

SPX FOOD+BEVERAGE

SPX Food and Beverage Processing Capabilities Food and beverage processing has never been more challenging. Margins are being squeezed, food safety is paramount and consumer demands for new products make formulation changes a regular occurrence.

To meet these challenges head on, you need a partner with a deep understanding of process engineering and a broad portfolio of equipment. Look to SPX and its industry leading brands to provide unparalleled technical support, equipment versatility and food processing expertise.

Based in Charlotte, North Carolina, SPX Corporation (NYSE: SPW) is a global, multiindustry manufacturing leader with approximately \$5 billion in annual revenue, operations in more than 35 countries and over 14,000 employees. The company's highly-specialized, engineered products and technologies are concentrated in Flow Technology and energy infrastructure. Many of SPX's innovative solutions are playing a role in helping to meet rising global demand for electricity and processed foods and beverages, particularly in emerging markets. The company's products include food processing systems for the food and beverage industry, critical Flow components for oil and gas processing, power transformers for utility companies, and cooling systems for power plants. For more information, please visit www.spx.com.

Drivers for Change

Through our heritage and experience of developing solutions for our Food and Beverage clients, SPX has identified that change within the majority of processing operations can be categorized into four main drivers. Each of these drivers have common as well as unique characteristics and provide processors different sets of challenges. Through SPX's identification of these drivers they have been able to develop and organize a comprehensive portfolio that can be utilized to address and reduce the stress of a user's change.

Driver Technology

Advancements, changes/ feature upgrades Including Automation upgrades, food processing methods, communications and connectivity monitoring and metering Drivers have the potential for affecting the following pain points most.

Pain Points related to Technology change -





Driver Product Category

Capacity changes, batch size runs, consumer trends/behaviors

Including product extensions, new flavors and ingredients, introduction and transfer of new lines, capacity increases, brownfield projects (New Processes in existing facilities)

Pain Points related

to Product Category change -



Driver Environmental, Health and Safety (EHS)

Updates and introduction of new requirements, risk reduction, global and local regulatory compliance

Including security, food safety and compliance, worker safety

Driver

Operating Principles

Process and CIP working practices, centralized purchasing/ equipment standards, corporate vision and priorities

equipment efficiency, productivity, uptime risk

Pain Points related to EHS change -



Pain Points related

to Operating Principles change -



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PAIN POINTS						
		RELIABILITY	DURABILITY	FLEXIBILITY	EFFICIENCY	SAFETY AND Security
CDV		Uptime and Consistent	Withstand Different	Manage Expected or Unexpected	Productivity and Energy	Operational Safe and Protection
SPX		Performance	Environments	Changes	Consumption	 Security to
Food and Beverage		Application	 Maintenance and CIP practices 	 Quick product switch out 	Managing	reduce for tampering and
Process Component		consistency			energy usage to minimize costs	contamination
Portfolio		Consistent and sustainable performance	Fast paced plant operation with all levels of operators	 Diverse mix of applications New opportunities for repurposing 	 Maintain up time 	 Maintenance
					and reduce switch out time	Safety
						 Regulatory and common working practice needs
Module	Product Group					
<u>Pumps</u>	Positive Displacement					
	Centrifugal					
	Metering					
	Diaphragm	•				
	Spares and Parts					
<u>Valves</u>	Single Seat/Mix-Proof					
	Butterfly/Ball					
	Specialty Process					
	Aseptic					
	Spares and Parts	•	•		•	
leat	Plate					
Exchangers	Scrape					
	Tubular					
	Spares and Parts					
	Maintenance Services			•		
<u>Homogenizers</u>	Homogenizers					
	High Pressure Pump					
	Spares and Parts					
	Maintenance Services					
Separators	Separators					
	Spares and Parts					
	Maintenance Services					
Mixers	Liqui- and Multiverter					
	DTL/TPM Mixer				_	
	Flex-Mix [™] Instant					-
	Colloid Mill/Shear Pump				_	
	Cavitator					
	Spares and Parts					

NOTE: The 🔳 denotes that the individual offering has significant capability, opportunity or potential to address the aligned pain point.

WHY SPX IS RIGHT FOR YOU!

It's hard to find a more comprehensive portfolio of processing equipment anywhere else. Many of our designs incorporate patented features and our research and development efforts continue to produce ground breaking technologies. When you specify our equipment, you get more than a product – you get a partner. We listen to your goals and design the best solution to help you achieve them. By testing your formulations at one of our many application centers worldwide – you'll have a proven process before you implement it in your plant.

PRODUCT GROUPS

Centrifugal Pumps: Centrifugal pumps are designed to achieve lifetime cost savings, lower energy consumption. CIP/SIP

Positive Displacement Pumps: Proven operation and durability, these pumps include advanced sanitation technologies, long life features, and installation flexibility. Aseptic models available.

Plate Heat Exchangers:

High quality and value added features. Wide range of frame compression technologies, connection types and sanitary accessories for increased cleanability.

Separators:

Expanded model offerings provides a duty specific design and not a "one size fits all" Separator. Manual automatic and standardizing provide simple installation and process integration.

Homogenizers:

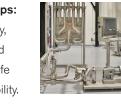
Designed to meet specific application requirements and optimizes both energy and water consumption for sustainable, economic production while providing consistent, reliable performance.

Flow Divert Valves/General Valves: A modular family of divert, mix proof and manual valves that are the ultimate in easy cleaning, high pressure, low maintenance design.

Mixers:

An extensive mixer portfolio offers the flexibility to handle all types of products, quickly and efficiently. Designed to improve product quality, shelf-life and provide better consistency.













Cavitator:

This patented SPX technology offers breakthrough benefits for the heating of liquids without scaled buildup and/or the mixing of liquids with other liquids, gasses or solids at the microscopic level to improve product quality and functional performance.

>Anhydro[®]

>APV[®]

SPX FOOD PROCESSING BRAND PORTFOLIO

>Bran+Luebbe[®] >Hankison[®]



Metering Pumps:

e&e Series

The mechanically actuated diaphragm pumps offer safe and reliable operation for liquids with a plunger pump head option for high pressure, low flow duties The pumps are suitable for single and



SSHE: SPX scraped surface heat exchangers have been replacing slow, inefficient batching operations with more uniform, control lable and repeatable continuous processing for decades.



multi-stream processes and auto-control using variable speed, electric stroke or a combination of both.

>Johnson Pump[•] >Gerstenberg Schröder[®] >Lightnin[®]

Seital Separation Technology



Aftermarket Parts:

Be sure to continue delivering top performance when you rely on original, factory calibrated parts and services. SPX customer service and parts experts anticipate potential requests and quickly deliver the parts you need to keep your process running at optimal levels.

Waukesha Cherry-Burrell





SPX FOOD+BEVERAGE

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