

## FOOD PROCESSING MACHINERY

Automating the can opening process while increasing your ROI. Increase your throughput of opening cans while reducing the labor need to do it.



### MODEL 20 AND MODEL 60

# AUTOMATED CAN OPENERS AND CRUSHER SYSTEM



# INDUSTRIAL CAN OPENER

Speed up the can opening and crushing process in one system.



## TWO MODELS

**BUILT FOR #10 CANS OF ANY HEIGHT**  
**SELECT YOUR MODEL BASED ON SPEED OF YOUR OPERATION**

Our automated can opens grow with you and offer a simple solution to increase safety in the can opening process while also speeding up your operation. Learn more about the different models we offer below.

### MODEL 20 Can Opener

#### Scalable for Growing Businesses

For operations looking to automate the can opening process while keeping costs low, the Model 20 Can Opener is a perfect solution. Running up to 20 cans per minute, this version of the automated industrial can opener is scalable for future growth. In this machine, operators hand load cans into the system's infeed conveyor. Next, a punch opens the cans while the magnetic de-lidder removes the lid. The opened cans are then discharged for an operator to dump.

This model can be scaled up, with options to add on automatic dumping and crushing as your operation grows. It's the perfect mix of automation with human labor.

**Speed: Up to 20 cans per minute.**  
**Can Size: Standard #10 Cans**

### MODEL 60 Can Opener

#### High Speed for Largest Operations

The Model 60 Can Opener automatically feeds, washes, opens, dumps, rinses, and crushes cans at one operator station, up to 60 cans per minute.

Once the cans are fed through the screws and opened, they are processed through our fully equipped dump stations. Each dump station is configured to flow into the elevated can twist and chute, emptying the contents of the can. Once the can is inverted, the elevated twist chute vibrates to ensure all contents make it into the dump area, which has a magnetic grate to collect excess metal shavings. Fixed nozzles wash out the cans before they enter the crusher.

**Speed: Up to 60 cans per minute.**  
**Can Size: Standard #10 Cans, custom options available.**

## MODELS BUILT FOR ANY SIZE OPERATION

Automate the opening, dumping, and crushing of cans for bulk food processing and prepared food preparation. These systems reduce safety risk for personnel opening cans manually while also increasing food production capabilities by speeding up the opening and dumping processes necessary for facilities that make prepared foods, sauces, and more.



#### ONE MACHINE THAT SCALES AS YOU DO

Our Industrial Can Openers are built to be modular, so they can scale up as your operation does. We offer two base models that feature a variety of add-ons complimentary to your specific business that solve your specific challenges.

Explore the options throughout this guide.



# MODEL 20 CAN OPENER

Automate the opening of your #10 cans.



## MODEL 20

Simplify your can opening process and keep safety at the forefront of your operation.

**Model cycles cans up to 20 per minute.**

### HIGHLIGHTED STANDARD SPECS

Infeed Conveyor
Drive overload protection on screw drive and de-lid
304 stainless steel construction drive
Open up to 20 cans per minute
Designed for 603 diameter cans
Perimeter barrier safety guarding
Standard Voltage Requirement: 480V, 3-phase
Standard Air Requirement: 1/2" Air line - 90 PSI
Controls System: Allen Bradley PLC & Components
Heavy washdown compliant



Open and de-lid automatically.

Cans are hand fed into the system. As cans enter, they are fed into a timing screw and de-lidded with a magnetic de-lidder. Once the lid is removed, the cans exit the system for manual dumping.

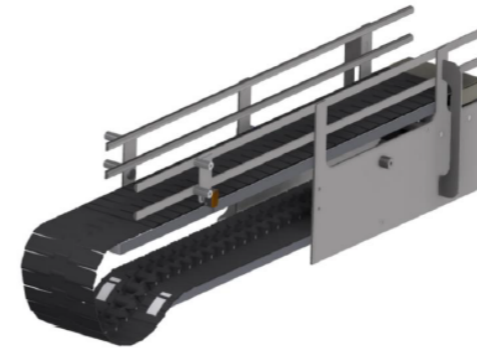
As you scale, so can the system. By purchasing this base model, we can add in automatic dumping and can crushing operations at a later date.

The system also features safety guarding around the delidding process.

The Model 20 can opener with magnetic de-lid system is mounted with a control panel interface to the main control box. This programmable machine (PLC) helps ensure trouble-free service and performance.

## System Overview

Each Model 20 Can Opener performs 3 automated steps that reduces overall labor need in your facility and speeds up the can opening process.



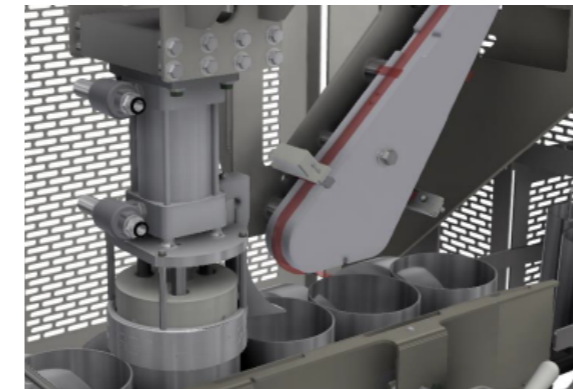
### STEP 1: Loading the Cans Onto the Infeed Conveyor

Operators load the cans onto a stainless steel, washdown-compliant conveyor. The conveyor feeds the cans into the can opener and is equipped with an infeed photo eye that helps ensure proper timing for crown punching.



### STEP 2: Pre-Rinse and Air Blow Off of Cans

Cans are rinsed and air-blown to remove debris prior to the opening process..



### STEP 3: Crown Punch and Magnetic De-Lidding

Cans are precisely punched to remove the lids. Lids are automatically discarded by a magnetic de-lidder. This process can run up to 20 cans per minute. Viscous products may require a slower process.

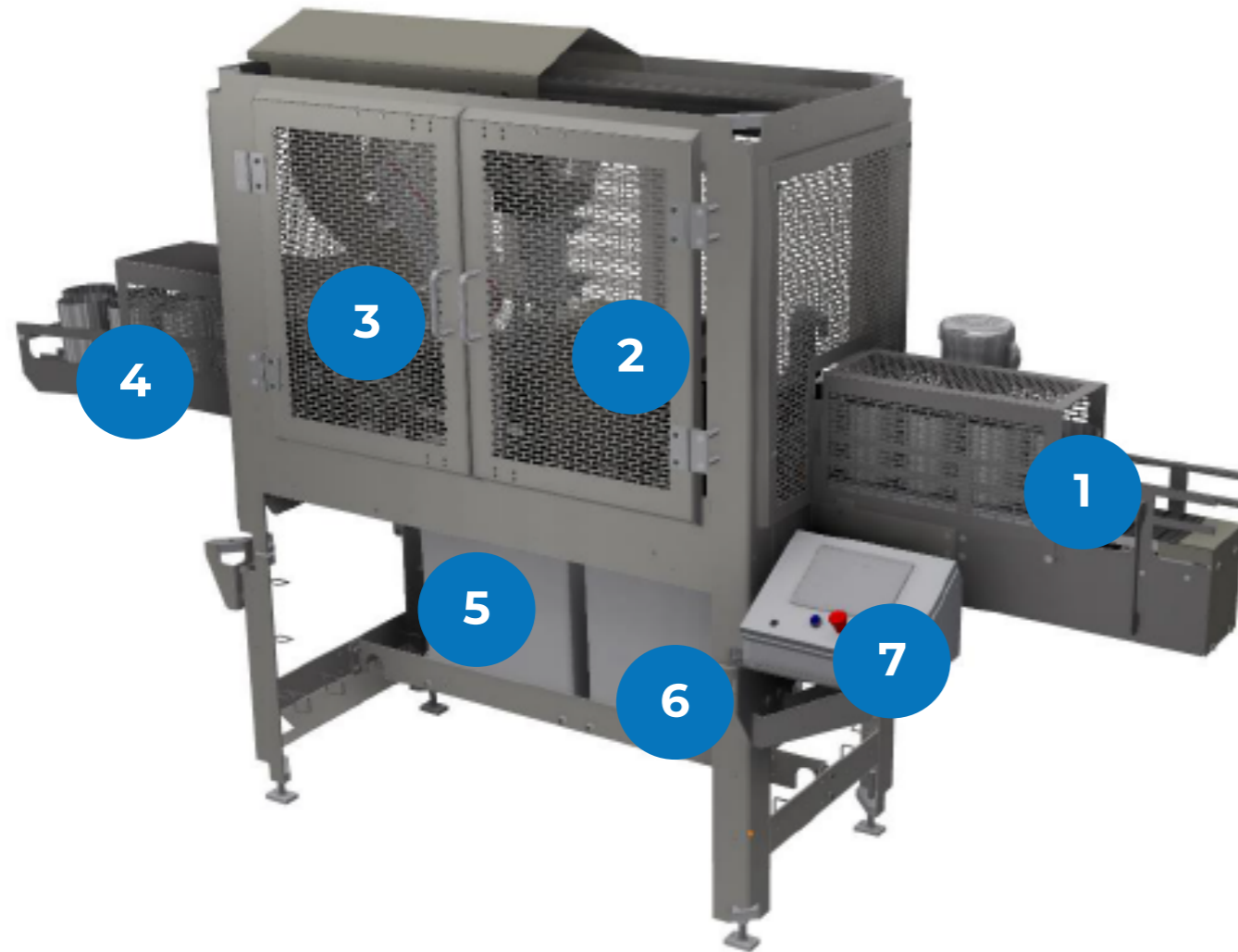


### STEP 4: Completed Cans Ready for Manual Dumping

The operator removes the opened and de-lidded cans from the system for manual dumping and crushing downstream (provided by the customer).

# MODEL 20 LAYOUT

Below is the standard layout for the system.



## LEGEND

1. Infeed Conveyor
2. Pre-Rinse and Air Blow Off
3. Crown Punch and De-Lidding
4. Discharge Conveyor
5. Local IO Panel
6. Main Electrical and Pneumatics Enclosure
7. HMI

## Standard Model Includes the Following:

### 8-Foot Stainless Steel Infeed Conveyor

- Delrin chain
- Electric and motor: 220/440 3-PH
- Powerflex 525 VFD for conveyor

### Can Opener and De-Lid System

- Ultra-high molecular weight polyethylene infeed timing screw
- VPF Servo on timing screw drive and VPF Servo on de-lid drive
- Powerflex 525 VFD on conveyor
- Unit is 304 stainless steel high washdown construction designed for #10 can size at maximum rate of 60 cpm (viscous products such as refried beans/pumpkin will run slower)
- Stainless steel barrier guarding
- Torque overload protection through servos/controls
- Standard input voltage: 480V / 3 ph / 60 HZ with 1 H.P.... Frequency Inverter Drive and 24V DC control voltage, 40-amp circuit required
- Ethernet capable PLC (Compact Logix)
- Surge tank needed (customer supplied) - requires minimum of 90 PSI for can opening
- IP65 Panel view Control interface with PLC machine controls mounted to main control box

### Electrical Components

- HMI
- Stainless steel cover and enclosure for pneumatics
- Lidded can sensor to detect if lid not properly pulled out of can
- Not included: incoming power cables, motor power cables, holes, knockouts, cord-grips on electrical enclosure



# MODEL 60 CAN OPENER

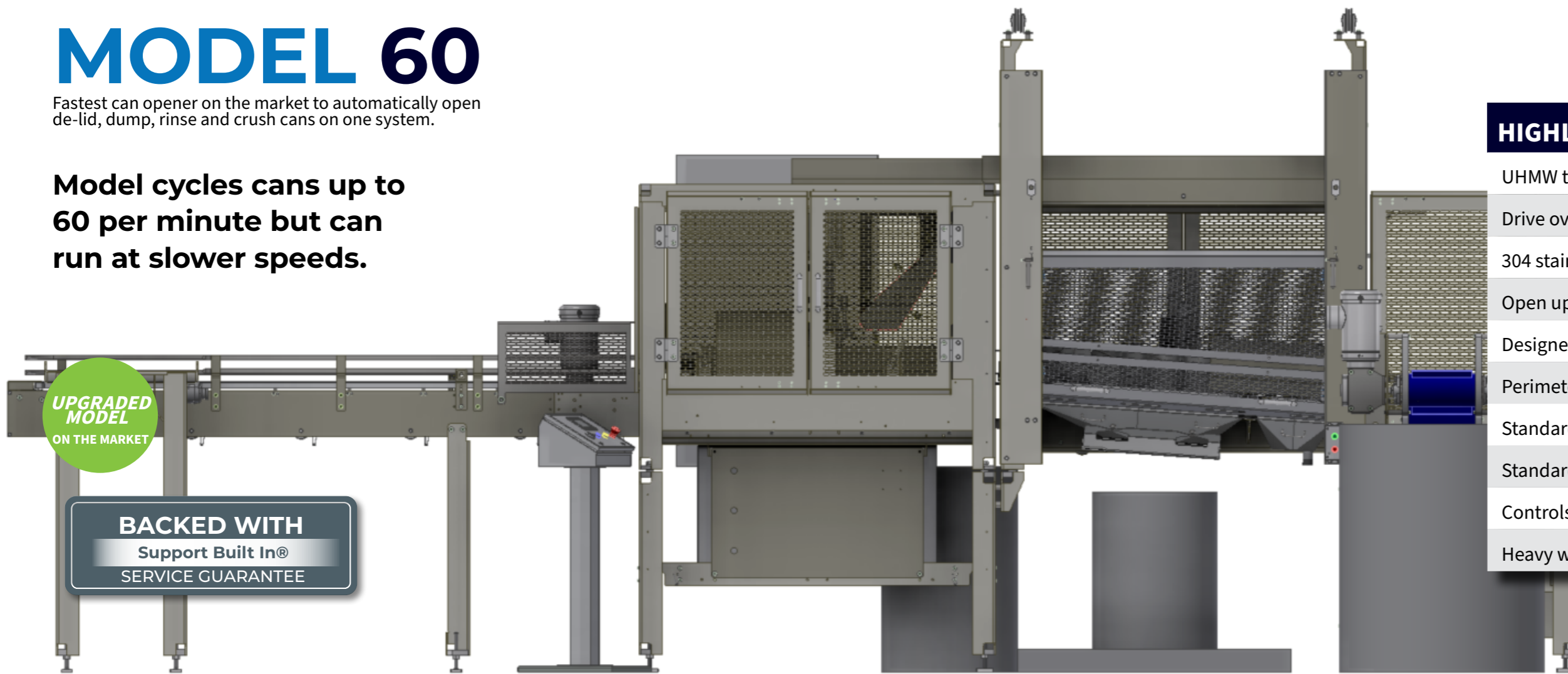
Speed up the can opening and crushing process in one system.



## MODEL 60

Fastest can opener on the market to automatically open de-lid, dump, rinse and crush cans on one system.

**Model cycles cans up to 60 per minute but can run at slower speeds.**



UPGRADED MODEL ON THE MARKET

BACKED WITH Support Built In® SERVICE GUARANTEE


HIGHLIGHTED STANDARD SPECS
UHMW timing screw
Drive overload protection on screw drive and de-lid
304 stainless steel construction drive
Open up to 60 cans per minute
Designed for 603 diameter cans
Perimeter barrier safety guarding
Standard Voltage Requirement: 480V, 3-phase
Standard Air Requirement: 1/2" Air line - 100 PSI
Controls System: Allen Bradley PLC & Components
Heavy washdown compliant

## Increase Productivity with an All-in-One Can Opening Process


Feed, wash, open, dump, rinse, and crush at one operator station. Once the cans are fed through the screws and opened, they are processed through our fully equipped dump stations. Each dump station is configured to flow into the elevated can twist and chute, emptying the contents of the can.

Once the can is inverted, the elevated twist chute vibrates to remove contents into the dump area which has a magnetic grate to collect excess metal shavings. Fixed nozzles washout the cans before they enter the crusher.


The Model 60 can opener with magnetic de-lid system is mounted with a control panel interface to the main control box. This programmable machine (PLC) ensures trouble-free service and performance.




**603 Diameter Can**  
Standard system runs 603 Diameter can and change parts can be supplied for various heights.




**Sustainability**  
Optional crusher can be provided in order to contribute to sustainability goals at your plant.




**Safety Guarding**  
System is equipped with perimeter guarding to keep line workers safe while system operates.



**Change Parts**  
If you need to run other can sizes, we can provide a robust solution that will allow you to run on the same line.



**Reduce Labor Demands**  
Model 60 is designed to reduce labor need by automating the entire can opening and dumping process.



**Run 10 to 60 Cans Per Minute**  
If 60 cans a minute is too much for your line, we provide other options that run slower and custom to you.



# HOW IT WORKS: MODEL 60

Step by step process of how the system operates.



## System Overview

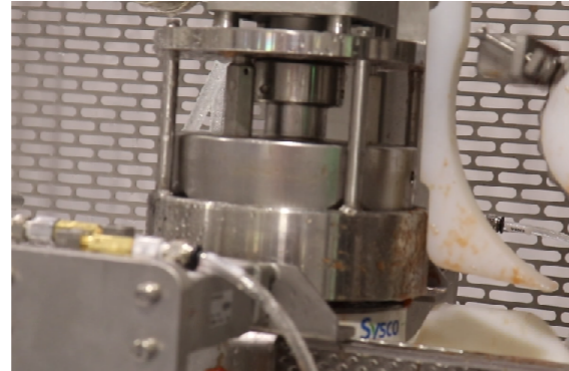
Each Model 60 Can Opener performs 7 automated steps that reduces overall labor need in your facility and speeds up the can opening process.

**WATCH NOW:**  
Click to see a video  
example of this system.



### STEP 1: Loading the Cans Into the System

This is the only manual process the system requires. Cans get loaded onto the conveyor via the dump table. From the **loading table**, an operator can easily slide cans directly onto the conveyor to keep a backlog of containers. From there, the cans move down the conveyor and are fed into the first station which prepares them to be opened.



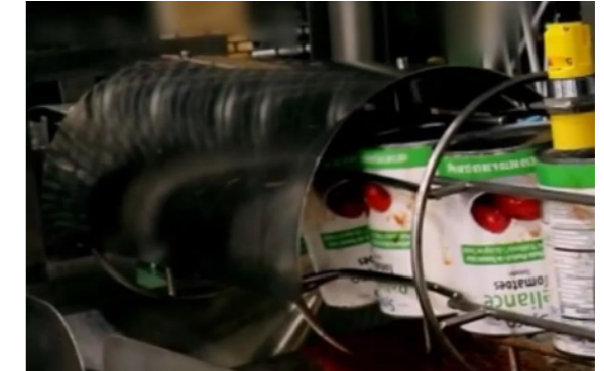
### STEP 3: Automatically Opening the Cans with Crown Punch

Cans are fed into a timing screw that spaces the cans consistently, ensuring the cans are precisely centered before being opened with the **crown punch**. With a quick punch motion, a blade pierces the top of the can and cuts the lid from the can. Even slightly dented cans are able to run through the system without issue.



### STEP 5: Emptying Product from the Cans

To empty product, the open and de-lidded cans are fed from the timing screw into a metal twist section where they are **inverted at 180 degrees** to dump product via gravity. This twist portion also vibrates to help dislodge and dispense any leftover product into the dump bins below.



### STEP 7: Cleaning the Cans for Recycling

The empty cans move onto a second and segregated section of the system to have any remaining product rinsed out to **prep the can for recycling**. Removing the residual product allows many types of cans to be recycled instead of going into the garbage.



### STEP 2: Preparing Cans to be Opened

Cans are fed under the first hood; the pre-rinse and air blow off station. In this section of the system, cans are rinsed off with water followed by an air blow that **removes any debris** that may be on the cans.



### STEP 4: Removing the Lids of the Cans

Once the cans are opened, the lids need to be removed before the contents of the can be dumped out. Morrison uses a **Magnetic De-Lidder** that syncs with the timing screw to remove the lids. This magnetic mechanism lifts and disposes of the lids down a disposal chute. **A sensor is in place to inspect all cans to ensure lids have been properly removed.** If a lid is not removed, the system will automatically fault so that the can will not be going through the dump and crushing stations incorrectly.



### STEP 6: Optional Punch and Blow

For more **viscous products** that are more difficult to dump out of the can, a Punch and Blow can be added to the system. This is a mechanism that pierces the bottom of the can, after it has been twisted 180 degrees, and then blows air in the can to evacuate the product.



### STEP 8: Optional Can Crusher and Takeaway Conveyor

Crushed cans offer additional cost-saving benefits since they can be recycled and do not incur hauling cost since they have a value for their weight which offsets the cost of removal. Crushing your cans saves you time and labor while contributing to sustainable practices. Once emptied and rinsed, cans are fed out of the secondary rinsing section and are dropped into the crusher, which is built with a smaller footprint at the end of the line. A mechanical arm moves back and forth to accept and crush the cans. A can elevator disposes of the cans.



# MODEL 60 LAYOUT

Below is the standard layout for the system.

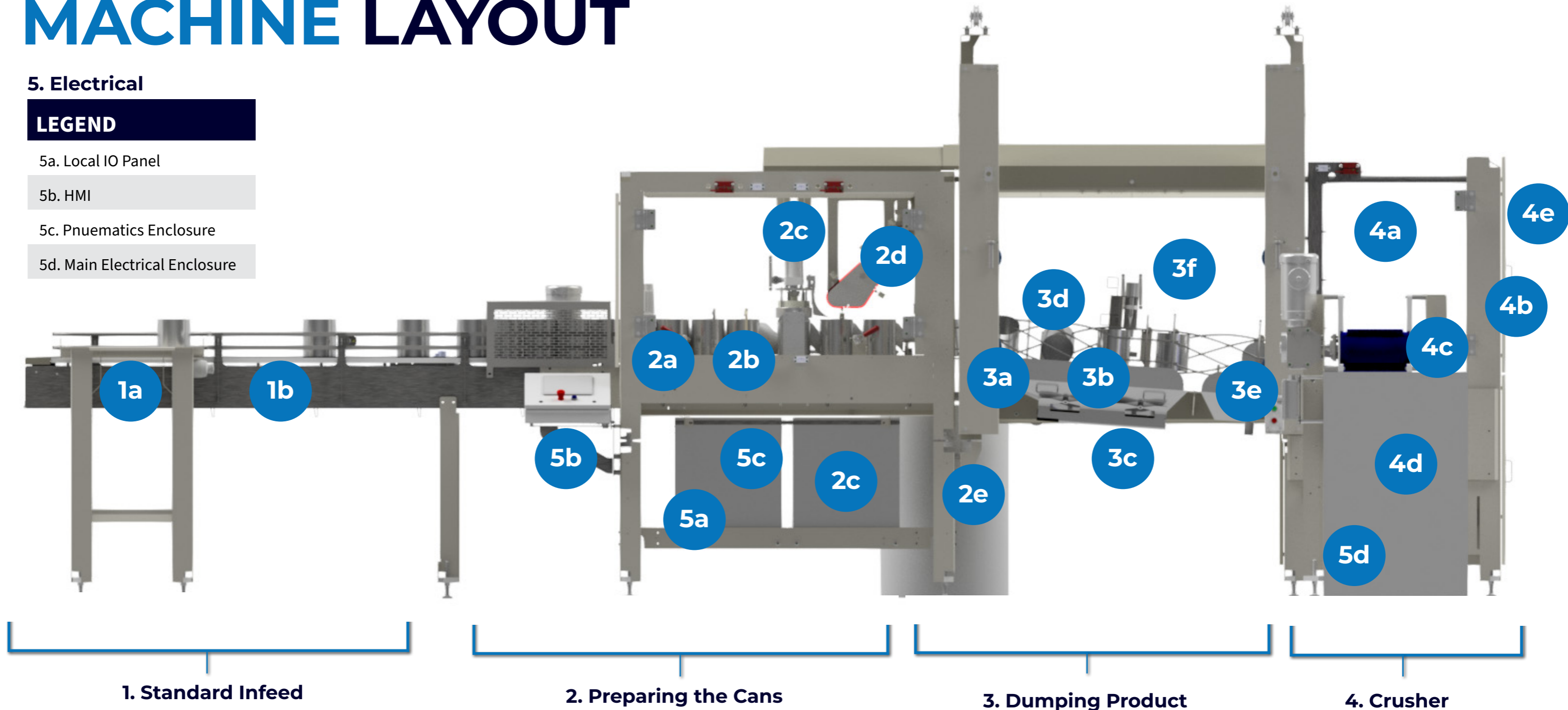


## MACHINE LAYOUT

### 5. Electrical

#### LEGEND

- 5a. Local IO Panel
- 5b. HMI
- 5c. Pnuematics Enclosure
- 5d. Main Electrical Enclosure



1. Standard Infeed

#### LEGEND

- 1a. Can Loading Table
- 1b. Infeed Conveyor

2. Preparing the Cans

#### LEGEND

- 2a. Pre-Rinse and Air Blow Off Station
- 2b. Timing Screws
- 2c. Crown Punch
- 2d. Magnetic Delidding
- 2e. Bins for Lids (customer provided)
- 2f. Guarding (not shown)

3. Dumping Product

#### LEGEND

- 3a. Twist and Dump
- 3b. Magnetic Grating
- 3c. Dump Bin
- 3d. Dual Can Vibrators
- 3e. Water Rinse
- 3f. Punch and Blow
- 3g. Guarding (not shown)

4. Crusher

#### LEGEND

- 4a. Crusher
- 4b. Can Elevator
- 4c. Takeaway Conveyor
- 4d. Bin for Cans (customer provided)
- 4e. Guarding

\*The dump bin for product (#3c) and bin for cans (#4d) are customer supplied. The height of bin #3c helps determines the height of this system.

# BUILD YOUR MODEL 60 MACHINE

Overview of what is included and machine orientation.



## Standard Model Includes the Following:

### 8-Foot Stainless Steel Infeed Conveyor

- Delrin chain
- Electric and motor: 220/440 3-PH
- Powerflex 525 VFD for conveyor

### Can Rinse and Blow Off

- Air and water nozzles
- Drain pan
- Wash cover

### Can Opener and De-Lid System

- Ultra-high molecular weight polyethylene infeed timing screw
- VPF Servo on timing screw drive and VPF Servo on de-lid drive
- Powerflex 525 VFD on conveyor
- Unit is 304 stainless steel high washdown construction designed for #10 can size at maximum rate of 60 cpm (viscous products such as refried beans/pumpkin will run slower)
- Stainless steel barrier guarding
- Torque overload protection through servos/controls
- Standard input voltage: 480V / 3 ph / 60 HZ with 1 H.P. Frequency Inverter Drive and 24V DC control voltage, 40-amp circuit required
- Ethernet capable PLC (Compact Logix)
- Surge tank needed (customer supplied) - requires minimum of 90 PSI for can opening
- IP65 Panel view Control interface with PLC machine controls mounted to main control box

### Dump Station

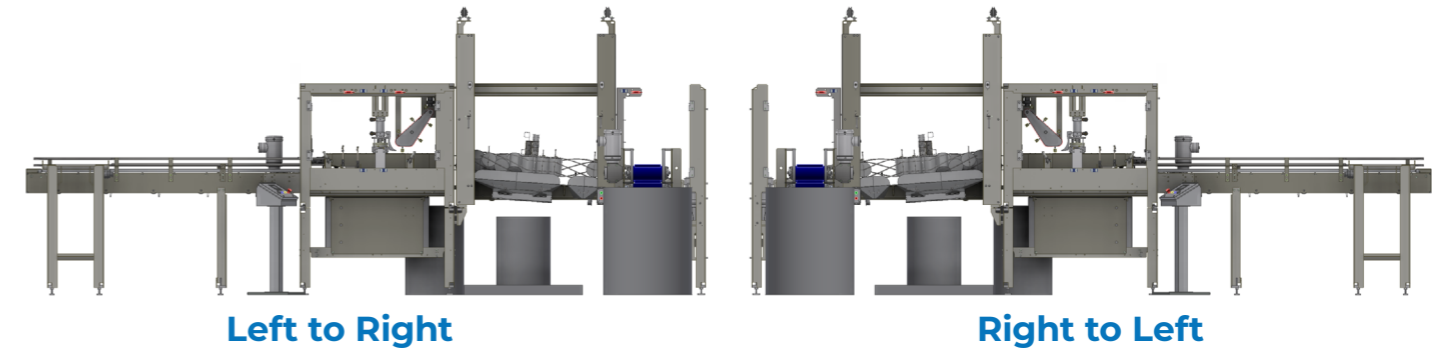
- Support frame and stand
- Can twist for one can (additional twist assemblies available for other sizes at additional price)
- Product chute

### Electrical Components

- HMI
- Stainless steel cover and enclosure for pneumatics
- Lidded can sensor to detect if lid not properly pulled out of can
- Not included: incoming power cables, motor power cables, holes, knockouts, cord-grips on electrical enclosure

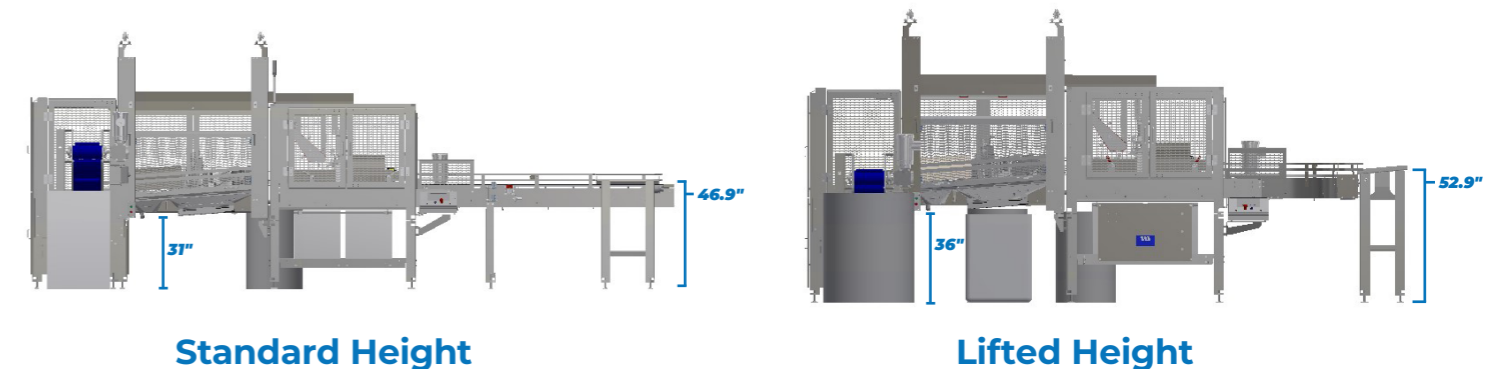
## Step 1: Select Orientation

Can Opener models can either go right-to-left or left-to-right. This refers to where your loading table is situated at the start of your system. See images below.



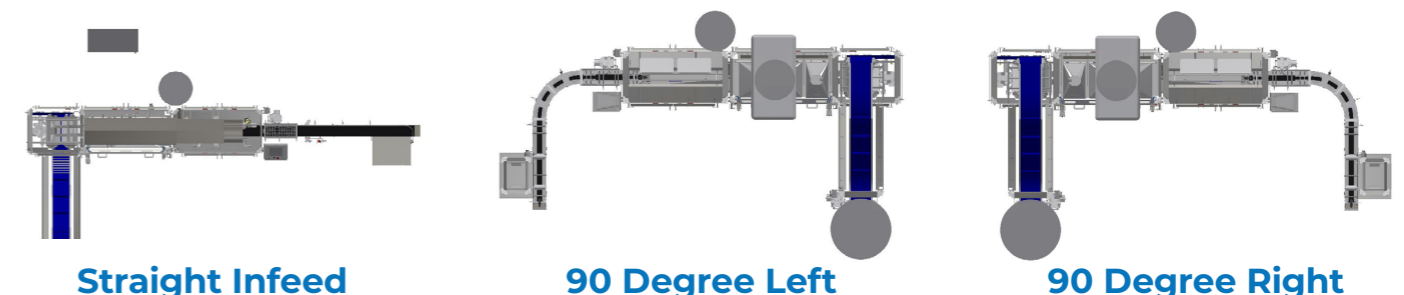
## Step 2: Select Height

Both models offer a standard height option or a lifted option. The lifted option would allow for a larger dump bin for product to be situated under the machine. The standard height is 46.9" for product load and 31" for product tote. Lifted is 52.9" for product load and 36" for product tote. [Note: All +/- 2".]



## Step 3: Select Conveyor Orientation

Standard models include different conveyor infeed orientations in order to accommodate your line constraints and facility space constraints. Select on of the three below.





# SELECTING YOUR MODEL

Explore options and add-ons.



## Step 4: Select Add-Ons

### Option 1: Pneumatic Vibrator

Pneumatic vibration station will vibrate containers once inverted to assist in evacuation of product. This is a requirement for high viscosity products such as pastes.

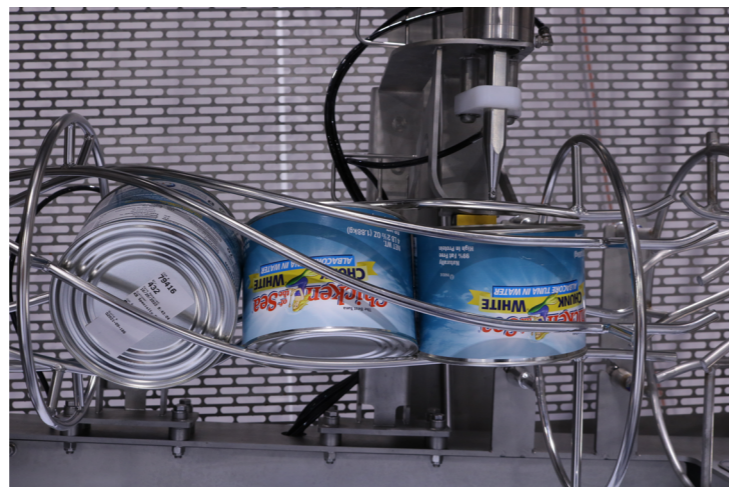


### Option 2: Punch and Blow

This is a pneumatic assisted air blast after piercing the bottom of the can, recommended for high viscous products such as pastes.

While the cans are upside down over the main dump area, the punch and blow will pierce the can bottom to allow for a pneumatically assisted blast of air into the bottom of the can to assist in evacuating the product from the can.

Note: for more viscous products, this will limit the speed the system can run to allow for product evacuation time.



### Option 3: Metered Can Washout Station

This is located after the main dump station. It is a secondary dump area that includes a metered can washout to spray the containers down to rinse off excess product. By implementing the can rinse area, customers increase the ability to recycle cans. It also helps eliminate product build up in the can crusher station (if crusher is purchased).

This add-on includes metering nozzles, localized piping on machine, and solenoid for fixed time shot of water. Customer provides the water line for the station.



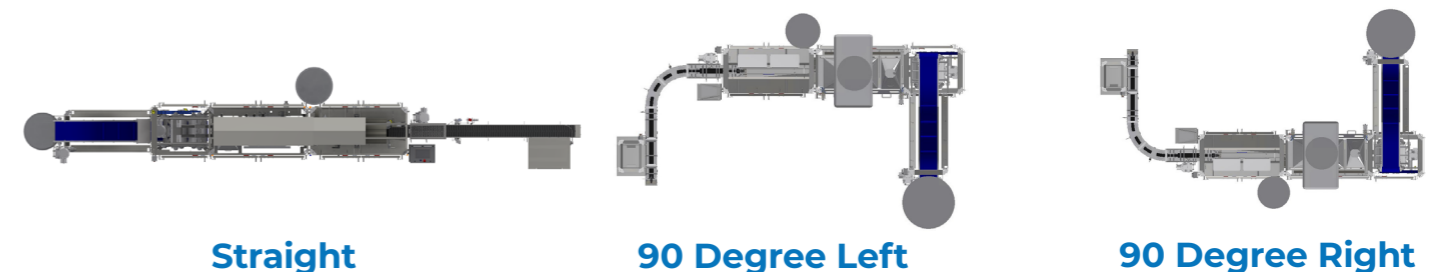
### Option 4: Can Crusher Package

Crusher is a stainless steel frame construction package that allows cans to be crushed for recycling and storage purposes. Crushed cans take up less room, which is why this is such a popular add-on.

Cans enter the crusher directly from the can twist and dump area and exit through a discharge at the bottom. An inclined high-friction takeaway conveyor brings the cans up and away, dropping them into a customer-supplied catch bin. A localized e-stop at the crusher is supplied with a heavy-duty push button.



The crusher takeaway conveyor has three potential direction of flow outputs, straight / 90 degree left / 90 degree right, to accommodate direction of flow needs. Select orientation below.



Straight

90 Degree Left

90 Degree Right



## PREVENTATIVE MAINTENANCE AGREEMENTS



With workforce needs becoming harder and harder to fulfill in skilled and unskilled positions, it's leaving packaging plants like yours without the talent needed to service the equipment that keeps your production up and running. Why keep trying to hire teams to service equipment when the experts are already at your finger tips and don't have to be on the payroll?

The Morrison Model 60 Can Opener requires regularly scheduled maintenance like all food processing machinery, due to the environment it operates in. With any new can opener, we recommend the purchase of a Preventative Maintenance Agreement (PMA) from our Aftermarket Services team in order to have an expert regularly onsite inspecting the machine and performing maintenance, keeping it running to optimal conditions and reducing the need of your team to focus its efforts on this system.

There are three standard plan types for Morrison's Preventative Maintenance Agreements. Each plan spans two years but accounts for different numbers of visits necessary to keep up with your machine.

The Morrison Container Handling Solutions Aftermarket Services team will work with you to determine which plan is best for your needs, depending on conditions the equipment operates in, run times, as well as any standards set by your company.

By purchasing the package and placing an importance on predictive maintenance, you receive a 15% reduction of the standard rate of service on all PMA visits in the package. This reduce rate is locked in for the entire two-year agreement.

Total pricing for each package is based on standard service rates with 15% off and the rate of travel associated with your facility's location. You won't even pay for the service until after the trip is complete.

Morrison is happy to offer custom packages unique to your needs if the standard offerings do not meet them. This can be coordinated with our Aftermarket Services Department.

### PMA Packages

#### 4 Visit Package

Year 1: Visit every 6 months  
Year 2: Visit every 6 months

#### 6 Visit Package

Year 1: Visit every 3 months  
Year 2: Visit every 6 months

#### 8 Visit Package

Year 1: Visit every 3 months  
Year 2: Visit every 3 months







## SUPPORT BUILT IN®

At Morrison Container Handling Solutions, we are dedicated to our customers.

Included in all of our products is Support Built In®, our personal customer service program for any general questions you may have or technical support you may need before, during, and after installation

We focus on our customers' needs in order to deliver the most effective automated packaging systems. After your new system has been fully integrated, Morrison's customer service continues to provide technical expertise and timing solutions for your particular applications. With our representatives' and engineers' knowledge and experience, we are determined to answer questions, analyze problems, and provide an expedient solution for our container handling equipment.

## CONTACT

Telephone: +1 708 756 6660  
E-mail: [info@morrison-chs.com](mailto:info@morrison-chs.com)

[www.morrison-chs.com](http://www.morrison-chs.com)