

# NovAseptic<sup>®</sup> Valves. Aseptic by design.

A superior design for aseptic point of use



# NovAseptic® Valves. Aseptic by design.

NovAseptic® Valves are engineered for optimal performance, reliability, durability and ease of maintenance.

The design and development of each component is based on more than 20 years' experience, focused on aseptic design. NovAseptic® Valves comply with cGMP Design Qualification criteria for aseptic processing.

This is why we choose to call it "Aseptic by Design."

## Process Valves

NovAseptic® Valves are specifically designed for aseptic applications and comply with the most stringent cleanability and sterilizability requirements. The focus on aseptic design is a significant feature for all valves.

Take off valves are often the ultimate choice when it is necessary to integrate taps designed for aseptic distribution systems for purified water (PW) and water for injection (WFI).

## Tank Outlet Valves

NovAseptic® Tank Outlet Valves are particularly designed to comply with the most rigorous requirements in applications in which CIP/SIP is crucial. Their integration in aseptic processing equipment ensures that this important part of the system can be easily sterilized and cleaned in place.

## Actuators and Diaphragms

Choose from a wide range of diaphragms and the following actuators for your applications:

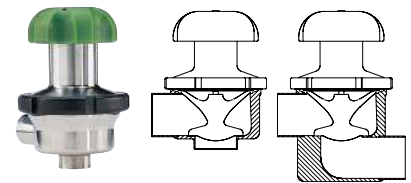
- **Pneumatic Actuators**
  - Spring Closed/Open
  - Multiple Acting
- **Manual Actuators**
  - Standard
  - Angled Extended Axis

## Cost Effective, Custom Designed Solutions

The different valves and valve combinations in sizes from 12 to 76 mm provide a wide range of solutions to engineering challenges. Solutions that give you full flexibility. Aseptic valves and combinations that provide a process with no dead legs and full CIP/SIP. The aseptic design makes the process easier to validate, with diaphragm materials such as Fluorocarbon Elastomer, EPDM, Silicone and PTFE. These fulfill FDA criteria and are USP Class VI tested. With our know-how in the application of automated processes, we can help you choose the best aseptic solutions for your applications.

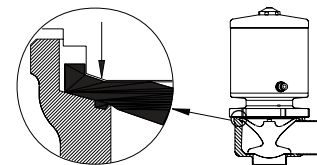
The main features of NovAseptic® Valves that give them their fine reputation include:

- **CIP/SIP** – Compatible
- **No dead leg** – No risk of contamination
- **Low product hold-up** – Saves money
- **Totally drainable** – Excellent aseptic performance
- **Engineering flexibility**

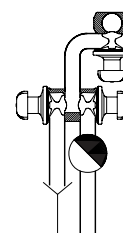


### Shut Off Valve

The diaphragm seal system on the NovAseptic® Valve produces positive sealing with no cavities. The seal remains static regardless of the position of the diaphragm. The valve is totally drainable and cleanable. 90° or 180° shut-off valves give engineers full flexibility with full drainability and low pressure drop.




The diaphragm is sealed by an O-ring integrated in the diaphragm which fits into the corresponding groove in the valve body. The actuator exerts positive pressure on this single seal, which remains static regardless of the position of the diaphragm.



### Drainage Point

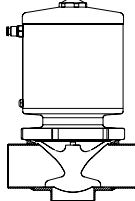

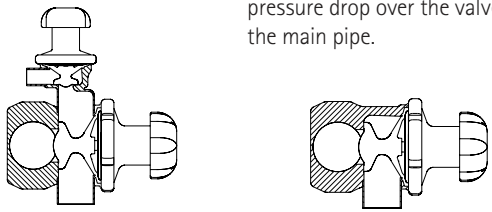
A valve combination that offers a dead leg free drainage point with separate outlets for steam trap and drainage, secured with double diaphragms between the product line and drainage/steam trap.

# Innovatively Designed Aseptic Components



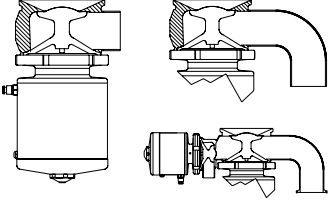

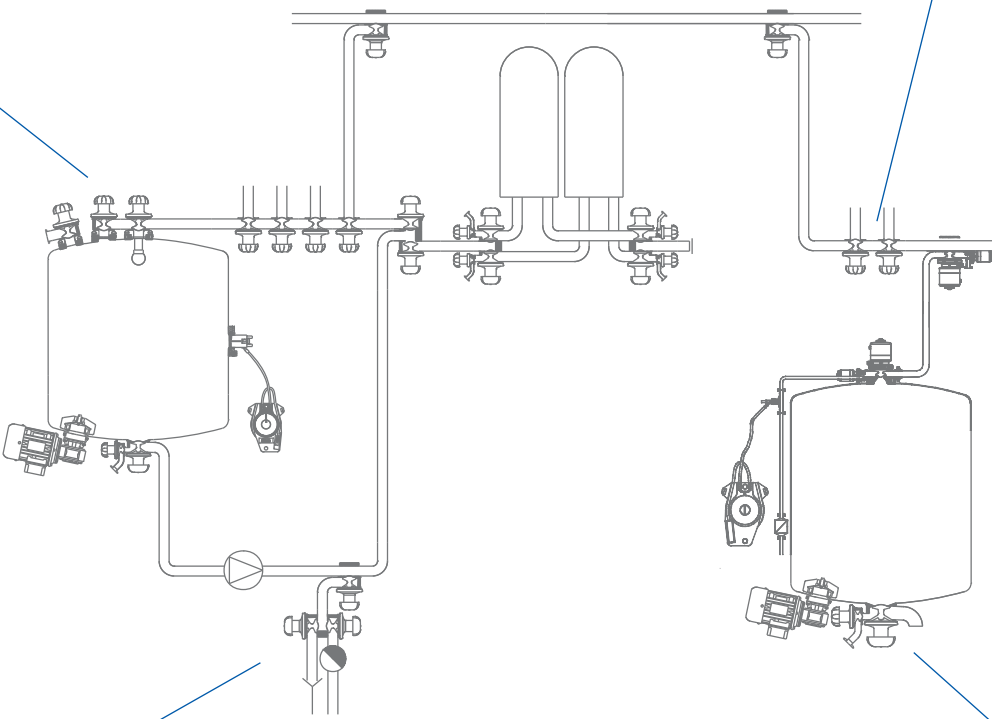
**Take Off Valve**

This valve has been specially designed for taps involved in the aseptic distribution of purified water (PW) and water for injection (WFI). Totally dead leg free and without any pressure drop over the valve in the main pipe.



**Flow Through Valve**

A valve designed for a wide range of applications in the aseptic process; including manifolds, take off and drainage valves.



**Tank Outlet Valve**

When welded in place, the valve becomes an integrated part of the tank base. It is engineered in the same way all NovAseptic® Valves are and can be equipped with different outlet elbows and connectors. A CIP/SIP valve can also be welded on the tank outlet valve to ensure clean/sterile downstream piping before starting to empty the tank. The tank outlet valve is available from 12 mm up to 76 mm.



**Divert Valve**

The divert valve can be used in various applications where the need for a minimum dead leg between two valves is important.

# Production and Quality Control

## Starting from Zero

The different market requirements for material quality standards according to ASME®, ASTM® and various European specifications are already taken into account when the stainless steel is ordered from the steelworks.

The material is cut from the original bar into work-pieces before being used to produce valve bodies. The heat number from the original bar is transferred directly to the valve body or recorded with the batch numbers that are engraved on the valve body. This provides full traceability back to the mill certificate for each single unit.

## Computerized, Uniform Handling

The bodies are turned in computer-programmed turning lathes to their final shape and the pipes are welded using semi-automatic TIG welding on the outside. This operation guarantees uniform handling and an

outstanding result. The valve part is polished manually and, if required, electro-polished according to your requirements to a surface finish of Ra <0.5 µm, or better.

Our quality control program for the valve body is extensive and ensures that only high-quality products are shipped to our customers.

## Quality Control Benefits

- Uniform and high quality
- 3.1 certificate available on all wetted parts
- Smooth inner surface – Easy cleaning
- Documentation for easy validation
- Diaphragm according to FDA and USP Class VI tested

# A Wide Range of Applications

Our clients currently include many of the world's top companies in the pharmaceutical, biotech and food industries – located throughout Europe, the United States and Asia. Our Sales constitute an international force, able to solve problems related to aseptic processes using innovative technical solutions. NovAseptic® Valves are chosen for a wide range of different applications in processes of different types.

## WFI and PW

The NovAseptic® Valve is often used as a take off valve in WFI and PW systems due to its superior design. This design enables a tap point without any dead leg and without pressure drop in the main loop with the opportunity to CIP/SIP the downstream pipe from the tap valve to the point of use.

## Injection Solutions

Processes for manufacturing injection solutions are critical applications for which many companies use NovAseptic® Tank Outlet Valves and Process Valves as their first choice.

## Fermentations

NovAseptic® Valves are used in many fermentation applications, in both the pharmaceutical and food industries.

## Vaccines

Entire production facilities for vaccines are built using NovAseptic® Valves. Important features that are taken into consideration include low hold-up volumes and CIP/SIP.

## Filling Machines

NovAseptic® Valves are used in many different types of filling equipment in both the pharmaceutical and the food industries, to ensure aseptic conditions from storage tank to packing.

## Feedback from End Users

End users often mention the same features when it comes to NovAseptic® Valves, namely:

- Low hold-up volumes and no dead legs that result in a high recovery rate for expensive/valuable products
- Compact sizes which are important for engineering flexibility
- Low pressure drops
- Potential for customized solutions
- Easy handling

## To Place an Order or Receive Technical Assistance

In the U.S. and Canada, call toll-free  
**1(800)-645-5476**

For other countries across Europe, call  
**+44 (0) 115 943 0840**

For other countries across Europe and the world, please visit [www.merckmillipore.com/offices](http://www.merckmillipore.com/offices)

For Technical Service, please visit  
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