

P331 Battery Powered Plastic Strapping Tool

OPERATION MANUAL



Machine	Battery Powered Plastic Strapping Tool
Model	P331
Date	April 2018
Issue	FPA001

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1. GENERAL INFORMATION

Congratulations on the purchase of your Fromm Battery Powered Plastic Strapping Tool. We trust you will have many years of packaging efficiency.

Before proceeding with the operation or installation of your new tool please read this manual thoroughly and gain a full understanding of the requirements, features and operation of your new tool.

1.1 Note of Installation

To ensure your tool operates in a safe manner please review the following requirements:

1. Tool power is 36 Volt 4.0 Ah Li-Ion Battery.
2. Keep work area clean.
3. Tool can operate in temperatures between -10°C and 45°C.
4. Please ensure you download and read our Install Guide before attempting it yourself.

1.2 Notice of Operation

Before you start using the battery tool, please review the following conditions:

1. Before operating, please read the operational manual carefully.
2. Ensure the switch is in the off position before inserting the battery.
3. Avoid any damp object or water around the electric parts.
4. Recharge battery only with the charger specified by the manufacturer.
5. When a problem does occur, please check the troubleshooting section for more information and advice.

2. SPECIFICATION

2.1 Specification table

Model	P331
Strap Width	19-32mm
Strap Thickness	0.60-1.53mm
Strap Tension	1200-7000 Newtons
Tensioning Speed	39-63mm/s
Joint Strength	Approx. 75%
Tool Size with Battery	396mm(L)x166mm(W)x175mm(H)
Weight with Battery	6.4kg
Sound level	82dB
Charging Time	Approx. 135 min

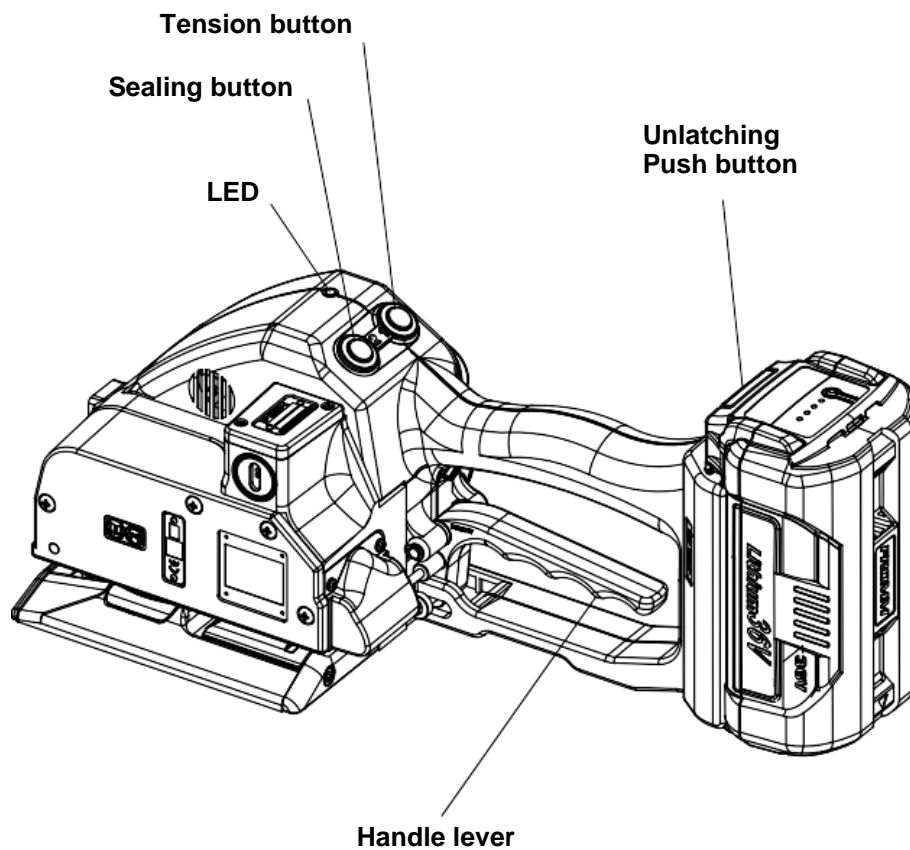
Accessories:

- Battery – 36 volt 4.0 Ah Li-Ion
- Charger – 240 volt / 50-60 Hz
- Wearing Plate
- Suspension Bracket
- Protection Plate

2.2 Chart of Types

Item No.	Model	Strap Width	Strap Thickness
43.0274	P331/19/0.80-1.19/7.0	19.0 mm	0.80 - 1.19 mm
43.0276	P331/19/1.20-1.53/7.0	19.0 mm	1.20 - 1.53 mm
43.0282	P331/25/0.60-0.79/7.0	25.0 mm	0.60 - 0.79 mm
43.0284	P331/25/0.80-1.19/7.0	25.0 mm	0.80 - 1.19 mm
43.0286	P331/25/1.20-1.35/7.0	25.0 mm	1.20 - 1.35 mm
43.0292	P331/32/0.60-0.79/7.0	32.0 mm	0.60 - 0.79 mm
43.0294	P331/32/0.80-1.19/7.0	32.0 mm	0.80 - 1.19 mm
43.0296	P331/32/1.20-1.35/7.0	32.0 mm	1.20 - 1.35 mm

2.3 Tool Description



LED - Indication at the tool	
Green	During tensioning the LED lights green.
Blue	Welding is initiated (only in semi-automatic mode).
Green	During welding the LED lights green.
Yellow	Cooling time is running, the tool must not be removed from the strap.
Blue blinking	Motor overheated. Motor cool down time running. If during this time a switch is operated, an acoustic signal happens.
Green + Acoustic signal	Cooling time is finished; the tool can be removed from the strap.
Red	Charge the battery.
Without indication	Power saving mode

3. OPERATION DESCRIPTION

3.1 Installation

Do not expose power tools to rain or wet conditions.
The batteries supplied are partially charged.
Before first use, the battery must be completely charged.
Never charge a damaged battery. Replace with a new one immediately.
Do not open batteries and store them in dry and frost-proof rooms.
Do not store the battery pack together with metal objects (short circuit risk).
The maximum ambient temperature is 50°C.
Keep dry at all times.

Inserting the Battery

Insert the battery from top to bottom into the tool until both unlatching push buttons are engaged.

When inserting the battery the LED indication shortly lights green.

Removing the Empty Battery

If the red LED starts lighting while a tensioning or welding procedure, the capacity of the battery is exhausted. All electric functions of the tool are blocked.



The seal efficiency is insufficient.

Warning! Straps with insufficient seal strength must be removed from the package.

The battery must be recharged.

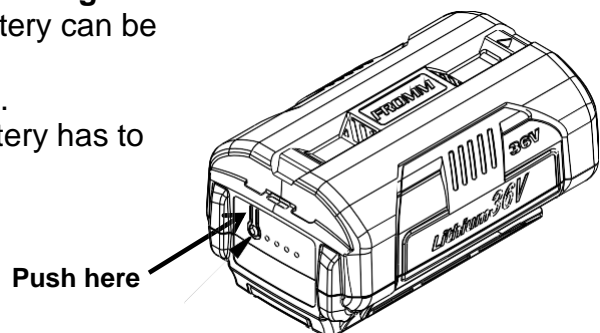
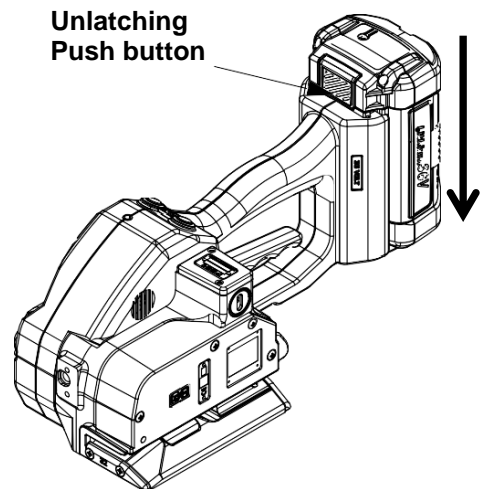
- Push the unlatching buttons at both sides of the battery.
- Pull the battery out of the tool.

Displaying of the Status of the Battery Charge

By pressing a button the status of the battery can be shown in four steps.

If four lamps are lighting the battery is full.

If only one lamp is lighting shortly the battery has to be charged.



3.2 Adjustments

3.2.1 Preselecting of Strap Tension and Tensioning Speed



Do not adjust the tensioning force too high.

If the tensioning force is higher than the tensioning strength of the strap, the strap will tear while tensioning.

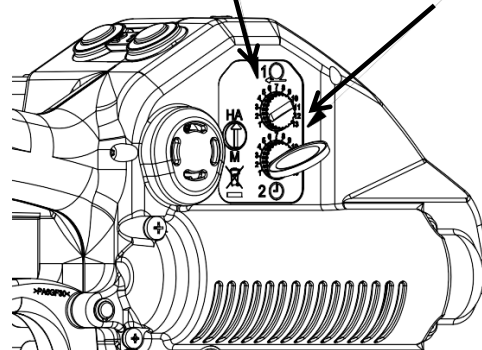
Tensioning force and tensioning speed can be preselected with the upper adjusting knob. Turning clockwise increases, turning counter clockwise decreases the tensioning force and the tensioning speed respectively.

The tensioning force on the minimum setting is 1200N and it is increased on the maximum setting to 7000N.

The tensioning speed on the minimum setting is 39mm/s, it is increasing linear up to 63mm/s on the maximum setting.

Adjusting knob tensioning force /
tensioning speed

Adjusting knob
Welding time



The adjustment knobs can be easily turned with a coin.

3.2.2 Adjusting the Welding Time

Depending on the size and quality of the strap, different welding times are required.

The welding time can be adjusted at the lower adjusting knob.

Turning clockwise increases, turning counter clockwise decreases the welding time.

3.2.3 Choose Operation Mode

There are 2 operation modes possible.

1. Manual - In this operation mode is the tensioning as well as the welding of the strap started by the operator.
2. Semi-Automatic - In this operation mode the welding of the strap is automatically started as soon as the preselected tension has been reached.

The choice of the operation mode can be made with the adjustment screw for operation mode.

Operation Mode – Manual	Operation Mode – Semi-Automatic
Turn adjustment screw with a screw driver in the desired position.	

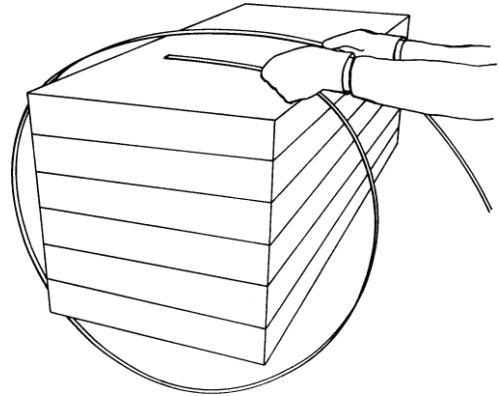
3.3 Feeding the Strap Around the Package

The strapping is fed around the package as illustrated.

Warning! The plastic strap which will be welded must be free from oil, grease and other dirt.

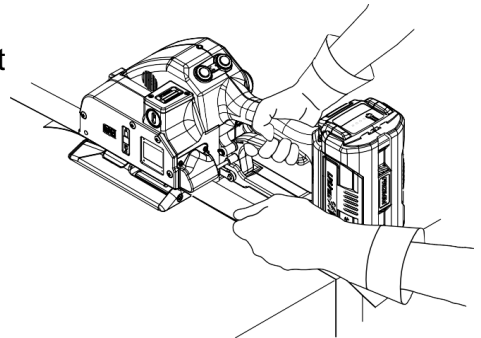


Dirty plastic straps can't be welded correct.



3.4 Inserting the Strap

- Pull up the handle lever firmly with your right hand.
- Insert the two straps well aligned on each other into the strap guide using your left hand. The lower strap end must slightly protrude the end of the base plate.
- Release the handle lever.



After welding of the strapping it is neither permitted to tension again nor to weld again. After welding and cooling the tool has to be removed from the strapping before a new strapping cycle is started. Disregard of this instruction can cause severe malfunction and damage to the tool.

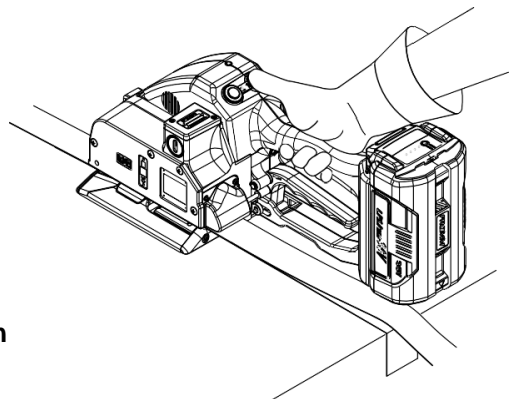
3.5 Tensioning the Strap, Operation mode – Manual

- Press down the tension button and then release it again after the desired strap tension has been reached.

The tensioning operation can be interrupted and restarted at any time.

During tensioning the LED lights green.

After automatic cut off of the tensioning force it can be tensioned again not before 8 seconds.



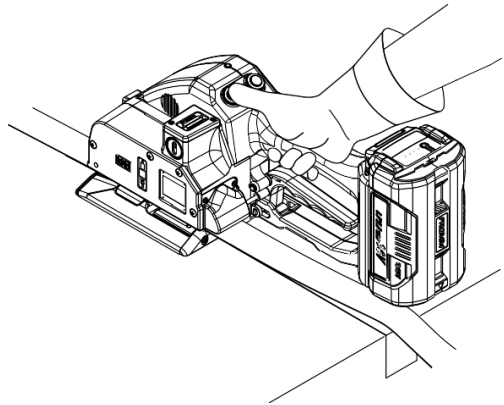
3.6 Sealing the Straps, Operation mode – Manual

- Press and release immediately the sealing button

The plastic strap is welded and cut off from the rest of the strap.

During the welding the LED lights green.

After elapsing of the adjusted welding time (see 3.2.2) the cooling time begins (LED lights yellow). During that time the tool must not be removed from the strap.

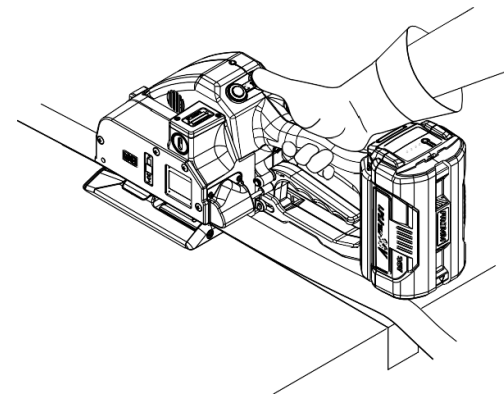


3.7 Tensioning and sealing the strap Operation mode – Semi-Automatic

- Push tension button until the adjusted tension force is reached.

During tensioning the LED lights green. The tensioning operation can be interrupted and restarted at any time.

After reaching the adjusted strap tension the sealing cycle is initiated automatically (LED lights blue). Welding gripper is lowered, the welding starts (LED lights green).



- Release the tension button after the sealing process has been started.

The plastic strap is welded and cut off from the rest of the strap. After elapsing of the adjusted welding time (see 3.2.2) the cooling time begins (LED lights yellow).

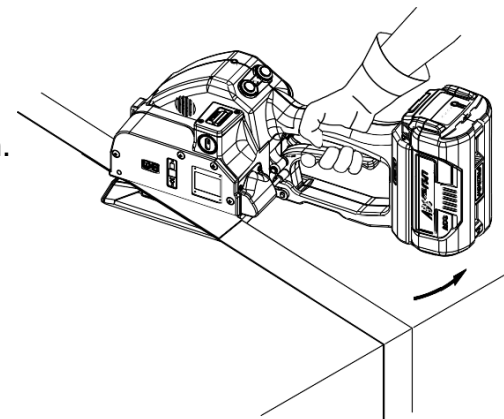


The tool must not be removed from the strap as long as the cooling time is not finished. Disregard of this regulation is causing insufficient seal efficiencies, which can cause severe injuries.

3.8 Removing the Tool

After the cooling time is elapsed an acoustic signal happens and the LED lights green again. The sealing process is finished.

- Pull up the handle lever,
- Pull the tool right and off the strapping.



3.9 Seal - Control

A regular control of the seal is necessary. The seal can be examined visually. Make a seal, peel it apart and examine it as follows:



Correct Seal

The seal must be completely welded over the whole width of the strap on a length of ca. 25mm. Minor quantities of fused plastic may overflow on sides.



Welding Time Too Short

The plastic strap is not welded over the whole width of the strap. The seal efficiency is insufficient.

Warning! Straps with insufficient seal strength must be removed from the package. Adjust the welding time (see 3.2.2).



Welding Time is Too Long

If the welding time is too long the straps are overheated. The fused plastic overflows on both sides of the straps. The seal efficiency is affected.

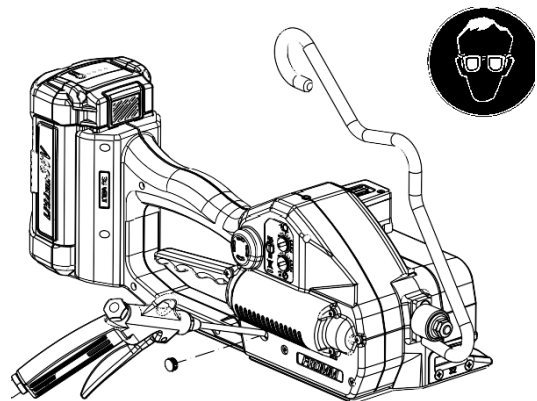
Warning! Straps with insufficient seal strength must be removed from the package. Adjust the welding time (see 3.2.2).

3.10 Cleaning

Clean strap gripping parts from strap abrasion regularly using compressed air. Thus also the cover can be removed and with a suitable air gun air been blown on the welding elements.

Do not use any mechanical tool for cleaning.

When cleaning the surface of the tool do not use water or aggressive solvents.



4. SAFETY NOTICES

1. It is not recommended to disassemble, modify or not respect the implemented safety measures. In that case, the manufacturer will not be held responsible for any possible damage caused.
2. Do not use the tool in a place where water and oil might splash.
3. Use personal protective equipment. Always wear eye protection.
4. Use only the specified battery and battery charger.
5. When battery pack is not in use, keep it away from other metal objects that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.
6. Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.
7. Do not use the tool in any way which is not specified in this manual.
8. It is forbidden to exceed the limits of use and operation with regards to weights and sizes of loads.
9. For use with plastic (PET) strapping only.

5. SAFETY RULES FOR STRAPING TOOLS

5.1 Joints

You are fully responsible to review the joints made by your tool. Become familiar with the seal control and seal adjustment described in this operation manual. Misformed joints may not secure the load and could cause serious injury. Never handle or ship any load with improperly formed joints.

5.2 Dispensing Strap

Only dispense strap from a dispenser specifically designed for strap. Tuck strap end back into dispenser when not in use.

5.3 Strap Warnings

Never use strap as a means of pulling or lifting loads. Failure to follow these warnings can result in severe personal injury.

5.4 Strap Breakage Hazard

Improper operation of the tool, excessive tensioning, using strap not recommended for this tool or sharp corners on the load can result in a sudden loss of strap tension or in strap breakage during tensioning, which could result in the following:

- A sudden loss of balance causing you to fall.

- Both tool and strap flying violently towards your face.

Note as follows:

- If the load corners are sharp, use edge protectors.
- Place the strap correctly around a properly positioned load.
- Positioning yourself in-line with the strap, during tensioning and sealing, can result in severe personal injury from flying strap or tool. When tensioning or sealing, position yourself to one side of the strap and keep all bystanders away.
- Use the correct strap quality, strap width, strap gauge and strap tensile strength recommended in this manual for your tool. Using strap not recommended for this tool can result in strap breakage during tensioning.

5.5 Cutting Tensioned Strap

When cutting strapping, use the proper strapping cutter and keep other personnel and yourself at a safe distance from the strap. Always stand to side of the strap, away from the direction the loosened strap end will fly. Use only cutters designed for strap and never hammers, pliers, hacksaws, axes, etc.

5.6 Environment Protection

Do not dispose of used batteries in the household refuse, water or by burning them. For disposal of the batteries the local laws and prescriptions must be observed.

6. SUGGESTED MAINTENANCE & TROUBLE SHOOTING

6.1 Suggested Maintenance

Fromm Packaging Australia recommends servicing every six months as a minimum, but many tools have different service intervals depending on condition and throughput. It's best to discuss your servicing requirements with Fromm Packaging.

6.2 Warranty Periods

To provide you with peace of mind all Fromm stretch wrapping, strapping and carton taping equipment includes a two year warranty from the date of delivery to your site. The warranty includes all deficiencies clearly resulting from poor manufacturing or faulty materials. Damage claims as a result of production shutdowns and claims for damage to persons and to property resulting from warranty deficiencies covering structural components and non-wearing parts effective from date of delivery to your site.

The warranty excludes:

- Wearing parts (tensioning wheels, cutters, punches, dies, notching knives, grippers, batteries and motors),
- Deficiencies resulting from improper installing, incorrect handling and maintaining the tool,
- Deficiencies resulting from using the tool without or with defective security – and safety devices,
- Disregard of directions in the operation manual,
- Arbitrary modifications of the tool,
- Deficient control or wearing parts,
- Deficient repair work to the equipment,
- Use of consumable products not recommended by the supplier of the equipment.

We reserve the right to modify the product at any time to improve the quality.

Please visit the Fromm website for the full terms of sale - www.fromm-pack.com.au/terms-of-sale/

6.3 Fromm Service Solutions

Fromm service technicians are trained to service all stretch wrapping, strapping and carton taping machines which we sell and are your on-site expert support to optimise the performance and reliability of your packaging equipment.

With technical offices in Sydney, Brisbane and Melbourne metro areas we are on hand to ensure your equipment is running smoothly. Customers located outside metropolitan areas we offer phone support and can organise onsite technical support when needed.

6.4 Possible troubleshooting causes and remedies

Troubleshooting

Tool Trouble	Possibilities	Solution
Tool doesn't work at all	Battery is empty or defective	Charge or replace battery
	Contact problems caused by broken battery housing	Replace battery
	Contact problems caused by a damaged insertation part P33.2135 or damaged motor housings P33.2111 and P33.2113/51	Replace cover insertation part or motor housing
	Contact problem of the internal wires	Check contacts and fix them if required or change defective parts
	Van N51.5464 defective	Change van
	Defective circuit board	Replace circuit board
Tool doesn't tension	Tensioning wheel is dirty or worn	Clean tensioning wheel or replace it, don't use any hard objects for this
	P35.4156 is not meshing with P35.4151 because spring N2.5296 is defective or parts are dirty	Replace spring N2.5296, clean dirty parts
	Faulty tensioning when or tensioning wheel is assembled reversed	Correct assembling
	Grippers are dirty, worn, or wrongly assembled	Replace grippers, clean them or assemble correct, don't use any hard objects for this
	Gearing parts from the tensioning gear are defective	Check tensioning gear and replace defective parts
	Defective circuit board	Replace circuit board
	Defective gear bearings	Replace bearings
	Needle free wheeling N3.4509 in gear wheel P33.2123 or in conical gear wheel P33.2122 assembled reversed or defective	Assemble the needle wheel free wheeling correct or replace it

Tool Trouble	Possibilities	Solution
Tensioning wheel turns back immediately after the tensioning cycle	Defective needle free wheeling N3.4519 in P35.4159	Check parts and replace if necessary
Tool doesn't weld	Welding gripper P35.4107 is dirty or worn	Replace or clean welding gripper, don't use any hard objects for this
	Welding stop gripper P35.4104 is dirty or worn	Replace or clean welding stop gripper, don't use any hard objects for this
	Damaged housing parts	Replace housing parts
	Defective circuit board	Replace circuit board
	Pressure spring N21.5216 defective	Replace pressure spring
	Needle free wheeling N3.4509 in P33.2123 defective or assembled reversed	Assemble the needle free wheeling correct or replace it
	Gearing parts of the welding gear are defective	Check welding gear and replace defective parts
	Motor N5.1193 defective or gear wheel is worn	Replace motor
	Gear wheel P33.2131 is worn	Replace gear wheel
	Defective gear bearing	Replace bearing
Tool badly cuts the strap or doesn't cut at all	Cutter P35.4198 is worn or damaged	Replace cutter
	Wrong adjustment of the coupler P35.0227	Check the adjustment and readjust if necessary
	Welding gripper P35.4107 is worn	Replace welding gripper
	Welding time too short	Change adjustment (See 3.2)
	Defective pressure spring N2.5211	Replace pressure spring
Tool switches off after a few strappings (displaying empty battery)	Battery defective or empty	Check the battery and change defective batteries
Gear noise	Tensioning or welding gear is worn	Check component parts and replace defective ones

7. CONTACT FROMM PACKAGING AUSTRALIA

For any questions please contact Fromm Packaging Australia

Phone: 1800 023 890

Email: info@fromm-pack.com.au

Postal Address: PO Box 4016, Mt Ommaney QLD 4074