



**Transforming Food & Beverage Processes**

# Background

HpE Process has been established for over 30 years, and with over 150 years of combined company experience in hygienic fluid handling processes. We are in a position to provide innovative, cost effective, advanced products and system solutions for any fluid flow application.

Complimented by a comprehensive range of selected proven products, from the worlds leading manufacturers, we are helping customers reduce downtime and waste.

HpE deliver sustainable solutions to the following industries and a few of our clients from those industries:

- Adhesives
- Architectural
- Automotive
- Beverage
- Bio Chemicals
- Bio Tech
- Brewing
- Chemical
- Confectionery
- Dairy
- Food
- Household
- Paints & Coatings
- Paper
- Personal Care
- Pharmaceuticals
- Ready Meals
- Water

**Greencore**



SINCE 1853  
**FOX'S**



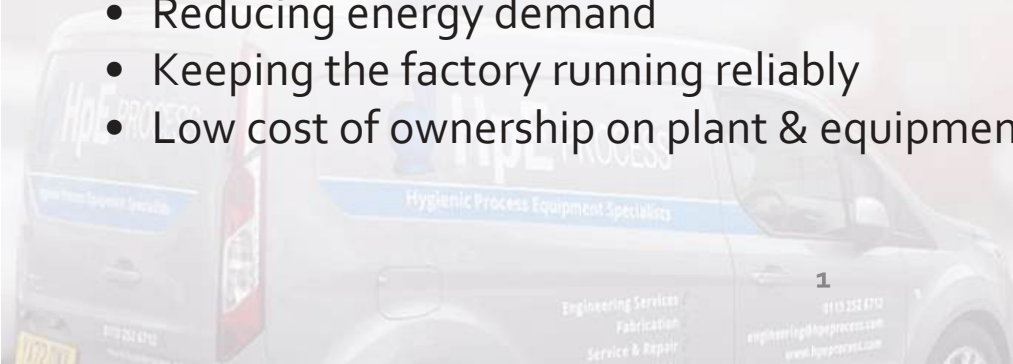
**GUINNESS**



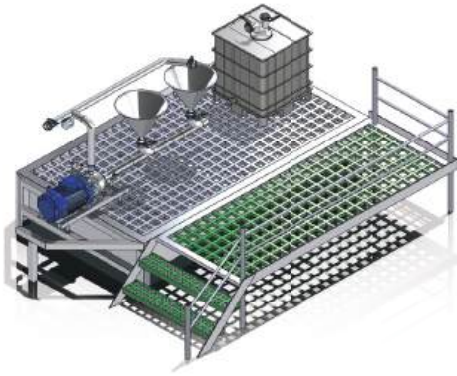
**KERRY**



- Maximising product quality
- Reducing product waste
- Reducing water usage
- Reducing effluent costs
- Reducing energy demand
- Keeping the factory running reliably
- Low cost of ownership on plant & equipment



# Mixing Skid



We specialise in creating custom mixing systems tailored to your needs, offering comprehensive services from consultation and design to manufacturing. The images displayed showcase a bespoke mixing system delivered to a prestigious client in the chemical industry for producing handwash. This system was designed and manufactured in-house to meet the clients specific requirements.

Controlled via a siemens PLC control panel, the system features two hoppers for adding the necessary ingredients. Once added, the mixer initiates the mixing process, and the final product is deposited into an Intermediate Bulk Container (IBC).

## Garlic Pumping System

This system was supplied to our clients in the food industry. The butter pumping system is meticulously designed, for the mobile platform to the bespoke jacketed tank with a custom flange to suit the pump inlet.



The ellipsoidal tank inlet is crafted to prevent butter from solidifying, which can cause bridging problems and cavitation. In operation, butter is deposited into the vessel and the system is managed via a PLC sequence, allowing the pump to switch between production mode and CIP (cleaning in place). Operators can easily monitor the product temperature through the display located on the control panel. The jacketed tank, equipped with a temperature control unit housed in an enclosed cabinet, maintains the product at the desired temperature.

For added practicality, a custom pump guard was created to prevent splashes, and a push handle was included for ease of use.

## CIP System



The CIP (Clean-in-Place) system comprises various cleaning equipment and processes designed to achieve a high level of hygiene and disinfection for equipment, tools, and surfaces used in the food, cosmetic, chemical, and pharmaceutical industries. This automated system has been supplied to our customer in the food industry, where the system would be used to clean tanks containing various additives. Biofilms are layers of proteins that form and cover microbes in extensive industrial production

circuits with numerous bends, leading to microbiological contamination. If not properly disinfected, this contamination can cause a wide range of problems. Given this risk, investing in innovative CIP cleaning systems is essential, necessary, and profitable for any company involved in the industrial production of products and foods.



Our integrated solutions allow various components to fall under one umbrella.

The four key areas are:

- CIP Skids
- Mixing Skids
- Pigging
- Pasteurisers



CIP Skid Systems



Mixing Skid Systems



Pigging Systems



Pasteurisers

## CIP Skids

We understand hygiene is a crucial part of food processing. Incorrect cleaning can lead to loss of production, poor product quality or product contamination leading to a product recall. It is important to make Cleaning-In-Place (CIP) simple, easy and suitable for any business size, with that in mind, we are able to offer manual and automatic CIP Skid Systems.



A typical system will include an installation tank, CIP send tank, CIP return pump, dosing pump, heating coil, butterfly valves (manual or automatic) and a control panel.

## Pasteurisers

Our range of compact electrical pasteurisers has been designed to carry out the thermal treatment of milk and its by-products, soft drinks, and juices. The objective is to eliminate the pathogenic micro-organisms through the application of high temperature during a short period of time.

- Flow: 250 – 1000L/h
- Heat Exchanger with 0.5mm plates in AISI 316 and gaskets in NBR, frame in AISI 304
- Centrifugal pump FL31CI for milk feed
- Food-grade hydraulic circuit DIN11851 with orbital welding
- Hot tube for maintaining temperature



# Mixing Skids

What are Mixing Skid Systems?

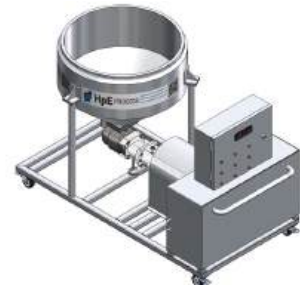
Mixing skid systems are integrated systems that incorporate all necessary components for mixing operations, mounted on a single, transportable frame. These systems are designed for ease of installation (DFM) and operation, providing a compact and efficient solution for mixing applications in industries such as pharmaceuticals, food and beverage, chemicals, and more.

## Mixing Skid Systems by HpE Process

We specialise in the design, manufacture, and implementation of high-quality mixing skid systems tailored to meet the diverse needs of various industries.

Our systems are engineered for optimal performance, efficiency, and reliability, ensuring that your mixing processes are both seamless and effective. Recognising that every process is unique, we offer mixing skid systems in various shapes and sizes. Whether you require a compact unit for a small operation or a large-scale system for high-volume production, we have the expertise and flexibility to deliver a solution that fits your needs perfectly.

Choosing HpE means partnering with a company committed to innovation, quality, and customer satisfaction. Our comprehensive approach ensures that from consultation to installation, your mixing skid system is designed to enhance your operations and provide you with a competitive edge.



# Pigging Systems

Pigging systems are needed because at the end of each production, the pipework contains residual volumes of manufactured product which are lost and this makes long, costly, and inefficient cleaning cycles compulsory.

Abscisse (AB6) Pigging System allows these volumes, which are often under-estimated, to be recovered and sold

- Rapid return on investment
- Strong reduction in effluent volumes
- Productivity increases
- Decrease in cleaning cycle times
- Improved traceability
- Recovery of residual fluids (liquids, viscous fluids, and fluids with markers)



Equipment and constructions tailored to the customer's use, from DN 12 to DN 300

Hygienic, CIP, SIP, low energy requirements, low maintenance and operation costs.

Fully engineered systems possible:

- Study of functional analyses
- Drafting the pipework specifications
- Commissioning and user training.

Integrated Solutions

# Pigging



## Asseptic Pigging systems

*Recovery of sensitive fluids*

This construction is suitable for recovery of sensitive fluids requiring bacteriologic cleaning between 2 production runs. It enables on-line sterilising operations. The aseptic pigging design meets standards ISO14159 and EN1672-2 (bend radius, thermal compressions, and expansions), optimising the sterilisation and the draining.

## Clean in place Pigging

*Fluid recovery between the lines*

This construction is optimised for fluid recovery requiring cleaning between 2 production runs. Whether the liquids are viscous or charged with solids, the rheology in these scraper stations is designed to guarantee perfect cleaning and the complete draining of the equipment.



## T Port Pigging

*Fluid recovery not requiring thorough cleaning*

The T Port pigging station is optimised for fluid recovery not requiring thorough cleaning between 2 production runs. It is designed for manual or automatic operation.

Several optional features are available (double jacket, manual pusher extraction, flush-set valves, etc.)



## 3 Way Valve Pigging

*Optimise the circulation of fluids*

In order to optimise the circulation of the fluids to the different utilisation points, 3-way distribution or by-pass valves may be necessary the 3 way valve pigging is ideal for this. Scrapable, they favour the recovery of the product and limit retention zones.

Turning 90° or 180°, they are quick and economical to install



## Pigging for Hoses

*Cleaning hoses*

The AB6'FLEX allows you to drastically reduce your cleaning time by scraping the viscous product quickly. Ergonomic and automated, it will simplify daily tasks for your operators in the cleaning process. Ideally designed for lotions, emulsions, creams and shampoos, make-up, jams and fillings, the AB6'FLEX scrapes all your viscous fluids in record time!

## Mobile Pigging

*Ideal for wines & spirits*

The new requirements of industrial processes call for efficient management of liquid fluid transfer phases to ensure the quality of the products placed on the market. In addition to eliminating dilution residues at the end of the transfer, integrating the mobile pigging cart into your manufacturing processes will optimise your cleaning by minimising water consumption and eliminating the cumbersome draining phases for your operators.





# Service and Repair

We carry out pump and valve service repairs in-house. Items are stripped and then cleaned. A report is prepared, which is then transmitted to the customer with a quotation for repair.

Once confirmed, the job is moved to our clean room facility, where re-assembly is carried out. We can perform static pressure tests, dynamic pressure and flow testing (for pumps). Items can be sanitised on re-build or after testing.

Our engineers can work on any manufactured pump, Centrifugal, Rotary Lobe, Twin Screw and other Hygienic Pumps.

# Evoguard/Krones Service Partner

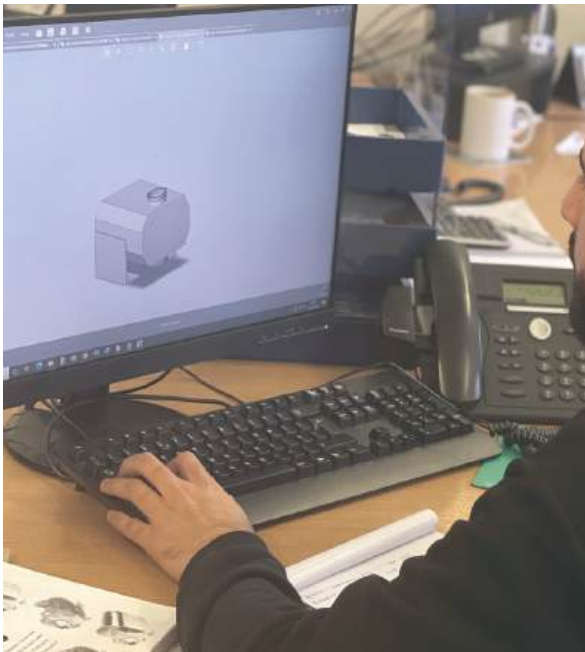
We are the UK Proven Evoguard Service Partner. Many sites have been serviced with Krones fillers.

To ensure servicing is carried out quickly and efficiently we keep stock of the seals / seal kits for the Evoguard Valves.

 **EVOGUARD**



# CAD Design



CAD enables the development, modification, and optimisation of the design process. Both 2D and 3D designs allow for better visualisation.

Engineers can make more accurate representations and modify them easily to improve design quality. If you do not have an engineer in-house who can generate CAD drawings this service is perfect for you.

Our CAD Service allows you to liaise with our very own skilled engineer.

The benefits:

- Cost reduction: early error detection minimises costly manufacturing mistakes
- Compliance: ensures designs meet industry standards and regulations, mitigating compliance risk
- Faster iterations: parametric modelling features allow quick and efficient design changes
- 3D designs can offer a clear preview of the final product.



Services

## Manways and Access Covers

We are the largest UK supplier of Manways and Access hatches.

Supported by technical expertise the team is able to find equipment best suited for the customers' application.

We work with reputable manufacturers globally as this allows us to offer competitive prices.

Our product range has expanded allowing us to offer the Versaline jet head, mixers, and tank safety equipment.

- 0-10 Bar pressure ranges with PED approval where needed
- 150mm dia to 1000mm
- Round, Oval, Rectangular
- Glass manways up to 600mm diameter - etched with customer logo



## Tank Sight & Light Glasses

- Hygienic (Versaline) or flanged
- 50mm to 200mm diameter
- Up to 10 bar rating
- Halogen or LED light units
- Options on switching
- Wipers



## Tank Cleaning

- Static & Rotary sprayballs
- Indexing jet heads for large tanks with difficult to clean products. High pressure low flow cleaners to reduce cleaning time and costs
- Flush washing valves

## Flush Fitting Tank Outlet Valves

- Rising or lowering plug options
- Manual or air operated
- Single seat or double seat mixproof
- 1" up to 6"
- Hygienic or Aseptic



## Levelling Feet



- Light duty feet - stainless steel - various base options available
- Medium duty feet to 3A & EHEDG standards
- Heavy duty feet
- Plastic threaded inserts & stainless weld plates



# Static Mixers



Static hygienic mixers and heat exchangers are solutions for mixing, cooling, frothing, dispersion and pasteurisation of foods and beverages.

Within the food industry aspects as CIP cleaning, smooth and / or polished surfaces and sanitary fittings, are of importance. Therefore, by applying static mixing elements and by the achieved increased product velocity alongside the inner wall of the tube.

The applied mixing element with respect to an empty tube after CIP Cleaning, provides a considerably cleaner result. Finally, the subsequently measured bacterial count is minuscule.

In-line mixers introduce or remove heat from a product stream without the need for plate heat exchangers (which cannot work on high viscosity products and are difficult to clean) or excessively long shell and tube units.

- The mixing elements are fully welded and electro-polished making them the cleanest available
- Tailor made units
- Supplied with or without heating/cooling jackets
- Up to 4 injectors in a single housing
- Intelligent design and pulse free flow allow us to make shorter mixers, minimising waste

# Lateral Mixers

Lateral agitators are highly suitable for maintaining and mixing products stored in medium and large volume tanks. The design allows high level of homogenisation of the mixture, which is why they are extensively used in the food industry, especially in the dairy industry.

Apart from milk cooling and maintenance, these units are used for:

- Dissolution of products like sugar, syrup, yeast, fats, powdered foods, thickeners etc
- Product homogenisation (wines, liquors, spices and flavourings in brines, vegetable oils, fats etc)
- Dilutions (whey, concentrates)
- Product/suspension maintenance (soft drinks, orange, clementine, lemon juices etc)
- Mixing flavours, additives, preservations etc



# InLine Mixers

In line mixers can provide high emulsion grades and are able to pump the product thanks to their slotted head and propeller design. These mixers achieve a completely homogenised, lump-free product and prevent oxidation.

With the careful treatment they provide, these are highly recommended for handling and decanting already homogenised products, thanks to their ability to maintain the properties of the product whilst pumping.

EML and EMLT inline mixers are widely used in:

- Dissolutions, dispersions or mixing of solids (powders or crystals) in liquids
- Emulsion, dilutions or liquids mixing
- Milling
- Mixing gases with liquids



# Centrifugal Pumps

- 0.55kW to 30kW
- Flowrate upto 15,000l/hr
- Head up to 75m

# INOXMIM

All pumps up to 7.5kW can be supplied with integral frequency inverters, electro polishing is standard, with options on specific finishes to customer specification. Motor to IE3.

We have various manufacturers we work with Kpa, Nakakin, Evoguard, Inoxmim and many more



## Single Stage Pumps

For dairy, brewing, soft drinks, wines, juices and CIP

- EHEDG approved
- Optional inducer for low NPSH applications such as wort transfer
- Optional heated pump casing: eg palm oil transfer
- All grade 1.4404 (316L) wetted parts
- DIN standard mech seal for low cost maintenance. One size seal fits all pumps from 0.55Kw to 30Kw
- Modular design for ease of maintenance

## Multi Stage Pumps

For food and pharmaceutical applications

- Horizontal mounting or vertical (self draining)
- Flowrate up to 45,000 l/hr head upto 120m



## HSCP Single Stage Self Priming

Best hygiene properties and easy to clean.

- Flow rate up to 50 m<sup>3</sup>/h
- Pump delivery height up to 60 m
- Operating pressure PN 16
- Intake capacity up to 7.5 m
- Quickest venting of pipe systems



# Pharma / Aseptic Pumps

Pharma process, quality water distribution maintenance

- Low maintenance
- Controlled delta ferrite, with optional certification
- Full material traceability
- Optional drain connection or valve

## 3PPrinz Twin Screw Pumps

For hygienic and aseptic applications

- FMH is EHEDG compliant
- 2 pumps in one - slow speeds for product transfers, up to 4000rpm for CIP feed and scavenge
- Very low shear to product
- Up to 30mm solids handling
- Self priming and capable of handling up to 60% air /liquid mix
- Optional twinscrew feeder
- Can dry run (with flushed mechanical seals)
- Optional heating jacket



## Progressive Cavity Pumps

For hygienic and aseptic applications

The FL-EL PC pumps are designed specifically for pumping fluids that require special care in handling like: Wine, Mustard, Oil, Juice, canned food etc.

Materials:

- Parts in contact with product is Stainless Steel AISI 316
- Stator and gaskets are Nitrile
- Mechanical Seal C/C/N

Options:

- Other connections: DIN 11851, SMS, CLAMP, RJT etc.
- Mechanical adjustable speed disk drive
- Trolley platform



## Dosing & Metering Pumps

Dosing pumps for additives, colours and flavours. A dosing pump is only part of the job. We also supply back pressure valves, injectors, suction tubes and calibration tubes.

Once the liquid is dosed into the line, it also needs mixing - no problem if the product in the line is in turbulent flow, but in laminar flow systems mixing 2 streams can be difficult, with the pump rate significantly affecting mixer efficiency. We can size your dosing pump, product transfer and a static mixer as a complete system.



Pumps



## Flotronic Pumps



Flotronic is a world leading manufacturer of air-operated Double Diaphragm Pumps and inventor of the revolutionary 'one-nut' design – a concept which has transformed the way they are being used throughout the industry.

The 'One-Nut'® Concept

The 'inside out' concept allows fluid to pass 'between the diaphragms', directly through the centre of the pump. Air pressure operates 'on the outside'

## Rotary Lobe & Circumferential Pumps

Unibloc Rotary Lobe Pumps are ideal for the Food and Pharmaceutical industries. With robust and reliable designs flexibility is offered in the forms of seal options, various connections are available making it easier to install on your site.

Heating Jackets are a great option when processing chocolate.

EHEDG, 3A and Atex certified pumps are available to suit your application.

The unique 'meat' pump uses composite rotors that are easily and cheaply replaced if a piece of bone gets into the pump.



Nakakin manufacture their pumps from the raw material, allowing for full control of all stages of production. High quality pumps are manufactured in Japan, with quick delivery times they are very competitive in the market.

The JMU Range is supported by the EHEDG Certification as well as the AMXN being a aseptic pump.



## Chocolate Pump

Where chocolate lines are never cleaned, the industry standard pump is the internal tooth gear pump. It uses a combined PTFE packed gland / camban shaft seal arrangement and increased internal gear clearances designed specifically for the product and is fitted with heating jackets as standard.

Selection of these pumps needs some care - different types of chocolate respond differently to shear rate and the rotor tip speed of the pump can affect product quality. We are able to size the pump for best product quality.

These pumps are also limited to 6 Bar differential pressure - any more than that and the pump separates the cocoa solids from the oils. We can select other pumps in our range for areas where higher pressure or CIP may be required.

# Versaline Butterfly Valves

Our Versaline range offers versatile and cost effective solutions for the food and beverage process.

- 1" to 4"
- RJT male, weld end or others to order
- Up to 10 bar
- Manual - lever or handwheel
- Air operated, with or without control head
- Control head with bright LED status indication
- Forged grade 316L body and disc
- EPDM or Viton Seals
- Finished to <0.8 micron Ra



# Sanitary Ball Valves

- 1/2" to 4"
- 2 way, or 3 way with T or L ball option
- Manual and air operated
- Weld end or with screw or clamp ends
- Feedback units and NAMUR solenoids
- Internal finish <0.8 micron Ra
- BSP ball valves from 1/4" to 4"

## Other Versaline Valves

- Non Return Valves
- Pressure Relief (Overflow - Non PED)
- Pressure Relief (Safety - PED)
- Sampling from line or tank
- Flow control

# Diaphragm Valves

- 2 way or multi-way
- zero dead leg
- Manual or air operated

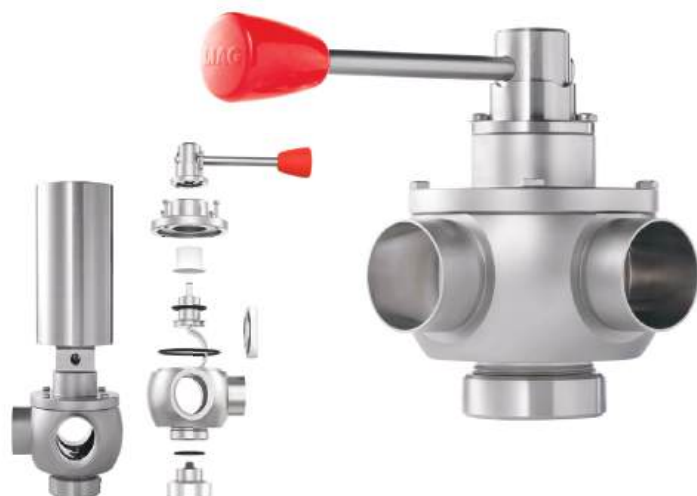


# Hygienic Shutter Arc Valves

For gentle control of viscous and solids laden products with low pressure drop.

The unique ARC allows full bore flow through the valves enabling the valve to be used with the DMV pigging system.

- EHEDG and 3A approved
- Manual air operated
- Flow control version
- 2 way and 3 way T or 120° options



**LIAG**   
ValveTec

Valves

## Sampling Valves

- EHEDG and 3A approved
- Aseptic sampling
- Industry leading range



## Tank Cleaning & Powder Intro Valve

### Tank Cleaning and Powder Introduction Valves

- Tank cleaning valve is designed to augment centrally mounted cleaning heads and enable the cleaning of those areas that the central unit cannot clean, such as mixers, manways or heating/ cooling coils
- A powder introduction valve allows powders to be drawn into a vessel under vacuum while providing a clean surface for CIP

## Evoguard/Krones Valves

The Evoguard range of process valves from Krones AG offer improved cost of ownership, easy maintenance with best in class seal replacement times, un-paralleled levels of hygiene with EHEDG and 3A approvals, reliability with PN25 bar designed bodies. The valves reduce operational costs up to 30% less reduced air consumption than competitors.

Various options available:

- Butterfly Valves
- Mixproof Valves
- Single Seat with balanced plug
- Double Seal Valves
- Aseptic single seat with stainless bellows
- Evoguard Spares Stockist



## EvoConnect Control Head

- Pneumatic System
- Includes 3 solenoid valves, depending on model
- Manual override at each solenoid
- Adjustable exhaust air throttle
- I/O link - Optional diagnostic module for monitoring the pneumatic pressure.





# Tube

- Sanitary Tube to ASTM-A270
- Hygienic Tube to EN10357
- Pharma Tube to ASME BPE
- Bends/Tees/ Reducers to BS4825, DIN11852, ISO2852
- Pharma/ Biotech Fittings to ASME BPE



We are a major stock holder of stainless steel tube and fittings we have always maintained strict standards on these products, meeting or exceeding national and international standards.

Our products combine high-quality materials, manufactured by state-of-the-art technologies and certified processes. The tubing we supply is true process tube, not exhaust or architectural grade that has been polished up.

## Bends, Tees & Reducers

Our full range of hygienic fittings to BS4825 including: 90° bends, 45° bends, pulled tees, concentric reducers, eccentric reducers, RJT unions and pipeclips.

## Union Parts

RJT 1" to 4", IDF 1" to 4", SMS (aseptic), 3A, DIN11864 aseptic, DIN11851 DN10 (0.5") to DN150 (6") - to suit metric or imperial tube. Clamps 0.5" to 12".

## Jacketed Pipe Fittings

Bends have matched radii to allow fabrication of jacketed bends. We also stock laser cut closure plates for sealing line ends, BSP fittings, vents for water connections to the jacket and a full range of de-mountable fittings for use with press-fit pipe-systems.

## Strainers, Filters & Mag Traps

Various types of Strainers are available, these include Y-Type, In Line, Duplex and Angle Strainers. These are ideal for the food, dairy, beverage and other industries.

### DOUBLE-JACKETED FILTER WITH MAGNETIC BAR:

The double-jacketed filters have a 12,000 Gauss magnetic bar, the ideal solution for industries seeking optimal filtration that includes the capture of metallic particles, along with precise temperature control. Its 316L stainless steel design and technical features make it a preferred choice for demanding applications, ensuring performance, safety, and reliability.

- For hot fluids if double-jacketed filter design
- Thermal regulation of the fluid - The double jacket allows the passage of temperature-regulating fluids (water, steam), thereby stabilising the temperature of the processed product, which is essential for products sensitive to thermal variations.
- 12,000 Gauss magnetic bar housed in a stainless steel sleeve
- Delivered as a complete, tested, and proven unit
- 316L



Tube & Fittings



Unit N2, Gildersome Spur, Leeds, LS27 7JZ  
Tel: 0113 252 6712 Email: [sales@hpeprocess.com](mailto:sales@hpeprocess.com)  
[www.hpeprocess.com](http://www.hpeprocess.com)

## Transforming Food & Beverage Processes

- Adhesives
- Architectural
- Automotive
- Beverage
- Bio Chemicals
- Bio Tech
- Brewing
- Chemical
- Confectionery
- Dairy
- Food
- Household
- Paints & Coatings
- Paper
- Personal Care
- Pharmaceuticals
- Ready Meals
- Water