AWH
NEUMO Ehrenberg Group

Valve Technology

"Tried and tested AWH valves for any cases."

AWH Valve Technology

Butterfly valves and ball valves have been fundamental parts of food and pharmaceutical processing systems for decades. They are developed, designed and manufactured for installation in pipes to block fluid flow. Typical flow media include water, steam, mineral oil, food, chemicals and pharmaceutical liquids, and pasty media using in cosmetics production. AWH valves offer top quality, reliability and hygiene.

In addition to the valves, AWH also offers a comprehensive range of accessories to create the perfect solution for any application. Aside from an assortment of manual variants, the valves can also be equipped with pneumatic or electric actuators in just a few steps. Various initiators and control heads are also available for monitoring switching function and adjusting the valves.

Product Range

- Butterfly valves
- Safety valves
- Leakage butterfly valves
- Ball valves
- Valve clusters
- Vent and exhaust valves
- Non-return valves
- Sampling valves

AWH Valve Technology

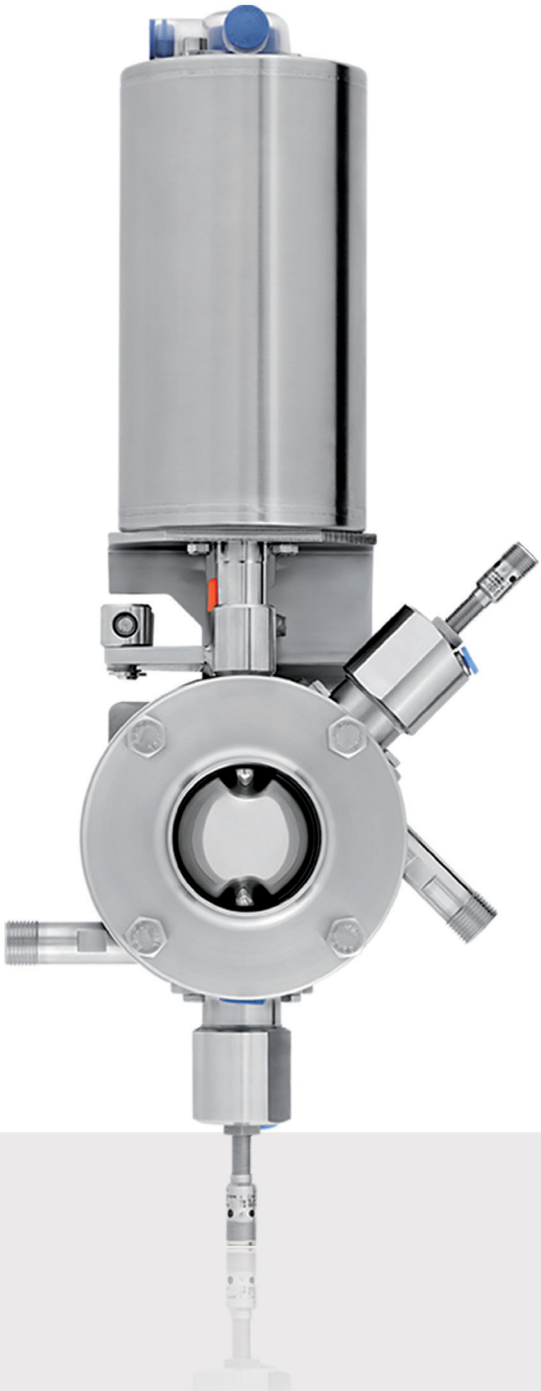
A variety of testing certificates and documentation is available upon request. These include:

- DIN EN 10204 inspection certificate 3.1
- 2014/34/EU (ATEX)
- 2014/68/EU (PED)
- FDA
- EC Regulation No. 1935/2004
- DIN EN 14432
- German Technical Instructions on Air Quality Control
- Biocompatibility

and many more.

We are also on the cutting edge in terms of conservation and saving energy. By consistently implementing the energy management standard ISO 50001, we are not only saving energy, we are also making a significant contribution to the environment.

Our valves are manufactured exclusively at our ISO 9001 - certified main facility in Hoetensleben. Our products undergo constant controls that ensure consistently high quality at all times.



"Top quality, reliability and hygiene."

Manual Butterfly Valve

Butterfly Valves

Butterfly valves were first used in the food and beverage industry around 50 years ago. At the time, they were considered revolutionary. Simple with the singular task of stopping flow when first designed, today's butterfly valves are sophisticated pieces of technology that have to meet the application criteria of modern production processes in the food and beverage industry.

The AWH butterfly valve has been under constant development throughout the years, with new and improved sealing materials, and tighter tolerances due to increasing temperature ranges. The AWH butterfly valve is available for various standard pipes and with various connection types. Our flexible production control also makes custom versions possible.

Variants

Butterfly Valves
- Materials: 1.4307 (304L), 1.4404 (316L)
- Nominal widths: DN10 - DN150 (DIN, ISO, Inch, SMS)
- Gaskets: Silicone, EPDM, FKM, HNBR
- Wide range of handles, actuators and connection types (also customized)

Leakage Butterfly Valves
- Materials: 1.4404 (316L)
- Nominal widths: DN25 - DN150 (DIN, Inch)
- Gaskets: EPDM, FKM
- Manual and pneumatic

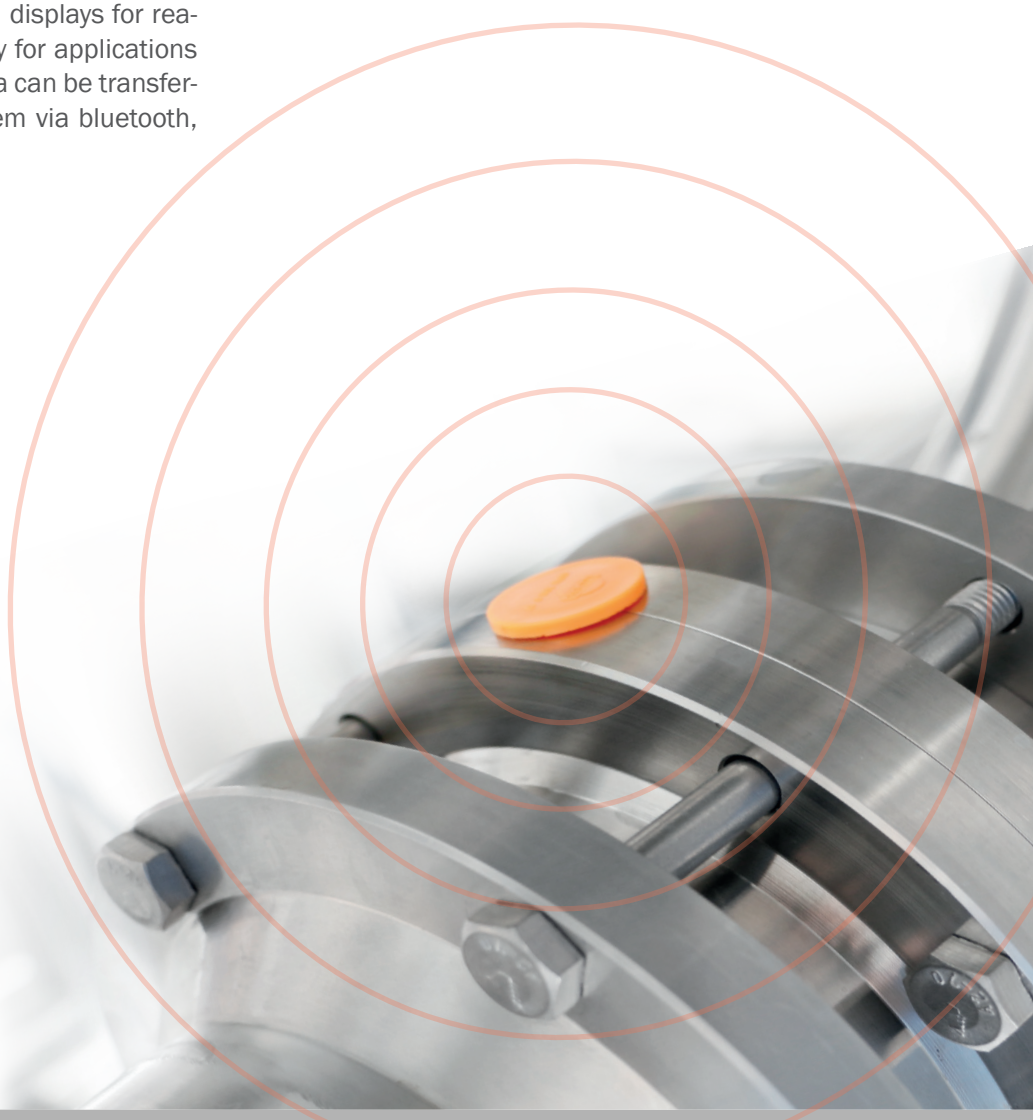
Intermediate Flange Butterfly Valves
- Materials: 1.4307 (304L), 1.4404 (316L)
- Nominal widths: DN25 - DN200 (DIN, ISO, Inch, SMS)
- Gaskets: Silicone, EPDM, FKM, HNBR
- Wide range of handles, actuators and connection types (also customized)

Butterfly Valves with RFID Transponder

The RFID transponder can be found today in almost all areas of daily life. We make use of this standard of technology and now implement RFID transponders in our butterfl y valves. Read all relevant data directly on the valve. A special in-metal transponder stores all relevant data on the valve. The information can be updated or overwritten up to 10,000 times. You can save inspection intervals, item numbers, type of sealing, order numbers and further data in the memory. The transponder can be retrofi tted, is water proof and immediately ready for use. Each transponder is unique as it has an ID number that cannot be overwritten. They can also store the item number from their P&ID on the chip. This means that the chip and valve can be assigned again and again.

This type of monitoring gives them increased security in dealing with their systems and processes. There are particularly robust devices with easy-to-read displays for reading and writing transponders, especially for applications in plants and production facilities. All data can be transferred from the mobile device to your system via bluetooth, for example.

"Security by Monitoring"



Butterfly Valve with RFID Transponder

"Flow-optimized, hygienic design with optimum self-cleaning"

Hygienic Non-Return Valve in intermediate Flange Design

Hygienic Non-Return Valve in intermediate Flange Design

The main task of such a valve is to reliably prevent fluid backflow. The hygienic AWH non-return valve was developed especially for processes with increased product and process requirements. The AWH valve is designed to have optimal flow and minimal dead space. It therefore has excellent properties in terms of cleaning and hygienic operational reliability.

The valve plate in the interior has neither a groove nor a gasket. A seal is created by an O-ring mounted in the housing, which meets the highest hygienic requirements. There is no mechanical stop inside the housing in order to permanently ensure the best possible position of the plate to the gasket. All O-rings installed in the housing essentially comply with the requirements of the hygiene standard DIN 11864 for flange connections.
The valve thus offers the greatest possible protection against contamination and germs in the area of the gaskets. Two gasket qualities, EPDM and FKM, are available for use.

Further versions and designs can be found in the current AWH valve catalog.

Technical Data

Material	1.4404 (316L)
Seals	EPDM, FKM
Opening pressure	0.05 bar
Operating pressure	10 bar
Max. operating temperature	80 °C, 130 °C short term (max. 30 min)

Hygienic Non-Return Valve

Special Materials for Valves

Stainless steel special alloys for butterfly valves and non-return valves
So-called "special alloy" materials are being used more and more not only in chemistry, but also in the cosmetics and food industries. Often it is the concentrates, which occur in the end product only in highly diluted form, that require the use of special steels and increase the service life of valves and pipelines many times over. The higher investment in these steels often pays off quickly.

The AWH special alloys program offers three of the most frequently requested steels on the market.

AWH special steels	1,4529 similar to AL6XN® 1,4539 904L 2,4602 Hastelloy C22

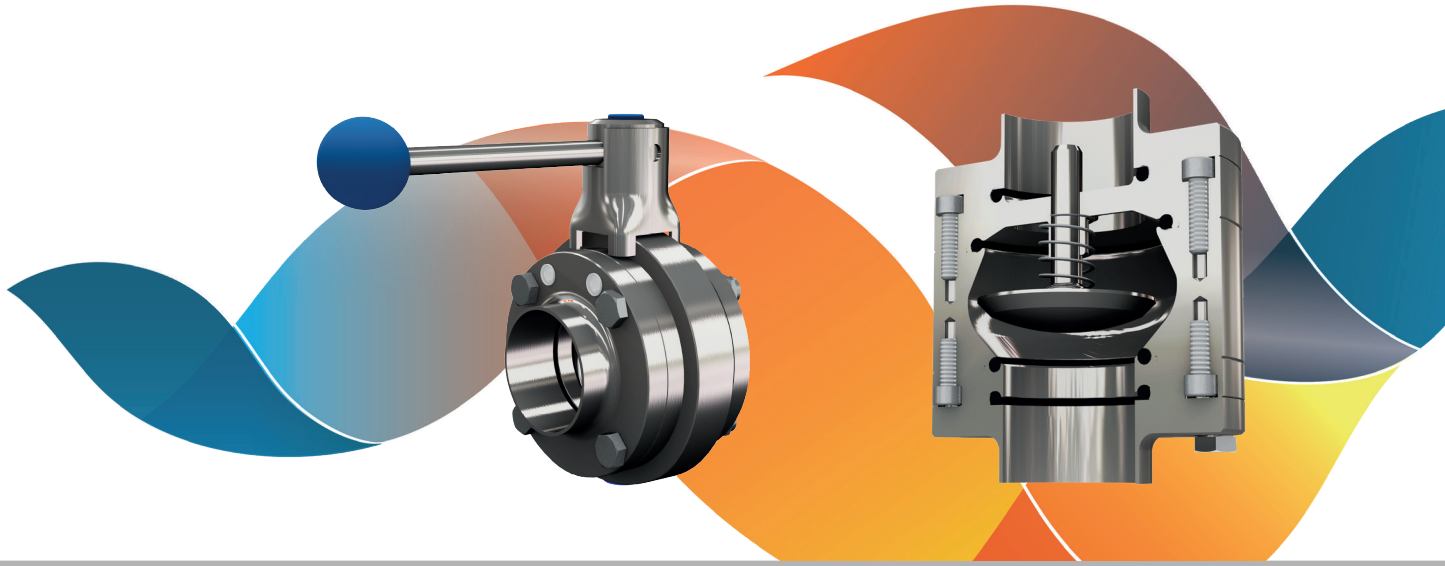
"Special Alloy"

Variants

AWH Compact Intermediate Flange Butterfly Valve
- dimensions: up to DN100 / 4"
  (exception Hastelloy only up to DN65 / 3")
- further butterfly valve variants with two flange halves in limited variety
- sealing materials: EPDM, FKM, HNBR

Hygienic Non-Return Valve in intermediate Flange Design
- dimensions: up to DN100 / 4" with welding ends
- sealing materials: EPDM, FKM, silicone

MaxCore



"Reliable, safe, clean and precise."

Pneumatic Actuators

- **Reliable** thanks to innovative technology
- **Safe** thanks to new sensor control
- **Clean** thanks to O-ring seals on the switching cams
- **Precise** thanks to the sensor shaft controller

AWH has a wide range of actuators for any application. Robust and compact, highly reliable and with an ideal torque curve for any application, even at high process temperatures.

VMove® Series

Use our new VMove® Series pneumatic actuators and let the air do the work. The VMove® heads up our broad range of products. We carry a variety of actuators for nearly any application. Whether with a positioner, a stroke limiter or simply as an electric actuator – we get your valve moving.

All components in our product range are compatible with each other to ensure extreme reliability. Our latest development, the VMove® Series, boasts unparalleled ease of installation.

The actuators come standard with a position indicator and two ports for proximity switches. The proximity switches no longer have to be adjusted. Just insert and connect.

Actuators VMove Series

Technical Data

Variants Air/spring
Air/air*

Diameter 70mm/90mm/130mm

Max. Torque LF 40Nm/70Nm/180Nm

Type Actuator	VMove® 0	VMove® 1	VMove® 2
Inner Square	9.5	9.5	14
Butterfly Valve	DN10 - DN40	DN25 - DN100	DN125 - DN200
T-Butterfly Valve		DN25 - DN100	
Leakage Butterfly Valve		DN25 - DN100	DN125 - DN150
Ball Valve		DN32 - DN65	DN80 - DN100

**VMove® 0 not available in version air/air*

Pneumatic Actuators

Safety Valve

The hygienic AWH safety valve, the latest product in the AWH valve portfolio, reliably protects tanks and piping systems against overpressure when all automatic regulating, control and monitoring systems have failed. Mechanically loaded safety valves are indispensable for the secondary protection of your systems, because they open reliably without adding any auxiliary energy.

The minimal dead space design offers the greatest possible protection against contamination in the areas that come into contact with the product and those that do not. The valve with its properties is therefore suitable for the food, beverage, bio-pharmaceutical and cosmetic industries.

The mechanics of the new spring-loaded valve are mounted on the inside, above the diaphragm. This protects all moving components from contamination. Thanks to the special, standard lifting mechanism, the valve cannot be accidentally blocked. All components in contact with the product are made of high-quality stainless steel 1.4404 (316L). The safety valve is factory set and sealed.

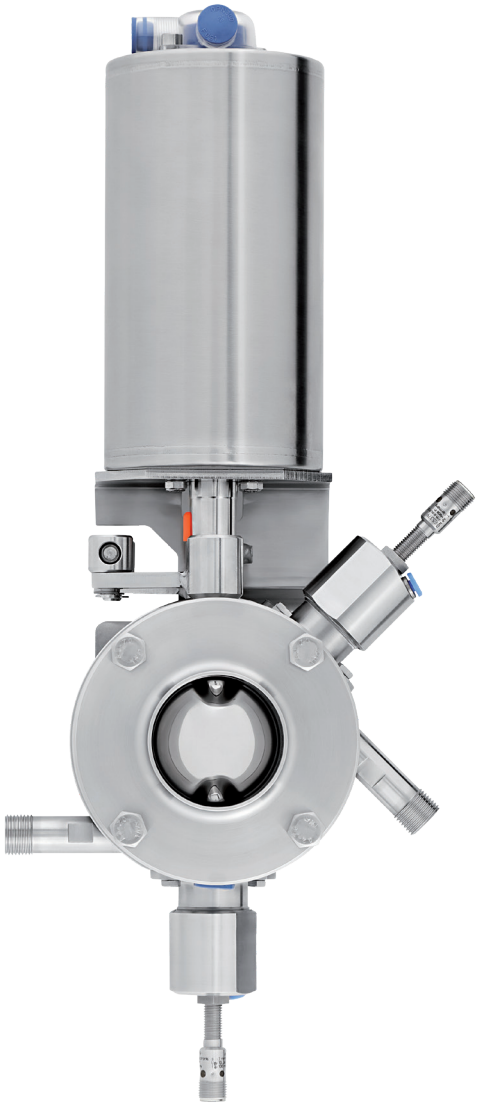
Technical Data

Material	in contact with the product: 1.4404 (316L)
Sealing material	EPDM, FDA-compliant
Response pressure	DN 25 - 80: 0.5 - 10.0 bar DN 100: 0.5 - 7.0 bar
Increments	0.1 bar increments

"Protects you and your equipment - safely and hygienically"

Safety Valve

"Separates media hygienically and securely!"



Leakage Butterfly Valve with pneumatic Auxiliary Valves and VMove 1

Leakage Butterfly Valve with pneumatic Auxiliary Valve

The AWH leakage butterfly valve is used to securely separate media and comes standard with a leakage valve and a rinse valve, also referred to as auxiliary valves. These auxiliary valves can be actuated separately pneumatically or at the same time.

Both valves are designed to be easy to clean and fully isolated when closed. Since the valve piston is virtually flush with the flow tube, this area cannot become soiled. The butterfly valve itself uses our tried and tested hygienic design. The actuator and auxiliary valves can be equipped with sensors to monitor the individual valve positions.

The “double-valve principle” offers the greatest safety when working with different media in the same system. The intermediate flange design makes installation easy during assembly and maintenance. The valve itself comes with our tried and tested AWH standard butterfly valve seals for maximum compatibility with our standard spare parts.

The auxiliary valves come with a 3/8" threaded male connection and can be integrated with ease into the appropriate pipeline system with an AWH weld-on union. A manual variant with mechanical positive auxiliary valve opening is also available from our standard range.

Technical Data

Material	Contact with product: 1.4404 (316L) No contact with product: 1.4307 (304L)
Gaskets	EPDM, FKM
Surface	Internal precision-turned up to Ra ≤ 0.8 µm, others available upon request
Operating pressure	max. 10 bar / 145 psi

Leakage Butterfly Valve

Compact Intermediate Flange Butterfly Valve

The AWH compact intermediate flange butterfly valve in a new hygienic design is available in manual and pneumatically actuated variants. The intermediate flange version is the ideal solution for mechanical engineering. The valve boasts ease of service and a compact size. All flanges are fastened flush with each other and ensure easy cleaning, both inside and out. The interior contains our tried and tested hygienic butterfly valve fastened to the valve housing with two flanges sealed by O-rings. Most screws and threads are in the housing and protected from external soiling. The new AWH retaining bracket makes assembly easy and precise, even in hard-to-reach places.

"Compact, hygienic intermediate flange valves."

Technical Data

Material	1.4307 (304L), 1.4404 (316L)
Gaskets	Silicone, EPDM, FKM, HNBR
Surface	Internal precision-turned up to Ra ≤ 0.8 µm, others available upon request
Operating pressure	max. 10 bar / 145 psi

Manual Compact Intermediate Flange Butterfly Valve

Compact Intermediate Flange Butterfly Valve with VMove 1 Actuator

Compact Intermediate Flange Butterfly Valve

"Control and monitoring made easy."

Control Technology for pneumatic Actuators

The degree of automation in modern systems requires a broad range of compatible parts. Whether analog or bus systems, we offer a variety of components that meet the needs of your processes.

Manual Control is in the Past

Thanks to our VMove shaft controller, we offer a safe and affordable process control, visualization and monitoring solution for all applications. Mechanical stroke limiters regulating volumetric flow in the open and closed position can be installed at a later time and round out our range of products. Customized solutions are also available thanks to our VMove technology.

VMove Shaft Controller

Data from process controllers and positioners is transmitted exactly by the shaft controller. Deviations that occur in stroke-controlled versions are eliminated by VMove. The rotary motion accurately transfers the valve position to the controller directly via the shaft. This means the controller position corresponds directly to the valve position. This technology also increases the level of compatibility with other controllers available on the market.

VMove 1 with Gemü 1436 Positioner

VMove 1 with mechanical Stroke Limiter

VMove 0 with VMON® II Control Head

Control Valve Actuators and elektric Actuators

AWH Control Technology for pneumatic Actuators

Thanks to its new functionality, the AWH VMove offers a variety of different adaptions for valve controllers, whether the AWH VMON® II control head or by another manufacturer, such as Gemü, Bürkert, etc. All of them can be easily combined with the VMove actuator. They can also be installed at any time later on, typically without even having to remove the actuator. And, depending on the application, the system can often remain operating during assembly.

The AWH VMON® II control head is available in three variants: the standard 24 V version, the IO-link version and the convenience ASI bus version. Color LED technology also visually indicates the status of the valve units. The rotary motion accurately transmits the position of the valve directly to the controller. This means the controller position corresponds directly to the valve position.

VMove 1 with 3/2 Way Solenoid Valve

VMove 1 with 3/2 Way Solenoid Valve ATEX

Electricity is our thing, too!

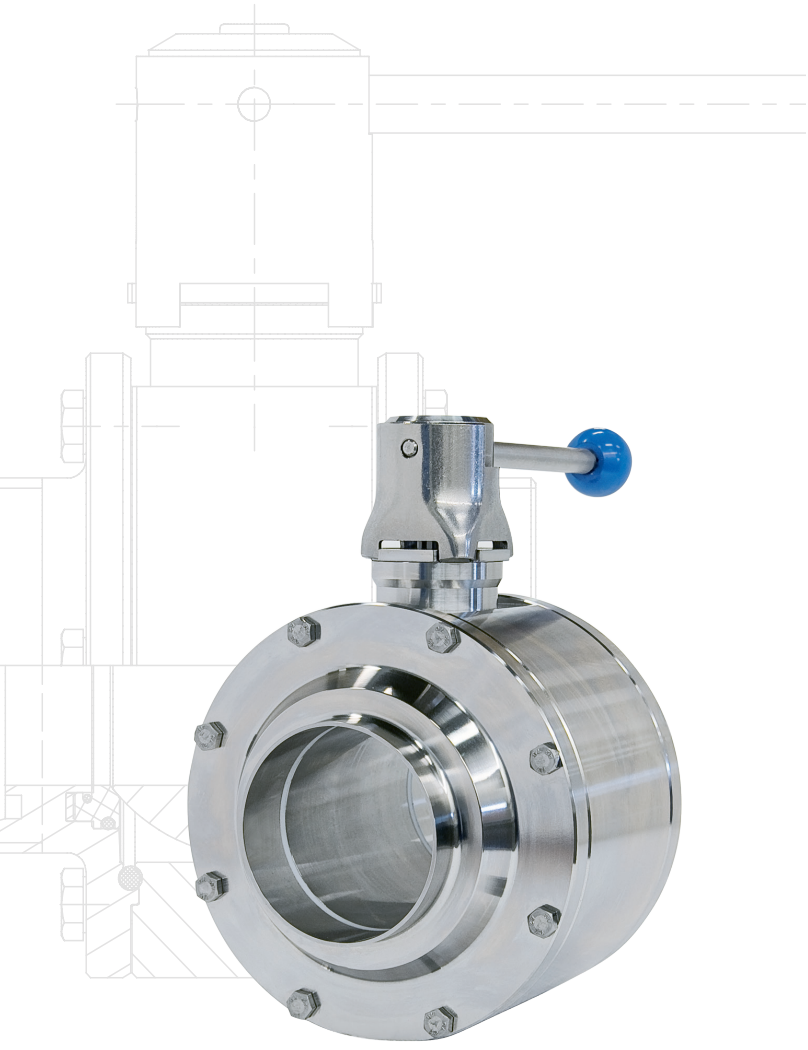
Compressed air is not available everywhere in production facilities. In some cases, compressed air is even prohibited for hygienic reasons, and some production processes require slow closing valves to prevent turbulence in the system. We offer our new electrical rotary actuators for cases like these.

Butterfly Valve with electric Actuator E2

VMove 1 with Positioner Bürkert 8692

VMove 1 with Gemü Positioner 1436 Eco

"AWH ball valves – for complex, sensitive, viscous and pasty media."



Manual operated Ball Valve

Ball Valve

The AWH ball valve features a modular design. The intermediate flange version boasts ease of service and, like all other AWH valves, is compatible with VMove.

We offer this valve in the standard variant, as well as with rinse nozzle and a heating jacket. The rinse nozzle are used to rinse the ball and seals. This ensures hygienic CIP cleaning, even in hard-to-reach areas.

The heatable variant is used in processes that use tempered media. The heatable valve comes with an internal heating circuit system with flow and return nozzle for the heating medium.

Unlike butterfly valves, ball valves feature a completely unobstructed flow path, making them ideal for use in product recovery systems as well as in processes with sensitive products in which laminar flow is required.

Versions

The butterfly valve product range has ball valves both with the AWH standard handle and the maintenance-free rotary actuator. Switching from manual to automatic at a later time is no problem.

The retainers for M12 initiators are integrated into the retainer bracket for the rotary actuator. Compatible switching cams are also available as accessories.

For abrasive and high-viscosity media, we offer specially designed seal rings that ensure safe function under unique conditions. A valve with a heatable housing is also recommended for this application. Just contact us!

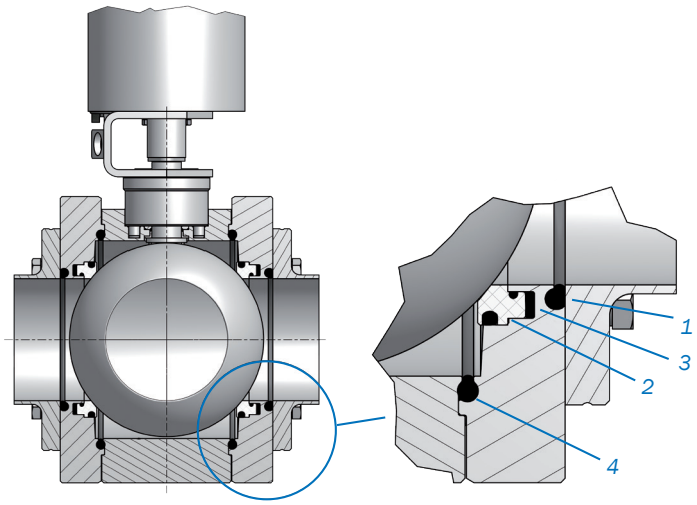
Ball Valve

CIP Cleaning

The ball valves are included in the automatic CIP circuit. The hygienic chamber behind the ball is efficiently cleaned by sequential actuating throughout the program.

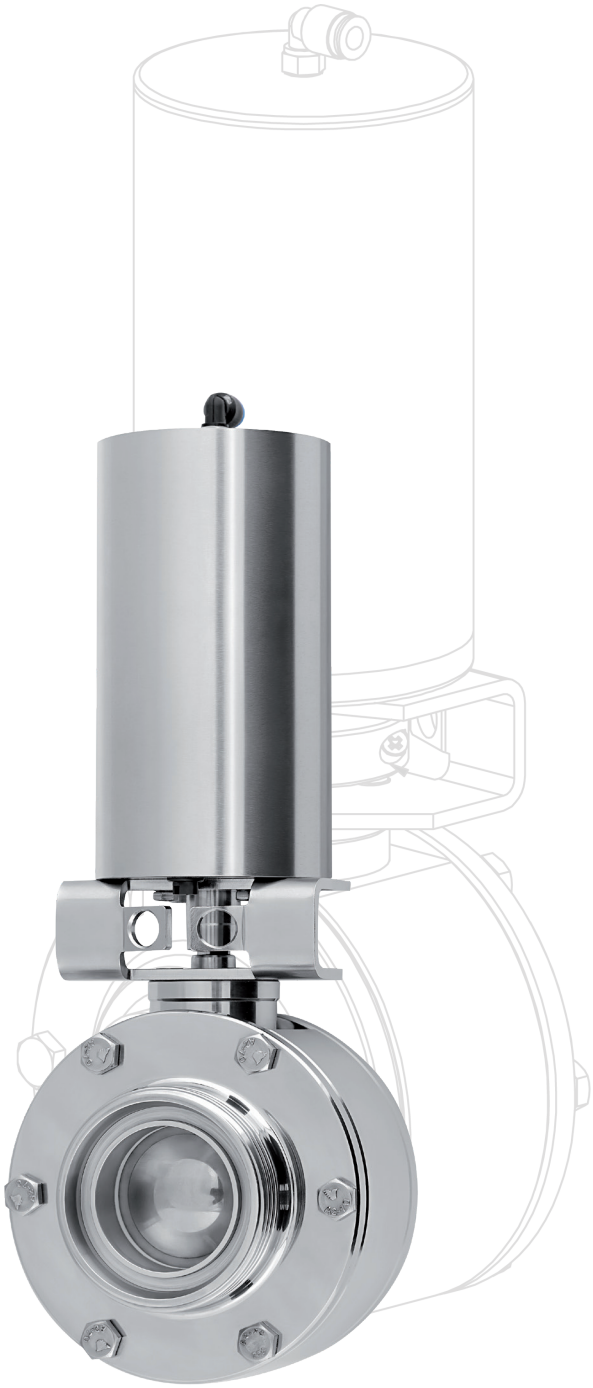
Technical Data

Materials	Contact with product: 1.4404 (316L) No contact with product: 1.4307 (304L)
Seal rings	PTFE, EPDM, FKM
Surfaces	Internal precision-turned up to Ra ≤ 0.8 µm, others available upon request
Operating pressure	max. 10 bar / 145 psi



AWH Seal Ring System

1. Aseptic intermediate flange seal ring
2. Support ring with guidance and hygienic seal ring
3. Elastic compensation ring
4. Aseptic seal ring with centering



Ball Valve with pneumatic Actuator

"Intelligent distribution of CIP cleaning agent."

Valve-IGEL

The Valve-IGEL was developed as an alternative to conventional coupling panels, and features improved hygiene and automation capability. The Valve-IGEL is an affordable variant for valve clusters based on 4/2 seat valves. The Valve-IGEL allows various product and cleaning lines to be connected to one tank, or one flow line to distribute the media to various lines.

The Valve-IGEL features a modular, compact and maintenance-friendly design. Stringing multiple base models together creates any number of outlets that can be blocked. Retrofitting additional modules during a system expansion is also easy.

The individual base models can be connected to one another using DIN 32676 clamps, DIN 11851 connections, flange connections and DIN 11864 connections. The flow line outlets to the individual tanks are blocked using space-saving butterfly valves.

Upon request, all butterfly valve variants listed in our catalog can come in manual or with pneumatic actuators. The Valve-IGEL is also available with butterfly valves in DN25 to DN80 nominal widths. The Valve-IGEL is a universal, compact and, above all, affordable solution with virtually limitless possibilities.

Benefits

- Alternative to complex valve clusters and coupling panels
- Clear design
- Easy to service
- Cost-efficient
- Compact and space-saving

Valve-IGEL

Vent and Exhaust Valve

This valve functions based on the interchangeable lower valve unit.

Vent and Exhaust Valve Function
The valve functions like a ball check valve. The control element is a mobile, low-density ball. As fluid increases, the ball is buoyed upward, presses against the upper valve seat, and automatically closes the valve. When the fluid decreases, however, gases can still flow past the ball unimpeded, preventing a vacuum from forming and acting as a vent. This version is often used in storage tanks. The vent and exhaust valve ensures that no fluid can escape when filling the container, the container can be filled completely and emptied without difficulty.

Exhaust Valve Function
Like a double-seat valve, a mobile ball forms the control element. When open, air is allowed to escape. As fluid increases, however, the ball is buoyed upward against the upper seal seat, automatically closing the valve. As a vacuum forms, gravity causes the ball to drop into the lower seal seat, preventing the fluid column from dropping. This type of valve is typically used to ventilate pipes and pump suction tubes, preventing the intake of air during start-up.

"Combines functionality and cost awareness."

Technical Data

Material	Contact with product: 1.4404 (316L) No contact with product: 1.4307 (304L) Ball: PP
Seal rings	EPDM
Surfaces	Internal: Ra ≤ 0.8/1.6 µm
Operating pressure	max. 10 bar / 145 psi
Max. operating temperature	< 90 °C / 194 °F

Vent and Exhaust Valve

"We make hygiene affordable."

Hygienic Sampling Valve

We make hygiene affordable. This is now also backed up by the enhanced AWH sampling valve. When it comes to determining taste, appearance, and microbiological and chemical values, taking accurate samples is paramount.

Our hygienic sampling valve was developed specifically for these applications. Its very good cleanability was confirmed by the EHEDG in 2016. This means your products will not be contaminated when used properly.

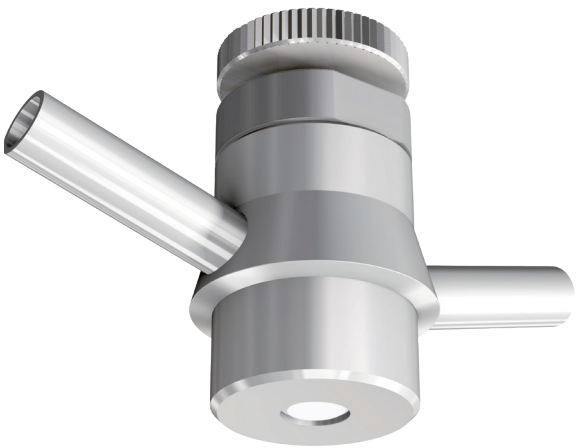
The new AWH sampling valve comes in four different versions with a variety of connection types for a wide range of applications: whether in the weld-in, weld-on, screw-in, or clamp-socket version. An optional rinsing connection can be attached for all versions.

Pneumatic Sampling Valve

With the hygienic, pneumatic compact air sampling valve, there is also an automatic sampling system with additional manual actuation in the AWH portfolio.

The sampling valve has a clamp connection in accordance with DIN 32676 and is compatible with the AWH Connect tank connection flange system. Our design is based on the tried-and-tested hygienic sampling valve with manual operation.

Upon request, an optional flushing connection can be attached for this version. This means that a connection to an automated CIP/SIP system is possible. In addition to the various predefined versions in the AWH sampling portfolio, customer-specific solutions can also be implemented.



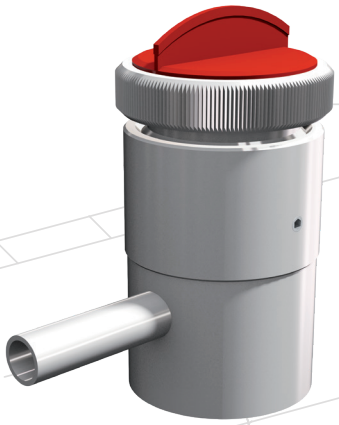
Sampling Valve with Tank Connection 30 mm and Rinse Connection

Vario Sampling Valve

The AWH Vario version is a sampling valve that can take product samples in two ways. Firstly, in the conventional way using the sampling tube; In addition, by means of a cannula, which is pushed through the membrane to take samples via a syringe or tube. The multiple-use membrane automatically closes when the cannula is withdrawn. Contamination from outside is thus reduced to a minimum.

ECO Sampling Valve

The AWH ECO version is the economical entry into the AWH product portfolio. Suitable for product sampling of fluids from tanks and pipelines in systems of the food and beverage industry. The sampler is available in screw-in and weldon versions. It is sealed with a PTFE stopper that closes near the product.



Sampling Valve Vario DN40 Weldon without Rinse connection

Pneumatic Sampling Valve without Rinse connection

ECO Sampling Valve with R 1/2" external Thread

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