SPX Corporation is a Fortune 500 multi-industry manufacturing leader, headquartered in Charlotte, North Carolina. With 15,000 employees and a presence in 35 countries, we offer highly-specialized engineered solutions to solve critical problems for customers.

SPX is focused on providing solutions that support the expansion of global infrastructure, with particular emphasis on the growing worldwide demand for energy and power. Our innovative product portfolio contains many energy efficient products, including:

- Cooling systems for power plants throughout the world
- Custom engineered flow process equipment for food and beverage manufacturing, oil and gas exploration, distribution and refinement and power generation
- Handheld diagnostic tools for vehicle maintenance and repair
- Power transformers that regulate utility companies’ voltage for electrical transmission and distribution

SPX’s Flow Technology segment designs, manufactures and markets engineered solutions and products used to process, blend, meter and transport fluids. We also offer equipment for air and gas filtration and dehydration. Our leading brands have global operations which serve the food & beverage, power and energy and industrial markets.

www.spxft.com
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OV SINGLE & OW DUAL BASKET STRainers

OV Single Basket Strainers:
- Used for filtering liquids when flow can be interrupted for cleaning
- Line sizes from 3/4” to 10” NB and pressure ratings to ANSI 300 available
- Available in a wide range of materials to suit the application
- OV & OW multi-basket designs available, filtration levels from 10mm down to 10 micron

OW Dual Basket Strainers:
- Used for filtering liquids when flow cannot be interrupted for cleaning
- Handle selects between operating chamber, allowing safe removal of basket from isolated chamber while filter is still in operation
- Optional 100% shutoff facility to eliminate any leakage between chambers

SELF CLEANING FILTERS
- Positive scraping action efficiently clean element while independent dumping minimizes fluid loss
- Wedge-wire or perforated elements provide filtration from 3mm down to 25 micron
- Eliminates operator contact with process fluid ensuring suitability for hazardous process fluids
- Automation provides labor savings and allows use on un-manned sites

GD Engineering
AN SPX BRAND
Email: gd@spx.com

Established: 1944
Common Applications: Oil & Gas, Gas Transmission, Offshore

BANDLOCK 2
- Benchmark Closure design for global high-pressure apps. up to ASME Class 2500
- Quick access to pipelines, filters and pressure vessels
- Approved to International design codes; ASME VIII Div. 1, PD5500, EN 13445

ROTOLOCK
- Horizontal or Vertical installation
- Developed for smaller/low pressure applications up to ASME Class 300
- Low cost solution
- Superior alternative to screwed type closures

HI-T PIG ALERT
- Simple & Proven Technology
- Wide range of models including: mechanical flag and electrical switch
- Bi-directional operation
- Under pressure removal using valved models

SPECIAL PROJECTS
- Automated Multiple Pig Launching
- Fully automatic vessel closures for waste treatment plants
- Closures for Medical waste treatment vessels

SERVICE & AFTERMARKET
- Onshore and offshore inspection and maintenance
- In-situ machining/seal face refurbishment
- Pig Trap Refurbishment
- Training
HEAT EXCHANGERS
- Invented Plate Heat Exchanger in 1923
- Wide portfolio including Gasket, Brazed, and Semi-Welded Plate, Tubular, Scraped Surface, Hybrid and District Heating Units
- Heat exchangers suitable for Hygienic and Industrial applications
- Large range of plate, gasket, material and configurations available
- Comply with international standard e.g. PED, ASME, SQL
- Plate material includes AISI 316, AISI 304, Titanium and most alloys

HOMOGENIZERS
- Rannie & Gaulin Brands
- High Performance
- Modular design for greater flexibility
- Innovative service and maintenance concepts
- Laboratory Testing Services
- Quiet stability with low noise, low vibrations and optional sound proof cabinets available
- Lower cost of ownership

PUMPS
- Centrifugal Pumps, Positive Displacement Pumps, Self-Priming Pumps
- Extensive product range including high capacity, aseptic, water for injection, high pressure
- Energy efficient
- Highest hygienic standards, EHEDG, 3A, FDA approved. Designed for CIP and SIP
- Easy maintenance
- Low noise and vibration levels
- Low NPSH requirements

VALVES
- Includes Butterfly, Single-Seat, Mixproof, Aseptic, Regulating and Process Valves
- Highest hygienic and aseptic standards. 3A, EHEDG, PMO, FDA approved
- Designed for CIP
- Easy maintenance, adaptable and modular
- Different control unit options - Direct Connect, AS Interface, Valve-Net - DeviceNet, Valve-Net Profibus

TECHNOLOGIES
- UHT & Thermal Processing Units; Membrane Filtration & Microparticulation, General Processing; Food; Fresh Dairy Products; Cheese, Butter & Spreads; Beverage & Brewery Units; Plate Evaporation & Distillation
- Dedicated Process Technology specialists
- Innovation Center to support customers in new developments
- Long tradition and extensive references in the Dairy & Food industry
- Excellent aftermarket support and service

AUTOMATION
- APV FactoryExpert delivers automation and software solutions targeting Quality, Production Performance, Utility Management, Regulatory Compliance, Maintenance and Production Optimization
- APV FactoryExpert provides highly functional automation solutions for new projects, migration of aging legacy control systems and upgrading existing automation controls

Established: 1910
### INFUSION / PURE-LAC
- Gentle and accurate heating
- Fast heating 600°C/sec.
- Accurate holding time
- High bacteria spore kill rate
- Shelf life up to 45 days
- High product flexibility
- Superior product quality - low chemical change, pasteurized milk flavor
- Low fouling rate
- Long operating time between CIP
- Pre-assembled and factory-tested
- As option designed according to ASME, PMO, 3A

### TUBULAR
- High up-time
- Flexible product range
- Easy inspection of product and medium surface
- High pressure tolerance
- Low energy cost
- Low maintenance cost
- Pre-assembled and factory-tested
- As option designed according to ASME, PMO, 3A

### HIGH HEAT INFUSION
- Bacteria kill rate over Fo 40 (Fo is defined as total integrated lethal effect)
- Increased operating time
- Reduced maintenance costs
- Efficient deaeration prior to heating
- Non-aseptic flavor dosing of the vacuum chamber possible
- Destruction of heat resistant spores (HRS)
- Pre-assembled and factory-tested
- As option designed according to ASME, PMO, 3A

### INSTANT INFUSION
- Gentle and accurate heating
- Fast heating 600°C/sec.
- Efficient bacteria spore kill rate
- Up to 70% less vitamin loss
- Holding time down to 0.09 sec.
- Very low chemical change
- Superior product quality
- High temperature treatment of +50% concentrate prior to spray drying
- Long operating time between CIP
- Pre-assembled and factory-tested
- As option designed according to ASME, 3A

### SPIRATHERM®
- Long running hours
- Designed for high fouling products
- No product / steam mixing
- Remote and downstream homogenizing, one or two stage system
- High velocity/natural scrubbing => less fouling
- FDA and 3A approved
- No gaskets at product side
- Short CIP time
- SpiraTherm tubular heat exchanger

### MULTI-PURPOSE UHT PILOT PLANT
- Very reliable system for product trials before upscaling to commercial production
- Highly flexible
- Quick and easy installation
- One unit with small footprint
- Operator-friendly
- Pre-assembled and factory-tested
**MICROFILTRATION (MF) SYSTEM**
- Proven components and system design
- Very robust ceramic membranes
- Long lifetime of the ceramic membranes
- New generation GP membranes
- Future option for SW polymer membranes
- Very high quality and reliable engineered system
- Pre-assembled in our workshop
- Operator- and maintenance-friendly

**ULTRAFILTRATION (UF)**
- Proven components and system design
- Proven membranes for any dairy application
- High performance and long membrane lifetime
- High quality engineering, standardized system
- Speed controllers on all motors
- Optimized utility consumption
- Pre-assembled in our workshop
- Operator- and maintenance-friendly

**UF CHEESE SYSTEMS**
- Proven membranes for various milk applications
- High performance and long membrane lifetime
- High quality engineering, standardized system
- Proven process/UF cheese technology
- High yield and product quality
- Increased profitability
- Large number of references
- Complete line with pre-treatment and post-treatment (e.g. MF debacterization for Feta)

**NANOFILTRATION SYSTEM (NF)**
- Proven components and system design
- Proven membranes for NF dairy applications
- Optimized performance and long membrane lifetime
- Inline UF, NF, RO polisher
- High quality engineering, standardized system
- Optimized utility consumptions
- Pre-assembled in our workshop
- Operator- and maintenance-friendly

**REVERSE OSMOSIS (RO)**
- Proven components and system design
- Proven membranes for NF dairy applications
- High performance and long membrane lifetime
- Inline process: UF, RO, RO polisher
- High quality engineering, standardized system
- Optimized utility consumption
- Pre-assembled in our workshop
- Operator- and maintenance-friendly

**APV LEANCREME™ PROCESS**
- A unique process ensuring optimal distribution of particle size
- Ensures superior taste in low-fat products
- Excellent functional properties
- Ability to vary particle sizes
- Fast payback, high ROI
- Proven, high quality system design
- Evaporation and spray-dry options
- Increased yield
CHEESE VATS - CURDMASTER A VERTICAL DOUBLE O VAT

- Fast foamless filling
- Rapid mixing of all added components including rennet
- Gentle and precise cutting
- High yield
- Fast whey draw
- Controlled, fast heating and cooling
- Vertical vat with 2 outlets for fast emptying
- Efficient and gentle stirring
- Fully automated with touch screen
- CIP cleanable vats

OPD PRE-PRESS

- Flexible pre-press for all cheese types, block sizes and shapes
- Adapts easily to variations in fat and water content
- Physical separation between the batches for clear identification
- Easy change of cheese dimension and shape
- Same unit can make Gouda- and Tilsit-types
- Long running time between CIP cleaning
- Higher yield and uniform water content
- High weight accuracy due to curd distribution

SANIPRESS SYSTEM

- Even pressing of cheeses in individual molds or multiple molds without using spring-loaded lids
- A specific pressure of 400 g/cm² (5.7 lbs./sq.in.) is achieved at only 0.3 bar (4.3 lbs./sq.in. air pressure)
- Optional pressing cylinders available
- Applicable to a wide variety of cheese types, shapes and sizes
- Integrated mold storage
- Collecting of whey and CIP liquid
- CIP cleanable

APV, AN SPX BRAND - EVAPORATION AND DISTILLATION

Established: 1910
Common Applications: Food, Dairy, Beverage, Brewery, Pharmaceutical, Chemical Industrial, Fuel Alcohol

PLATE EVAPORATOR

- Enhanced quality of food products
- Low head room requirement
- Easy accessed for cleaning
- Flexibility in capacity by adding plates

DISTILLATION

- Modular design - pre-assembled
- Full lab testing available
- Customized for application
<table>
<thead>
<tr>
<th>CONTINUOUS BUTTER MAKING MACHINE - HCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Built-in cream pre-heater</td>
</tr>
<tr>
<td>- Built-in buttermilk cooling</td>
</tr>
<tr>
<td>- Low air content in final product</td>
</tr>
<tr>
<td>- Advanced dosing system for water, salt and culture</td>
</tr>
<tr>
<td>- Internal CIP system</td>
</tr>
<tr>
<td>- Factory-tested before shipping</td>
</tr>
<tr>
<td>- Each machine size has a wide capacity range</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BUTTER PACKAGING LINE - FMG</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Stainless steel throughout</td>
</tr>
<tr>
<td>- Single, compact unit</td>
</tr>
<tr>
<td>- Accurate filling for less giveaway of butter</td>
</tr>
<tr>
<td>- Available with a troubleshooting system to reduce downtime</td>
</tr>
<tr>
<td>- Advanced control system with data collection</td>
</tr>
<tr>
<td>- Factory-tested before shipping</td>
</tr>
<tr>
<td>- Each machine size has a wide capacity range</td>
</tr>
<tr>
<td>- FMG+ is capable of packing two different carton sizes at the same time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DAIRY BLEND PLANT</th>
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</thead>
<tbody>
<tr>
<td>- No vegetable oil residues in the buttermilk</td>
</tr>
<tr>
<td>- Simultaneous injection of several oil types</td>
</tr>
<tr>
<td>- Flexible end-product range, fat content in final product 40-80%</td>
</tr>
<tr>
<td>- Stand-alone system, factory-tested before each shipping</td>
</tr>
<tr>
<td>- Each machine has a wide capacity range</td>
</tr>
<tr>
<td>- APV patented process</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BUTTER REWORKING PLANT</th>
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</thead>
<tbody>
<tr>
<td>- Continuous, closed system minimizing the risk of bacteriological issues</td>
</tr>
<tr>
<td>- Vacuum chamber for lowering of the air content in the product</td>
</tr>
<tr>
<td>- Precise dosing of water, salt, culture, etc. to ensure a uniform end-product</td>
</tr>
<tr>
<td>- Stand-alone system, factory-tested before shipping</td>
</tr>
<tr>
<td>- Wide capacity range</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BUTTER SILOS HRS</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Big diameter augers ensures reduced working softening of the product</td>
</tr>
<tr>
<td>- Auger speed can be controlled by packaging capacity</td>
</tr>
<tr>
<td>- Installed light and transparent man-way ensures easy inspection</td>
</tr>
<tr>
<td>- Round corners inside</td>
</tr>
<tr>
<td>- Inclined bottom to ensure drainage during CIP</td>
</tr>
<tr>
<td>- Short CIP turn-around time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BUTTER SILO HCC</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Suitable for butter as well as dairy blend</td>
</tr>
<tr>
<td>- No augers</td>
</tr>
<tr>
<td>- No additional working of the product</td>
</tr>
<tr>
<td>- 1 - 5 butter pumps</td>
</tr>
<tr>
<td>- Low waste of product at shut down</td>
</tr>
<tr>
<td>- Minimal floor space requirement</td>
</tr>
</tbody>
</table>
FLEX-MIX INSTANT

- Unique high shear mixing enables a high powder intake
- Air is efficiently removed during mixing prolonging running time and ensuring consistent quality
- Allows a closed, continuous production, resulting in higher throughput and reduce dust issues
- Handles a large number of formulations

FLEX-MIX PROCESSOR

- Gentle agitation, internal circulation
- High shear mixing for emulsification
- Handles particulate inclusion
- Heating via jacket or direct steam injection
- Closed system with vacuum/flash options
- Quick batch preparation (flip-flop)

FLEX-MIX LIQUIVERTER

- Simple but versatile
- Flexibility at low CAPEX
- Large dissolution capacity due to free vortex and square shape
- Fully drainable for improved hygiene and minimum waste
- Direct drive reduces spare parts wear
- Flushed double mechanical shaft seal available in material of customer’s choice, depending on application
- Easy to maintain

POWER-MIXER

- Aseptic aeration
- Emulsification
- Continuous mixing
- PLC standard in all aseptic systems
- Operator-friendly, smooth and trouble-free operation
- Pre-assembled and factory-tested

DEAERATOR - VFJ/VFN

- New, superior aroma-recovery system
- Automatic parasol regulating valve
- Improved hygiene
- Reduced commissioning costs
- Operator-friendly
- Pre-assembled and factory-tested

VFN E-VAP CONCENTRATOR

- Fresh taste and odor
- Increased viscosity in milk applications
- Smooth and creamy texture in fermented products
- Increased serum stability
- Operator-friendly
- Pre-assembled and factory-tested
PROCAM METERING PUMPS
- Modular, single and multi-stream pump configurations to match the process requirement
- Double Diaphragm and Plunger Pumps
- Pressures up to 20 bar / 300 PSI
- Flow rates up to 3000 l/h / 790 GPH per pump head
- ProCam Smart, a high quality, economic pump for customers with less demanding applications

NOVADOS METERING PUMPS
- Horizontal and vertical metering pumps
- Modular, single and multi-stream pump configurations to match the process requirements
- Pressures up to 1000 bar / 15000 PSI
- Flow rates up to 22600 l/h / 6000 GPH
- Variable speed drive & variable stroke adjustment for manual or automatic flow control
- Double diaphragm and plunger pumps, API 675 complaint
- Remote condition monitoring with the NOVALINK-CSM online diagnostic system

NOVAPLEX PROCESS PUMPS
- Reciprocating high performance diaphragm process pumps for high pressure and high capacity applications
- Modular design, additions can be added on for future expansions
- Pumping chamber hermetically sealed
- Pressures up to 1000 bar / 15000 PSI
- Flow rates up to 80 m3/h / 21000 GPH
- Hydraulic power up to 260 kW / 350 HP with variable speed control option
- Remote condition monitoring with the NOVALINK-CSM online diagnostic system

ONLINE ANALYZERS
- Wide range of different applications
- Fully automatic systems
- Multi-stream measurements
- Low operation costs
- Remote control and diagnostics
- Inline probes
- Innovative technology
- Single parameter and multi parameter systems

Established: 1932
Common Applications: Oil & Gas, Petrochemical, Chemical, Food, Beverage, Personal Care, Pharmaceutical, Pulp & Paper, Water Treatment
### STANDARD SYSTEMS FOR ADDITIVE INJECTION
- Space efficient
- Standard design
- Cost-effective
- Quick Delivery
- Food quality available
- High quality and fit for purpose
- 1-500 l/hr dosing flowrate
- Control options, (inverter, flowmeter, controller)

### TOILETRIES MASTERBATCH SYSTEMS
- Product pumped direct from storage vessels
- Inline mixing removes need for large batch vessel
- Inline quality assurance (pH, viscosity)
- Manufacture “white” common base
- Minimal clean out
- Custom designed, built and fully tested
- Continuous or batch applications

### FINISHING UNIT SYSTEM
- Using common “white” base, makes several variants
- Dosing perfume, color, pH adjust, viscosity adjust, etc.
- Inline mixing removes need for large batch vessel
- Inline quality assurance (pH, viscosity)
- Minimal clean out
- Fast changeover to different recipes with minimal waste

### FOOD MANUFACTURING PACKAGE
- Sanitary design
- Consistent product quality
- Single skid unit
- Small footprint compared with batch
- Continuous process - make only as much as you need
- Control automation available
- Proven technology

### CHEMICAL PROCESSING
- Blending processes or single chemical dosing
- Heating, cooling and mixing options
- ATEX designs available
- Suitable for hostile environments
- Custom designed, built and fully tested
- Minimal onsite installation
- Continuous or batch applications
- Control Options (PLC to full SCADA)

### PROCESS UNIT FOR LIQUID LAUNDRY DETERGENT
- Continuous flow process
- Sanitary design
- Flexible production
- Excellent mixing performance
- Quality check by inline measurements
- Efficient and fast cleaning procedures
- Very high dosing accuracy

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**Established:** 1932
**Common Applications:** Color, Fragrance, Shampoo, Shower Gel, Fabric Conditioner, Liquid Detergent, Mayonnaise, Tomato Ketchup, Margarine, Polyurethanes, Resins, Bitumen, Shaving Gel, Orange Juice, Soft Drinks, SLES Dilution, Bakery Additives, Brewing, Medical Gels and Paper Wipes

---
**BASIC INJECTION PACKAGE**
- Single chemical/single injection point
- Duty or duty/standby arrangement
- Simple design
- Space efficient
- Fast and easy to operate and maintain
- Quick delivery
- Long term aftermarket and service support
- Fit for purpose, but higher quality

**MULTI-PUMPHEAD PACKAGE**
- Multi-pumphead injection and storage package
- Single chemical/single injection point
- High volume/high pressure/high temperature applications
- Designed for hazardous area installations
- Suitable for hostile environments
- Custom designed, built and fully tested
- Minimal on-site installation
- Continuous or batch applications

**MULTI-POINT CHEMICAL INJECTION PACKAGE**
- Multi-compartment storage volume with different chemicals
- Horizontal modular duty/standby multi-headed pumps
- Single source - single accountability
- Comprehensive solution, tailor made to client requirements
- Topsides or subsea applications
- Easy operation and maintenance
- Designed for low and high temperatures

**VERTICAL MULTI-PUMPHEAD PACKAGE**
- Patented Vertical modular pump configuration
- Space and weight efficiency
- Design concept permits future expansion
- High accuracy, repeatability and durability
- Self-contained storage and injection package
- Extensive global reference list of installations
- Highly engineered components to meet stringent requirements

**SOLAR PANEL PACKAGE**
- Completely self-contained including solar panels and battery backup
- Suitable for remote desert and hostile locations
- Low power consumption of motor
- Minimum friction losses giving high reliability & high efficiency
- Low maintenance/low life cycle costs
- Higher returns on investment
- Environmentally friendly

**FLOW CONTROL VALVE PANEL**
- Self-regulating injection metering valves
- Multi-injection points with either a dedicated or common flow meter
- More than one chemical can be accommodated
- Duty/standby pumps recommended per chemical
- Stand-alone or inclusive panels supplied
- Manual or remote control
- Space and weight efficient
SPECIAL APPLICATION GLOBE & ANGLE STYLE CONTROL VALVES

- General Service applications
- Severe Duty applications
- High turndown
- ".75" - "24" Sizes
- 150 - 4500 ANSI Ratings
- Special ANSI & API Ratings
- Meets ASTM/ASME Standards
- Butt/Socket Weld, Flanged & Hub Connections

STEAM CONDITIONING EQUIPMENT (DESUPERHEATERS)

- 7 Styles
- Mechanical Atomizing
- Variable Orifice
- Integral cooling water function available
- 150 - 2500 ANSI Ratings
- Special ANSI & API Ratings
- Meets ASTM/ASME Standards

TRIM TYPES

- 13 Types
- RAVEN
- HUSH™
- CAV B9
- One Stage HUSH™
- Noise control
- Cavitation elimination
- Velocity & Erosion control

ACTUATORS

- Diaphragm Style. Model 700
- Diaphragm Style. Model 1000
- Manual Style 820
- Electric available
- Electro/Hydraulic available
- Piston
- Reverse acting
- Direct acting

NUCLEAR CONTROL VALVES

- Pneumatic, Motor, Manual Operators
- Metal & Resilient Seats
- Widest Selection of Trim in the Industry
- Globe, Angle Isolation & Three Way Body Configurations
- Size Range: 3/8" - 20" class 150-2500
- ASME Section III "N" & "NPT" Stamp Certified

NUCLEAR HIGH PERFORMANCE BUTTERFLY AND BALL VALVES

- Bi-Directional Class VI Shut off
- Metal & Resilient Seats
- Torque Seated/Position Seated (Butterfly only)
- Pneumatic, Motor, Manual Operators
- Modulating or Isolation
- Two & Three Piece Ball Valve design
- ASME Section III "N" & "NPT" Stamp Certified
COMPRESSED AIR TREATMENT

- Refrigerated Dryers
- Heatless Desiccant Dryers
- Heat regenerated Desiccant Dryers
- Heat of Compression Desiccant Dryers
- Filtration Media
- Consistent Pressure Dew Points
- Multiple Industries
- Low Energy Consumption Dryers

GAS TREATMENT

- Gas separation
- Inert gas dryers
- Vent Gas Purification systems
- Wide range of applications
- Reduce concentration of water vapor
- Decreased Pressure Dew point
- Regeneration Loop gas dryers

COMPRESSED NATURAL GAS DRYERS

- No gas losses
- Steady dew point under any operating conditions
- Low maintenance and trouble free duty

NITROGEN GENERATORS

- For Purging Tanks and Vessels
- Oil & Gas Production
- Inerting Storage Tanks
- Purging Pipelines
- Food and Packaging Industries
- Wine Production
- Heat Treatment and Production of Metals

CABLE & WAVEGUIDE

- Easy to Install and Service
- Simple to Operate
- Low Noise and Vibration
- High Reliability
- Safe
- Low Power Consumption
- High Efficiency
- Reduced Risk of Corrosion

ATMOSPHERIC AIR TREATMENT

- RFB Atmospheric Air Dryer
- CFB Heavy Duty Dryers
- MVB Dehumidifier
- HRB Desiccant Ambient Air Dryer
- Custom Engineered Systems
- Close Control of Humidity during Production
- On site Service & Support

Established: 1936
Common Applications: Petrochemical, Electronics, Oil & Gas, Power Generation, Food, Beverage, Packaging, Manufacturing

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4879 NE Etten-Leur
the Netherlands
Tel: +31 (0)76 508 5500
Fax: +31 (0)76 508 5590

Email: delair@spx.com

Established: 1936
Common Applications: Petrochemical, Electronics, Oil & Gas, Power Generation, Food, Beverage, Packaging, Manufacturing
REFRIGERATED DRYING AIR TECHNOLOGIES

- HG/HGE Series delivers durability in a small package. Flow rates: 10 to 500 scfm
- HYDROGARD® Series with dew point stabilization and optional Pyramid™ filtration. Flow rates: 100-3000 scfm
- HYDROGARD® Series Dryers match power consumed to real-time demand. Flow rates: 800-3000 scfm
- DES Series Cycling Dryers offer a load matching profile for energy savings. Flow rates: 80-875 scfm
- DHC and ES High Volume Dryers available

DESICCANT DRYING AIR TECHNOLOGIES

- HCS, HCL, and HCT Series Heatless Dryers empower users with three designs to match your demands. Flow rates of 40-5,400 scfm
- ZP Series Blower Purge Desiccant Compressed Air Dryers provide flow rates of 250-3200 scfm
- WM Series Wall-mountable Heatless Dryers offer the choice of -40°F or -100°F pressure dew point performance
- RP Series Externally Heated Desiccant Compressed Air Dryers provide point of use dew point control

FILTRATION TECHNOLOGIES

- 300 Series: Sustainable Filtration Solutions! Flow rates: 35-3500 scfmm
- DF Series: 7 Grades of Filtration. Flow rates: 20-21250 scfm
- DTA Series Filters. Flow rates: 100-11400 scfm
- ME Series Mist Eliminators: The lowest system pressure drop! Flows rates: 125-3000 scfm
- Color-Change KC Series Filters: Maximum Vapor Protection. Flow rates: 12-280 scfm

AIR TREATMENT FOR HIGH INLET TEMPERATURES AND PRESSURES

- HTD Series High Inlet Temperature Dryers replaces four components with a complete air system that accepts high temperature air to 180°F, 82°C with flow ranges from 20-197 scfm
- DHT Series High Pressure Dryers accepts air inlet temperature directly from an air compressor to 180°F and operates in ambient up to 110°F with flow ranges from 20-100 scfm

CONDESATE MANAGEMENT AND MEMBRANE TECHNOLOGY

- DMD Series Membrane Dryers deliver energy savings through select permeation
- ESM Series Energy Saving Membrane Dryers save energy for fluctuating process air demands
- Hydroclean® CS, CSC and CSG Series Condensate Separators and Hydroclean® OWS & CS Series Oil Water Separators with flow rates up to 4500 scfm
- NLD Series electronic and pneumatic drains
- ADV Series automatic drains available

DEL-MONOX® BREATHING AIR SYSTEMS

- Del-Monox® air purification systems provide a highly effective means to control exposure to respiratory hazards in the work place and serves flow rates of 18 - 1190 scfm
Dollinger offers Process Filtration Equipment for the Oil & Gas, Petrochemical and Power Generation Industries around the globe. This product range includes both gas and liquid fabricated pressure vessel filters. Custom designs can be incorporated.

Options available to package filter vessels onto a skid arrangement with any required instrumentation or control equipment. Ensures compliance to all relevant codes with every product.

Our technical development facilities are located throughout Europe, North America, South America and Asia. Built around the globe, Dollinger is able to simulate a diverse range of environmental conditions, in order to provide a detailed technical assessment of all current and desired filter systems.

Ability to manufacture a small retrofit weather hood, through to a large air intake system with full enclosure. 18 Standard Models with flow rates up to 72,000 scfm. Efficiency to be 99% of 10 microns.

The Dollinger Oil Mist Eliminators (OME) is a filtration system of superior efficiency. Collects 99.97% of oil droplets 0.3 micron and larger, thus removing virtually 100% of visible oil mist emissions. The extracted oil mist droplets can be returned back to the lube oil system of the Gas or Steam Turbine, Gas or Diesel Engine and Compressors. Removes health, safety and environmental concerns as well as making significant cost savings. ASME VIII Vessel Rating.

Keeping fluids clean and free from contaminant and moisture, is an essential requirement for maintaining efficiency. We can supply both replacement filter systems or design engineered packages. Partnered with Vokes filters and filtration systems, Dollinger can also provide Liquid Coalescers, Fuel Filtration, Lubricating Oil Filtration and Stream-Line Systems for insulating fluid treatment.
Established: 1921
Common Applications: Power Generation, Oil & Gas

PULSE JET FILTERS
- High dust holding capacity
- Low pressure drop due to sharp pleat tips and even spacing
- Ideally suited for desert style environments

LIQUID & GAS FILTERS
- Fuel & Lubricating Oil Filters
- Fuel Gas Filters & Coalescers
- Oil/Water Coalescers
- Lubricating Oil Mist Eliminators
- Engineered skid packages

AIR INTAKE SYSTEMS
- 18 Standard Models
- 3,000 – 1,000,000 scfm
- Low pressure loss/high efficiency
- Efficiency from 0.3 to 10 microns
- Optional silencing feature
- Weather hoods standard equipment
- Custom systems

REFRIGERATED AIR DRYERS
- Stainless steel brazed plate heat exchanger, No rust water and corrosion
- Integral structure, air-to-air heat exchanger, evaporator & moisture separator
- User friendly controllers
- Optimal dew point performance under all conditions
- Low pressure drop reduces operating costs
- Reliable timed electric drain

DESICCANT AIR DRYERS & ENGINEERED PRODUCTS
- Stable dew point performance and low dust creation
- High quality process switching valve, long component life cycle
- Basic design : ASME, IEC, DNV
- No energizer control system (Pneumatic control)
- Low noise let down system (80 dB)
- Transmitter design : Motion load analysis
<table>
<thead>
<tr>
<th><strong>SCRAPED SURFACE HEAT EXCHANGERS</strong></th>
<th><strong>HIGH PRESSURE PLUNGER PUMPS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>- For crystallization of fat</td>
<td>- Few wearing parts</td>
</tr>
<tr>
<td>- Low and high pressure</td>
<td>- Fast and simple servicing and maintenance</td>
</tr>
<tr>
<td>- Various certifications available</td>
<td>- Constant product flow</td>
</tr>
<tr>
<td>(PED, ASME, etc.)</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td><strong>EMULSIFYING EQUIPMENT</strong></td>
<td><strong>ICE CREAM PRODUCTION</strong></td>
</tr>
<tr>
<td>- Systems for batch and continuous</td>
<td>- Easy access to all main refrigerant valves</td>
</tr>
<tr>
<td>processing</td>
<td>- Built-on frequency converter and control cabinet with PLC and control panel</td>
</tr>
<tr>
<td>- Flexible solutions</td>
<td></td>
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<td></td>
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<tr>
<td><strong>BUTTER EQUIPMENT</strong></td>
<td><strong>CUSTOMER SERVICE</strong></td>
</tr>
<tr>
<td>- For production of butter, butter</td>
<td>- Repair of equipment</td>
</tr>
<tr>
<td>spreads and blends</td>
<td>- Service agreements</td>
</tr>
<tr>
<td>- Flexible process solution</td>
<td>- System and/or product optimization</td>
</tr>
<tr>
<td>- Easy maintenance</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>ICE CREAM PRODUCTION</strong></td>
<td></td>
</tr>
<tr>
<td>- For additional freezing of traditional ice cream</td>
<td></td>
</tr>
<tr>
<td>- Low temperature extrusion</td>
<td></td>
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<tr>
<td>- Low energy consumption</td>
<td></td>
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<td></td>
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<tr>
<td><strong>CUSTOMER SERVICE</strong></td>
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<tr>
<td>- Commissioning of machines and</td>
<td>- Repair of equipment</td>
</tr>
<tr>
<td>complete production lines</td>
<td>- Service agreements</td>
</tr>
<tr>
<td>- Spare parts delivery</td>
<td>- System and/or product optimization</td>
</tr>
<tr>
<td>- Maintenance plans for your equipment</td>
<td></td>
</tr>
</tbody>
</table>
REFRIGERATED AIR DRYING TECHNOLOGIES
- HPR Series affordable non-cycling dryers offer flow ranges from 5-500 scfm
- HPRplus Series for continuous air demand profiles, flow ranges from 100-3000 scfm
- HES Series 90-675 scfm, your sustainable energy saving solution!
- HES Series dryers serve flow ranges from 800 to 3000 scfm for systems with varying levels of air demand
- HV and HES Series high volume dryers offer flow ranges from 4000-20000 scfm

DESICCANT AIR DRYING TECHNOLOGIES
- HHS, HHL, & HHE Series heatless desiccant air dryers offer 3 specific control systems, flow rates: 40-5400 scfm
- DHW Series wall-mountable heatless desiccant dryers, flow rates: 7-50 scfm
- HDF Series single tower dryers: Ideal for low flow applications, 5-30 scfm
- Other available desiccant systems: AAA-AT & ACAT Series Adsorber Towers, HPD Series Heated Purge Dryers, HBP Series Blower Purge Dryers, and HEDS Series Drying Systems

COMPRESSED AIR FILTRATION TECHNOLOGIES
- NGF Series air filters are designed according to ISO 12500 standards, flow ranges from 20-1500 scfm
- HF Series air filters offer 7 grades of filtration, flow rates from 20-21250 scfm
- HFM Series Filter Monitor with audit control
- M Series mist eliminators-the auditor’s choice!
- Specialty filtration technologies include: HTA Series high temperature afterfilters, HF High Pressure Series and HF Corrosion Resistant Series

MEMBRANE TECHNOLOGIES & CONDENSATE MANAGEMENT
- HMM Series modular membrane air dryers offer “point-of-use” alternative
- SMM with Sweepsaver™ Series modular membrane air dryers reduce power costs
- HMD Series dryers operate in any orientation
- HGS Series oil/water separators and HPE Series oil/water condensate separators are available for system flow rates to 4500 scfm
- Condensate Drains include: Snap Trap®, Trip-L-Trap and 531, 532, and 533 Series automatic condensate drains

HIGH PRESSURE & INLET TEMPERATURE TECHNOLOGIES
- HIT Series high inlet temperature refrigerated dryers cool, dry and clean your compressed air supply in one compact, easy-to-use package with flow rates from 20-125 scfm
- HPET Series high pressure refrigerated air dryers are designed for 725 psig operations and are important for PET blow molding installations around the world with flow rates from 13-3750 scfm

BREATHING AIR PURIFICATION SYSTEMS
- Catalite® purifiers offer a way to use your compressed air system as a source for breathing quality air and can be safely used to supply air to breathing devices such as masks, hoods and helmets
- Removes excessive moisture, solid particles (dust and dirt), oil aerosols and mists, carbon monoxide, and hydrocarbon vapors commonly present in compressed air
**ROTARY LOBE PUMPS – POSITIVE DISPLACEMENT RANGE**

- Hygienic stainless steel tri-lobe, multi-lobe and bi-wing lobe pumps easy to clean
- High volumetric efficiency for thin and viscous liquids
- Accurate and gentle flow with minimal pulsation
- Front loaded hygienic mechanical seals easy to access for inspection and cleaning
- Different hygienic certificates available

**INTERNAL GEAR PUMPS – POSITIVE DISPLACEMENT RANGE**

- Robust, heavy-duty design in several material options for extended life
- Suitable for both thin and viscous liquids
- Pulsation-free flow for accurate and gentle pumping
- A variety of sealing options and seal-less mag drive
- Simple design with few parts, easy to service with back and front pull-out for access to rotating parts

**SELF-PRIMING CENTRIFUGAL PUMPS**

- Horizontal and vertical versions – Single and multi stage executions
- Hydraulics according to EN 733
- Modular designs based on interchangeable parts
- High pump efficiency, minimal internal losses
- A variety of sealing options – packed gland, mechanical seals and cartridge seals

**CENTRIFUGAL PUMPS**

- General purpose pumps, heavy duty chemical and process pumps, in-line pumps, close-coupled pumps, submersible pumps
- Modular designs based on interchangeable parts
- Horizontal and vertical versions – Single and multi stage executions
- Comply with ISO, DIN and API standards
- A variety of sealing options and seal-less mag drive

**MAG DRIVE PUMPS**

- Heavy duty 100% leak-free centrifugal and gear pumps for applications which convey corrosive, toxic, aggressive or expensive liquids
- Modular pumps based on interchangeable parts
- Environmentally friendly and improved safety in chemical and process plant environments
- Centrifugal ranges comply with ISO5199 and EN22858 and are interchangeable with existing (ISO 2858) pumps

**FLEXIBLE IMPELLER PUMPS**

- Easy-to-handle, positive displacement pump with excellent self-priming ability
- Pulsation free and gentle pump action for sensitive liquids, able to handle large soft solids without damage
- Fast, simple and inexpensive maintenance with low operational cost and short down time
- Different versions for a broad field of applications meeting a variety of industrial demands, hygienic or non hygienic

Established: 1968

HEAVY-DUTY FLEXIBLE IMPELLER PUMPS

- A range of multi-purpose bronze pumps
- Compact design. Pedestal or electro-magnetic clutch versions
- Self-priming
- Available in sizes from 3/8” to 2 1/2” 4 L/ min to 620 L/min (1-165 USGPM)

- Ideally suited as cooling water pumps for marine engines, bilge, deckwash and fuel transfer pumps and other self-priming multi-purpose applications
- Also suited on shore to empty septic tanks, to flush clean and to fill water tanks

WATER PRESSURE SYSTEM - AQUA JET SERIES

- Suitable where low amperage and sound levels in relation to water flow are placed at a premium such as in shower and galley applications
- Quiet and pulsation-free even at low speeds
- Five chamber diaphragm pump

- Perfect water pressure or deck wash solution
- Efficient and compact
- Available in sizes from 9 L/min to 40 L/min (2.4-10.4 USGPM)
- Integrated pressure switch for automatic operation

SUBMERSIBLE BILGE PUMP SERIES

- A variety of mounting options, available with capacities of 30 to 250 L/min (500-4000 USGPH)
- Heavy-duty motors with stainless steel shaft and tough thermoplastic bodies provide for a long pump life

- Can handle most bilge pump applications
- With an automatic switch installed, the pump turns on and off automatically

DC DRIVEN FLEXIBLE IMPELLER PUMPS

- High level of flexibility & self-priming
- Ideally suited for use as bilge and deckwash pumps, fresh water pumps, refueling pumps for oil and diesel
- May be combined with a vacuum or pressure switch for automatic operation

- Capacities vary from max 14 L/min to 55 L/min (3.7-14.5 USGPM)
- All motors are heavy-duty to provide long service life even under heavy use
- Available in 12 or 24 volts

COMPACT TOILET HANDLING AND WASTEWATER PUMPS

- Maximum flow 32 L/min (8.5 USGPM)
- Engineered to pump black wastewater with uncompromising odor-prevention features
- Whisper quiet operation
- Non-choke valves - no waste shredding required

- Pump head rotatable 360°
- Self-priming up to 2.5 meters (8.2 ft.)
- Can be run dry and can pump air/water mixture
- Electric motor with power-out, manual-crank backup

AquaT™ MARINE TOILETS MANUAL OR ELECTRICAL POWERED

- Hygienic, easy-to-clean vitreous china bowl and exterior surfaces
- Low water consumption
- Versatile plumbing connection options and automatic back-flow prevention

- Designed for virtually any on-board mounting position and may be installed above or below the water line
- Suitable for OEM or replacement installation
- Innovative brake bushing prevents annoying leakage at the handle
### ENGINEERED SOLUTIONS
- Quality manufacturing
- Innovative design
- Engineered solutions for air, gas and liquid
- Application engineered to your process
- Factory trained service network
- Experienced customer service team

### HEATED DESICCANT DRYERS
- 7000 Series Oriad internally heated
- KPZ Series blower purge drying
- KHP Series externally heated
- Specialty gas drying applications
- No process gas lost to purge
- Stable dew points in all weather conditions

### HEATLESS DESICCANT DRYERS
- LPS Series consistent outlet dew points
- KHE Series with energy management
- KHL Series manual energy management
- KHS Series fixed cycle fixed dew point
- Low flow applications
- Automatically adjusts to load
- User selected load control
- Dependable and economical

### DRI BREATHERS
- Installed on storage tanks to prevent moisture
- Prevent contamination of hygroscopic liquids
- Reduce storage tank corrosion
- Sizes ranging from 3.8 GPM - 115 GPM
- Color change moisture indicator
- DRB 3 Reactivator available for desiccant

### FLAME ARRESTERS
- Explosion prevention and containment
- Available for class C and class D gasses
- Special designs available for class B gasses
- Eliminate straight through heat conduction
- Prevent the flow-through of hot particles
- Maximum protection at minimum cost
- Custom engineered arresters per application
- The protected side of the barrier remains cool

### CONDENSATE MANAGEMENT
- KME Series mist eliminator
- Automatic Timer drains
- Mechanical Demand drains
- Electric Demand drains
- Removes gross liquids, prevents slugging
- Regular drainage at user selectable times
- Do not waste any valuable compressed air
- Detect liquid and only operate when filled
PORTABLE/FIXED MOUNT/STATIC MIXERS

- Laboratory and general purpose
- Industry-standard, single-purpose and full-featured mixers for small batch applications
- Single-speed to digital-controlled mixers for bench top open and closed tank service
- Direct and gear models
- Rapid response time for continuous dosing/sampling
- Shear control for blending sensitive products

SANITARY MIXERS

- Dry running, aseptic mixers for blending, solids suspension and cell culture for biotech, pharmaceutical, cosmetic and food processing industries
- Sanitary mixers for the complete range of small batch applications
- Bottom and top mounted, magnetically coupled hermetically sealed mixers for sanitary applications, including injectables

FGD VSF SIDE-ENTRY MIXER

- C-Face motor mount eliminates motor shaft alignment and coupling failures
- Rugged gearbox
- Removable couplings for easy seal change and maintenance while tank is full and operating
- FGD slurry seal designed to excel in harsh environments
- A312 impeller provides the most flow per unit of power in a focused pattern

HEAVY MIXERS

- Mechanical design technology proven up to 2600 kW/3500 HP for all process mixing applications
- Belt and gear drive side entry units
- Robust, state-of-the-art design delivers value and performance for process and environmental control applications

PROCESS SYSTEMS AND EQUIPMENT

- Attrition Scrubbers
- Minerals processing equipment
- Static and dynamic mixers

PROCESS TECHNOLOGY

- Highly efficient, axial flow impellers for flow-controlled purposes like blending, solid suspension, and heat transfer
- Radial flow impellers for dispersion and mass transfer
- Circulator impellers for pumping applications
**GATE VALVES**
- Offered in sizes 2” – 84” ANSI 150-2500
- Top entry - Inline maintenance capability
- Thru conduit, piggable, double block and bleed capability
- Built in accordance to API 6D standards and ISO 9001 certification
- Utilized in pipeline applications for Oil/Gas Products

**CONTROL VALVES**
- Offered in sizes 2” – 30” ANSI 150-2500
- Rangeability of 350: 1 turn down ratio
- Full Port in open position with Bi-directional flow capacity
- Noise Abatement and Cavitation trim available
- High Cv characteristics allows reduced valve size
- Prime application to Oil/Gas Products and Refineries

**SURGE RELIEF VALVES**
- Axial 'straight path' smooth flow pattern for high flow capacities Cv
- Fast response-rapid open/close, seals tight without slamming shut
- Low-noise and cavitation trim available
- Large annular flow area allows high pressure recovery, low pressure drop
- Offered in sizes 2” – 24” ANSI 150-900

**SKID MOUNTED DESIGN**
- Complete package design with M&J manufactured products
- Single source offering with proven Danflo Surge Valve
- Factory training and field commissioning available at site
- System designed to customer specific flowing conditions

**4-WAY DIVERTER VALVES**
- Offered in sizes 3” – 24” ANSI 150-1500
- For use in Bi-Directional Meter Prover Systems
- Top Entry design allows replacement of the seals in the field
- Rapid operation with zero leakage for positive proving capabilities
- Provided with SID feature to show positive indication of plug sealing

**EXPANDING GATE VALVES**
- Offered in sizes 2” – 36” ANSI 150-1500
- Thru conduit, piggable, double block and bleed capacity
- Top entry design for field repair capability
- Mechanically seated design to provide maximum sealing capability in both low and high differential pressure conditions
- Built in accordance to API 6D standards, ISO 9001 certification, and fire tested to API 6FA
<table>
<thead>
<tr>
<th>SIMPLEX TYPE STRAINERS</th>
<th>BACK FLUSH STRAINERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used in liquids and gases</td>
<td>Used where an automatic cleaning strainer is required</td>
</tr>
<tr>
<td>Quick release cover eliminating the need for tools</td>
<td>Ensures process continuity without manual labor</td>
</tr>
<tr>
<td>Designed for pressure ratings up to ASME class 300 (51 Barg)</td>
<td>Provide a high level of cleaning efficiency with minimal product loss</td>
</tr>
<tr>
<td>Fine Stainless Steel mesh inserts can provide capabilities for particle removal down to 10 microns for liquid &amp; 1 micron for gas</td>
<td>Straining element is manufactured from Stainless Steel 316</td>
</tr>
<tr>
<td>Fitted with cleanable baskets and inserts or disposable gas cartridges</td>
<td>Fine Stainless Steel mesh lined baskets provide capabilities for particle removal down to 50 microns</td>
</tr>
<tr>
<td>Fabricated filters to suit unique specifications</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DUPLEX DUAL BASKET STRAINERS</th>
<th>SELF-CLEANING FILTERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designed for applications where continuous operation is required</td>
<td>Used where an automatic cleaning strainer is required even with low pressures</td>
</tr>
<tr>
<td>Integral flow changeover valve permits basket removal and cleaning without interruption of flow</td>
<td>Ensures process continuity without manual labor or contact with hazardous materials</td>
</tr>
<tr>
<td>Designed for pressure ratings up to ASME Class 300</td>
<td>Fine Stainless Steel wedge wire or perforation elements down to 25 microns</td>
</tr>
<tr>
<td>Fine Stainless Steel mesh inserts can reduce particle removal down to 10 microns</td>
<td></td>
</tr>
<tr>
<td>Quick release covers eliminate the need for maintenance tools</td>
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<table>
<thead>
<tr>
<th>GAS FILTRATION</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Designed to remove solids from gas streams</td>
<td>High pressure rated to Fas PD5500/E13 &amp; ASME VIII specification</td>
</tr>
<tr>
<td>Elements include cleanable stainless steel or disposable fiberglass or polypropylene</td>
<td>Quick opening or bolted closures</td>
</tr>
<tr>
<td>Designed to meet customers operating conditions</td>
<td></td>
</tr>
</tbody>
</table>
Plenty Mirrlees Pumps
AN SPX BRAND

Established: 1790
Common Applications: Oil & Gas, Petrochemical, Chemical Processing, Tank Storage, Sugar Processing, Power, Marine

MAGMO SUGAR PUMPS
- Designed to handle high viscosity abrasive sugar products, such as Molasses and Massecuite.
- Primary application in sugar processing

TWINRO TWIN AND TRIRO TRIPLE SCREW PUMPS
TWINRO TWIN
- Bulk transfer of liquids
- Terminal distribution
- Fuel oil transfer
- Ships bunkering / cargo pumping
- Rail / road car unloading / loading
- Pipeline and process flow requirements

TRIRO TRIPLE
- Fuel Oil Firing
- Forced Lubrication (API614 / 676)
- Crude Oil
- Heavy Fuel Oil Pumping
- Lube Oil Transfer

VANE PUMPS
- U2000 - Variable Flow Rotary Pumps
- G2000 & P2000 - Fixed Flow Rotary Pumps
- Used in almost any process plant requiring variable flow rates
- Typical Applications: Lube oil blending, bitumen/asphalt, ships bunkering

Plenty Mixers
AN SPX BRAND

Established: 1790
Common Applications: Oil & Gas, Petrochemical, Chemical Processing, Tank Storage, Sugar Processing, Power, Marine

BELT AND GEAR DRIVE MIXERS
FIXED ANGLE
- For blending, homogenizing and temperature uniformity duties

SWIVEL ANGLE
- For tank cleaning operations and the prevention of harmful sludge build-up
- Complete range of liquid and gas elements
- Available in various materials of construction including metal, fiberglass and polypropylene
- Degree of filtration from 10mm – 1 micron
- Flow tested both liquid and gas elements to ensure process warranties can be offered

### LIQUID FILTERS
- Plenty Process Filters design a range of filters in a variety of materials in accordance with international pressure vessel codes
- Single basket and Dual basket (Duplex) filters
- Fully automatic backflush filters
- Hi-Flow Filters
- Designed to incorporate either quick release or bolted closures
- Elements are either cleanable or disposable

### CARTRIDGE FILTERS
- Custom design Filters to meet specific application details
- Designed and manufactured in accordance with international pressure vessel code
- Range of materials of construction to meet customers specific operating parameters

### BACKFLUSH FILTERS - METAL
- Custom designed range available
- Stand alone or skid mounted
- Internals available in a range of materials to meet specific applications
- Line sizes 6” – 90”

### BACKFLUSH FILTERS - GRP
- Developed primarily for sea water with high corrosion where metal bodies are unsuitable
- Custom designed range available
- Stand alone or skid mounted
- Internals available in a range of materials to meet specific applications
- Line sizes 6” – 90”

### DRY GAS FILTERS
- Designed to remove solids from gas streams
- Available in both horizontal or vertical units, in a variety of materials to meet international codes
- Quick opening or bolted cover
- Elements include cleanable stainless steel or disposable fiberglass or polypropylene
- Designed to meet customer operating conditions
<table>
<thead>
<tr>
<th><strong>FILTER SEPARATORS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Designed to remove both solids and liquids from gas streams</td>
</tr>
<tr>
<td>Constructed using Plenty Coalescing cartridges, vane units and/or cyclones to achieve required solid and liquid removal efficiency</td>
</tr>
<tr>
<td>Unit available from pipe sizes 2&quot; and above to suit any pressure class</td>
</tr>
<tr>
<td>Available in a range of materials suitable for all operating conditions</td>
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<tr>
<th><strong>COALESCERS</strong></th>
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<tr>
<td>Designed to coalesce fine liquid mist in gas streams into droplets considerably larger than their original size, such that they can be drained by gravity from the vessel</td>
</tr>
<tr>
<td>Units available in both horizontal and vertical orientation with single or two stage construction</td>
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<tr>
<th><strong>SKID MOUNTED PACKAGES - LIQUID</strong></th>
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<tbody>
<tr>
<td>Custom designed range available</td>
</tr>
<tr>
<td>Skid mounted packages</td>
</tr>
<tr>
<td>Modular</td>
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<tr>
<td>Can include mechanical, electrical, instrumentation, ladders, platforms to be compatible with site requirements</td>
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# Pneumatic Products

**SPX Flow Technology**
4647 SW 40th Ave.
Ocala, FL 34474
Tel: 352-873-5793
Fax: 352-873-5770

**HEATLESS DESICCANT AIR DRYERS**
- LHA Series low flow desiccant dryer
- DHA/CDA Series standard and custom
- DSE/DSS/DHD Series industrial grade
- CHA Series large flow heatless dryers
- Consistent outlet dew points
- Critical applications and hostile environments
- Durable economic industrial applications
- Corrosive, toxic or explosive environments

**HEATED DESICCANT AIR DRYERS**
- DEA Series internally heated
- CAB/IBP Series blower regenerated
- PHD Series externally heated
- NRG-Les Series waste heat
- Low purge energy savings
- No process gas lost to purge
- All weather dew point control
- Compressor outlet heat regeneration

**HIGH VOLUME REFRIGERATED COMPRESSED AIR DRYERS**
- PNC Series non-cycling constant dew point
- ESR Series cycling variable demand
- Controls provide energy efficiency
- Fully automatic cycling under rated conditions

**FILTERS AND ADSORBERS**
- Small flow filtration
- P2000 Series high performance filters
- PCC Series large flow filtration
- PCS Series premium quality filtration
- Oil and water vapor adsorbers
- PME Series mist eliminators
- High performance air and gas filter cartridges
- State-of-the-art filtration media
- Exceptional air quality and low pressure drop
- Critical applications and hostile environments
- Remove unwanted hydrocarbon vapors
- Minimal pressure drop improves demand

**SPECIALTY DEHYDRATION TECHNOLOGIES**
- BAP Series breathing air purification
- CNG Series single tower natural gas dryer
- CNG Series twin tower natural gas dryer
- HCP Series hydrogen coolant purifiers
- Prevents compressed air respiratory hazards
- Removes water vapor in small-medium flows
- Specifically engineered for large flows
- Electrical power plant generator applications

**CONDENSATE MANAGEMENT**
- Automatic timer activated drain valves
- Mechanical demand operated drain valves
- Electronic demand operated drain valves
- Allows drainage at predetermined settings
- Only operate when filled to certain levels
- Drain closes automatically when drained

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**Established:** 1946
**Common Applications:** Chemical, Oil & Gas, Power Generation, Pharmaceutical, Electronics

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Email: pneumatic.products.sales@spx.com

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PNEUMATIC PRODUCTS
AN SPX BRAND
**Established:** 1948  
**Common Applications:** Petrochemical, Power Generation, Electronics, Manufacturing

### COOL - WITH AN AFTERCOOLER/SEPARATOR
- Reduce the temperature of hot compressed air leaving the compressor to safe, usable levels (within 5°F of ambient temperature)
- Remove up to 70% of water
- Precondition the air for further drying and filtering

### DRY - WITH A REFRIGERATED OR DESICCANT DRYER
- Eliminate troublesome liquid water from downstream air lines and equipment
- Choose a dryer to produce a dew point temperature below the lowest temperature that your air lines are exposed
  - Dew point temperature at which water vapor changes to a liquid

### FILTER - WITH A PACKAGED FILTER SYSTEM
- One micron air line filter
  - Removes solid particles
- High efficiency coalescing type oil removal filter
  - Removes oil aerosols (also called oil mist, fog, or smoke)
  - Provides virtually oil free air
- Optional system includes oil vapor removal system
  - Eliminates odor from compressed air
  - Protects products and processes from contamination
### Common Applications:

- **Tigerloop® and oil products** are applicable on oil burner systems for light oil or kerosene.
- **Tigex®** is applicable on all kinds of boilers where a stable draught is required.
- **NoTap®** is applicable on all types of metal pipes; galvanized, stainless steel, copper and iron.

### TIGERLOOP® Oil De-Aerators

- Remove gas/air bubbles from oil lines
- Increased efficiency - reduced oil consumption
- Eliminate oil pump and nozzle problems

### Oil Filters

- Filters available in different sizes from 1/4" to 2"
- Filter inserts in various materials available from 10 to 150 microns
- Oil filters of brass construction and are available with or without an isolating valve

### Flexible Oil Hoses

- Complete program of high quality oil hoses
- Sizes available from 300 mm up to 1500 mm
- Manufactured in the highly oil resistant rubber quality NBR/PVC

### TIGEX® Draught Regulators

- Draught regulator, developed and patented by SPX
- Manufactured in stainless steel
- Helps improve boiler efficiency
- Reduces risk of chimney damage caused by condensation

### Notap® Method

- Pipe blocking on "live" pressurized piping systems
- Branch connections on "live" pressurized piping systems
- Draining the pipe system is not necessary
- Adding new water or venting radiators is not necessary

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**Established:** 1971

**Email:** tigerholm.se@processequipment.spx.com
**FUEL & LUBRICATING OIL FILTERS**

Vokes' Fuel and Lubricating Oil Filtration systems are designed to protect critical equipment as utilized by the power generation, marine and locomotive industries.
- Simplex & duplex designs available
- Drop sump & top servicing filters available
- Robust design and construction
- Cartridges incorporate integrated gasket
- Every filter element incorporates high dirt loading media and are corrosion resistant
- Filter media is unaffected by water, salt or engine acids

**LIQUID COALESCERS**

The Vokes Filter Coalescer is a static device for the removal of solids and free water from Distillate and Light Liquid Fuels and Mineral Lubricating Oils.
- Eliminates the requirement for a separate pre-filter
- Robust filter and cartridge design
- Easy maintenance
- No moving parts allows for quiet operation
- No external supplies (power, air) required
- Ideal for marine installations (i.e. use on board both surface and sub-surface vessels)
- Free water removal in marine applications
- Can be designed for military specifications
- Steam turbine applications

**OIL MIST ELIMINATORS**

Vokes Oil Mist Eliminators are designed to eliminate oil mist present in compressed air systems. Failure to do so can cause operational hazards and obstruct machine operation. Protect your system with Vokes.
- Ideal for diesel or natural gas engines
- Discharges clean air to the local atmosphere
- Can be mounted away from the engine
- APB automatically balances sump pressures

**STREAMLINE® - INSULATING FLUID TREATMENT SYSTEMS**

Insulating Fluid is vitally important for the safe and efficient operation of many types of electrical equipment. This fluid is also used as a coolant in transformers and as an arc suppressant in circuit breakers. Vokes' Streamline systems ensure the purity of insulating fluid to optimize performance.
- Removes water and particulates
- For electrical insulating oil purification
- Improves the dielectric strength
- Extends insulating oil and transformer life
- Available as fixed site or mobile units
- Removes free and dissolved water
- Water reduction to 90% in single pass
Models available in rectangular flange or aseptic configurations with non-galling 88 alloy rotors
Pumps can be remanufactured
Close-coupled Tru-Fit mounting options available
Universal II - Pressures up to 500 psi (34 bar), CIP design
Universal I - Pressures up to 200 psi (14 bar), COP design

High efficiency, minimal vibration, longer life pumps
One size seal fits all 200 Series models
Available models include 200 Series, C-Series, Multi-Stage, Self-Priming, WFI, and Stub shaft pump versions

Sanitary, hygienic valves manufactured of stainless steel
Rising stem, butterfly, ball, manual, and specialty valve designs
Designed to be cleaned in place or out
Heavy-duty construction for long service life
Easy to maintain
Adaptable and modular

Models available for processing moderate to ultra high viscosity products
Options for controlling residence time and for maintaining product integrity
Material selection to meet specific process requirements
Horizontal and Vertical mounting choices
Vast applications database from over 50 years of process experience

Colloid Mills - Greater capacity with 50% more flow rate with less heat, CIPable
Shear Pumps - Processes as it pumps, interchangeable stator and rotor combinations
CR Mixers - For high shear emulsifying, and controlled and precise aeration

New lock down head feature helps control belly thickness
The timer feature allows you to compensate for wide variations in belly temperatures and minimizes over or under pressing
The patented “Maximizer” bladder inflates to fill the void on the thin end of the belly reducing wrinkles during the pressing cycle
The press is capable of up to 16 bellies per minute
## SANITARY FITTINGS

- Constructed of T304 & T316 L Stainless Steel
- John Perry
- S-line
- Schedule 5 and 10
- Sanitary Weld
- “Cam” style unions
- Bevel Seat
- Pipe to Tube adapters
- I-line
- Aseptic Unions
- Tube OD weld (Industrial)
- DIN and SMS

## BPE FITTINGS

- Manufactured in accordance to ASME BPE standards
- Electropolished fittings available
- Available in 1/2" through 6"
- MTR (Material Test Reports) provided with each shipment and available online for download
- Made of T316L stainless steel (Other alloys available)
- Packaged in resealable bags

## BUTTERFLY & BALL VALVES

<table>
<thead>
<tr>
<th>Butterfly Valves</th>
<th>Ball Valves</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Available 1” through 4”</td>
<td>- Available 1/2” through 4”</td>
</tr>
<tr>
<td>- T304 and T316 construction</td>
<td>- T316 construction</td>
</tr>
<tr>
<td>- Finishes are 32 Rg ID and OD</td>
<td>- Finishes are 32 Rg ID</td>
</tr>
<tr>
<td>- 13 position handle</td>
<td>- Meets 3A and FDA requirements</td>
</tr>
<tr>
<td></td>
<td>- Locking 4 position handle</td>
</tr>
</tbody>
</table>

## C-SERIES PUMPS

- Versatile pump offers strong performance
- Standard CIP capability
- Easy-cleaning, open type impeller delivers smooth pumping performance
- Parts are interchangeable with other C-Series brands
- Enlarged inlets available for larger suction lines

## SPECIALTY PRODUCTS

- Extensive metal working capabilities
- Dedicated production cells to shorten lead times
- Designed and constructed to customer specific requirements
- Digital imaging equipment for quality validation
- Unique tangents and configurations
- Weld mapping, logs and documentation programs

## RELATED PRODUCTS

- Rath manufactured tubing in T304 and T316 L stainless steel
- Tube Hangers
- Special alloy products in AL6XN® and Hastalloy®
- Sampling Valves
- Torque Nuts for S-line Clamps
- Check Valves
Innovation Centers

Research and development are important elements in SPX Flow Technology’s (SPX FT) activities in general. Processors are increasingly seeking cost-effective engineered solutions for the production of high quality, innovative products.

In this process, the Innovation Center has an important role to play in close cooperation with SPX companies and customers around the world.

Our services cater to the needs of the food industry in the broadest possible sense, including after sales service, laboratory analysis, technical Information and training of SPX employees and customers.

The Innovation Center is an active participant in all types of development, testing and application of SPX equipment, systems and processing lines. All our facilities and services are designed to provide added value by minimizing waste and energy requirements into new, competitive products.

Technical Facilities

The Innovation Center has the facilities to test and demonstrate profitable solutions to all kinds of production problems. The center can also participate in trouble shooting, making the customer’s operations more flexible, cutting energy costs, increasing production volumes or meeting new environmental regulations without sacrificing the quality of the final product.

Flexibility of the Equipment

The Innovation Center is designed for maximum flexibility. All equipment can be interconnected and new equipment is easily installed. Some of the equipment is mounted on frames for mobility and easy connection to other units, and most of it is controlled by variable speed controllers (VLT). Specialist equipment can be brought in as required and process lines configured to suit individual requirements.

Process Hall

The process hall is well-equipped and is laid out so as to provide for maximum flexibility in conducting test, trials and training. We have several semi-industrial scale plants and have found that up scaling to industrial scale is easily done from this plant size. We also have small scale and industrial scale plants.

Service Facilities

Water, ice water, air, glycol, power (380 V, 220 V) and steam are available.

Tank Facilities

According to customer’s request. Various mobile tanks are available.

Storage Facilities

Temperature controlled storage rooms are available with both cooling and heating possible (0° C/32° F to 40° C/104° F).

Workshop

Our experienced fitters are involved in the installation of trial plants, building new plants or modifying existing equipment for special trial runs. To allow for maximum flexibility and rapid response, a fitter is always available during trial runs to undertake any on-site modifications.

Laboratory Facilities

Our laboratory performs chemical, microbiological and functional analysis of all kinds of food products. All analysis is carried out in accordance with international standards.

Homogenizer Application Laboratory

The SPX FT Homogenizer Application Laboratory offers new and advanced small-scale application development assistance to customers.

Situated in Albertslund, Denmark, the laboratory is serving customers with homogenizing tests and analyses to help them troubleshoot processing problems, optimize existing products and develop new ones.

Finding the right homogenizer - The SPX FT Homogenizer Application Laboratory helps customers to document the benefits of a particular homogenization process for their application and optimize the homogenizing efficiency by determining process parameters such as optimum pressures, type of homogenizing valve, premix, temperature, etc. Customers can choose to move forward with pilot tests on their own premises using a new APV homogenizer, a rented homogenizer from APV - or to use the facilities at the SPX FT Innovation Center, where more extensive pilot testing results are possible in a valid production-scale process.

Technical Facilities

Customers running trials on their own premises can choose to rent whatever new plant and equipment they need to complete their testing. Rentals cover both pilot and full production-scale plant equipment.

For more information please visit www.spxft.com.
R&D Testing Capabilities

Testing Flexibility
SPX Flow Technology lab facilities are highly sophisticated and equipped with leading edge technology. They were specifically designed to accommodate a broad range of tests with the highest degree of flexibility. Depending on your specific need, we offer testing and consulting services on a fee basis.

- Whenever possible we prefer to test your actual materials. This may range from a simple rheology definition to the preparation of a complete recipe in our laboratory. Or, we may run a full-scale test at your facility.
- We guarantee our recommendations and are available to assist all the way through installation and plant start up.
- If we cannot process your material due to safety concerns or process conditions we will work with you to find a material to mimic the properties of your process.

Our brands pride themselves on offering a range of products designed to meet the most arduous of conditions. The result of extensive research and development, all of our equipment has been engineered to offer a selection of benefits, which can be simulated in the company's laboratories across the world. Whether the product is a fully engineered process system or a small fitting, each has received a level of engineering expertise and testing that is your assurance of product suitability, even in the most extreme conditions.

With a focus on performance with minimum energy input, SPX products have been designed to give you the output you need, while keeping your energy cost under control and helping you to reduce your carbon footprint.

- Pumps, valves, drives, heat exchangers, mixers and mills in an endless variety
- Vessels from 200 ml to 450,000 gallons
- State-of-the-art digital data acquisition systems
- Brookfield Viscometer with Small Sample Adapter & Temperature Control
- Haake High Shear Viscometer
- Accelerometers, Torque Cells, Load Cells, Pressure Transducers, Flow Meters, Sound Level Meters
- Motion analyzer for pump cavitation analysis
- Laser Doppler Velocimeter
- Microtrac and Horiba particle size analyzer
- High power microscopes with digital image capture
- Spectrophotometer
- Gloss Meter
- Full Computational Fluid Dynamic and Finite Element Analysis using the latest software
- Feasibility studies for process systems

Visit www.spxft.com to learn more.
SPX Flow Technology After-Sales Services
An International Customer-Focused Service Platform

SPX Flow Technology - Service and Parts Solutions
- Repair and exchange services
- Equipment upgrade services
- Installation and start-up support
- Predictive and preventive maintenance
- Remote Diagnostics
- Process and mechanical consulting
- Asset management
- On-site field support
- Training

SPX Flow Technology provides innovative ways to improve your productivity and profitability. We'll help you minimize your asset investments while ensuring that you continue to meet your production requirements.

Multiple service facilities are strategically located throughout the world, providing a wide range of support 24 hours a day.

Service locations are the hub for our parts distribution. We can analyze your spare parts inventory to identify critical, damaged and obsolete spare parts, and help you create an inventory reduction program.
- High quality OEM spare parts and consumables
- Quick-ship delivery services available

A worldwide network of companies and distributors ensures that you are never far from the help you need to get back up and running quickly and get the ultimate performance from your investment.

See specific brand pages for additional contact details.

OFM, provides a full range of valve and wellhead service, repair, remanufacturing and inventory management of customer assets for the pipeline, petrochemical, hydrocarbon storage well and geothermal industries. OFM specializes in reconditioning of valves from all manufacturers, and turnkey valve field services. OFM continues to manufacture the complete underground storage wellhead hook-up in accordance to our API 6A and 6D license.

Email: OFM@spx.com
SPX Flow Technology designs, manufactures and markets solutions and products used to process, blend, meter and transport fluids as well as air and gas filtration and dehydration products serving the food & beverage, power & energy and industrial markets worldwide.