

**THE LINK TO YOUR FOOD
PROCESSING SUCCESS**

**HORIZON
SYSTEMS**



FOOD PROCESSING SOLUTIONS ON THE HORIZON

Material Handling • Majors-Minors-Micros Batching
Sanitary Solutions • Process Safety Solutions

At Horizon Systems, we understand the challenges you face from process requirements, industry trends and regulations...and the essential role we fill in being the strong link in your process line. Our company culture has always been one of an engineering company that manufactures. This “engineering first” focus has made us the industry leader in innovation and engineering improvements.





PLANT SAFETY

Combustible dust explosion is a critical issue in process safety. We provide safety solutions that conform to both OSHA and NFPA regulations.

- NFPA standards
- FM global requirements
- OSHA requirements/compliance
- Adequate training of all plant personnel
- Hazard analysis and risk assessment

PRODUCT SAFETY

Food Safety is a key requirement in today's process. Passive Sanitation – Active Sanitation methods are critical in today's process.

FOOD SAFETY ISSUES

- FSMA
- GFSI audit schemes (BRC, SQF, FSSC, etc.)
- Risk mitigation
- Process risk zoning of new and existing facilities

We achieve food safety without sacrificing product yield, while delivering consistency and repeatability in implementing the Prevent-Clean-Sanitize-Validate cycle.

QUALITY

Ensuring label conformity and traceability are primary focuses for Horizon Systems. Our systems deliver consistency and repeatability.

- Ingredient protection
- Batch accuracy
- Product integrity
- Traceability
- Prevent cross-contamination

SUSTAINABILITY

We integrate sustainability into every aspect of our business to benefit the global community.

- Better record keeping
- Less downtime
- Control/minimize waste
- Quicker product changeover
- Lower power consumption
- Increase product yield

INNOVATION

We provide innovative processing solutions to meet today's demanding production schedules.

- Forward-thinking
- Customer-focused
- Operator-friendly



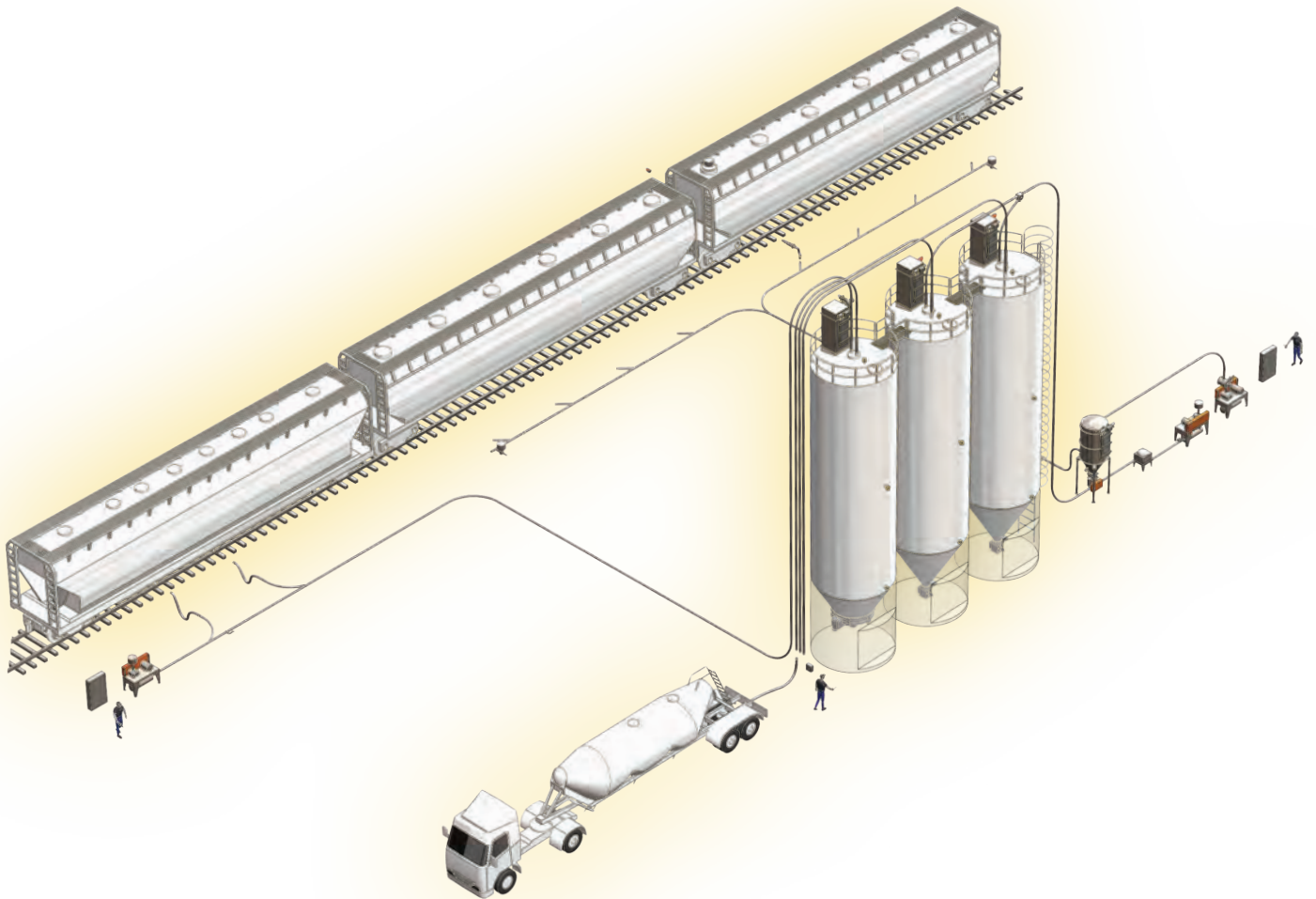
BULK UNLOADING SYSTEMS

SYSTEM DESCRIPTION:

Horizon Systems designs transfer systems from railcar and trucks to storage silos. Our unloading systems are designed to fit your specific application.

MULTIPLE UNLOADING CONFIGURATIONS INCLUDE:

- Dilute phase vacuum unloading and pressure transfer to plant
- Continuous dense phase vacuum unloading and dilute pressure transfer to plant
- Dilute vacuum unloading and continuous dense phase pressure transfer to plant
- Continuous dense phase vacuum unloading and pressure transfer to plant
- Dilute vacuum unloading and pressure pot dense phase transfer to plant





DILUTE PHASE SYSTEMS

SYSTEM DESCRIPTION:

Dilute phase systems are used to transfer material utilizing high air volumes at lower pressures. They are designed around positive displacement blowers as the air source in vacuum or pressure configurations.

VACUUM SYSTEM ADVANTAGES:

- Leaks are inward
- Flexibility at the material pick-up points
- Larger number of pick-up points can be utilized
- Heat sensitive materials are more readily handled
- No airlock blow-by air to contend with cleaner in-plant transfer

PRESSURE SYSTEM ADVANTAGES:

- Ease in discharging material to several destinations
- Higher conveying capacity can be achieved
- Longer conveying distances can be overcome
- Lower capital investment
- Products that are moisture/oxygen sensitive can be more readily handled



CONTINUOUS DENSE PHASE SYSTEMS

SYSTEM DESCRIPTION:

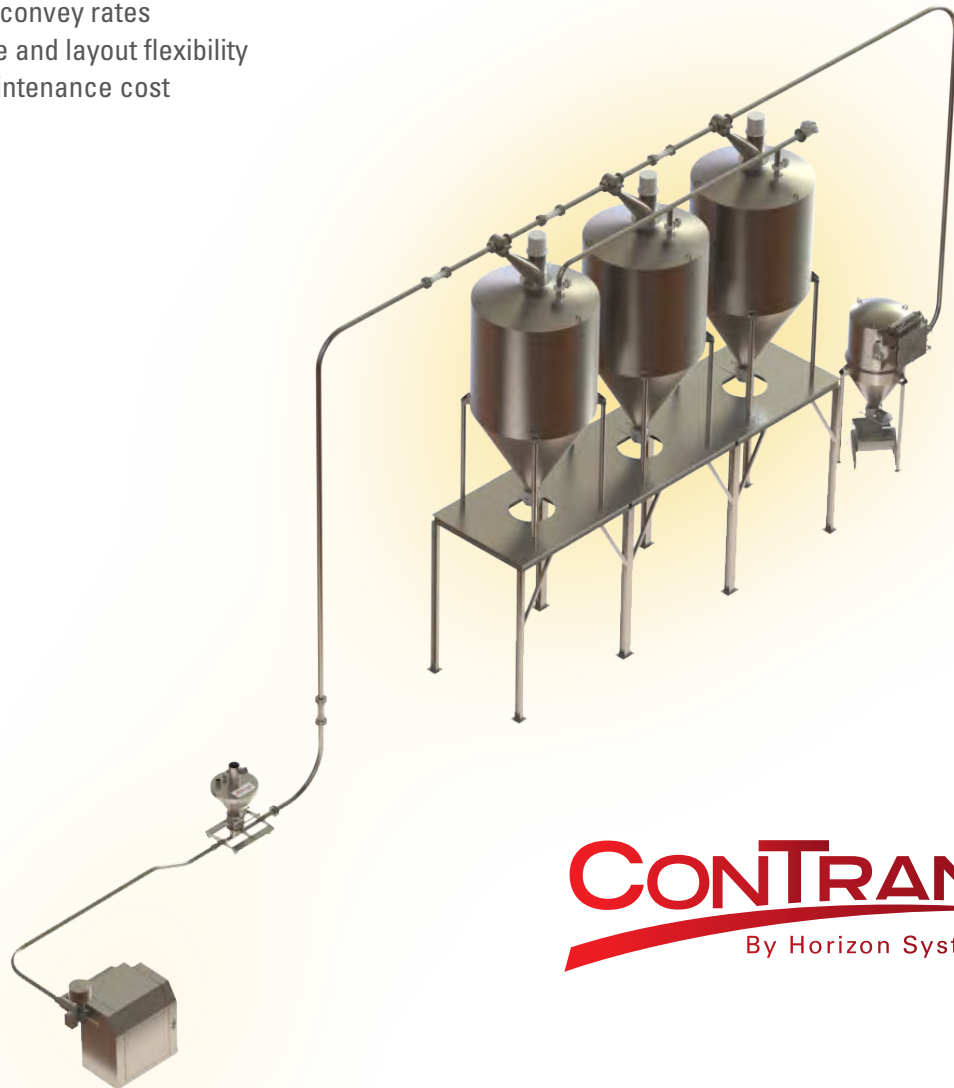
This type of system provides for continuous conveying of the product from the source to the destination utilizing low air volume at higher pressures. There are primarily three variations of continuous dense phase available in the market place today.

MULTIPLE CONFIGURATIONS INCLUDE:

- Pressure
- Vacuum
- Closed loop

ADVANTAGES:

- Extremely well suited for conveying friable materials
- Abrasive materials
- Sanitation-friendly
- Varying convey rates
- Distance and layout flexibility
- Low maintenance cost



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By Horizon Systems



BATCHING SYSTEMS

SYSTEM DESCRIPTION:

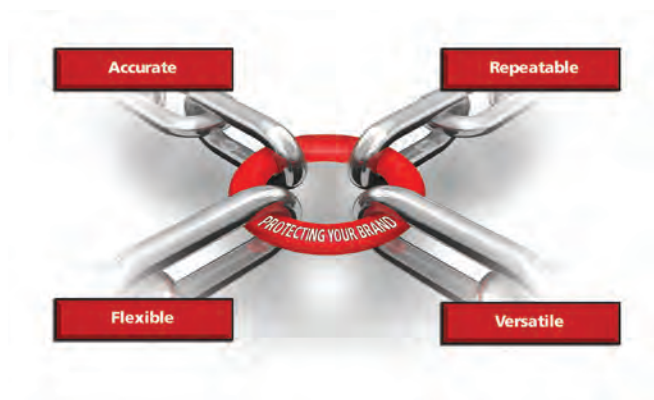
Our batching systems utilize our automated ingredient management and tracking system for exceptional accuracy and cleanability. Recipe and sequence flexibility allow you the freedom to develop the product campaign you want with the security you expect.

ADVANTAGES:

- Lot tracking and reporting to improve monitoring
- Modular design for ease of future expansions
- Systems are accessible, easy to clean, view and sanitize reducing downtime
- Automatically collect detailed batch and process data
- Create and configure flexible batch sequences
- Create and manage recipes
- Create and manage campaigns

CUSTOMER VALUE:

- Reduce price for raw materials
- Improved change over efficiency
- Increase output vs. typical manual operation
- Decrease or eliminate product giveaway
- Less waste



LIQUID HANDLING SYSTEMS

SYSTEM DESCRIPTION:

Our knowledge and expertise in liquid handling systems offers you solutions to fulfill all your liquid handling needs. Whether you receive your material in bulk or totes we design the systems to deliver specified amounts accurately to your process.



MULTIPLE CONFIGURATIONS INCLUDE:

- Bulk liquid storage and delivery
- Tote system delivery
- Scaling system
 - Massflow meters
 - Batch scales





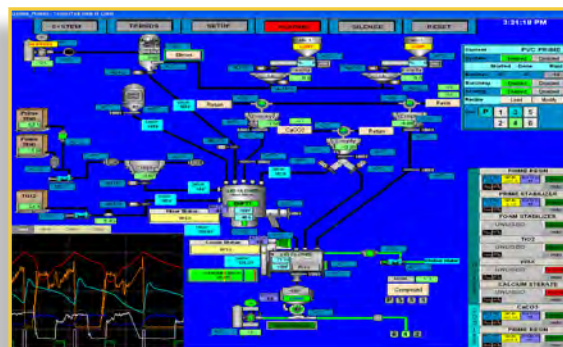
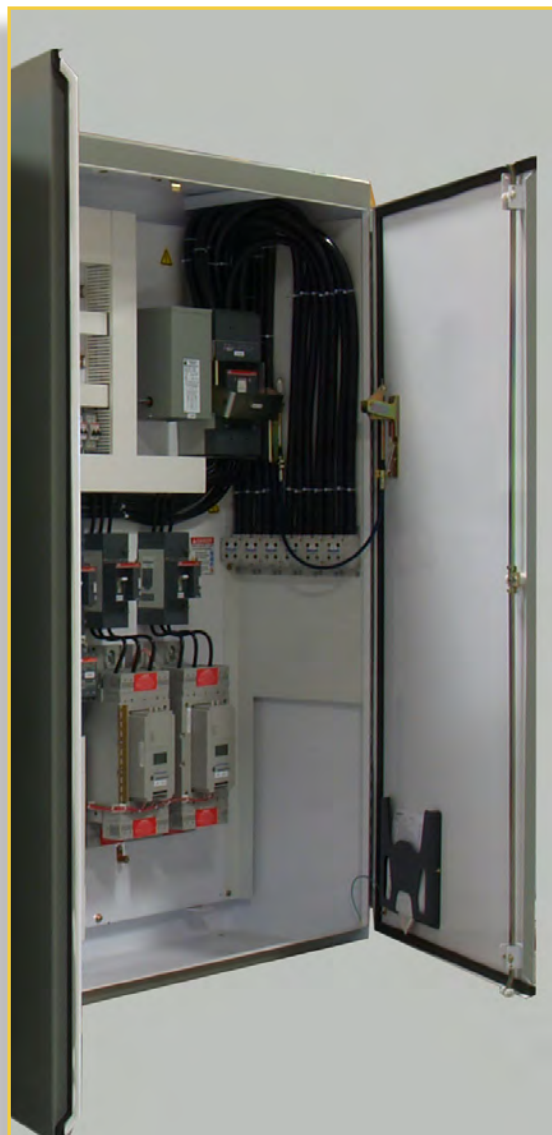
AUTOMATION/CONTROLS

DESCRIPTION:

Our control systems are designed with process and operator safety in mind. We provide state-of-the-art controls that optimize your process, maximize the return on your equipment investments and ensure overall project success.

ADVANTAGES:

- Recipe management and security
- Operator flexibility
- Material mapping and bar codes
- Web-based reporting
- Lot tracking and reporting
- Product quarantine

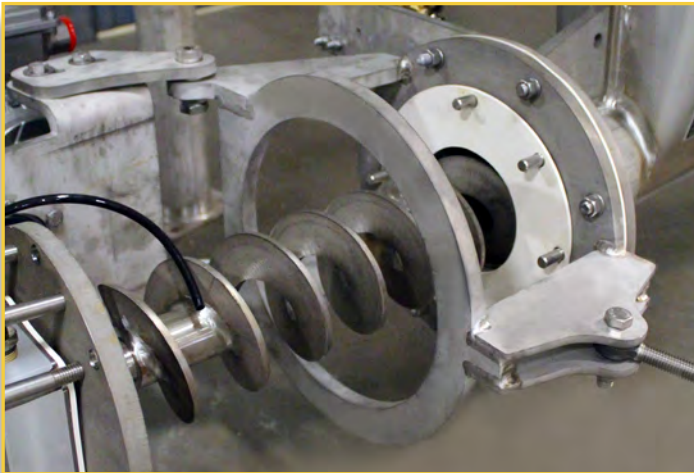


SANITATION

Effective sanitation is a critical step in brand protection. In any HACCP program there are two primary phases. Passive sanitation focuses on contamination prevention in the design of your plant, processes and equipment. Active sanitation is an aggressive approach to your daily Prevent-Clean-Sanitize-Validate cycle.

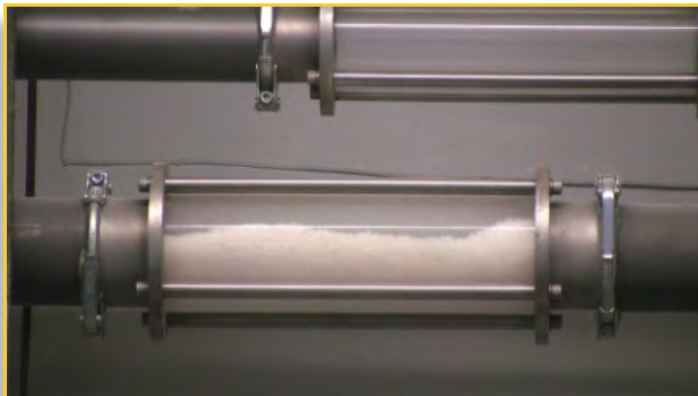
“PASSIVE” SANITATION DESIGN FEATURES:

- Weld and sheet finishes
- Elimination of ledges and corners
- Filters designed for minimum product entrapment
- Clean air plenums and exteriors accessible and cleanable
- Maintenance from the process exterior wherever possible
- Accessibility for inspection and cleaning



“ACTIVE” SANITATION DESIGN FEATURES:

- Provide access for cleaning, sanitizing and verifying
- Tool free access with no small loose parts
- No glued on gaskets that are easily demounted for cleaning
- Material compatibility with cleaning agents and methods
- Wet or dry cleaning options
- PH of chemicals
- Temperature (Heat, dry ice, etc.)



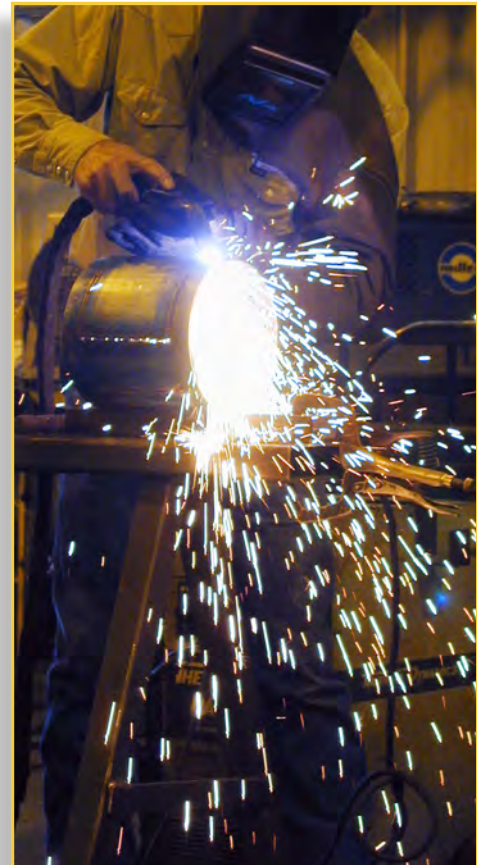
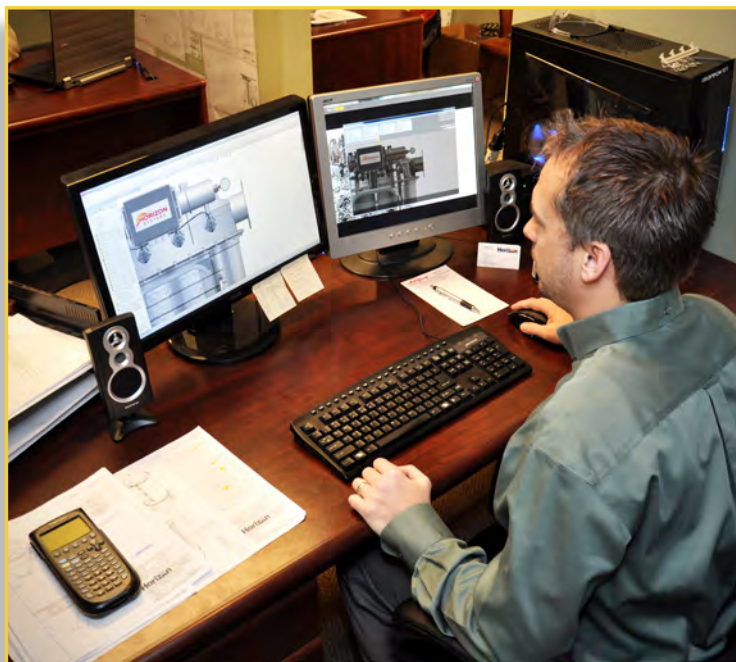


ENGINEERING AND MANUFACTURING

Our in-house engineering and manufacturing allows us to focus on solutions and your unique processes. This combination allows us the flexibility to consistently provide our customers with the best available technology that builds long-lasting relationships.

ADVANTAGES:

- Control quality
- Delivery date control
- Made in the USA
- Follow through to completion
- Custom engineering and manufacturing



TECHNOLOGY CENTER

The Horizon Technology Center leads and supports our engineering capabilities by developing innovative conveying, batching and sanitation solutions. This on-site facility enables us to conduct:

- Research and development
- Material testing
- Trialing active sanitation methods
- Technical training



THE LINK TO YOUR SUCCESS



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