HYDROGEN

Valves • Actuators • Automation Technology

EBRO ARMATUREN®

Stafsjö
SINCE 1666

FORWARD-THINKING. INNOVATIVE.

Industrial shut-off and control valves.
High-performance solutions for hydrogen production.

Hydrogen is increasingly seen as a key technology for energy transition and the decarbonization of varoius sectors. Its versatility as both an energy carrier and a raw material makes it an essential element in future energy and industrial policies.

Butterfly valves are used in a wide range of applications, from hydrogen production and transport to storage and utilization in fuel cells. Particularly in the emerging field of hydrogen mobility and industrial processes, where hydrogen serves as an energy carrier or raw material, reliable and safe butterfly valves are essential.

Hydrogen technology imposes specific requirements on butterfly valves. H2 has unique physical and chemical properties that require special consideration.

EBRO: YOUR RELIABLE PARTNER

For decades, EBRO valves have been trusted worldwide for their reliability and durability, particularly in demanding applications. The processes involved in hydrogen production are no exception. EBRO has the benefit of knowledge in chemical and hazardous media and can draw on extensive experience and expertise in this area. Our customized products ensure smooth and extremely economical operation.

THE EXCELLENT SAFETY AND QUALITY OF OUR PRODUCTS ENSURE THAT YOUR SYSTEM IS SAFE AND RELIABLE:

- **Resource-efficient operational management:** we focus on efficiency, thanks to optimal coordination of valves with suitable actuator and automation technology
- **Significant reduction in operating costs:** due to improved system performance and reliability
- **Sustainable and economical operational management:** through minimized energy consumption and optimized processes
- **Certified safety:** our products are approved in accordance with ATEX, SIL, EN 161 and DVGW-Gas
- **Future-orientated solutions:** continuous research and development allows EBRO to stay ahead to in our field and bring innovation

SOLUTIONS FOR VARIOUS APPLICATIONS.

Water treatment / demineralization
Cooling systems
Gas supply (natural gas / biogas)
Electrolysis (AEL, PEM, AEM, HTEL)
Steam reforming
Methane pyrolysis
Separation
Filtration

Gas drying
Oxygen handling
Physical storage
Chemical storage
Power generation
Mobility
Industrial applications
Transportation in pipelines

Guaranteed certified:
To guarantee the conformity of our products, we consistently adhere to the current directives and regulations, ensuring that all products used comply with the strictest standards and regulations for safe facility operation.en.

- **Pressure Equipment Directive 2014/68/EU**
- **Gas Appliance Regulation EU/2016/426**
- **DVGW Gas**
- **EN 161**
- **Explosion Protection ATEX 2014/34/EU**
- **SIL (IEC 61508 Level 3)**
- **Fugitive Emissions ISO 15848-1 | TA Luft**

HIGH PERFORMANCE VALVES

Reliable under extreme conditions

The double eccentric design, high-quality materials and precision machining ensure safety even under extreme operating conditions.

The HP valve is commonly used in areas such as separation, oxygen handling, distribution infrastructure, and storage.

For use in potentially explosive atmospheres, an ATEX type certification is available up to category 1 GD (Zone 0 and 20).
Marking for explosive gas group IIC prevailing in H2 atmospheres is possible.

More information on
High-Performance valves.

HP114-C
Lug-type
DN 80 – DN 400

HP112
Double-flanged
DN 80 – DN 600

HP111
Wafer-type
DN 700 – DN 1200

HP114
Lug-type
DN 700 – DN 1200

PTFE VALVES

Durable and safe

PTFE-lined butterfly and control valves are specially designed for use in chemically aggressive alkalis and acids. The minimum 3 mm thick lining made of pure PTFE guarantees optimum protection and ensures non-contact with metallic components with PTFE-coated discs.

In conjunction with live loaded double shaft sealing, this valve series offers maximum operational safety.

PTFE valves are typically used in processes involving demineralized water.

More information on
PTFE valves.

T211-A
Wafer-type
DN 50 – DN 300

T214-A
Lug-type
DN 50 – DN 300

T212-A
Double-flanged
DN 350 – DN 1000

RESILIENT SEATED VALVES

Versatile and reliable

The resilient seated butterfly valves with triple shaft bearing and replaceable liner have a wide range of applications, for example in cooling and water circuits as well as gas supply systems.

Depending on the configuration and material combination, these valves can also be used in applications with up to 100% hydrogen content.

DVGW gas and EN 161 certified versions are available. Special disc coatings like ECTFE or Rilsan® are also offered depending on the application.

For use in potentially explosive atmospheres, an ATEX type certification is available up to category 1 GD (Zone 0 and 20).
Marking for explosive gas group IIC prevailing in H2 atmospheres is possible.

More information on resilient seated valves.

Z011-A / DVGW-Gas
Wafer-type
DN 20 – DN 1200

Z014-A / DVGW-Gas
Lug-type
DN 20 – DN 600

Z611-K
Wafer-type
Split-body
DN 50 – DN 300

Z614-K
Lug-type
Split-body
DN 50 – DN 300

ACTUATORS & CONTROLS

Energy-efficient with uncompromising performance

EBRO actuators enable butterfly valves and knife gate valves to be actuated with high-efficiency.
Due to precision alignment of the actuators with other components, applications benefit from increased energy-efficiency and reduced operating costs.

Customized configurations of individual product components are possible.

EB-SYD (Scotch-Yoke)
Pneumatic actuator
Double-acting
27 Nm – 9.768 Nm

EB-SYS (Scotch-Yoke)
Pneumatic actuator
Single-acting
35 Nm – 3.590 Nm

EP3
Electro-pneumatic positioner

SBU IO-Link
Smart Box Unit
Valve status monitoring

E50 – E210
Electric quarter-turn actuator
24V AC/DC, 230V AC, 400V AC
Battery pack for emergency function
40 Nm – 4.000 Nm

More information on actuator technology.

More information on automation technology.

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