

INLINE FILLING MACHINE

Model AGF-2

CONTENTS

INTRODUCTION	3
Warranty	3
Description on Machine and Limits of Use	3
Abbreviations	3
Section 2-User's Manual	5
SCREENS	5
OPERATIONAL SETTINGS.....	5
1. MAIN SCREEN (Main)	5
2. CONTINUE SEALING (ContSeal)	6
3. ANGLE DELAY (POSITINER) AND TRIGGER DELAYS AND FLAG LENGTHS (LABELLER) (DlyFlg)	7
4. MOTOR SPEED ADJUSTMENTS (Speed)	7
PROTECTED SETTINGS (SyS)	8
1. DRIVE ACCELERATIONS- Labellers.....	8
2. LIMITS.....	9
3. DRIVE SCALLING	10
4. INDEX.....	10
OPERATION PROCEDURE	11
INSTALLING LABEL REELS	12

INTRODUCTION

This booklet describes the use instructions for the **Inline Filling Machine** for 2.5 l jam buckets, model AGF-2.

Proper machine operation depends on correct use and adequate maintenance.

The manufacturer disclaims all responsibility due to negligence or failure to observe the rules given in the following booklet. In addition it disclaims all responsibility deriving from improper use of the machine and the equipment.

Warranty

The manufacturer guarantees its products for a period of twelve months from the date of delivery to plant.

This warranty is expressed solely in the repair and replacement free of charge of those parts that after a careful examination carried out by the manufacturer turn out to be defective.

Warranty, is considered limited to solely material defects and ceases to have effect if the parts returned anyhow turn out to have been dismantled, tampered with or repaired outside the manufacturer's factory.

Description on Machine and Limits of Use

This machine is a custom filling, sealing and labelling machine for 2.5L jam buckets.

The machine consists of a new indexed conveyor, bucket dispenser unit, bucket positioner and labeller and used the filling and sealing stationed pre-owned by Aussie Growers Fruit.

The machine dispenses the buckets from the bucket dispenser using a number of synchronised pneumatic pistons. The buckets are placed on the conveyor and are transported to the filling station to be filled with jam and then to the sealing station where a foil is applied to seal the bucket. From the sealing station the bucket is placed in a roller unit which positions it for labelling. After the label is applied the conveyor transports the bucket to a turn table where the operator can check the product before applying the lid manually.

The machine is for use in regular food packaging operations and is not designed to operate in special environments such as ones with explosion hazard.

Abbreviations

• Main	Main screen
• ContSeal	Continue sealing after emergency stop
• DlyFlg	Delay distance and flag length screen
• Speed	Speed adjustments screen
• Sys	System settings (protected)
• Acc/Dec	Drives accelerations/deceleration
• Limits	Minimum number of buckets in the dispenser and maximum label length
• DriveScale	Drivers scale
• Index	Conveyor Index Settings

Section 2-User's Manual

SCREENS

OPERATIONAL SETTINGS

The following parameters need to be set for before starting the filling process.

1. The speed of the machine
2. The speed of the conveyor, positioner and label head
3. The delay angle for the positioner
4. The delay distance and flag length for the label head

Additional settings include:

5. Number of buckets to be sealed, positioned and labelled after an emergency stop. This number needs to be checked and set after each emergency stop if there are still buckets on the conveyor that need sealing.
6. Drivers accelerations/decelerations
7. Minimum number of buckets in the dispenser and the maximum label length
8. Drivers' frequency at 100% of machine speed
9. The conveyor index settings



The parameters 6 to 9 have been preset by the manufacturer to ensure smooth operation of the machine. Only appropriately trained and experienced staff should change these setting if they need to be modified.

All the settings above can be done by switching between the following screen s on the AGF-1 Model Display:

1. MAIN SCREEN (Main)

The on/off buttons for most of the equipment are on this screen.



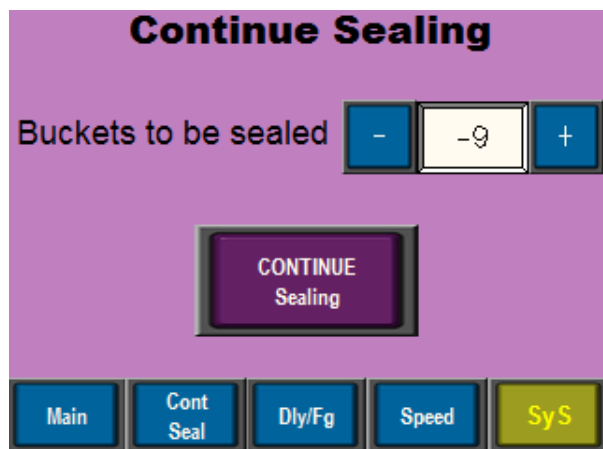
The speed of the machine can also be adjusted on this screen. Use the top window to increase or decrease the speed to suit the other equipment connected to the machine.

2. CONTINUE SEALING (ContSeal)

If the machine is stopped during operation and there are buckets on the conveyor that are filled but not sealed and labelled please follow the following steps:

1. Remove all the buckets released from the bucket dispenser that are between the bucket dispenser and the filling station (all loose empty buckets).
2. If there is a bucket at the selling station that has not been sealed prior to stopping the machine, remove this bucket and place it on the conveyor on the next available position after the other filled and not sealed buckets. The sealing will start again with the next stop of the conveyor only.
3. In there is a bucket in the positioner that has not been positioned for labelling prior to stopping the machine leave this bucket in the positioner and rotate it manually to the right position. The positioning will start again with the next stop of the conveyor only.
4. Count the buckets (filled with jam) that are on the conveyor before the sealing station (there should not be gaps between these buckets) and write this number in the Continue Sealing screen.
5. Press the Continue Sealing button.
6. On the main screen check that the Bucket, Filling and Sealing buttons are OFF and the Positioner and Label buttons are ON.
7. Press the Main Conv. Button

The sealing, positioning and labelling of buckets will start with the next stop of the conveyor and will stop after the number set in the Continue Sealing screen is reached.



3. ANGLE DELAY (POSITINER) AND TRIGGER DELAYS AND FLAG LENGTHS (LABELLER) (DlyFg)

When the bucket reaches the positioner it is gripped between the rollers and turned. After the sensor sees the bucket, the positioner continues to rotate the bucket for the angle set on this screen.

The distance at which the labeller is triggered after the product sensor sees the product and the length of the label that protrude from the peel plate can also be set on this screen.

Trigger Delays & Flag Lengths

Labeller Delay -999.9mm

Labeller Flag -999.9mm

Pos Stop Delay -999.9

Manual Trigger Labeller

Main Cont Seal Dly/Fg Speed SyS

Non-zero delays must be set here for all labellers

While the positioner's stop delay and the flag length can be set to zero, the labellers will not be automatically triggered when the machine is running unless a non-zero trigger distance is set.

There is also a button on this screen for manual triggering the labeller for testing purposes.

4. MOTOR SPEED ADJUSTMENTS (Speed)

The speed of the conveyor, labeller and positioner can be individually adjusted using this screen.

Motor Speed Adjustment

% + -

CONVEYOR -99.9 %

LABELLER -99.9 %

POSITIONER -99.9 %

Main Cont Seal Dly/Fg Speed SyS

PROTECTED SETTINGS (SyS)

The AGF-02 Model has the following default settings. These settings have been preset by the manufacturer to ensure smooth operation of all devices.



It is recommended that only properly trained and experienced staff modifies these values if they need changing for any reason.

1. DRIVE ACCELERATIONS- Labellers

The acceleration and deceleration rates for the conveyor, labeller and positioner can be set using this screen.

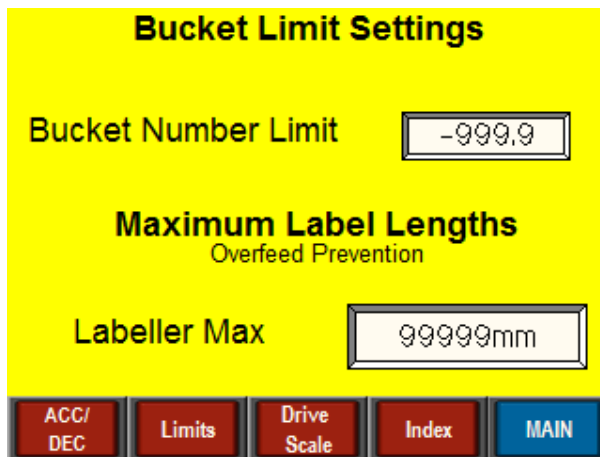
Drive Accelerations				
Main Drive Acc/Dec	99999 Hz/4ms			
Labeller Acc	99999 Hz/4ms			
Positioner Acc/Dec	99999 Hz/4ms			
ACC/DEC	Limits	Drive Scale	Index	MAIN

To ensure smooth operation of the machine these drive accelerations were preset by the manufacturer to:

- Main Drive Acc/Dec= 75 Hz/4ms
- Labeller Acceleration= 25 Hz/4ms
- Positioner Acc/Dec= 25 Hz/4ms

2. LIMITS

The minimum number of bucket in the bucket dispenser can be set on this screen. When the sensor on the bucket dispenser sees a gap (there are no buckets above it), the conveyor slows down to 20% of the machine speeds and continue the filling, sealing and labelling for the number of buckets set on this screen after which it stops. If this number is 0, the conveyor stops immediately when the sensor on the bucket dispenser sees a gap (there are no buckets in the dispenser above it).



A maximum label length must be set on this screen. This length is the linear movement of the labeller's drive after which it stops regardless of the label sensor reading.

This is particularly useful in the event the support paper breaks. It is also useful for the calibration of the label sensor when 5-7 labels have to pass through the sensor's fork.

The maximum label length must be bigger than the actual length of the label. Otherwise the labeller will not work properly- it will stop before completely releasing the label.

If for any reasons the maximum label length is reached, the labeller stops and an error is displayed on the main screen. Once the cause for error is rectified (label breakage, maximum label length too short, etc), the labeller should start again and the error message will disappear from the screen.

The default settings for the maximum label lengths are:

- Labeller Front 1 Maxim= 145 mm

3. DRIVE SCALLING

Drivers' frequency at 100% of machine's speed can be set here.

The default settings ensure the speed of all devices will increase and decrease by the same rate when the speed of the machine is changed on the main screen.

The default settings of the drivers' scaling are:

- Conveyor= 7500 Hz@100%
- Positioner = 1500 Hz@100%
- Labeller = 1500 Hz@100%

4. INDEX

The conveyor's index parameters can be set on this screen.

The default index settings are:

- Conveyor stop (x0.1 seconds)= 30
- Conveyor stop delay=379 (mm)
- First Cycle Stops= 1

The conveyor stop is the time the conveyor stops for at one step.

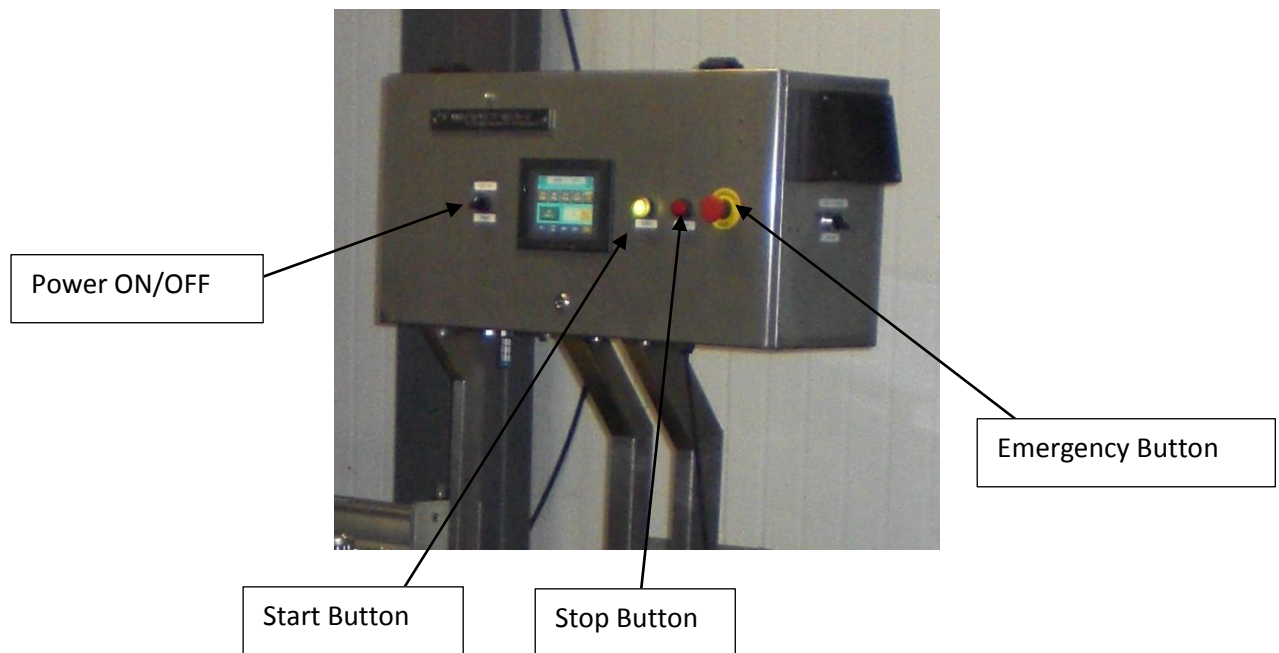
For precise positioning of the bucket at each station, a sensor is used underneath the conveyor to stop it. After the sensor sees a bucket holder fin, it stops the conveyor after the Conveyor stop delay distance is reached.

The First Cycle Stops is the number of stops for the conveyor after the machine is started after which the bucket dispensing starts.

OPERATION PROCEDURE

To start the machine, turn ON the power from the Power ON/OFF switch and press the Start Button. If necessary, check all the settings described previously in this manual and adjust them accordingly. Set all the stations (Bucket Dispenser, Filling, Sealing, Positioner and Label) ON from the main screen.

Press the Main Conv button to start the conveyor.



INSTALLING LABEL REELS

Put the reels onto the special disks and have the label paper tape pass around the roles and between the fork of the label sensor following the route shown in figure below:

