

**Gardner**  
**Denver**

VACUUM & PRESSURE SOLUTIONS  
FOOD & PRODUCT PACKAGING

# Packaging Industry



# Food Vacuum Packaging

## ■ Tray Forming/Sealing

- Food trays are formed under vacuum molding from rolls of plastic film
- Food product (ground beef for example) is placed in the formed tray for sealing
- Clear plastic sealing is applied and vacuum is used to extract the air from the package
- Often times certain gas mixtures are introduced back into the tray to extend shelf life
- This process is known as Modified Atmospheric Packaging (MAP)
- Special “oxygen rated” vacuum pumps must be used for this MAP process

## V-Series

Rotary Vane



- Compact footprint
- Low noise level
- Long life vanes
- Oil-free or lubricated designs
- Extended maintenance intervals

## S-Series

Screw



- Continuous variable pitch screws
- Short evacuation times
- Oil-free compression
- High water vapor tolerance
- Minimal maintenance costs

## L-Series

Liquid Ring



- High resistance to corrosion
- Contact-less operation
- Increased water carry-over models
- UL/CSA approval
- 50/60 Hz motors as standard
- Available in partial or closed circulated





V-VC



V-VTR



S-VSI



S-VSI



L-BL2



L-BV5



# Vacuum Packaging

## ■ Package Evacuation

- Meat, fish, cheese portions are placed into a vacuum bag for consumer packaging
- Bags are placed in a vacuum chamber machine, chamber lid closes and a vacuum applied
- When air is removed from the bag and the final vacuum is reached, bag is then heat sealed closed
- Removal of the air ensures the longest shelf life and appearance for the consumer
- Vacuum packaging use has now been extended to many other consumer products

### V-Series Rotary Vane



- Compact footprint
- Low noise level
- Long life vanes
- Oil-free or lubricated designs
- Extended maintenance intervals

### S-Series Screw



- Continuous variable pitch screws
- Short evacuation times
- Oil-free compression
- High water vapor tolerance
- Minimal maintenance costs





V-VC



V-VTR



S-VSI



S-VSI



# Vacuum Packaging

## ■ Trim Removal

- Food packaged via continuous plastic roll stock (blocks of cheese for example) are individually cut
- After one package is cut away from the continuous roll, there is a scrap plastic strip remaining
- Vacuum is used to suction the plastic trimmings away from the packaging machine
- Elmo Rietschle has a vacuum blower solution which provides the vacuum and collects the scrap

## F-Series

Radial



- Aluminum cast housing and impellers
- Cost efficient and robust
- Life-time lubricated bearings
- Process safe and resilient
- Quiet and low vibration operation



F-CEVF





# Packaging

## ■ Filling & Closing Machines

- Vacuum filling is used for such products as beverages, cosmetics & pharmaceuticals
- Air is removed simultaneously as the product is filled into the container
- Removal of the air speeds up the filling process and extends the shelf life of the product
- Air is removed from pharmaceuticals and cosmetics to ensure product purity

## ■ Labeling

- Automated machines place adhesive labels to products and packaging
- Vacuum is used in conjunction with suction cups to pick and place labels

## ■ Volume Reduction

- Foam type products and clothing are reduced in volume by means of vacuum
- Vacuum bagged items take up less space for transport and storage

### G-Series

Side Channel



- Contact-less operation
- Quiet operation
- Tolerant to dust ingestion
- UL/CSA approved
- Service intervals up to 40,000 hours
- 50/60 Hz motors as standard

### L-Series

Liquid Ring



- High resistance to corrosion
- Contact-less operation
- Increased water carry-over models
- UL/CSA approval
- 50/60 Hz motors as standard
- Available in partial or closed circulated

### V-Series

Rotary Vane



- Compact footprint
- Low noise level
- Long life vanes
- Oil-free or lubricated designs
- Extended maintenance intervals

### C-Series

Claw



- Long up-times
- Maintenance friendly
- Dry running and contact free operation
- Targeted discharge of cooling air
- Process safe and resilient
- High efficiency

### S-Series

Screw



- Continuous variable pitch screws
- Short evacuation times
- Oil-free compression
- High water vapor tolerance
- Minimal maintenance costs





G-BH1



G-BH2



L-BL2



L-BV5



V-VC



V-VTR



C-VLR  
ZEPHYR



S-VSI



S-VSI

# Packaging

## ■ Packaging Materials

- Many common packaging materials are formed using vacuum
- Examples include bubble wrap and inflatable bag packaging materials

## G-Series Side Channel



- Contact-less operation
- Quiet operation
- Tolerant to dust ingestion
- UL/CSA approved
- Service intervals up to 40,000 hours
- 50/60 Hz motors as standard

## ■ Blister Packaging

- Vacuum is often used to assist with the formation of consumer packaged goods





G-BH1



G-BH2



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by continuously improving all business processes  
with a focus on innovation and velocity

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