

BEEF, PORK AND POULTRY SOLUTIONS



Brine and Marinade Preparation

Meat Transfer and Handling

Cleaning and Sanitizing



Consumers are demanding meat products that are moist and taste good. Proper marination will help the processor achieve these goals. With a consumer push to natural starches and other ingredients, processors are seeing marinade and brine formulations that are tougher to dissolve and disperse. Shearing is needed to blend these ingredients to achieve the correct viscosity, maintain flow velocity in the vessel and ensure consistency from one batch to the next. However, many ingredients, especially starches, are susceptible to 'fracturing' from too much shear. The approach must be to provide enough shear to eliminate lumps and allow full hydration, but not too much to fracture the dispersion.

BRINE AND MARINADE PREPARATION

DISSOLVING, DISPERSING, DEAGGLOMERATING

"OUR BRINE/SALT TRIAL WITH THE ROTOSOLVER® RESULTED IN 5% MORE YIELD THAN OUR OLD PROP MIXER AND REDUCED MIXING TIME FROM 45 MINUTES TO 10 MINUTES."



RTOSOLVER® HIGH SHEAR MIXER

THE ULTIMATE COST EFFECTIVE MIXER FOR MEAT AND POULTRY PROCESSORS



Drastic reduction in energy consumption

Lower RPM and HP than any shear mixer in the industry

New simplified, sealed drive assembly

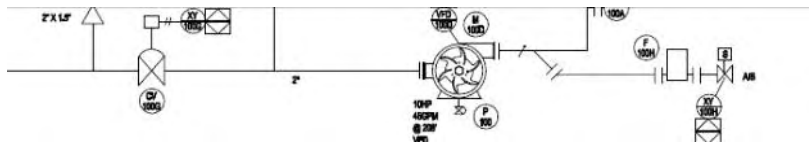
Provides streamlined design and simpler maintenance

Clean-In-Place capability

Single shaft design and no wearing parts in the product zone

3A and USDA compliant

IMPROVED PROCESS RESULTS THROUGH BETTER DRAWDOWN OF FLOATING POWDERS AND ABILITY TO HANDLE THE NEW, THICKER VISCOSITY MARINADES.



FASTFEED™

IN-LINE POWDER INDUCTION

With its in-line powder induction and dispersion system for rapid incorporation of and wetting out of difficult powders, the ergonomic design of the Fastfeed™ is unlike any other powder induction system. A high performance suction pump conveys 3 to 400 lbs/minute of any powder or solid, including gums, starches and carbomers. It is designed for continuous powder suction even as viscosity and solid levels increase.

- Adjustable powder feed rates with regulating valves
- Improved yield of marinade and brine solutions
- Ergonomic, floor level design
- Portable design for use in any mixing area



TURNKEY MIXING SYSTEMS



FULLY INTEGRATED MIXING SKIDS FOR MARINADE AND BRINE SOLUTIONS



Our custom modular and skidded systems are designed, fabricated and installed to meet your specifications. Skids include tanks, powder and liquid feed systems, batch and/or in-line mixing, transfer/recirculation pump and all necessary fittings, piping and valves.

Controls can be mounted or remote-mounted. Each system comes with full utility support and documentation. All skids are pre-wired, fully assembled, functionally tested and ready for installation.

High quality fabrication

All 304/316SS construction with CIP capability throughout

Manual or fully automatic controls

Compliant to FDA and USDA regulations

When processors have to transfer meat, positive displacement pumps are usually the product of choice. Within the PD pump range, lobe and diaphragm pumps offer flexibility and ruggedness. They are efficient, CIP-able and minimize the shear on the product.

The quality of mechanically deboned meat (MDM) and other pre-ground raw material is heavily dependent on effective management of its temperature. Scrape-surface heat exchangers make cooling MDM a continuous, integrated process and ensure rapid, even cooling. This process achieves a more consistent end product of better quality that can command a higher market price.

MEAT TRANSFER AND HANDLING **MECHANICALLY-DEBONED MEAT**

AIR-OPERATED DOUBLE DIAPHRAGM PUMPS

IDEAL TRANSFER OF MEAT PRODUCTS—UP TO 20,000 CPS

Handles solids up to 2.5 inches in diameter

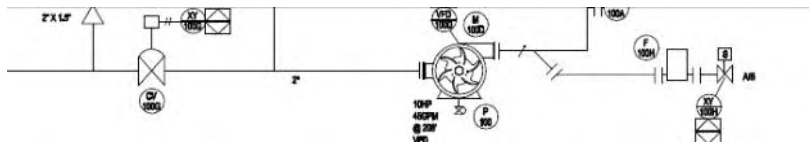
FDA-Compliant, meets CFR Title 21

Easy to clean; quick knockdown design

Durable, lube-free, non-sticking air valve



OVERMOLDED DIAPHRAGM PLATE WITH *PTFE* ON THE FLUID SIDE AND *EPDM* ON THE AIR SIDE SO THERE'S NO PLACE TO HARBOR BACTERIA.



SCRAPED-SURFACE HEAT EXCHANGERS

UNIFORM, CONTROLLABLE AND REPEATABLE CONTINUOUS PROCESSING

The Votator's™ high efficiency and productivity results from a simple concept - heat or cool continuously moving product by providing a large heat transfer surface. Tube wall thickness and thermal conductivity is precisely engineered to maximize heat transfer and structural stability. The heat transfer tube is separate from the media jacket. The double O-ring seal on each end can be removed in minutes without disturbing the media piping.

The result - a rugged, economical and hygienic heat exchanger.

- Handles a wide range of viscosities
- Vertical or horizontal mounting options
- USDA, CFIA, 3A and ASME design standard
- Unique boltless blade mounting pins



M.G. NEWELL IS AN
AUTHORIZED SPX
DISTRIBUTOR OF
VOTATORS™ AND WCB
PUMPS AND PARTS.



WCB ROTARY PD PUMP

LARGE, EASY ENTRY, ANTI-CAVITATION PORTS ALLOW EFFICIENT PUMPING OF LARGE MEAT CHUNKS AND PARTICLES



Versatile 3-way mounting gear case

Waukesha "88" alloy rotors

Permits tighter running tolerances over wide range of temperatures and viscosities

Single wing rotor option available for minimal damage of particulates

Easy disassembly for COP cleaning

3A and USDA compliant

THE UNIQUE WCB DESIGN HAS NO BEARINGS IN THE PRODUCT ZONE—PRODUCING MAXIMUM SERVICE LIFE EVEN UNDER SEVERE OPERATING CONDITIONS.

Regular cleaning and sanitation of meat processing equipment is an integral part of Good Hygienic Practice (GHP). In fact, it should be considered one of the most important activities in a meat plant. Pre-conditions for efficient cleaning and sanitation include sanitary design of equipment (accessible, smooth surfaces with no crevices), proven cleaning methods and systems and personnel trained in cleaning and sanitation methods.

Disinfection, the elimination of microorganisms, is best achieved when preceded by intensive dry/wet cleaning. Without pre-cleaning, microorganisms can remain embedded in encrusted dirt, protein or fat. Adequate rinsing with water after cleaning and prior to disinfection is also indispensable.

CLEANING AND SANITIZING

CIP AND COP SOLUTIONS

CLEAN-IN-PLACE (CIP)



SINGLE-USE OR RE-USE, ONE, TWO OR MULTI-TANK OPTIONS

CIP systems are engineered to your specific requirements. They are cost-effective, efficient, and provide effective cleaning of cracks and crevices. As with all cleaning methods, CIP systems utilize time, temperature and mechanical force to achieve maximum cleaning.

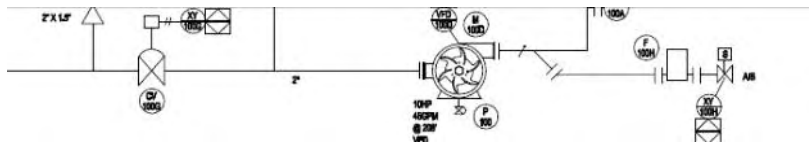
One-tank, single use

- Single-use source of cleaning solution and water
- Simple and flexible operation
- Lower space requirements

Multi-tank, detergent and/or water reuse

- Permits reuse of wash solution and rinse water
- Reduces water and wastewater costs
- Decrease wash cycle times

RE-USE CIP SYSTEMS RECOVER ~80% OF THE CHEMICAL AND WATER VOLUME.



CLEAN-OUT-OF-PLACE (COP)

OUT OF PLACE, BUT IN CONTROL

COP systems provide consistent and repeatable cleaning of equipment parts and components. Benefits include reduced chemical and water usage, less labor and faster cleaning than hand washing. COP is typically used for pump rotors or impellers, cases, hoses, tubing, fittings, gaskets and other handling equipment.

COP washers can be designed as portable/skid or stationary systems with single or multiple compartments. Standard models are typically built with a 304L stainless steel construction with jet manifolds and a centrifugal pump to pump the water and cleaning solution through the system. Designs can be further upgraded to 316L stainless and can include a heat exchanger and PLC controls for semi-automation of sensors and feed systems.

Other options include:

VATWASH¹—cleans the interior and exterior of vats, bins and carts

SANICAB—automated cabinet washer for weigh scales, buckets, trays and totes

TUNNELWASH—custom washer for trays, pallets and tote



¹M.G. NEWELL IS AN
AUTHORIZED SANI-MATIC
DISTRIBUTOR OF CIP
SYSTEMS AS WELL AS
VATWASH, SANICAB AND
TUNNELWASH.



CONTROLS AND AUTOMATION

PROCESS CONTROL, SYSTEM INTEGRATION, BATCHING, MACHINERY AUTOMATION

Programmable logic controllers (PLCs) increase the consistency of a process and product and improve productivity through real-time monitoring and stability correction. From simple start/stop functionality of a motor to full CIP cycle programs, PLCs provide simple control of complex processes.

From conceptual design to installation and start-up, our engineers and technicians will develop and validate a system that meets your requirements.

- HMI design and programming
- Control panel design and fabrication
- Control software and programming
- Documentation
- Audits
- Training and support



PROVIDING SANITARY PROCESSING EQUIPMENT AND CUSTOMIZED SERVICES SINCE 1885

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