

**Plant components,
selected for sound
performance**



Selected plant components to meet our customers' demands

We provide you with a wide range of plant components through one reliable source.

Our extensive offer includes components from global industry leaders specifically designed and perfected for food processing.

Selected summarizes the process to understand our customers need of keeping the production always up and running and achieving maximal processing uptime while minimizing life-cycle cost.

We are offering, high product safety and quality, cost efficiency, sustainability, global ownership as well as perfect delivery.



Selected plant components to sharpen your competitive edge

When buying anything within our broad range of selected plant components you get much more than a component with warranty: we have a real interest in protecting your investment by keeping your plant up and running and in a good condition.

Selected applies not only to our plant components but also to the process they pass to give our seal of approval. Decades of experience in the food industry allow us to make sure you sharpen your competitive edge maintaining customer satisfaction and brand loyalty.

The major benefits you gain when co-operating with Tetra Pak are:

Lowest cost of ownership

Proven plant components to offer high performance, with an increased running time and low utility consumption and product losses.

Sustainability

Less environmental impact which leads to a more efficient production and to increased profitability.

High product safety and quality

Verified technologies ensuring food safety, consistent food quality and traceability.

Perfect delivery

Single source supplier with secured availability, convenient shipping, fast delivery and personal pre and after sales service.

Selected range of plant components

We supply a wide range of leading-brand components that are ideally suited to processing applications within the food industry, such as the dairy, beverage, prepared food, ice cream, cheese & powder and cosmetics categories.

You can discuss your needs with us and we can recommend the plant components best suited to your requirements; no matter if your need is expansion, upgrading, modifying, or replacement. The common characteristic is our proof of quality provided by our selection process in close cooperation with major global suppliers.

Since uptime is crucial, we offer you a superior portfolio with warranty for best performance. Furthermore, our knowledge about technologies, requirements and materials are updated and aligned for any country so our portfolio is always ensuring the best solution matching your needs.

By choosing selected plant components you will get a loyal long-term partner for your daily operations. We offer you a wide variety of plant components in the following categories:

- Valves
- Pumps
- Measuring instruments
- Integration components
- Automation and electrical components

Valves

The simple yet smart design of valves of course incorporates corrosion-free materials, and they have been selected for their precision-engineered design and simplicity to clean. It all results in a smooth and flexible operation, high standards of hygiene, low-cost maintenance, and a long reliable lifetime.

We supply you with a world-leading range of valves for both sanitary (e.g. aseptic processing) and non-sanitary (primarily utilities and media) applications.

Sanitary

- **Mix-proof valves:** Provides a reliable and safe separation of incompatible liquids. The flexibility offered by these valves helps you to save space and installation costs.
- **Shut-off valves:** Offering safety when closing a line and stopping the flow of liquid. Their high versatility is synonym of product quality and safety.
- **Changeover valves:** Used when a split of one flow into two is required and a closure of the line is not desirable. It results into safety and lower cost of ownership.
- **Sampling valves:** Allows you to take a representative portion of a fluid to test (e.g. by physical measurements, chemical analysis, microbiological examination), typically for the purposes of identification, quality control, or regulatory assessment. It brings product quality and safety.
- **Regulating valves:** Maintains a constant pressure or controls the flow in the process line. It ensures a stable and safe production.
- **Safety valves:** Protecting line equipment for over-pressure.

In the category of sanitary valves there is a possibility of an automation option for mix-proof, changeover and shut-off valves. As an option, we can integrate an automated system control unit that is mounted on the top of a valve which can activate up to three valves or valve positions simultaneously. Different interfaces allow trouble-free communication with a central control room; it is all about securing reliability in the process.

Non-sanitary

- **Shut-off valves:** ball valves and seat valves for utilities
- **Regulating valves:** seat valves for regulating flow in utilities lines
- **Safety valves:** protecting line equipment for over-pressure in e.g. steam line



Pumps

The highly efficient pumps supplied by Tetra Pak provide precision pumping for all kinds of fluids with different viscosities, and the desired functionality for gentle and cost-effective food production.

Using the right pump for each application is the key to significant savings. Pumps account for a staggering 10% of global electricity consumption – and as much as 50% of the total electricity consumption in some applications. Energy usage can vary enormously between pumps in different processes, so comparing performance and energy consumption in each application is crucial. Our experts help you to find the size of pump that will give the most efficient performance in each specific application.

Sanitary

- **Centrifugal pumps:** Both the premium pumps and standard duty pumps in this range are excellent for pumping product through a system, gently and efficiently. For special applications, we offer multi-stage, high-pressure, self-priming, and high-purity water pumps. Self-priming centrifugal pumps can evacuate air from the suction pipe combined with a low noise level and high pumping efficiency. These pumps can also be used as product pumps.
- **Rotary lobe pumps:** These are the optimum solution for high efficient pumping of liquids over a wide range of viscosities, especially shear sensitive products. With its efficient, front-loading primary seal options and unique self-cleaning rotor retention device, this pump type offers maximum hygienic integrity. There are also various installation alternatives.
- **Circumferential piston pumps:** With highly efficient design circumferential pumps are particularly suited to applications that are low in viscosity with a medium to high discharge pressure.
- **Liquid ring pumps:** Providing several options for pumping liquids containing gases. The liquid ring is self-priming when it is at least half filled with liquid, enabling it to pump from a suction line partly filled with air, thus making these pumps ideal as return pumps in CIP systems.
- **Peristaltic pumps:** Seal-less design to avoid leakages, self-priming and can withstand continuous dry running.
- **Excentric screw pumps:** Wide application range but large installation space and sensitive for dry running but excellent when low shear forces and large particles needs to be pumped.

Non-sanitary

- **Service media pumps:** Designed for both hot and cold fluids.
- **Vacuum pumps:** Removes gas molecules from a sealed volume. Typical use within the food industry is as vacuum pump in a deaerator or as a vacuum pump in a flash vessel for flash cooling. Vacuum pumps are also used in tanks.
- **Dosing pumps:** Optimal for precision dosing of chemicals.
- **Membrane pumps:** Air driven for cost efficient transportation of chemicals.

Measuring instruments

This is another specific area that you can discuss in depth with us to ensure your process monitoring needs. In addition to projects and stand alone installations we supply complete instruments as spare parts as well as service kits.

We also offer a complete solution for on-site calibration of critical instruments. Calibration is vital to secure your food production and ensure maximum operational efficiency. Calibration of instruments is normally performed during regular service stops to maximize production uptime.

The main areas covered are:

- **Flow measurement:** For measurement of either volumetric or mass flow rate. Electromagnetic flow meters for volumetric flow rate are supplied from basic all the way to very demanding applications. Mass flow meters for liquids with or without conductivity include Brix metering as well as density and viscosity monitoring.
- **Pressure measurement:** For monitoring of pressure or liquid levels.
- **Level measurement:** Either level guards (switches) or continuous monitoring based on several different measurement techniques.
- **Temperature measurement:** Sensors and meters for the control and supervision of temperatures.
- **Analysis measurement:**
 - *Conductivity measurement* for both alkalis and acids,
 - *PH measurement* with direct in-line monitoring using glass-free sensors that can be retracted during CIP operations.
 - *Turbidity measurement* for more accurate mixing phase monitoring to reduce waste.
 - *Brix measurement* with refractive index to measure sugar content or whey content
 - *Weighing to measure* level in tanks and blending units
 - *Instrumentation* for process data transfer

The benefits of choosing our assortment are common for all the measuring instruments:

- Secures food safety and product quality
- Ensures energy efficient production
- Maximizes production uptime
- Provides documented quality assurance



Integration components

All processing solutions need a vast array of small components to complete the integration into a well working processing line. The integration components in our portfolio are selected to meet the same high quality demands and standards as all the other components, because no chain is stronger than its weakest link.

This category within plant components portfolio comprises of components that are required to integrate e.g. valves, pumps, processing modules, systems and lines.

The main components are:

- **Installation material:** Fittings, bends, tees, reducers, tubing, pipe support
- **Tank equipment:** Manhole covers, sight glasses and tank legs
- **Mixers and agitators**
- **Cleaning equipment:** Spray balls, rotary spray balls, rotary jet heads
- **Steam accessories:** Steam filters, separators and traps
- **Pneumatic equipment:** Valves, tubes and air preparation units
- **Other typical components** are air accessories, temperature regulators, dosing pumps, vacuum units, strainers and filters, hoses etc.

Integration components must comply with the same stringent quality standards as the equipment they join together. It is important that products are uniform, especially in regard to material quality, wall thickness, problem-free welding, tolerances and surface finish. Typical standards followed are SMS, ASME and DIN.

Our Integration components are synonymous with uniform high quality.



Automation and electrical components

Our portfolio, represented by industry leaders in the world of automation, helps meeting the productivity and quality demands of our customers. The automation portfolio is tailored to give the food producer full control of processing, packaging and plant logistics.

All our solutions are built on extensive experience and application know-how to ensure the smooth flow of product and information even through integrated automation systems. We offer customized solutions targeted at reducing our customers' costs and increasing their profits.

We help assuring maximum efficiency and minimal waste, which translates into sustainability, at the same time cutting costs and enabling optimum product quality and full traceability.

With embedded intelligence in our equipment and production solutions, food producers can:

- Interconnect entire machines, modules and lines etc into a network
- Integrate with existing enterprise resource planning (ERP) systems
- Achieve exceptional performance planning and repeatability, as well as life-cycle management
- Achieve the greatest efficiency at the lowest cost – all with uncompromised food safety

Our automation and electrical assortment include:

- **PLC-systems** for control of the process line
- **Operator interface** for monitoring and running the process line
- **I/O-systems** for internal and external communication of the equipment
- **Communication and network equipment**
- **Instrumentation** for process data transfer of the process line
- **Frequency converters and soft starters** to control motor (pump) speed
- **Low voltage equipment for electrical distribution**

As with all other components supplied by Tetra Pak, you get added value in the form specialist knowledge, personal service and production security.





Ensuring process performance

Our job is to enable you to develop and improve your products and production.

The component solutions we deliver are specifically designed to:

- treat your products gently
- be as economical with resources as possible
- meet high demands on flexibility – in your present production and via future upgrading possibilities

That's how we future-proof your operational performance.