



Sanitary Valves

The Complete Line





Everything you need,
everywhere you need it

Alfa Laval is a world-leading supplier of valves for a wide range of sanitary applications within the food, dairy, beverage, bio-pharm and personal care industries. Our products are developed not only to meet your exacting demands for safety, reliability, efficiency and hygiene, but also to ensure the careful handling of your products.

One of the features that distinguishes us from our competitors is our breadth of application. We can supply components for all stages of your process – besides valves, our sanitary range includes pumps, installation material, tank equipment and heat exchangers.

This brochure includes the following Alfa Laval line of high-quality sanitary valves:

- Mixproof Valves
- Single-Seat Valves
- Sanitary Ball Valves
- Regulating Valves
- Sampling Valves
- Butterfly Valves
- Other Valves
- Control & Indication Units

For more detailed technical information and specifications of our products, please refer to the relevant product leaflet provided by your local Alfa Laval supplier, or to our website, www.alfalaval.us

Mixproof Valves

Mixproof valves are an essential part of automated processing, not only separating two different products but also preventing product contamination from other non-sanitary fluids. Mixproof means no mixing of incompatible liquids, but when thinking in terms of processing, the task is to obtain mixproof solutions while at the same time using as few resources as possible.

One double-seat valve can replace two or three single-seat valves, saving you space and installation costs, and providing you with unmatched system flexibility. Alfa Laval offers several Mixproof valves, all with simple and cost-effective maintenance.



*Unique **UltraClean**
Top of the line in our
Unique range, meeting
the highest demands for
hygienic processing.*

Unique Mixproof Valves

Alfa Laval's *Unique* mixproof valve concept offers you customized and modular solutions that exactly fit your application or demands. The reliable valve is spillage-free during operation providing optimum hygienic conditions, and the *SpiralClean* system cleans more efficiently and uses less cleaning fluid. The valve requires minimal service and maintenance.

To assist you in your valve selection, you will find outlined below some standard configurations of our *Unique* mixproof valves:

Unique **Basic** – for low cost and CIP solutions

Unique **SeatClean** – for standard solutions

Unique **HighClean** – for high hygienic solutions

Unique **UltraClean** – the highest hygienic solution

Unique **PMO** – for compliance with Pasteurized Milk Ordinance drainage requirements

Unique PMO – for compliance with Pasteurized Milk Ordinance drainage requirements

The *Unique* PMO valve meets the FDA Pasteurized Milk Ordinance (PMO) criteria for dairy operations. It provides separation of milk products (including cheese curd applications) and cleaning solutions, eliminating the need for manual pipe swing connections.

SMP-TO – Tank Outlet

The compact SMP-TO is specifically designed for mixproof operation and safe tank outlet operations and where the cleaning of pipelines up to the bottom of the tank is required. The plug design secures spillage-free operation during valve opening, resulting in minimized product loss. The design of the lower plug seating guarantees that high pressure or pressure shock will not affect the plug position. Excellent cleanability is ensured by the integrated seat lift. With its compact design, the SMP-TO offers substantial space-saving benefits, and the flange connection means flexible installation.

SMP-BC

The SMP-BC mixproof valve is specifically engineered for applications where additional safety and leak detection are desirable. Because the SMP-BC is based on our proven SRC seat valve design, many parts are common to both valves. The easily accessible seals can be replaced from the top.

Unique PMO Actuator with seat lift interlocked.



SMP-TO For mixproof tank outlet operations.



SMP-BC When you need extra safety and leak detection.



700 Series Valve

The 700 Series valves are designed to deliver years of reliable performance. Rugged and long-lasting plastic stem bushings eliminate metal-to-metal galling. The stems are threaded to actuator shaft, eliminating the coupling between the stem and actuator, thereby ensuring proper alignment. Bushings at each end of the cylinder support stem also ensure perfect alignment. The 700 Series features a heavy-duty bonnet and body ferrule design that will stand up to years of pounding from hydraulic stock.

Our 700 Series valves offer more control options. For instance, all 700 Series valves are available with an innovative control top housing option. Easily installed by replacing the standard visual valve position indicator, the versatile housing provides valve position feedback by accommodating mechanical and proximity switches, with no internal modifications necessary to the actuator. The 700 Series also accommodates *ThinkTop* control and indication units.

Additional flexibility can be achieved by installing a solenoid in the control housing. The solenoid decentralizes valve regulation from a main control panel to individual control modules, significantly improving response time and greatly reducing installation costs.

Two actuators (long and short) fit most 700 Series valves - including a wide selection of shut-off and divert valves. Valves are also available in sizes from 1" to 6" OD so you can build any size valve without increasing inventory requirements. Available normally open or normally closed, actuators can be field-reversed simply by disassembling, repositioning and reassembling.



Single-Seat Valves

SRC – Sanitary Remote-Controlled Valve

Alfa Laval's air-actuated SRC sanitary remote control valve requires only a few simple moving parts for operation, making it an extremely reliable and hygienic design for stopping or diverting product flow in single or multi-directional systems.

The SRC consists of a field reversible actuator, double rubber lip seal, plug and valve bodies. The flat seat design means longer seat life. All components are assembled by means of clamp rings and a stem clip-system. There is no O-ring or O-ring groove, so contaminants cannot migrate or collect within. The valve is based on a modular design concept that enables parts within the line to be interchangeable, reducing the burden and cost of carrying a large inventory of spare parts.

ARC – Aseptic Remote-Controlled Valve

Based on the SRC valve design, the ARC is an aseptic seat valve with a PTFE diaphragm or steel bellows. It can meet most operating conditions, such as high sterilization temperatures. The valve is characterized by excellent cleanability and smooth product treatment. It is available as a stop valve or change-over valve.

The ARC is operated by means of compressed air and can be supplied with or without a spring return. The specially designed PTFE/rubber diaphragm unit ensures sterile stem sealing towards the atmosphere, and does not allow product residues to build up on the product contact surface.

SMO and SMO-R – Sanitary Manual Valves

The sanitary and flexible design of the SMO valve can be used in a wide range of applications, e.g. as a stop valve with two or three ports or as a change-over valve with three to five ports. SMO-R is a regulating valve used for manual control of pressure and flow.

The valves permit gradual opening and the few and simple moving parts result in very reliable valves that are easy to dismantle.

SMO and SMO-R are manually operated versions of the SRC valve. As the main parts are identical, the SMO can easily be converted into an SRC valve.

Small Single Seat Valve

The Small Single Seat Valve with its sanitary and flexible design is applicable for a wide range of tasks either as a stop valve with two or three ports or as a change-over valve with three to five ports. The valve is suitable for use in food, beverage, dairy and pharmaceutical industries.

The design and features of the Small Single Seat Valve makes it very hygienic and easy to clean. With its special double lip sealing concept the valve is very safe, even under vacuum.

The valve can be ordered in 1/2" or 3/4" sizes as either a stop valve with two or three ports or as a change over valve with three to five ports. The Small Single Seat Valve is remote-controlled or manually operated and due to few moving parts the small valve is very reliable.

SPC-1 - Sanitary Proportional Controlled Valve

The SPC-1 operates with a limited number of simple, moveable parts. It is supplied with a positioner that maintains the valve in a position determined by the control instrument. An external IP converter is needed to change the electrical signals to pneumatic signals.



SRC
An extremely reliable and hygienic design.

ARC
An aseptic valve well-suited for high sterilization temperatures.

SMO
A manually operated valve for a wide range of applications.

Small Single Seat Valve
A small size valve for a wide range of applications

SPC-1

SRC-LS Sanitary Long Stroke Valve

The SRC LS is specially designed for use in sanitary and non-sanitary applications where suspended solids or high viscosity products are processed. This has been achieved by increasing the stroke of the valve plug considerably compared to the standard SRC valve. Authorized to carry the 3A symbol, the valve is operated by means of compressed air and can be supplied with or without spring return. It has few and simple moving parts, which results in a very reliable valve.

Regulating Valves

CPM-2 – Constant Pressure Modulating Valve

The Alfa Laval air-actuated CPM-2 valve series is designed to maintain either constant inlet or constant outlet pressure – important for such applications as pasteurization, separation, filling systems, filters, filtration and heat exchangers.

Inside, a diaphragm/valve plug system reacts immediately to any alteration of product pressure and changes position so that the pre-set pressure is maintained. The valve operates with a pressure-regulating valve for the compressed air and a pressure gauge in the product line.

The optimum body design of the CPM-2 results in several product benefits, such as excellent cleanability. As the inlet is tangential to the bottom of the valve body there is no sump. One special plug allows very low capacities and high CIP flow.

SPC-2 – Sanitary Electro-Pneumatic Modulating Valve

The SPC-2 is a sanitary valve for use in stainless steel pipe systems. Typical applications are automatic control of pressure, temperature, flow rates and tank levels. The combination of electro-pneumatic actuator and specially designed valve cone makes this one of the most responsive and accurate regulation valves available.

Butterfly Valve

LKB – Butterfly Valve

Alfa Laval LKB butterfly valves are economical on/off routing valves, available for either automatic or manually operated systems. Due to their large opening areas, these stainless steel valves offer low flow resistance, allow for reversible flow direction and provide gentle treatment of low and medium viscosity product.

LKBF Flange Connections

The LKB is also available with flange connections. Flange connections in welded systems allow for in-line maintenance.

Actuators

Available in either normally closed or normally open versions for automatic operation. The LKB can be fitted with vertically mounted LKLA actuators, as well as the *ThinkTop*® control and indication unit.

Handles

For manual operation, Alfa Laval offers a complete range of handles, including the new multi-position lockable handle and a complete range of multi-position, mechanically locking handles.



SRC-LS
Ideal for suspended solids or high viscous products.



CPM-2
When you need to keep your product under even pressure.



SPC-2
Pressure control valve for sanitary applications.



LKB
Economical on/off routing valves for low and medium viscosity product.

Check Valves

Air Blow Check Valves

Our air blow check valve is designed to evacuate lines of product or CIP solution and for air agitation of product in tanks and other vessels. The disposable air filter media, designed for use with the air blow valve, will filter out the impurities in the air placed under pressure for drying out process tubing after it has been cleaned and rinsed. It also serves as a filter for air used in the air agitation of products in tanks and vessels.

Ball Check Valves

The 45 BYMP ball check valve is designed for use in sanitary stainless steel pipe systems to prevent reverse product flow. This ball check valve is available in 1-1/2" to 3" sizes with molded Buna-N, Viton or a solid Nylon ball. Body design allows full flow and can be used in conjunction with an air blow check valve.

Other Valves

LKC-2 – Non-Return Valve

The non-return valve LKC-2 is designed for use in stainless steel pipe installations to prevent reverse product flow. LKC-2 opens when the pressure below the valve plug exceeds the pressure above the plug and the spring force. It closes when pressure equalization has been achieved. A higher counter pressure will press the valve plug against the seat.

MH – Shutter Valve

The MH is a self-draining valve that allows for multi-directional flow of product. An internal shutter closes ports progressively to help minimize pressure shock and stress. The MH can either be manually or pneumatically operated, and is available with two or three port connections at the same level.

650/655 Fractional Valve

With self-draining ports and ease of operation, the 650/655 fractional valves are ideal for processes where an uncompromising sanitary environment is demanded.

Air Blow Check Valve



Ball Check Valve



LKC-2
A non-return valve that prevents reverse flow.

MH
A shutter valve that allows for multi-directional flow of product.



Fractional Valve

Other Valves (continued)



Ball Valve

Ball Valves

The full-flow design of ball valves minimizes line turbulence and pressure drop. An optional encapsulated seat reduces the threat of product entrapment on critical process applications. With a reputation for rugged dependability, wetted parts are wrought AISI type 316L stainless steel. Compatible with Tri-Clamp connections, ball valve sizes range from 1/2" to 4". Ball valves are available as manual valves (as shown) or with pneumatic or electronic actuators.



Vacuum Breaker

Vacuum Breakers

The GHVB air-operated vacuum breaker is used to eliminate vacuum on the downstream side of the pasteurizer in an HTST system. It is truly CIP-able, needing only one air connection for CIP control. The GHVB is authorized to carry the 3A symbol.

Plug Valves

Plug valves are designed for low pressure and temperature applications (less than 25 psig, maximum 100°F). Sizes range from 1-1/2" to 3" and are offered in Tri-Clamp, butt-weld or bevel seat ends in either 304 or 316L stainless steel. Pasteurizer Leak Detect types are available for tank pasteurizer valves.



Plug Valve

D60T Compression Valve

Our D60T compression valve is designed to relieve pressure, sample or shut-off flow. While these components are less visible, they are just as vital to the performance of a process system as a pump or seat valve. Available in 1" to 3" sizes (1-1/2" to 3" for sample valves), the valve body material is made of 316L stainless steel.



D60T

Control & Indication Units

The valve control of yesterday has finally entered a new era. The requirements for total component reliability, together with superior performance, are key functions for success within processing areas.

The **ThinkTop**® offers the most advanced automated control unit for all air-operated Alfa Laval sanitary valves. Whether you are modifying an existing plant or planning a new installation, the **ThinkTop**® is right for your process. Using a combination of state-of-the-art, patented sensor system and preset tolerance bands, the **ThinkTop**® is self-adjusting, eliminating the need for adjustment over time.

The **ThinkTop**® control and indication unit is so versatile it can be used on any air-operated, sanitary valve from Alfa Laval – including single-seat and mixproof valves.

ThinkTop®'s registered design features a modularity and flexibility like no other control unit Alfa Laval has ever offered.

Further features and benefits of the **ThinkTop**® are:

- Self-adjusting when installed
- Can be set up without dismantling or readjusting
- Wide range of interface modules: Digital, ASI and DeviceNet
- Integrated indication of seat lift
- Offers the ability to integrate external signals in the top
- Includes maintenance indication integrated in the top
- External signals included
- Saves set-up parameters until re-programmed, even in the event of power failure



The Tri-Clover control top is designed to accommodate a variety of switch options, including proximity or mechanical switches.

