

Hygienic leakage valve LV

Hygienic leakage bottom-seat valve DT

Functionality

Hygienic leakage valves are mix-proof flow components for processing plants. The leakage chamber enables the safe separation of both media via two seals at all times. Any leakage that occurs at the seals is drained out through the leakage opening in a depressurized manner.

Use

- Valves are designed for use in the food, dairy and beverage, pharmaceutical, chemical, and cosmetics industries
- Used as a safe, reliable, and robust flow control device in hygienic (low-germ and highly clean) production and bottling plants
- The modular valve design allows integration into diverse process applications
- Operating temperatures up to +140°C (+284°F)
- CIP (cleaning in place) and SIP (sterilizing in place) capable up to +140°C (+284°F)

Design Characteristics

- Modular design, consisting of the three main components: housing, internal assembly, and actuator
- The actuator and internal assembly are connected to the housing with a three-piece clamp
- Low-maintenance, service-friendly, and hygienic design
- All product contact surfaces are made of AISI 316L stainless steel (materials certificate available upon request) with a surface finish of 0.8 µm Ra that meets all common hygienic standards
- Complete actuator made of stainless steel
- Customer-specific materials and surface finishes available upon request
- Valve connections can be provided with hygienic flanges, screw connections, or clamps
- All valve positions can be detected at the top of the actuator
- The low-maintenance design enables low operating and maintenance costs
- Minimum number of seals that come into contact with the product due to the use of welded stainless steel folding bellows
- Thorough cleaning and steaming of the bottom valve seat possible through seat lifting

Valve Housing

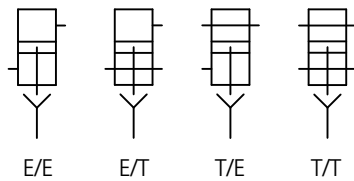
Housings for leakage valves are available with either two, three, or four port connections. Housings for leakage bottom-seat valves are available with one or two port connections. For both types, the valves are produced with standard butt-weld connections by default. In addition to the normal bottom-seat version, DT housings are also available with welded or screwed flange connections.

Internal Assembly

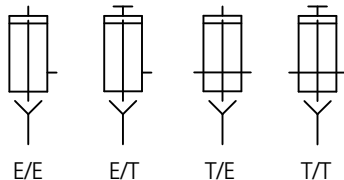
The standard version of the top valve seat is designed with a Tefasep® seal and the bottom seat with an EPDM seal (additional sealing materials available upon request). The internal assembly can be equipped with an optional steam connection and thus offers the possibility of a depressurized sanitation of the leakage chamber.

Actuator

The pneumatic actuator for the hygienic leakage valves LV and leakage bottom-seat valves DT is designed to be spring-closing / air-opening (NC). In the standard design, this permits the lifting of the bottom valve seat in addition to the full stroke.



LV



DT

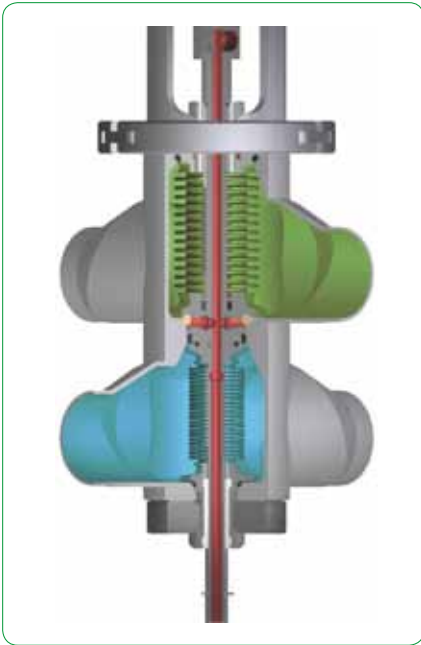
Hygienic leakage valve LV with pneumatic actuator



Hygienic leakage bottom-seat valve DT with pneumatic actuator

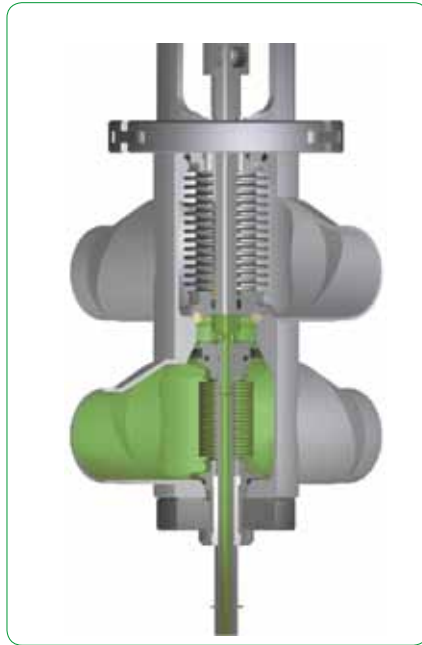


Functionality of the leakage valve LV



Basic position

Safe separation of two media through two valve seat seals which separate the leakage chamber from the product chamber. The supply of steam through the piston rod permits the removal of steam from the leakage chamber and increases process safety.



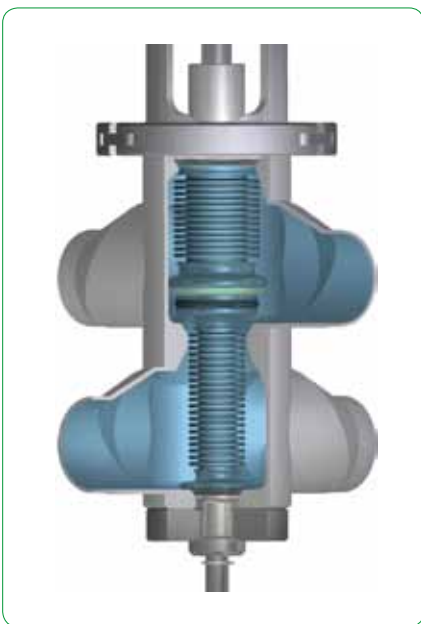
Seat lifting, bottom

The lifting of the lower valve seat permits a thorough cleaning of the valve seat and leakage chamber during the CIP process.



Intermediate position

If the full stroke of the valve is actuated, the bottom valve seat moves towards the top valve seat first. The leakage chamber is sealed with the bottom valve seat seal. Thus the actuation is accomplished without leakage.



Full stroke

When the end position is reached, the safely sealed internal assembly remains there to enable a maximum product flow through the valve.

■ Product
■ CIP
■ Steam

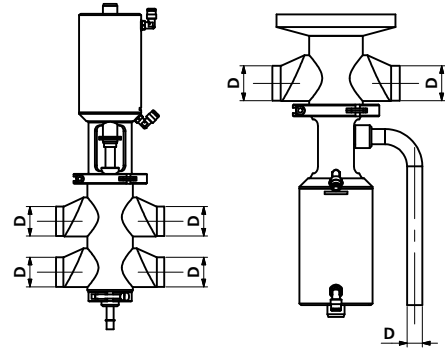
Leakage bottom-seat valve DT



The functionality of the leakage bottom-seat valve DT is identical to that of the leakage valve LV.

Dimensions of the pipe connections (acc. to DIN 11866)

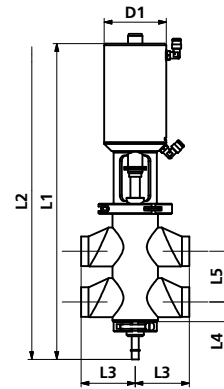
DN	25	40	50	65	80	100
DIN 11866 A (DIN 11850)						
Dim. Ø x s (mm)	29x1.5	41x1.5	53x1.5	70x2	85x2	104x2
DIN 11866 B (ISO)						
Dim. Ø x s (mm)	33.7x2	48.3x2	60.3x2	76.1x2	88.9x2.3	114.3x2.3
	1"	1½"	2"	2½"	3"	4"
DIN 11866 C (OD)						
Dim. Ø x s (mm)	25.4x1.65	38.1x1.65	50.8x1.65	63.5x1.65	76.2x1.65	101.6x2.11
Dim. Ø x s (inch)	1.0x0.065	1.5x0.065	2.0x0.065	2.5x0.065	3.0x0.065	4.0x0.083



Dimensions of the hygienic leakage valve LV

DN	25	40	50	65	80	100
D1	86	86	144	144	190	190
L1	435	438	537	537	577	635
L2	650	650	790	790	830	985
L3	75	75	100	90	150	135
L4	21	27	34	42.5	50	59.5
L5	70.5	70.5	100	104	107	125.5

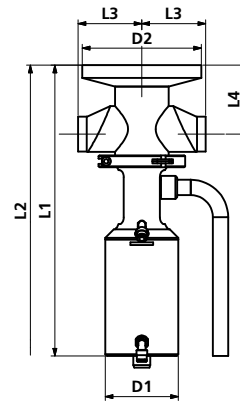
Other nominal diameters available upon request



Dimensions of the hygienic leakage bottom-seat valve DT

DN	25	40	50	65	80	100
D1	86	86	144	144	190	190
D2	140	140	185	185	220	250
L1	342	342	394.5	394.5	434	466
L2	460	460	550	550	590	660
L3	75	75	100	90	150	135
L4	87	81	96	87.5	103.2	116.2

Other nominal diameters and bottom-seat versions available upon request



For a better overview, the top spouts in both LV images were turned by 90° and thus does not show the standard configuration of a cross valve.