

# FOOD AND BEVERAGE INDUSTRY

Valves ■ Actuators ■ Automation Technology



The valve people





# SOLUTIONS FOR INDUSTRIES AND APPLICATIONS



**Malt, barley, rice, animal food**



**Beer and distilled drinks**



**Milk, cheese, ice cream**



**Flour, muesli, flakes**



**Raw and processed sugar**



**Potatoes, starch**

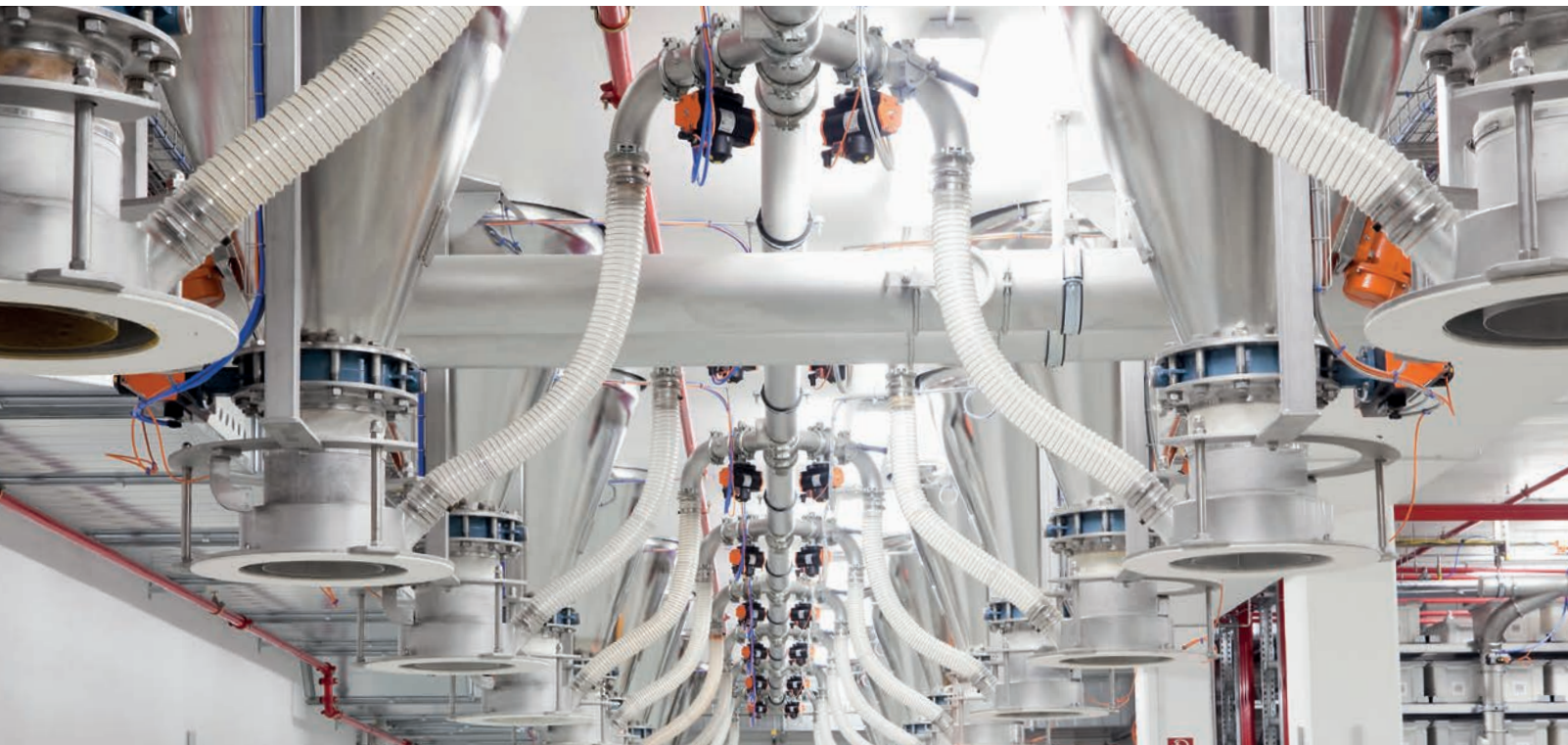


**Drinking water, water treatment**



**Coffee, cocoa, chocolate**





## PROVEN FOR GENERATIONS

SHUT-OFF AND CONTROL VALVES FROM EBRO IN THE FOOD AND BEVERAGE INDUSTRY.

In the food and beverage industry, careful handling is a requirement for a perfect product. Traditional functions such as simple shut-off, but also sensitive tasks such as mixing, dosing and filling of sensitive, liquid, powdery or solid media require the use of high-quality valves. This also includes processes for vacuum or high-temperature drying.

EBRO valves are subject to the latest directives and regulations and ensure a high degree of service life, process reliability and quality. In addition, we also have our own customized actuator and automation technology for individual control systems.

In order to ensure sustainable quality and safety, our valves offer the following quality features:

- Two-part stainless steel body for CIP/SIP cleaning processes
- One-piece disc-shaft combination without dead spaces
- Highly polished disc surfaces in contact with the product
- Specially tested and certified materials for use in the food industry
- Energy-efficient electric and pneumatic EBRO actuators with individually adapted automation technology.
- Special flanges for removing adhesions and cleaning of the disc



## WAFER TYPE BUTTERFLY VALVE Z 011-A

Universally applicable butterfly valve with elastomer liner in accordance with EN 593. The variety of available material combinations allows a customized valve design for applications in the food and beverage industry.

For special processes (e. g. vacuum applications) this valve can be equipped with a vulcanized liner (model Z 011-B).

<b>Nominal diameter:</b>	Z 011-A: DN 20 - DN 1200 Z 011-B: DN 50 - DN 600
<b>Temperature range:</b>	-40°C to +200°C (depending on pressure, medium and material)
<b>Operating pressure:</b>	max. 16 bar

Z 011-A / Z 011-B  
Universally applicable according to  
EN-593



## LUG TYPE BUTTERFLY VALVE Z 014-A

The design of this valve enables the one-sided flanging of pipelines.

An extensive range of materials is available to ensure individual design for applications in the food and beverage industry.

As series Z 014-B, this valve is available with vulcanized liner for dimensions up to DN 300.

<b>Nominal diameter:</b>	Z 014-A: DN 20 - DN 600 Z 014-B: DN 50 - DN 300
<b>Temperature range:</b>	-40°C to +200°C (depending on pressure, medium and material)
<b>Operating pressure:</b>	max. 16 bar

Z 014-A / Z 014-B  
This design enables the one-sided  
**flanging of pipelines**



## WAFER TYPE BUTTERFLY VALVE Z 611-A

This valve has a split body design with a one-piece disc/shaft connection. This is particularly suitable for processes where frequent change of the liner is required.

As a stainless steel body (Z 611-K) this valve is often used in the beverage industry.

<b>Nominal diameter:</b>	DN 50 - DN 300
<b>Temperature range:</b>	-40°C to 200°C (depending on pressure, medium and material)
<b>Operating pressure:</b>	max. 16 bar



Z 611-A / Z 611-K  
**Particularly service-friendly**  
 due to the two-part body

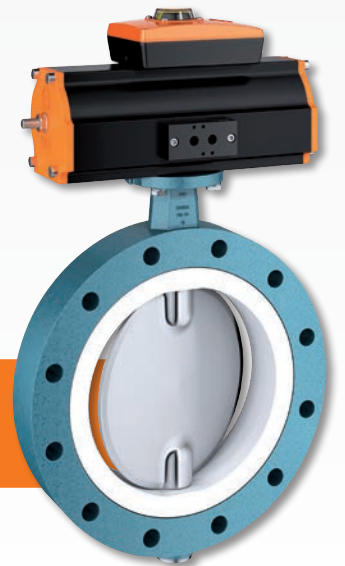
Z 611-K

Z 611-A

## FULL FLANGE BUTTERFLY VALVE Z 014-WN

Shut-off and control valves of this series are characterised by a fully cast aluminium body with through holes. This design ensures a smooth and clean connection to the counter flanges and prevents undesirable deposits, especially when sensitive products need to be protected.

<b>Nominal diameter:</b>	DN 50 - DN 600
<b>Temperature range:</b>	-40°C to +200°C (depending on pressure, medium and material)
<b>Operating pressure:</b>	max. 10 bar



Z 014-WN  
**Full flange valve with through holes**

## HIGH PERFORMANCE VALVE HP 111

Wafer-type butterfly valve with double eccentric design. The high-quality sealing system (Inconel or R-PTFE) ensures operational reliability even in heavy-duty applications.

The areas of application for HP valves in the food industry mainly refer to the energy supply e. g. with hot air, hot water and steam or condensate.

Further food applications can be found in vacuum drying.

<b>Nominal diameter:</b>	DN 50 - DN 1200
<b>Temperature range:</b>	-60°C to +600°C (a low temperature version is available on request)
<b>Differential pressure:</b>	≤ DN 150 max. 40 bar > DN 150 max. 25 bar

HP 111  
Ensures operational reliability  
even in heavy duty applications

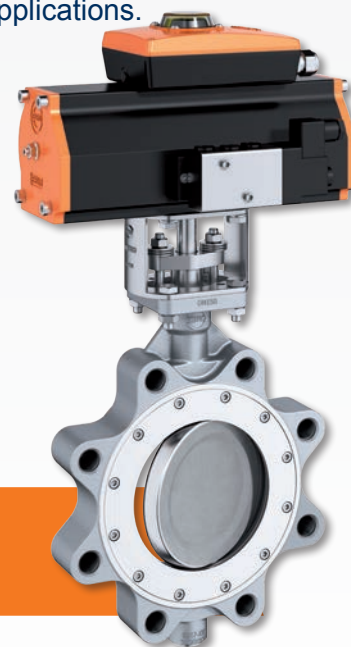


## HIGH PERFORMANCE VALVE HP 114

High performance butterfly valve for use in difficult applications, such as heat recovery (steam and high-temperature water), hot air or in refrigeration systems. The high-quality sealing system (Inconel or R-PTFE) ensures operational reliability even in heavy-duty applications.

<b>Nominal diameter:</b>	DN 50 - DN 1200
<b>Temperature range:</b>	-60°C to +600°C (a low temperature version is available on request)
<b>Differential pressure:</b>	≤ DN 150 max. 40 bar > DN 150 max. 25 bar

HP 114  
This design allows the one-sided  
flanging of pipelines





## CYCLE LOCK TS

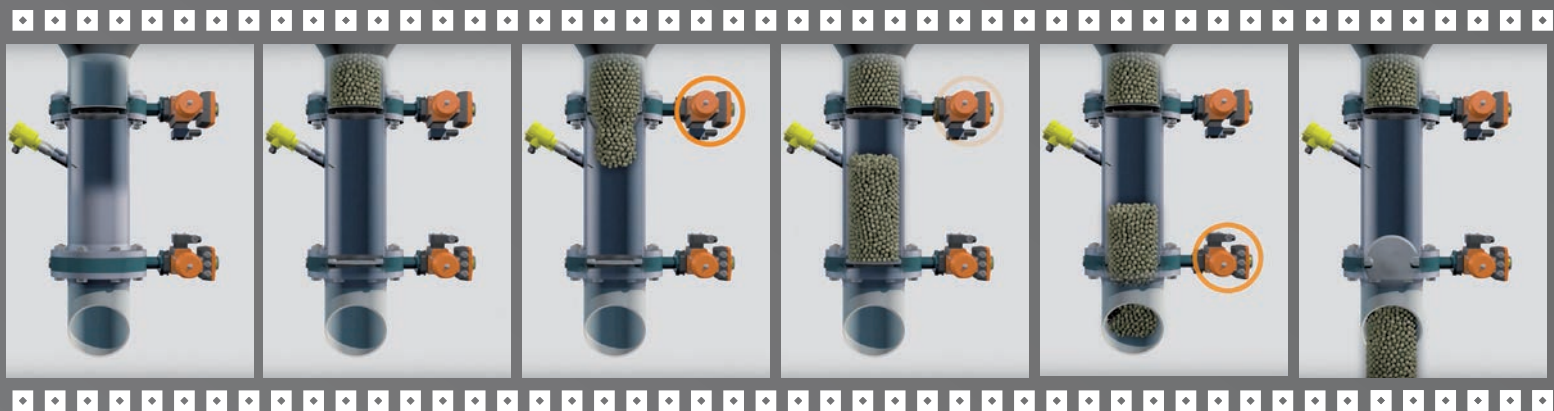
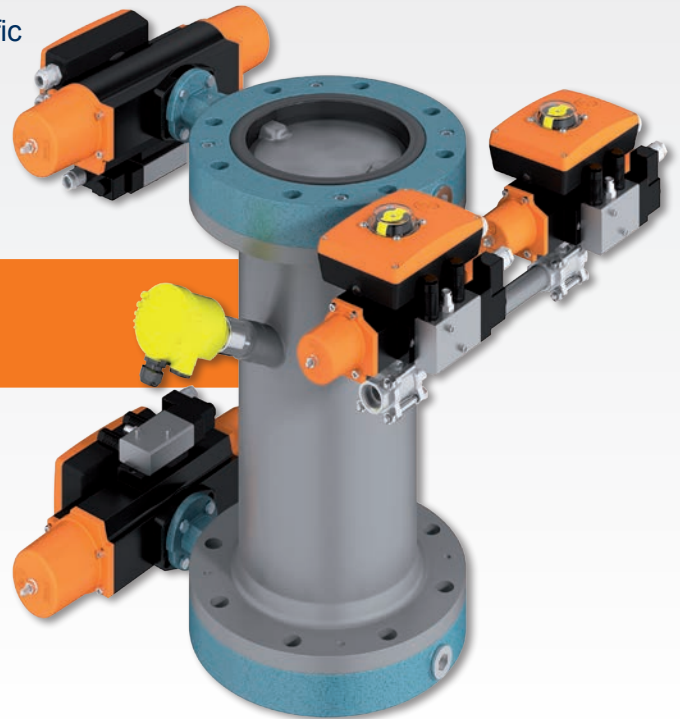
If there are pressure differences between the single production sections, during transport or discharge of bulk material, a gas-tight discharge device is required.

With the EBRO cycle lock TS, dusty or granular media are discharged, or even dosed from silos, storage tanks or BigBags. Particularly when media have to be transferred into pressure feed lines, there is considerable leakage air loss with conventional dosing devices. The overflowing air accelerates media particles in the flow, which has a highly abrasive effect on the components in contact with the product.

The cycle lock is approved as an explosion-decoupling protection system in accordance with European regulations.

<b>Nominal diameter:</b>	DN 50 - DN 600
<b>Temperature range:</b>	-20°C to 70°C
<b>Operating pressure:</b>	max. 10 bar
<b>Volume of chamber:</b>	customer specific

Cycle lock TS  
**Gas-tight discharge for powdery**  
 products, media and solids



Operation of the cycle lock available as animation on YouTube.

# INFLATABLE SEAT INFLAS®

If abrasive media are handled, the closing and opening processes of the disc lead to considerable wear of the liner. This results in frequent service intervals and reduced plant utilization. In the case of sensitive media (tablets, mechanically unstable foodstuffs), the product might be damaged by the mechanical force of the closing valve.

The EBRO Inflas series prevents such damage. When the valve is opened, the liner relieves and opens a narrow gap between disc and liner. Friction is considerably reduced and the disc can be opened with low torque. When the valve is closed, the integrated controller checks the disc position in a fraction of a second. Once it is established as fully closed, a secure sealing is achieved by pressurising the liner.

<b>Nominal diameter:</b>	DN 80 - DN 600
<b>Temperature range:</b>	40°C to + 200°C (depending on pressure, medium and material)
<b>Operating pressure:</b>	max. 16 bar

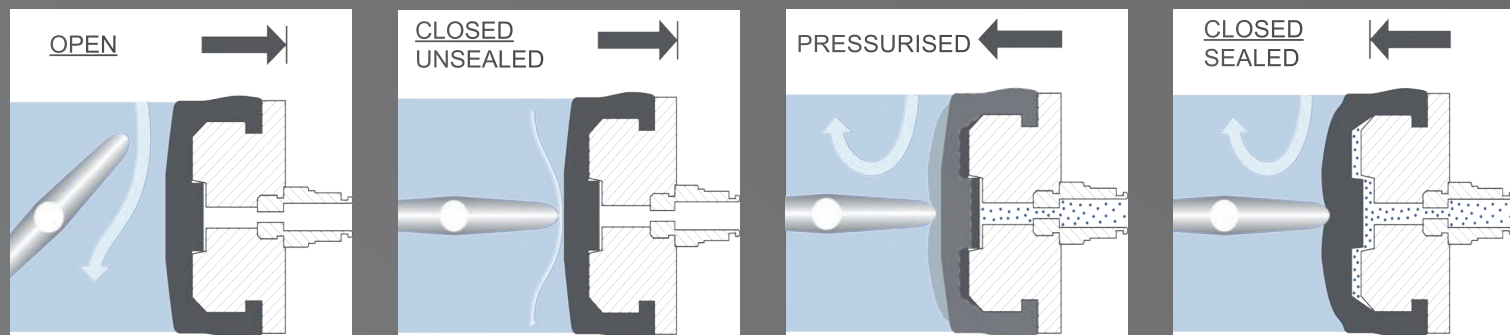
<b>Inflas PRO:</b>	Advanced control technology for critical applications that demand sequence verification and faster cycle times
<b>Inflas ECO:</b>	Cost-effective solution for pressurization and pressure relief of the liner

**INFLAS®**  
Low wear by using an  
**inflatable liner**



*Inflas PRO*

*Inflas ECO*





## VIBRATION /DOSING VALVE VIDOS®

Bridging is a well-known problem in bulk solids handling, especially in dosing processes. Media adhere to vessels, are compressed and interrupt the product flow. The EBRO Vidos valve solves this problem economically and effectively.

A vibrator mounted on the lower shaft causes the disc to vibrate horizontally in linear vibration. Media are loosened and continue to move. The vibrations are controlled by the air pressure.

<b>Nominal diameter:</b>	DN 150 - DN 400
<b>Temperature range:</b>	-10°C to +200°C (depending on pressure, medium and material)
<b>Operating pressure:</b>	max. 16 bar

VIDOS®  
**No bridging effects** by using a vibrating disc



## IMPELLER VALVE FS-M

A continuous material flow is required for the discharge of powders or granules from silos, big bags or hoppers. Continuous conveying of sensitive foodstuffs and ingredients must be ensured in such processes on a permanent basis and blockages or damage to the products must be avoided.

FS-M minimizes such risks. Easy to install, it conveys powder and granular bulk materials. The powerful gear motor is speed-controlled and can optionally be coupled to feed or discharge augers.

<b>Nominal diameter:</b>	DN 150 - DN 500
<b>Temperature range:</b>	-20°C to +100°C, optional up to +250°C
<b>Operating pressure:</b>	max. 6 bar

FS-M  
**Safe and consistent discharge**  
**of rapidly flowing products**



## KNIFE GATE VALVE WB

The full bore, full passage is suitable for liquids with solids as well as for bulk solids. These include wheat, barley, malt, fodder pellets, maize and corn, powdery media such as wheat flour, milk and cocoa powder and starch.

<b>Nominal diameter:</b>	WB 11: DN 50 - DN 300
	WB: DN 350 - DN 1600
<b>Temperature range:</b>	max. 120°C
<b>Operating pressure:</b>	DN 50 - DN 300: 10 bar
	DN 350 - DN 400: 6 bar
	DN 500 - DN 600: 4 bar
	DN 700 - DN 1200: 4 - 6 bar
	DN 1400 - DN 1600: 2 - 4 bar

WB

**Suitable for solids and liquids with or without solids content**



## KNIFE GATE VALVE MV

The stainless steel body offers different application possibilities in the food industry. Typical MV applications can be found in regular use with chemicals such as SIP/CIP processes or washing systems in the beverage industry. The flange ring system simplifies maintenance and offers a selection of different sealing rings.

<b>Nominal diameter:</b>	DN 50 - DN 1200
<b>Temperature range:</b>	max. 300°C (depending on pressure, medium and material)
<b>Operating pressure:</b>	DN 50 - DN 125: 16 bar
	DN 150 - DN 300: 10 bar
	DN 350 - DN 600: 6 bar
	DN 700 - DN 1000: 4 bar

MV

**Suitable for solids and liquids with or without solids content**









## ABOUT US

EBRO ARMATUREN, headquartered in Hagen, Germany, is one of the world's leading and long-established manufacturers of industrial valves, actuators and automation technology. With our international network of production plants, subsidiaries and representatives, we are always close to the customer. Excellent expertise, combined with high-quality products, makes us an internationally acknowledged partner of the machine and plant engineering sector.

As an owner-managed family business, we stand for quick decision-making, high individual responsibility, continuity and sustainable investments in research and development. We offer customized solutions for almost every industrial application.

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The valve people

