



Complete Product Line, 2017

Dependable and Cost-effective Automated Equipment

Specializing in the container, manufacturing, and food production industries, Martin Automated Systems creates custom solutions that solve automation difficulties and allow manufacturers to dramatically reduce labour costs.

Martin Automated Systems

Unit 102, 17941 Roan Place,
Surrey, British Columbia,
Canada V3S 5K1

Tel: 604-576-6000 Fax: 604-576-6097

Email: info@martin-auto.com

www.martin-auto.com



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- ▶ Lid Stackers

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Custom Solutions - Our History

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Lid Catchers

The Martin Automated lid catcher is a take-out system that orients the lids from under the mold and conveys the covers in a single file up to an accumulation stacker. Guarding can be designed to fit your configuration.

Features

- Siemens PLC and interface
- Festo cylinders
- Balder motor

Safety Features

- CSA inspected
- Guarding, where applicable, is built to OSHA standards



Automatic Lid System

The Automatic Lid System automates the installation of gaskets and fitments. The ALS system incorporates a gasket verification station and spout/plug leak testing stations. Additionally, the machine can be custom tailored to accommodate most industrial closures and is designed to support different spout/plug types, which can be easily selected without the shifting of hardware. The ALS can range from a machine that only installs/verifies gaskets to a machine that has multiple feeders. There are many different configurations available, for example, a machine can process up to three different styles of lids at the same time. The different styled lids are tracked as they enter the machine, different closures/fitments can be installed on each lid and then the completed lids are tracked and stacked into three different stacks and accumulated. Each station can be disabled or enabled during production. Also, lids that fail any detection station are rejected without any further operation to the lid and will not be stacked. An HMI touch screen allows parameters to be set - passwords can be assigned for different levels of access and authorization - preventing unauthorized system changes.

Typical Closures/Fitments

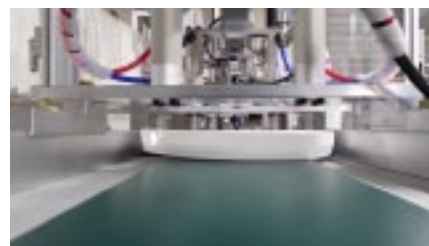
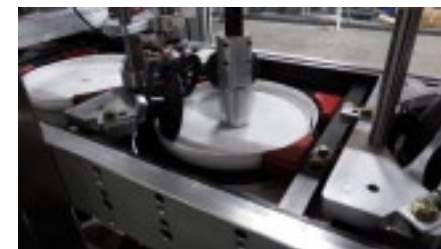
- Metal Crimp
- All Types of Plastic Press-in Spouts
- Tint Plugs
- Vents
- Screw Caps

Gasket Installation

The gaskets are partially placed on the lid by the operator before they enter the machine. From there, the lid enters the gasket installation station, where the rubber gasket is accurately inserted by means of an insertion wheel.

Flame Treating

The flame treating station can be enabled or disabled according the type of lid being processed.



Automatic Lid System (Continued)

Gasket Detection

The gasket detection station confirms that the gasket is properly installed. It is able to detect double, missing, or folded-over gaskets. In the event a lid fails the gasket detection test, the succeeding stations will no longer process that lid.

Lid Orientation

The lid orientation station orients the cover.

Fitment Installation

Fitments are oriented and fed by means of a vibratory bowl feeder and small conveyor. A shuttle, or pick and place mechanism, places the fitments onto the bottom press and the top locator re-centres the cover. When a fitment is in the press and the lid is centred, the top press pushes down the cover and the fitment is pressed in from the bottom.

Leak Testing

The leak testing station is where the lid is pressure tested for proper fitment installation. If a lid fails the leak test, it will not be stacked, but continue on to the reject bin.

Lid Stacker

The lid stacker stacks the lids to an adjustable number. Lids with installed spouts can be stacked 120 degrees offset to achieve a balanced stack. Upon completion, the stack is transferred to the stack accumulation table.

Closures

APC Products Limited
<http://www.pailclosures.com/>

American Flange & Manufacturing Co.

Rieke Packaging Systems
<http://www.riekepackaging.com/>

Tri-Sure
<http://www.tri-sure.com/>

Features

- Siemens PLC and interface
- Touch screen operator interface to set the machines modes and parameters
- Ability to enable or disable the various assembly stations



Features (Continued)

- Operating manual, including assembly drawings, wiring diagrams, parts lists, recommended spare parts and preventative maintenance

Safety Features

- Electrically and pneumatically interlocked guard
- Strobe light when machine has stopped
- Blocked discharge detection
- Equipment CSA inspected
- Guarding to be compliant with OSHA

Optional Systems

Lid In-feed Conveyors

Conveyors to move product from the mold or waiting stacks into the lid machine.

Lid De-Nester

The stacks are conveyed up to the de-nesting station, where the lids are separated and then feed into the indexing conveyor of the lid automation.

Semi-Automatic Lid Systems

Semi-Automatic Gasket and/or Spout Installer

This semi-automatic lid machine can be configured to install both O-ring style gaskets and crimp/press-on style spouts.

The gasket installer installs O-ring style gaskets with the assistance of an operator. The operator places the gasket loosely into the groove of the lid and then places the lid into the gasket installer's drive plate. The cycle is then initiated by means of two Banner touch start buttons. The gasket installation area is guarded by a safety light curtain. During installation, the gasket is guided to the edge with a guided mechanical finger, the gasket is pressed into the groove by the gasket install wheel. There is the option to add gasket confirmation. Gasket confirmation will check for double gaskets, overlapped gaskets or no gasket. An error will signify a faulty installation.

As an option to the manual gasket installer, crimp/press on style spouts can also be installed. The operator manually places the fitment on to the lid as well as the gasket. When the machine is activated by the two banner style buttons, the top press pushes down on the cover and the fitment is pressed in from the bottom, followed by the gasket installation as described above.



Semi-Automatic Gasket Installer (Press Rotation Wheel)

The Martin Automated manual gasket installer installs O-ring style gaskets with the assistance of an operator. The operator places the gasket loosely into the groove of the lid and then places the lid into the gasket installer's drive plate. The cycle is then initiated by means of two Banner touch start buttons. The gasket installation area is guarded by a safety light curtain. During installation, the gasket is pressed into the groove by an insertion cup.

Features

- Siemens PLC and HMI
- Ergonomically designed Banner touch start-buttons
- Lockable castor wheels for easy mobility
- Festo cylinders
- Balder motor

Standard Safety Features

- Safety enclosure made to OSHA standards
- Equipment CSA inspected
- Safety light curtain

Lid De-Nester

The lid de-nester is designed to separate lids from a stack. The stacks are conveyed up to the de-nesting station, where the lids are separated and then fed into the indexing conveyor of the lid automation and will unstack lids at a rate of 20 lids per minute.

Features

- Fully pneumatic operation
- Festo Cylinders
- Compact and durable design

Safety Features

- Equipment CSA inspected
- Guarding to be compliant with OSHA



Lid Stacking Systems

The stacker is designed to stack and accumulate lids up to a stack height of 60 lids, depending upon the lids nesting characteristics. The lids are stacked upwards and completed stacks are lowered back on to the conveyor and accumulated. The unit is controlled by a small PLC with an operator interface (HMI).

Features

- Includes an accumulation conveyor
- Stacking rate up to 1,500 per hour
- Designed for stack molds
- Stack height up to 60 lids

Safety Features

- Equipment CSA inspected
- Guarding to be compliant with OSHA



Pail Catcher

Martin Automatic Systems clamshell style Pail Catchers are a cost-effective and simple way to bring out and orient pails from under an injection molding machine. Pail Catchers will not interfere with the molding cycle time.

Single Cavity Pail Catcher

The pail drops into a funnel shaped catcher. Two hinged doors then open and the pail is conveyed by a belt conveyor. The top of the catcher has 3/8" diameter-rounded edges, and the bottom of the catcher has a spring loaded polyurethane pad below the belt, to protect the pail from damage. This system has a very low profile and adds less than 3 1/2" to the pail height.

Dual Cavity Pail Catcher

A dual clamshell style catcher, featuring a belt conveyor.



Pail Lifter

The Pail Lifter is designed to receive pails from a conveyor at one height level and transfer them to a conveyor or machine at a different height level. It can be set up to receive and transfer pails in line or 90-degrees to the right or left. The pail lifter can be used as a space saving alternative to long conveyors. Safety guarding can be custom designed according to the configuration needed.

Features

- An HMI touch screen for setting timing parameters.
- Photo sensors to protect against pail jamming.

Safety Features

- Equipment CSA inspected
- Guarding compliant with OHSA



Pail Stretcher

Martin Automated Systems manufactures pail stretchers for both square and round pails. The pail stretchers are water-cooled, and the expanding jaws are machined from hard anodized aluminum or optional heat treated stainless tool steel and use Turcite bearings. Pail Stretcher units are highly effective at improving molding cycle time.

Features

- The expanding core is manufactured from hard anodized aluminum or optional heat-treated mould steel. (Stavax)
- Water cooled.
- A dual belt conveyor will transport the pails to under the expanding core and out.
- Stop cylinders are used to hold back upstream pails.
- The core is expanded by means of a wedge, driven by an 8" diameter air cylinder.
- The amount of expansion is controlled by an adjustable barrel style stop.
- Timing parameters of the machine are settable by means of a small HMI.
- A Siemens PLC is used to control the unit.

The unit is supplied with two manuals, a wiring diagram, a parts list, recommended spare parts list, and preventative maintenance.

Safety Features

- Equipment CSA inspected
- Guarding to be compliant with OSHA



Leak Testers

UN Leak Tester

The Martin Automated Systems UN Leak Tester checks pails for small leaks using a rugged ceramic pressure transducer. This is connected to a 12-bit analog-to-digital converter. It monitors the pressure inside by inflating the pail to a pre-set test pressure and monitoring it for a pre-set time. Adjustments to the leak tester are made on an easy to understand operator terminal. Our UN Leak tester uses pressure at 3 PSI and will detect pressure drops of 1%. This accuracy enables you to consistently detect holes as small as .015" diameter in warm pails. Throughput, depending on temperature of the pails and required accuracy is 300 per hour. At the end of its cycle, the terminal will display the pressure values as well as a Pass or Fail condition and eject the failed pails. Features a guard that fully encloses the leak tester and is constructed to Osha standards and an automatic reject station.

Features

- Siemens PLC and HMI
- Data logging ability
- New simple to understand HMI
- Inter changeable seal - Gum Rubber or Polyurethane seal are available

Safety Features

- Equipment CSA inspected
- Guarding to be compliant with OSHA



Leak Testers (Continued)

Manual Leak Tester (Jugs)

Our manual leak tester checks jugs for small leaks using a rugged ceramic pressure transducer. This is connected to a 12-bit analog-to-digital converter. It monitors the pressure inside by inflating the jug to a pre-set test pressure and monitoring it for a pre-set time. Adjustments to the leak tester are made on an easy to understand operator terminal. It will detect pressure drops of 1%. This accuracy enables you to consistently detect holes as small as .015" diameter in warm jugs. At the end of its cycle, the terminal will display the pressure values as well as a Pass or Fail condition and eject the failed pails.

Features

- Siemens PLC
- Ergonomically designed Banner touch start-buttons
- Lockable castor wheels for easy mobility
- Festo cylinders

Safety Features

- Equipment CSA inspected
- Guarding to be compliant with OSHA
- Safety light curtain



Flame Treaters

Automatic Flame Treater

The Martin Automated Automatic Flame Treater is designed to flame treat a standard product range of 4-5 gallon round or square pails. In optional square mode the burner traces the shape of the pail by means of a cam. The flame duration and other parameters can be set via an HMI touch interface.

Trap-and-Spin Flame Treater

Designed for round pails. .

Dual In-Line Flame Treater

Designed for 1, 2, and 3 gallon pails. Cycles at 600 units per hour.

Optional Flame Monitoring for All Systems

The flame is monitored by an infrared Thermo Couple. If the burner fails to ignite, the pail will not be released until the machine is reset.

Safety Features

- Equipment CSA inspected
- Guarding to be compliant with OSHA



Flame Treaters (Continued)

Manual Flame Treater

The Martin Automated manual flame treater flame treats pails with the assistance of an operator. The operator places a pail on to an adjustable disk, then initiates two Banner photo electric buttons to start the flame cycle. The buttons feature an anti-tie-down circuit. Upon initiation of the cycle, the pail starts rotating and the flame is turned on. A product sensing photo switch prevents the operator from starting the machine without a pail in place. Flame time is adjustable by a timer.

Safety Features

- Equipment CSA inspected
- Guarding to be compliant with OSHA



Hot Stamper

Our automatic hot stamper is designed to hot stamp child safety warning labels on to 11" and 12" round pails, as well as square or rectangular pails. The pail is oriented by means of a servo motor and offset in the stamping area. Two different labels can be placed at any offset, and a flame treating station is included. All our hot stampers can be switched between different modes via an easy to use HMI touch screen.

Single Head Hot Stamper

Our standard single head hot stamper. It's available with options to add an integrated UN leak tester / pail diverter and square/rectangular pail orientation with actuated flame treatment.

Dual Head Hot Stamper

Hot stamper with two stamp heads that can stamp simultaneously. The options of an integrated UN leak tester / pail diverter and square/rectangular pail orientation with actuated flame treatment is available on this model.

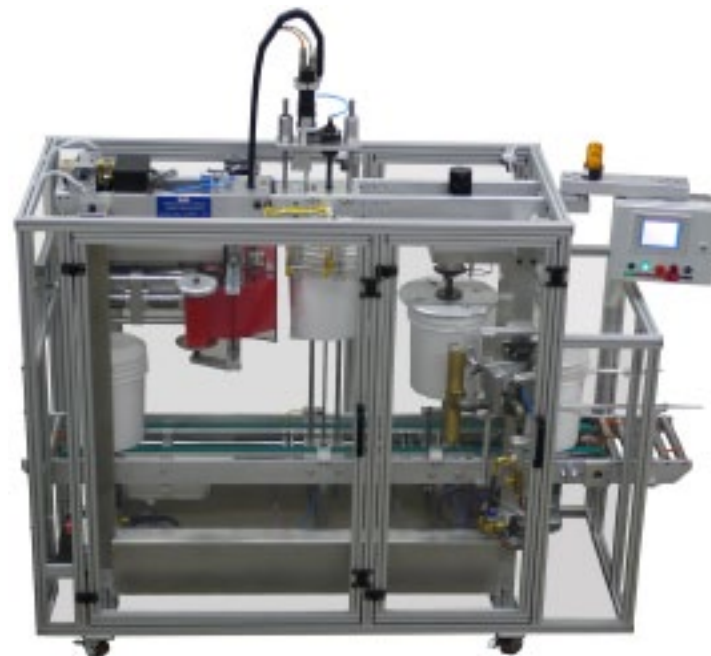
Standard Features

Flamer

Flame treatment can be enabled and disabled via the HMI touch screen. Also, duration and rotation speed are adjustable via the HMI touch screen. Includes a flame out sensor. If the burner fails to ignite, the pail is held back and warning screen appears.

Hot Stamping

The pail is lifted to the stamping head, then oriented, then stamped. The stamp location can be offset (adjustable to 360 degrees). Temperature control and hot stamp parameters are controlled via the HMI touch screen. When the foil is running low and when the foil has run out, a sensor will indicate this with a warning.



Hot Stamper (Continued)

Safety Features

- Electrically and pneumatically interlocked guard compliant with OSHA
- Strobe light when machine stops and is in bypass mode
- Equipment CSA inspected

Pail Processing Cell

A completely integrated pail processing cell. The system starts with the standard MAS single head or dual head hot stamper and integrates stations into the machine. All stations parameters can be set by means of an HMI touch screen and each station can be enabled or disabled. These options are listed below. We can tailor the processing cell to your requirements. Advantages of the pail cell are that it can save space, is easily moved on casters and will not stamp pails that leak.

Pail Stretcher

Martin Automated Systems manufactures pail stretchers for both square and round pails. The pail stretchers are water-cooled, and the expanding jaws are machined from hard anodized aluminum or optional heat treated stainless tool steel and use Turcite bearings. Pail Stretcher units are highly effective at improving molding cycle time.

UN Leak Tester

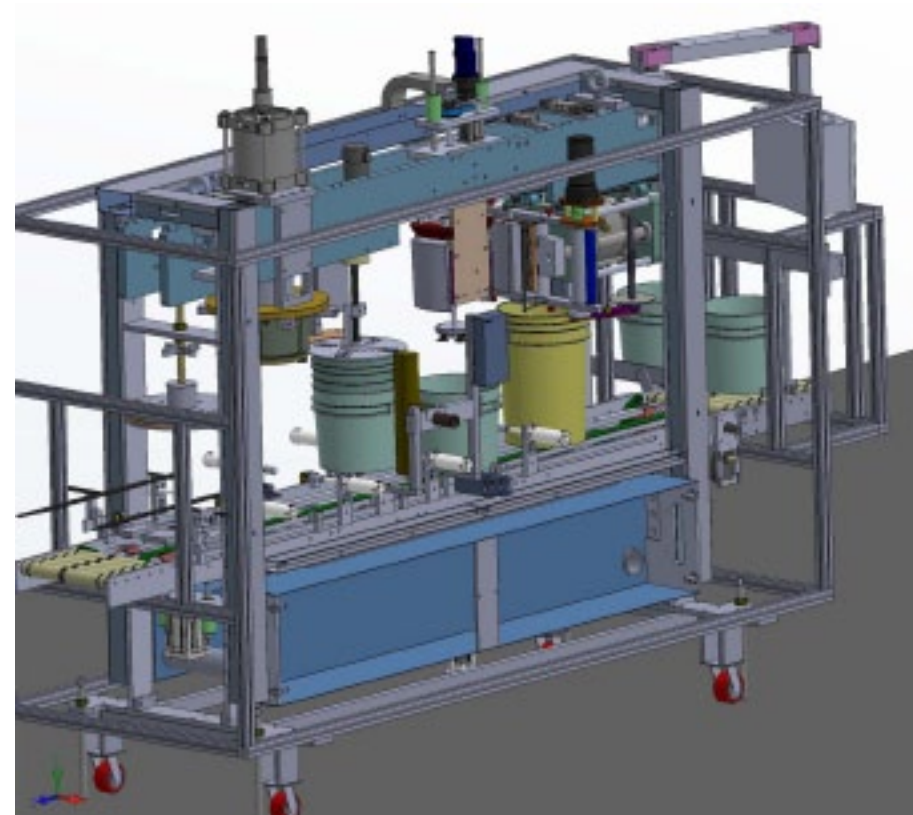
The UN leak test option will check pails for small leaks. It monitors the pressure inside by inflating the pail to a pre-set test pressure and monitoring it for a pre-set time. The operator can adjust the leak tester settings from an easy to understand operator terminal.

Lip Flaming Attachment

The lip flaming attachment will flame treat the lip of the pail to ensure there are no plastic remnants.

Failed Pail Diversion

If a pail has failed the leak test station, it will be diverted to a rejection bin.



Pail Stacker

The stacker stacks pails to a maximum height of 48".

Gravity Conveyor and Stack Accumulation

The conveyor moves the finished stacks into the stack accumulation, ready for

Hot Stamper (Continued)

Optional Systems

Square/rectangular pail orientation with actuated flame treatment

Square/rectangular pail types are orientated to the handle mounting hole. The pails are then flame treated by a cam actuated flamer, which traces the shape of the pail. This option provides more consistent flame treatment.

UN Leak Tester

The UN leak test option will check pails for small leaks. It monitors the pressure inside by inflating the pail to a pre-set test pressure and monitoring it for a pre-set time. The operator can adjust the leak tester settings from an easy to understand operator terminal.

Pail Lifter

The pail lifter takes the pails from the catcher and lifts them to the hot stamping machine. The pail lifter elevates pails from a lower conveyor up to the in-feed height of the hot stamping machine or other equipment.

Pail Stacker

The stacker takes the finished product and stack it to a maximum of 48". The stacker can be tooled for different pail sizes. Also, handle or handle-lobe orientation.

Pail Stacker

The stacker is designed to stack and accumulate pails up to a stack height of 48". The pails are stacked upwards and completed stacks are lowered back on to the conveyor and accumulated. The unit is controlled by a small PLC with an operator interface.

Standard Features

- Pails are stacked to an adjustable height
- Completed stacks are lowered onto the conveyor and move onto a powered accumulation conveyor ready for packaging
- Stack counts and timing values are changed by means of a small operator interface.
- All cylinders and solenoid valves are Festo.
- The conveyor drives are Baldor DC variable speed.
- A six foot powered accumulation conveyor is included.

Safety Features

- Equipment is CSA inspected
- Guarding to be compliant with OSHA



Plastic Handle Installers

Pail Handle Installer

The automatic handle installer is designed to install plastic handles onto pails, then stack and accumulate the completed products. One operator is able to load two handle storage conveyers and manage two systems simultaneously - the system is specifically designed to reduce operator fatigue. Provides speeds of up to 400 units per hour.

Handle Accumulation Conveyor

The operator loads handles here. Speed adjusted via touch screen.

Pail Orientation

Pails are oriented by rotation and pneumatic stop to be in proper position.

Handle Transfer Arm

The handle transfer arm picks a handle from the accumulation conveyor, forms the handle to a U shape, and aligns the handle buttons with the opening of the pail.

Handle Installation

The pails are precisely re-oriented and the handle buttons are pressed into the pail openings.



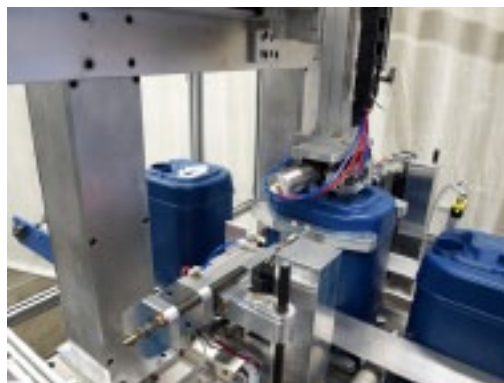
Plastic Handle Installers (Continued)

D-Handle Installer

Fully automatic, this system installs D-Handles onto tight-head blow-molded containers. The system can be adjusted to fit different pail sizes. The machine features a servo-driven gantry that senses the height of each container, and adjusts via a touch probe.

Safety Features

- Equipment CSA inspected
- Guarding to be compliant with OSHA



Plastic Handle Installers (Continued)

Manual Handle Installer

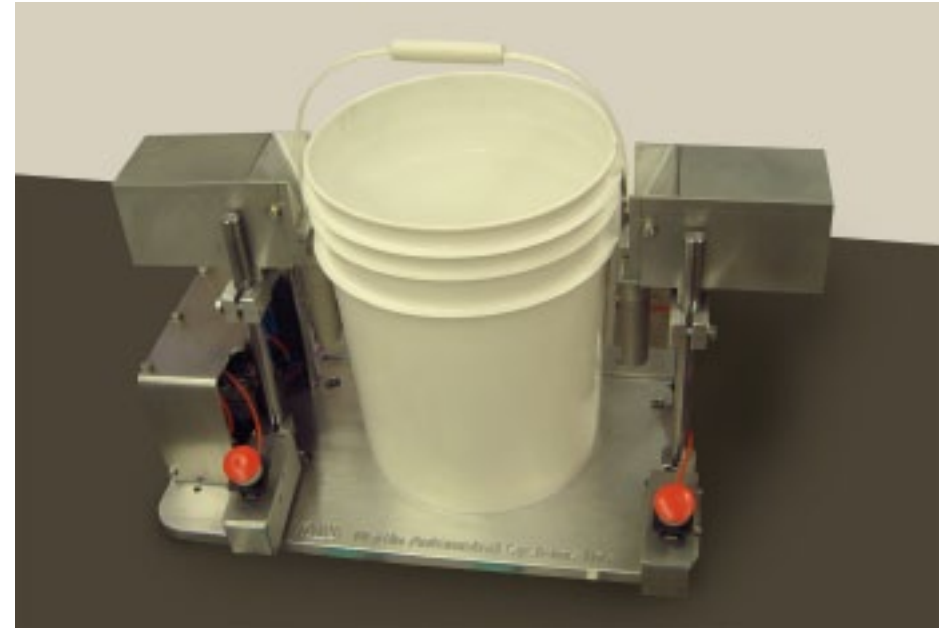
MAS manual handle installers are custom manufactured to install handles onto various different types of containers.

Benefits are:

- Less worker fatigue
- Prevention of work-related injuries like Carpal Tunnel Syndrome.

Safety Feature

- Equipment CSA inspected



Lid Closing Press

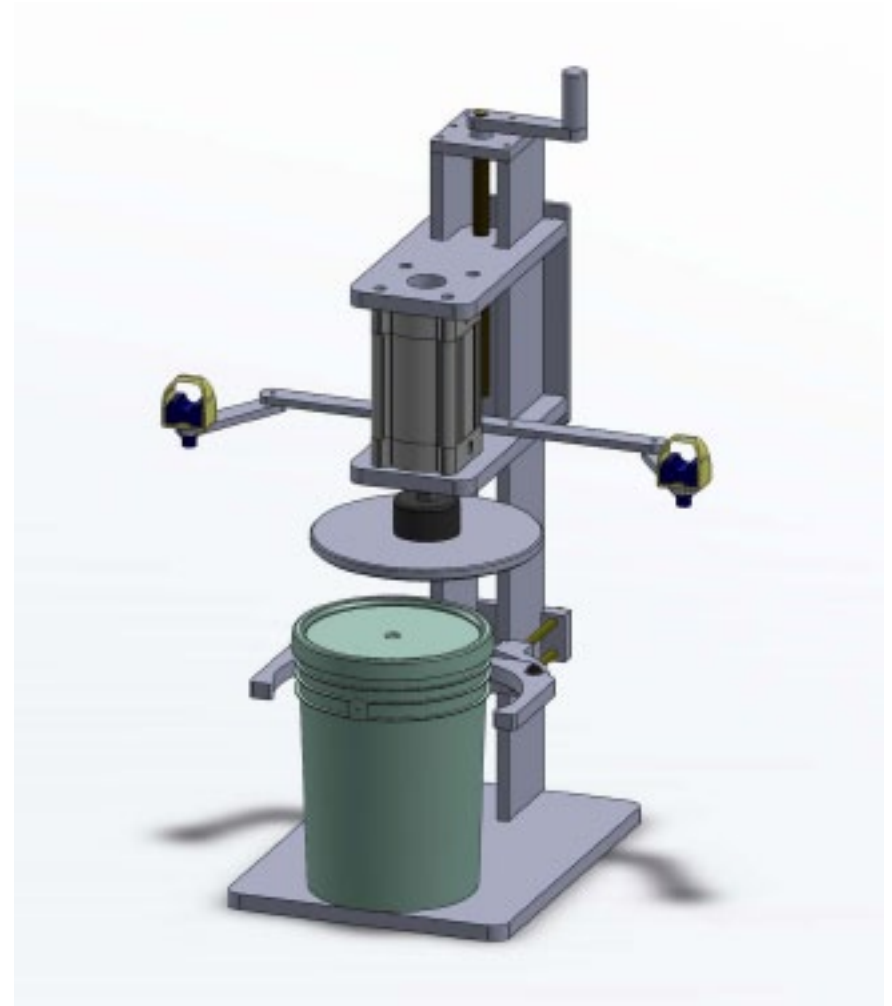
The lid press is designed to seal a plastic lid onto a plastic pail. The lid is manually placed into the sealing area and the automation of the lid press is actuated using dual pneumatic start buttons.

Features

- Fully pneumatic operation
- Pneumatic anti tie down start buttons
- Festo Cylinders
- Compact and durable design
- Adjustable pail height
- Satellite ring support for thin wall pails

Safety Features

- Equipment CSA inspected
- Guarding to be compliant with OSHA



Orienting and Elevating Feeder

The MAS Orienting and Elevating Feeder is built to handle a wide range of round, lightweight parts such as caps, lids and plastic discs.

Parts are drawn from the hopper via a cleated belt, then rest on the cleats as they advance to a vertical elevator section. Orientation is accomplished within the vertical elevator section, and parts with their heavy side towards the belt remain on the cleat. A cam bar directs the part through an external side discharge chute, preparing the part to be sent to its next destination.

The conveyor is shown feeding APC-7 closures for insert molding in pail covers.



Vibratory Feeders

Welded stainless steel feeder bowls with excellent feeding characteristics and innovative track design. Reasonably priced, our feeders also feature a durable polyurathane coating for clean and quiet parts handling.

Controls

A frequency controller provides the most efficient amplitude and feed rate.

The controller operates at 110v AC, 60 hertz and 220v AC, 50 hertz.

Closures

APC Products Limited

<http://www.pailclosures.com/>

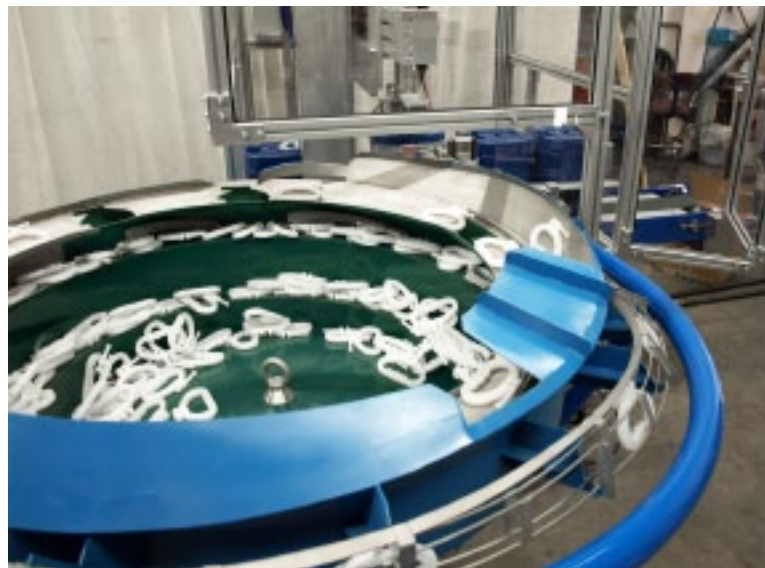
Rieke Packaging Systems

<http://www.riekepackaging.com/>

American Flange & Manufacturing Co.

Tri-Sure

<http://www.tri-sure.com/>



Aluminum Extrusions

MAS is able to offer components, aluminum extrusions, and various attachments developed through our expertise in building and guarding custom machinery.



Conveyors

Martin Automated Systems can provide a wide range of standard and customized solutions for manufacturing conveyor automation needs. Our conveyors use high quality materials and stand up to the rigor of manufacturing. Guarding can be customized to your manufacturing configuration.

Features

- Baldor motors
- Siemens PLC

Safety Features

- Equipment is CSA inspected
- Guarding to be compliant with OSHA

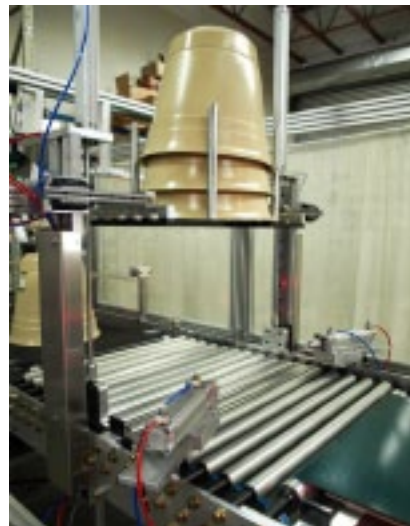
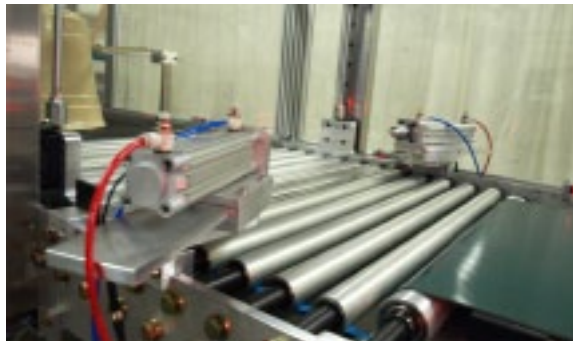


Tub Stacker

A special-purpose stacker which can be built to suit your specific needs. UPC and product labeling are integrated.

Process:

- Labeling
- Stacking
- Accumulation



Automatic FIG Gasket Installer

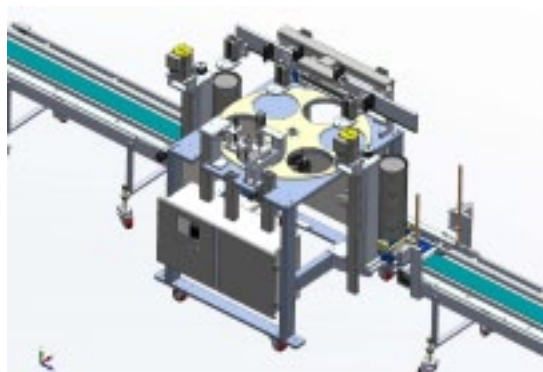
A special purpose flow in gasket which can be built to accommodate many types of lids, specific to your needs.

Process

- Loading conveyor
- Pick and place
- Infeed lid weighing
- Flow in gasket
- Completed lid weighing
- Pick and place
- Exit conveyor

Features

- Servo driven
- Rejection picker
- Siemens PLC
- Operator touch screen



Safety Features

- Electrically and pneumatically interlocked guard
- Equipment is CSA inspected
- Guarding to be compliant with OSHA



Our History

Herman started his career in design and engineering at the technical school of Rudolf Diesel Technology Center in Augsburg, Germany otherwise known as Rudolf-Diesel Technikum. From there he immigrated to Canada and began working with technical companies across the country.

Herman founded Martin Automated Systems in the year 1986 and the Company was subsequently incorporated in 1988. Herman utilized his love for engineering and his technical expertise to consult on design, as well as develop and manufacture high quality custom machinery for clients' facilities such as Capilano Plastics and Sharp Plastics.

MAS has grown by continuously developing new solutions that solve automation difficulties and allow manufacturers to reduce labour costs across Canada, the United States of America, and South America.

