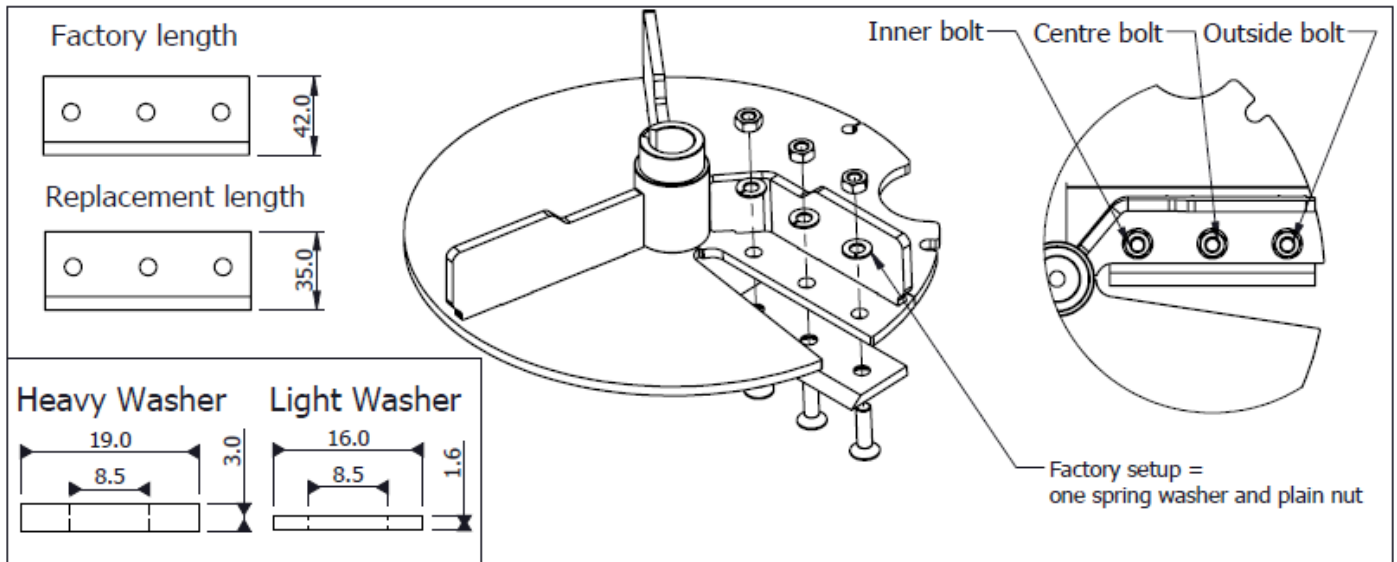
Sharpen the knives on a surface grinder. A cutting angle of 40° is critical for the performance of the chipper. Make sure plenty of coolant is used when grinding to avoid softening of the steel knives.

Reinstall the knives

8

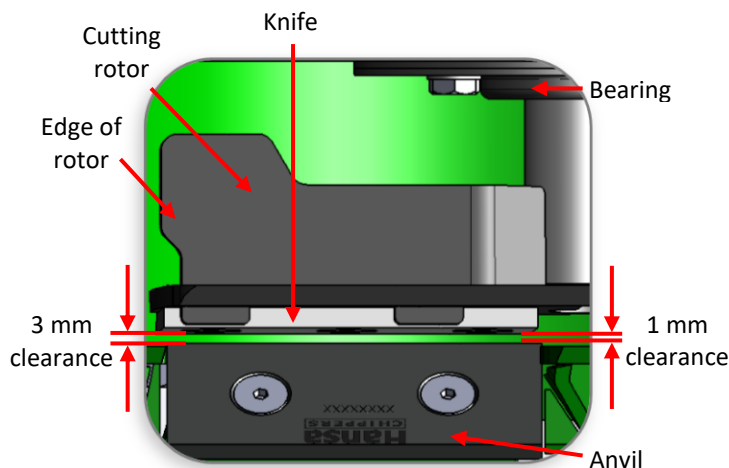
Clean all mounting surfaces and remount the knife in the reverse procedure. Tighten all three nuts as tight as possible by hand using a 13 mm spanner and 6 mm hexagonal Allen key. **Do NOT** tighten the bolts with the hexagonal Allen key.

Note: When the knives are sharpened, material is removed from the knives, affecting the distribution of weight in the rotor. The rotor must be balanced appropriately after knife sharpening, as per the method outlined below:



Note: A 20% dimensional deviation for the washers is acceptable. Two light washers (1.6 mm thick, DIN 125 A.) can be used in place of one heavy washer (3 mm thick).

9



Adjust the anvil at this stage as the location of knife edge will change after sharpening or replacement.

Normally the edge will last for over 200 operating hours. When the edge is dull, it can be reversed. When both edges are worn, the anvil should be replaced (contact Hansa for a replacement).

The clearance between the knife and anvil should be approx. 1 mm on the inside closest to the bearing and 3 mm on the outside closest to the edge of the rotor (refer to diagram for more detail).

The gap between the knives and the anvil is tapered out slightly to allow for a small amount of movement in the rotor as it bites into the wood.

The anvil position can be adjusted by loosening the anvil mounting bolts. Once adjusted correctly, tighten the anvil mounting nuts using a torque wrench to 22 Nm.

If there is not enough clearance, the knife edge may touch the anvil through deflection when cutting heavy branches and damage the sharp edge. Too much clearance will allow small twigs and fibrous materials to be dragged through without being cut.

Turn the cutting rotor by hand to check that it turns freely.

10



Reassemble the housing and inlet chute by repeating steps 1-3 in reverse.

Note: When reassembling the housing, first align the hooks on the curved wall with the tabs near the outlet on the housing front. Once these are aligned use a nylon hammer (or other suitable alternative) to hammer the back of the housing to locate the remaining four tabs. Do not attempt to do up the housing bolts until these tabs have been aligned.



WARNING! Every time the knife clamping bolts are torqued up to 22 Nm and loosened off again, the life of the bolts is reduced. The knife clamping bolts must be replaced at most after every six sharpens. Contact Hansa for replacement bolts (m8x25 countersunk bolts of grade 12.9 or higher). Use only genuine Hansa bolts.

Bolt torque

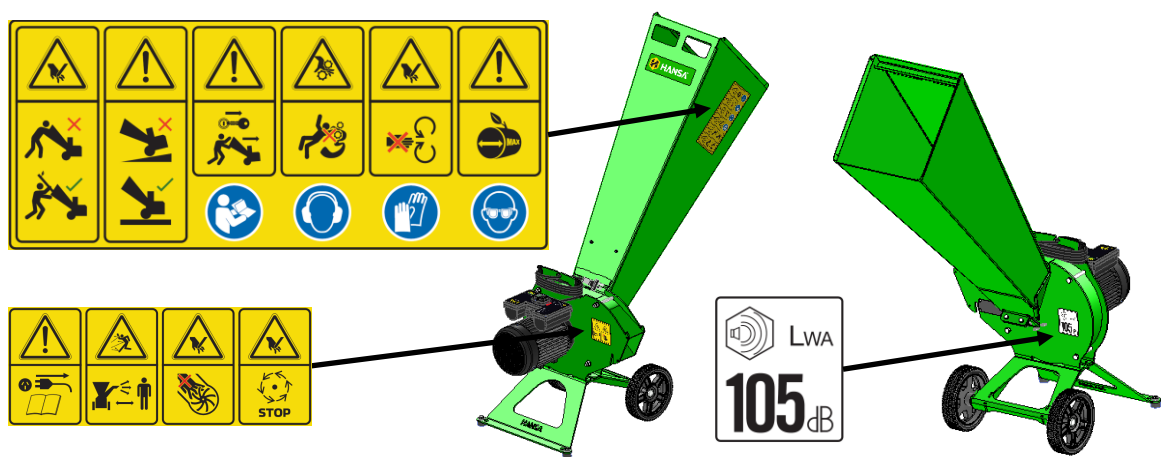
		Relative Strength Bolt Marking			
		4.6		8.8	
		Recommended Tightening Torque		Recommended Tightening Torque	
Bolt size	Spanner size	lb ft	Nm	lb ft	Nm
M8	13 mm	6	8.5	16	22
M10	16 mm	12.5	17	32	44
M12	18 mm	22	30	57	77
M16	24 mm	54	73	140	190
M20	30 mm	105	143	274	372

Specifications

	C3e	
General	Length	1095 mm
	Width	550 mm
	Height	1335 mm
	Weight	55 kg
Motor	Type	Electric 2kW
	Power source	Single phase 230-240V AC
		50-60 Hz 8.4 A (S1)
Cutting System	Disc speed	2820 RPM
	Disc dimensions	286 x 6 mm
	Shaft diameter	24 mm
	Knives	1
Feed System	Chipping capacity	40 mm
	Feed type	Gravity fed, self-feeding
	Inlet chute opening	100 x 130 mm
Discharge System	Discharge height	410 mm
	Outlet chute type	Fixed

Safety Labels

Safety Label Locations



Safety Label Explanations

Instructions manual must be read.	Ear protection must be worn.	Tight and heavy-duty gloves must be worn.	Eye protection must be worn.

Switch off and remove plug from mains before adjusting, cleaning or if the cord is entangled or damaged.	Stay clear of the outlet chute discharge area. Keep bystanders away.	Keep hands clear of outlet chute.	Wait until all machine components have completely stopped before touching them.

  	  	 	 	 	 
Use only wooden stick to clear blockage.	Operate only on stable level ground.	Turn machine off before moving.	Do not operate with loose clothing or long hair.	Do not extend hands down inlet chute past rubber flap.	Max 40mm branch capacity.



LWA

105dB

Noise level.

HANSA global industrial limited warranty

For the purposes of this warranty document, “HANSA” means HANSA Products Limited and any of its international subsidiary companies. Refer to contact details below for further information.

HANSA warrants each new HANSA chipper (“HANSA product”) free from defects in materials and workmanship under normal use and routine servicing, for the warranty periods and subject to the limitations and exclusions detailed below.

HANSA offers a special extended warranty period (“Extended Warranty”) to new HANSA products purchased from an authorised HANSA dealer. The Extended Warranty period is set out below. In order to take advantage of the Extended Warranty you must:

1. Register your HANSA product through the HANSA warranty registration process and identify your HANSA product by its machine serial number. **Registration must be completed with ten (10) days from the date of purchase.** Your warranty registration confirmation email is your identification for warranty service; and
2. Have your registered HANSA product maintained in accordance with the schedule contained in the relevant owner’s manual supplied with the product by an authorised HANSA dealer for the applicable territory. In order to ensure the safe operation of your HANSA product, we strongly recommend that you only use an authorised HANSA dealer for servicing. The cost of routine or required maintenance and services is the responsibility of the purchaser. You must keep a record of all service and maintenance history as proof of servicing history. HANSA may request such servicing history when assessing any future warranty claim.

When making a claim for warrantable repairs under the Extended Warranty, your warranty registration must accompany the HANSA product. If the warranty registration is lost or destroyed, proof of purchase documentation clearly recognising the machine serial number shall be accepted for warranty purposes. Where neither is available and HANSA does not have any record of the purchaser’s details the warranty period shall be calculated from the appropriate dealer wholesale sale date. Any claim under the applicable Warranty must be made within the relevant warranty period specified below.

The Extended Warranty may be subject to cancellation if the above requirements are not satisfied.

The Extended Warranty is available to domestic (non-commercial) and commercial customers (excluding commercial customers in the business of plant/equipment hire).

All HANSA products that have not complied with the Extended Warranty registration and maintenance requirements are entitled to the “Non-Registered” warranty period set out below.

Any authorised HANSA dealer is further authorised to repair or replace any part which proves defective within the limits of the Extended Warranty or Non-Registered Warranty (the “Warranties”) at no charge to the owner, covering parts and labour. Consumable items such as but not limited to oils, grease, blades and belts shall be the responsibility of the owner. All defective parts replaced under the Warranties become the property of HANSA.

You (as owner) are responsible for all shipping and transportation costs (including insurance) to and from an authorised HANSA dealer for the product subject to a warranty claim.

Exclusions

The warranties shall NOT APPLY TO:

- Any damage which results from neglect of periodic maintenance specified by HANSA.
- Any damage which results from repair or maintenance operations by methods other than specified by HANSA.
- Any damage which results from misuse or use beyond the limitations of the intended use specified by HANSA in the operation, maintenance and safety manual, such as overloading, including foreign objects such as stones, pieces of steel, glass etc. being dropped into the running machine or use under abnormal conditions (in HANSA’s sole judgement).
- Any damage which results from use of non-genuine parts, lubricant or fluid not approved by HANSA.
- Any damage resulting from modification or installation in other products in a way not approved by HANSA which has any influence on the function and/or performance of the products.
- Any damage which results from operation other than specified in the Owner’s Manual either intentionally or by error.
- Fading of painted surfaces, deterioration of plated surfaces, deterioration of rubber and plastics, including rusting due to the passage of time.
- Normal phenomena such as noise, vibration or oil seepage which are considered by HANSA as not affecting the quality, function or performance of the product.
- Any damage due to improper storage or transport.
- Consumable replacement items: Belts, cutting blades, anvil, serviceable bearings.
- Periodical maintenance items such as cleaning, inspection and adjustments.
- Any repair and/or adjustment performed by persons other than an authorised dealer, or damage resulting therefrom.
- Any repair and/or adjustment to correct improper or poor quality work previously performed.

- Incidental expenses incurred in the warranty claim. For example: additional expenses such as those for towing, communications, hotel and meals, incurred due to breakdown of the product at a remote location. Any expense related to personal injury and/or property damage, (exclusive of the product itself). Compensation for loss of time, commercial losses or rental costs of a substitute product during the period of adjustment.
- Any damage which results from unavoidable natural disasters, fire, collision, theft, etc.
- Any normal wear or deterioration, such as that of sliding or rotating parts caused under normal operating conditions. For example: Normal wear pivot points, rod ends and bearings.
- Any damage resulting from exposure of the product to soot and smoke, medicines and chemical agents, sea water, sea breeze, salt or other environmental phenomena.

Limitations

- HANSA reserves the right to modify, alter and improve any product without incurring any obligation to replace any product previously sold with such modification.
- In no event shall HANSA's liability exceed the purchase price of the product.
- Equipment and accessories not of HANSA's manufacture (such as engine, battery and tires) are warranted only to the extent of the original manufacturer's warranty and subject to their allowance to HANSA only if found to be defective by such manufacturer.
- HANSA reserves the right to supply remanufactured parts as it deems appropriate.

HANSA Product Warranty Period

HANSA CHIPPERS	DOMESTIC	COMMERCIAL (EXCLUDING HIRE)	COMMERCIAL (HIRE)
Non-Registered	12 months	12 months	3 months
Extended Warranty	36 months (Conditional)*	36 months (Conditional)*	N/A

Each of the warranty periods stated above commence from the date on which you purchased your HANSA product.

*Conditional Warranty:

This is a HANSA extended warranty period for products that are:

- Purchased from an authorised HANSA Dealer.
- Registered at the time of sale through the Hansa Chippers website: www.hansaproducts.com/registration
- Serviced by a HANSA Dealer in accordance with the Hansa service schedule using genuine HANSA parts.
- Extended Warranty is limited to 36 months or 1000 hours, whichever occurs first.
- Meeting all other warranty requirements.

Warranty periods vary depending on whether the purchaser is: (i) a domestic (i.e. non-commercial) customer; (ii) commercial customer (excluding plant/equipment hire businesses); or (iii) a commercial customer in the business of plant/equipment hire.

General

1. Your rights:
 - a. HANSA will recognise any implied rights and remedies that are available to you at law in the applicable territory and that cannot be excluded by HANSA.
 - b. In New Zealand, Hansa Products Ltd will recognise your statutory rights under the Consumers Guarantee Act 1993 (provided that you are a consumer for the purposes of that Act).
 - c. In Australia, this warranty is given by Hansa Products Pty Ltd. This warranty is provided in addition to other rights and remedies you have under law - our HANSA products come with guarantees that cannot be excluded under the Australian Consumer Laws.
2. If any provision of this warranty document is held by any competent authority to be invalid or unenforceable in whole or in part, the validity of the other provisions of this warranty document and the remainder of the provisions in question will not be affected.
3. The English language version of this warranty document prevails over any translated version/s of its terms.
4. This warranty document is governed by the laws of New Zealand. The parties submit to the exclusive jurisdiction of the New Zealand Courts.

Contact Details

New Zealand:

Hansa Products Limited
PO Box 10323, Te Rapa
Hamilton

Rest of World:

Please refer to www.hansaproducts.com
for a current list of our authorised dealers
and contact details relevant to your territory.

Commissioning checklist and registration



It is the retailers' responsibility to ensure that this chipper is correctly commissioned for use, and that the purchase is registered with Hansa Chippers so as to provide the owner with the full benefit of the warranty policy.

Product registration must be completed online:

www.hansaproducts.com/registration

For registration, you will require the chipper serial number and customer details.

It is the retailers' responsibility to check the following:

Final Assembly	Check all bolts for tightness including knives
Operation	Instruct the owner/operator on operating procedures and techniques
Safety	Instruct owner/operator on safety procedures
Maintenance	Explain the maintenance requirements and the importance of following the maintenance schedule to the owner/operator
Manual	Emphasise the importance of reading and understanding the manual in full before initial operation of the chipper

Sound output information

The sound output level and the sound pressure level from the Hansa C7 have been measured in accordance with the testing provisions:

Directive 2000/14/EC
EN ISO 3744:2010
ISO 11201:2010
ISO 4871:1996
EN 13683:2003

The guaranteed sound output level which must be stated by the manufacturer in accordance with Directive 2000/14/EC is as follows:

Hansa C3e: 105 dB (A) relative to 1pW.

The wood chipper's sound pressure level at the operator's position is measured in accordance with Directive 2000/14/EC is as follows:

Hansa C3e: 89 dB(A) relative to 20μPa.

The values stated above are subject to the common uncertainty of the measuring method and the estimated variation in a product series for the type of machine. Detailed information about the measurements and results and estimation of uncertainty are found in a detailed report which can be supplied on request.

As a result of the actual sound levels, the wearing of ear protectors is mandatory when using the wood chipper.

EC Declaration of Conformity

**Manufacturer:**

Hansa Products Ltd
PO Box 10323
Te Rapa
Hamilton 3241
New Zealand

Name of the person authorized to compile the technical file on behalf of the manufacturer:

Hansa Products Europe GmbH
Unterer Graben 9
85354
Freising
Germany

This declaration of conformity is issued under the sole responsibility of the manufacture.

Product designation: Brush chipper

Product description: Integrally powered shredder/chipper

Product model: C3e

Serial number: Serial Manufacture

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

Machinery Directive; 2006/42/EC
Noise emissions Directive; 2000/14/EC
Electromagnetic Compatibility Directive; 2014/30/EU
Restriction of Hazardous Substances Directive; 2011/65/EU
Waste Electrical and Electronic Equipment Directive 2012/19/EU

Furthermore, it is stated that the following has also been applied where applicable:

ISO 7010:2011
ISO 11684:1995
ISO 13857:2008
EN 50434:2014
EN 50581:2012

Signed for and on behalf of:

Hansa Products Ltd

A handwritten signature in black ink, appearing to read 'M. Vogel'.

Martin Vogel, Managing Director

Hamilton, New Zealand
September 10th 2017