



MEFE
MITCHELL ENGINEERING
FOOD EQUIPMENT PTY LTD

Instruction Manual



Rotary Plucking Machine

CAT 155 4 | CAT 155 6 | CAT 155 8

Revision 4

Thank you for your purchase of our Electric Poultry Plucker which removes the feathers off large turkeys, high volume chickens, ducks, geese, pheasants and quail in as little as 30 seconds. Simply scald birds then drop into the tub.

Before Use

- 1) Do not use on an unstable surface.
- 2) Confirm power supply is suitable for machine using machine data plate.
- 3) Check all nuts and bolts are secure. This should be done before and after every use, as machine vibrations can cause them to loosen.
- 4) Ensure the rotating disk is working, adjust the belt if needed.

Please Note:

Machine should be clean before and after use.

For safety, the power switches of the motor should be higher than the machine, and kept a decent distance away.

Broken plucker fingers are replaceable.

Keep hands away from the chute to avoid injuries.

Machine fitted with:

40L Rotary Plucker— 106 Natural Rubber Fingers - Soft (50 Shore)

60L Rotary Plucker— 184 Natural Rubber Fingers - Soft (50 Shore)

80L Rotary Plucker— 211 Natural Rubber Fingers - Soft (50 Shore)

Please note: To prevent overheating the best operating practice is to run the unit for no more than 15 minutes uninterrupted, following a 5 minute cool down before further use. The machine should be used with a duty cycle of 75%.

You can run the machine for a maximum of 3-4 hours continuously, however this does run the risk of overheating the motor and voiding your warranty. The copper wire can undertake 130°C, and the machine body can undertake 75°C.

Specifications:

Capacity	Voltage	Power	Size (mm)	Weight	Barrel DIA
40L	220V	Models prior to S/N 15152 - 150W Models from S/N 15152 - 180W	450 x 450 x 680	23kg	400mm
60L	220V	1.5kW	680 x 650 x 1000	69kg	600mm
80L	220V	2.2kW	850 x 850 x 1100	108kg	800mm

How To Use

- 1) Use your preferred method to kill your bird. We recommend use of our Electric Poultry Stunner (CAT 44N). Make a small cut on the neck to allow the bird to bleed, complete removal of the head is NOT recommended.
- 2) Test the bottom of the rotating disk to see whether it is working or not, and try to adjust the belt as best as possible.
- 3) Scald the bird (without scalding, the rotary plucker will not function as expected). Heat your scalding water with a scalding machine to a desired temperature. Submerge the bird into the hot water, move the bird around to ensure all feathers are loosened. Scalding is done when the bigger feathers on the wings can be pulled out easily by hand.
- 4) **BIRDS MUST BE SCALDED BEFORE BEING DEPILATED!** Different birds require different scalding temperatures and scalding times, see table below for guideline. If scalded too long or hot, the skin can tear, if it is too short or cold, feathers will stick.

We recommend our Poultry Scalding tanks CAT 103 70 (70L scalding) and CAT 103 120 (120L Scalding).

Poultry	Scalding Temperature	Scalding Time	Poultry	Scalding Temperature	Scalding Time
Quail / Bird	60-65°C	30~40 Seconds	Geese	70-72°C	120~130 Seconds
Chicken	60-65°C	70~90 Seconds	Pheasant	63-67°C	70~90 Seconds
Duck	63-66°C	160~180 Seconds	Turkey	51-54°C	80~95 Seconds

- Optional: When scalding, add some salt into the water, it will help protect the poultry skin from being broken.
 - Optional: Submerge the bird in cold ice water. A large plastic tote is suitable for this step. This is not required but many prefer to do it, because the skin is less likely to tear during plucking or further butchering.
 - Optional: Mix dish soap with the scalding water allows the hot water to penetrate to the skin. Birds have oil on their feathers and breaking down the oil allows the hot water to get to the skin. The hot water relaxes the muscles holding the feathers in place. Change the scald water when it gets dirty or oily.
- 5) After removing the birds from the scalding, place them in the drum of the plucker. Turn on the plucker and overhead water. The plucking is complete in 15-30 seconds. Turn off the plucker, then the water. The 40L plucking machine will defeather 1-2 birds at a time, the 60L plucking machine will defeather 6-10 chickens or 2 turkeys at a time, the 80L plucking machine will defeather 8-12 chickens or 3-4 turkeys at a time. The operator may have to handpick a few remaining feathers. Place the poultry in covered containers before the evisceration process, we recommend for small quantities, our handheld Evisceration fork (CAT 121C).
 - 6) The 80L Machine can also be used to dehair piglets weighing less than 20kg.

Note: Good plucking is a combination of the right number of birds, the right time of plucking and the right removal of feathers. The bird in the plucker should tumble in such a way that it is tumbling end over end, but sideways at the same time. A sort of rotating diagonal tumble. This means all sides of the bird pluck evenly. If you have too many birds in the plucker they cease to rotate correctly and slide around plucking one side and leaving the rest poorly plucked. Plucking time is an observation, and will vary according to the type of bird and feather cover. Over plucking can damage the skin. Water spray allows better plucking and a cleaner finish. It also starts to chill the bird.

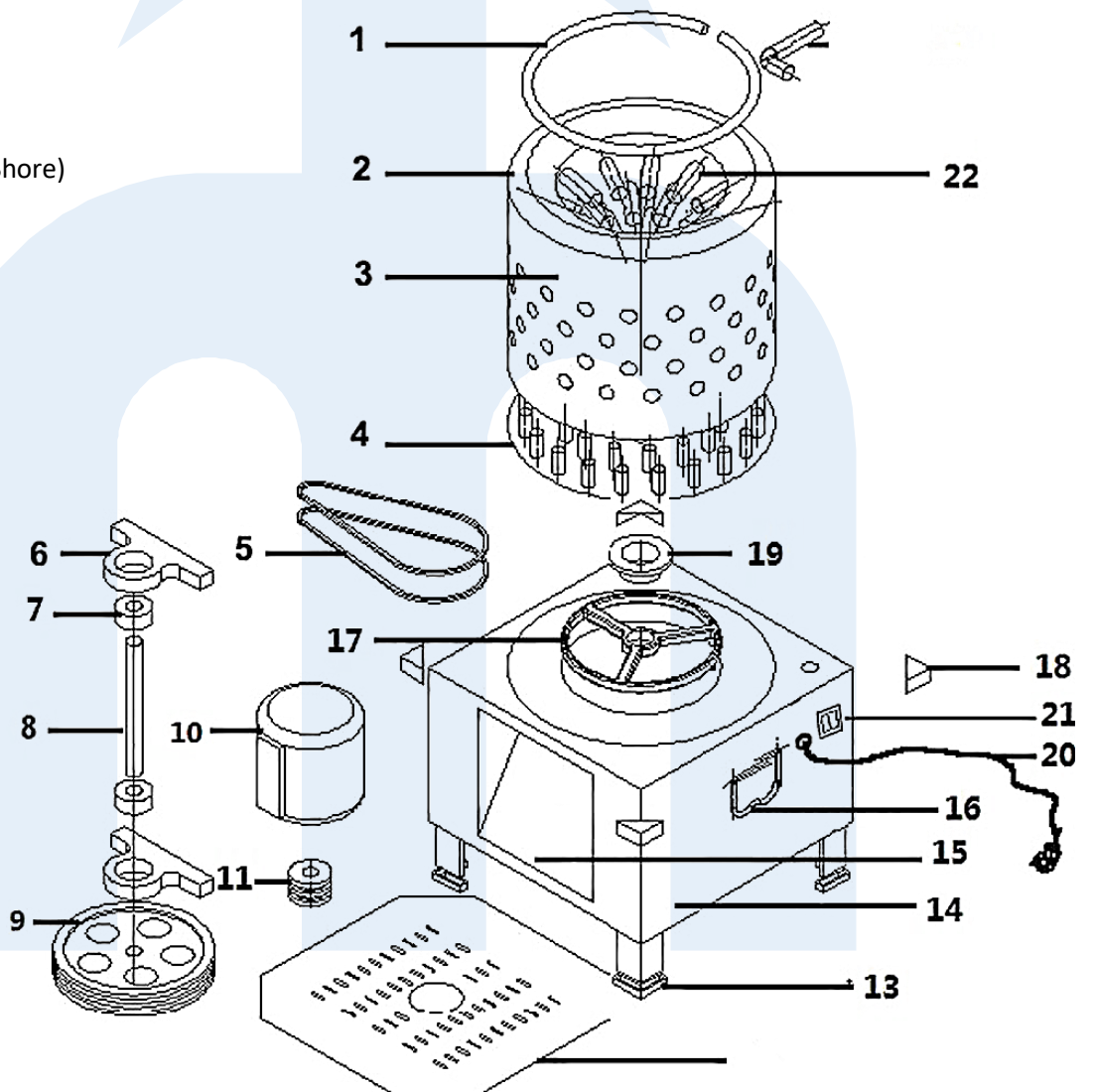
Exploded View and Parts List

CAT 155 4

No.	Item Name	No.	Item Name
1	Water Hose (Except 40L Unit— CAT 155 4)	13	Metal Leg with rubber cover (x4)
2	Drum Cover	14	Body
3	Drum	15	Feather Outlet
4	Rotating Feather Plate	16	Metal Handle
5	Motor Belts (x2)	17	Triangle Pulley
6	Bearing Block (x2)	18	Plastic Corner Protector
7	Bearing (x2)	19	Seal Ring
8	Shaft	20	Cable
9	Belt Pulley	21	ON/OFF Power Switch
10	Motor	22	Natural Rubber Fingers
11	Motor Pulley	23	Water Inlet (Except for 40L Unit—CAT 155 4)
12	Bottom Plate (Except for 40L Unit—CAT 155 4)		

Plucking Fingers

40L Replacement fingers
CAT 155 4 50—Soft (50 Shore)



Exploded View and Parts List

CAT 155 6—CAT 155 8

No.	Item Name	No.	Item Name
1	Water Hose	13	Metal Leg with rubber cover (x4)
2	Drum Cover	14	Body
3	Drum	15	Feather Outlet
4	Rotating Feather Plate	16	Metal Handle
5	Motor Belts (x2)	17	Triangle Pulley
6	Bearing Block (x2)	18	Plastic Corner Protector
7	Bearing (x2)	19	Seal Ring
8	Shaft	20	Switch Pillar
9	Belt Pulley	21	Cable
10	Motor	22	ON/OFF Power Switch
11	Motor Pulley	23	Natural Rubber Fingers (see below for codes)
12	Bottom Platez	24	Water Inlet

Plucking Fingers

60L Replacement Plucking Fingers

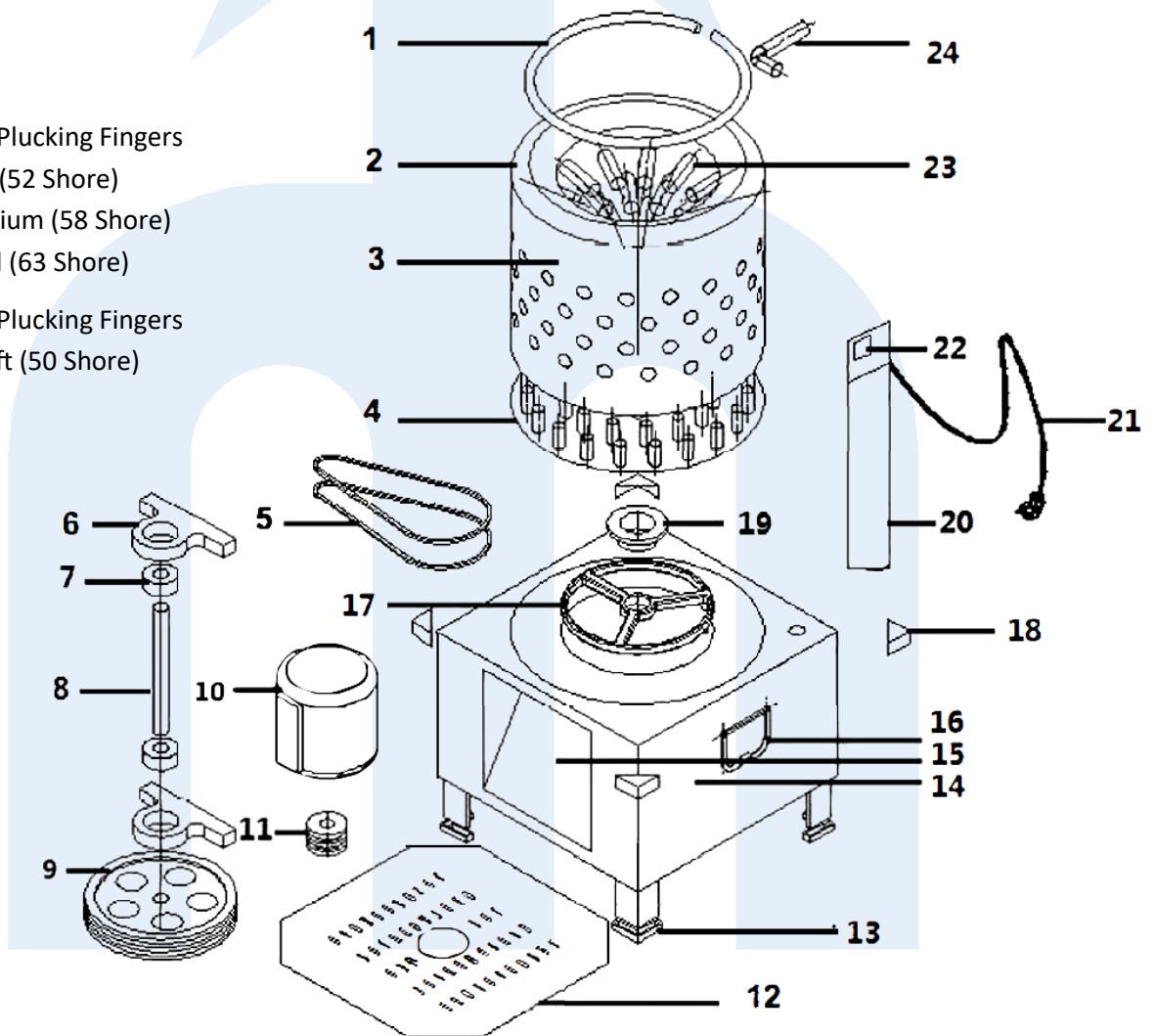
CAT 155 52—Soft (52 Shore)

CAT 155 58—Medium (58 Shore)

CAT 155 63—Hard (63 Shore)

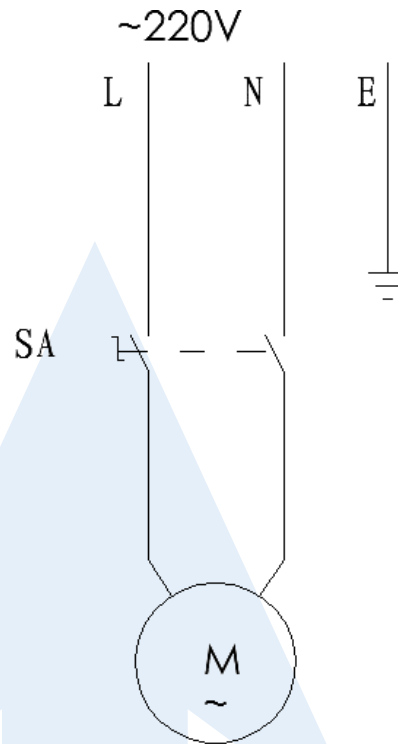
80L Replacement Plucking Fingers

CAT 155 8 50—Soft (50 Shore)



Circuit Diagram

Code	Meaning
L	Live Wire
N	Neutral Wire
E	Earth Wire
SA	Power Switch
M	Motor



Trouble Shooting

Problem	Possible Cause	Solution
Skin Tearing	<ol style="list-style-type: none"> Over scalding (too hot or too long) will weaken the skin and allow it to tear. Small birds and very thin skinned birds like quail and squab, etc. 	<ol style="list-style-type: none"> Scald the birds with the right temperature. Use the right model of plucker for the size of bird you are plucking.
Machine is slow when adding poultry	<ol style="list-style-type: none"> The bottom line of fingers on the drum and the outer line of fingers on the bottom plate is too long. The belts of the pulley are loose. The latch between the belt pulley and shaft is loose. Start of the capacitor of the motor is broken. The electric contacts (like a clutch) near to the shaft of the motor is loose or disconnected. 	<ol style="list-style-type: none"> Check the finger length and cut them to keep the suitable space for the chickens to rotate. Adjust the belts. Fasten the latch. Change to a new start capacitor. Fasten the clutch of the motor.
Not rotating	<ol style="list-style-type: none"> The power switch is broken. The wires are disconnected. The capacitor is broken. The motor is burnt. 	<ol style="list-style-type: none"> Change to a new switch. Check the wires. Change capacitor. Change motor.