

## Ezi-Bagger Instructional Video Transcript - Video Part 1

This is C-Mac's Ezibagger machine, my name is Robert McMaster and I am general manager for C-Mac Industries. This machine was developed 30 years ago by my father for putting potting mix into plastic pots for the nursery industry. Since then the machine has been developed by our nursery division and is now widely utilised in all industries, and now one of our most popular products.

To start off using the machine the customer needs to load his materials in the hopper at the top using a frontend loader or a conveyor system. The material then falls down through the hopper and sits on the vibrating conveyor underneath it, feeds down the vibrating conveyor over the hinged chute and into the bag. The bag can consist of being a hessian bag, plastic bag, or whatever the customer requires.

To fill the bag it can be done three different ways:

We can fill it manually using the foot pedal, just holding the bag underneath the chute and operating the foot pedal.

The second way of doing it is to set a timer operation, where you just push the foot pedal and it will run for 2, 3, 6 seconds whatever time you would like it to run to fill the bag.

The third option is to use the scale system, where you set the scale weight of 25 or 40 kilos or 15 kilos. Press the foot pedal once and the material flows out of the chute continuously and stops when the bag reaches that weight.

Once the bag is full, you just lift it onto the metal slide on our static conveyor, it can be slid along to the heat sealer where we can heat seal the plastic bag, or use a stitching machine to sew up a hessian bag or wiring up with a wire using a little hand wiring gadget.

The hopper has been developed over a number of years, it has various angles and different radiuses in the corners to facilitate a better flow of the material. The hopper is made of galvanised steel normally, then it is etched primed and painted with two coats of enamel. Some hoppers are made of stainless steel to give extra-long life for corrosive products or in the food industry where stainless steel is a requirement. On top of the hopper is a hungry board. The hungry boards are made to suit the customers' requirements. Hungry boards are different sizes because customers have different sized front end loaders that can reach different heights and have different width buckets.

The galvanised steel frame and the legs are attached separately and this is to assist customers with different shaped floors and terrain. The whole unit is modularised so it can be made the most economical way possible and it helps keep the price down. Also on the galvanised frame we have these forklift slippers so the machine can easily be moved around. You must remember it shouldn't be full of sand when you are doing that. Another reason these legs are made separately is that some customers require the units to be mobile, so they can be mounted on trailers and moved around the countryside wherever they are needed. Here at the back of the ezibagger machine this rear leg has been manufactured shorter to allow for this step here so the customer can get his machine back hard against the wall. If he wanted he could have actually mounted this here back on the loading dock.

Just below the hopper is a stainless steel chute. The stainless steel chute is suspended by wire rope which are made of stainless steel as well and they are attached to the galvanised frame. On the back of this chute is an electromagnetic vibrator which is manufactured in house at C-Mac. The vibrator works on a magnet which turns itself on and off. Now that magnet turns itself on/off at 50 cycles per

second. What that means is that the chute will move forward and then return, move forward and return at 50 cycles per second. Now the chute is on an angle so you can imagine the chute, on an angle like a grader, pushes the sand forward then comes back, pushes it forward, then comes back, sand drops down, pushes sand forward, comes back, more sand drops down and pushes forward. So that gives it the flow that the material needs to fall out of the hopper and come forward into the bag.

On both sides of the hopper is a vibrator unit which is run by 240 volt. These motors have eccentric weights on them which cycle at 3,000 revs per minute. The weights give a hammering action of approximately 30 kilos per cycle. These side vibrators can be adjusted to give you different forces depending on product. When these leave the factory these have an impact of 30kilos.

On the side of the Ezibagger is our electronic control box. The unit is mounted back behind the framework to help protect it. Basically the unit runs on 240 volt. We have an isolator switch, have a power on indicator, we have our side vibrators which I was talking about earlier on, we have our chute vibrator adjustment, and over the side here we have our control which we can turn onto manual for working the foot pedal, or we can turn it onto timer to set timer operation which is set by this control, so you can set the number of seconds, and the final position is the weight which is used to use the scale unit.