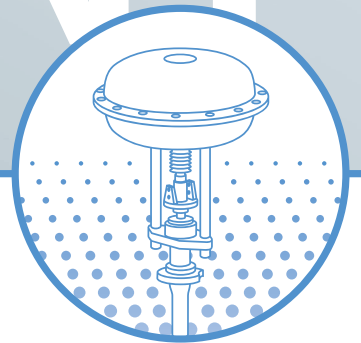




He AS COOLANT



WEKA FOR ADVANCED
CRYOGENIC APPLICATIONS

VALVES AND CRYOGENIC
COMPONENTS

HELIUM, THE CRITICAL COOLANT FOR ADVANCED TECHNOLOGY!

MASTERING EXTREME CRYOGENICS

At -268.9 °C Helium reaches its boiling point. Down to absolute zero WEKA's cryogenic components don't just function, – they excel. With decades of expertise in ultra-low temperature applications, we've engineered solutions that maintain their integrity and performance in environments where conventional components invariably fail.

BEYOND STANDARD HELIUM HANDLING

Our specialized metal bellows sealing technology for valves creates a hermetic barrier that maintains integrity even after 10,000 mechanical cycles and multiple thermal cycles between ambient and cryogenic temperatures. This exceptional performance directly translates to significantly reduced helium losses, extended maintenance intervals, and uncompromised system reliability in the most demanding applications.

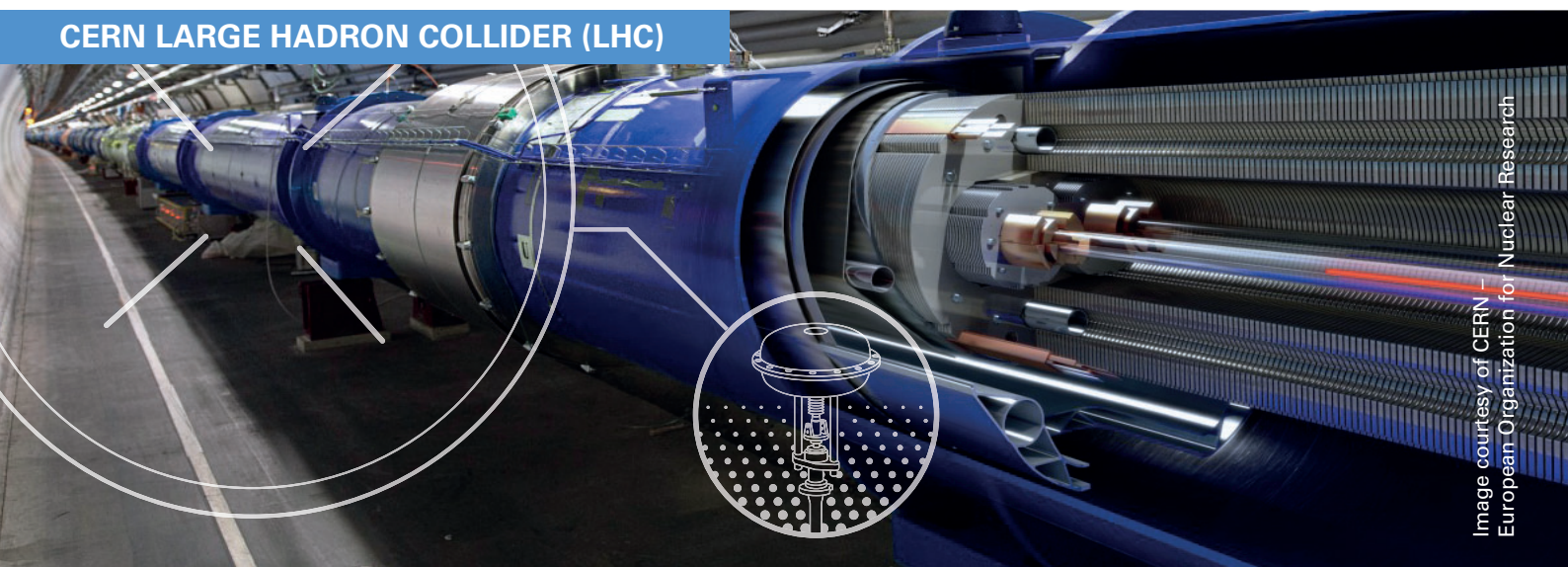
RESOURCE CONSERVATION IN A CONSTRAINED MARKET

In a global market where helium reserves are finite and prices remain volatile, WEKA solutions deliver measurable ROI through demonstrated heat leak minimization and highest tightness. Each gram of helium saved not only reduces operational costs but also preserves this irreplaceable resource for critical applications in research, science and infrastructure.

WHAT WEKA STANDS FOR

- + proven supplier for cryogenic equipment since the 1970s
- + swiss quality
- + sustainability, ECOVADIS rating
- + QM system based on ISO9001
- + highest reliability and lowest maintenance
- + highest product safety in operation
- + flexibility to provide solutions outside standard setups
- + solutions for harsh environmental and service conditions

CERN LARGE HADRON COLLIDER (LHC)



WEKA'S TRUSTED CRYOGENIC EXCELLENCE: PROVEN PRECISION FOR SCIENTIFIC ACHIEVEMENT IN EXTREME ENVIRONMENTS WORLDWIDE

For decades, WEKA's cryogenic components have been trusted in the world's most demanding scientific environments. Our valves excel in CERN's particle accelerators, where absolute reliability at extreme temperatures and minimal heat leaks are non-negotiable requirements. This proven performance extends across other high-stakes applications including quantum computing facilities and critical space ground installations, where our precision-engineered solutions consistently meet the extraordinary demands of helium-based cooling systems.

ADAPTABLE TO YOUR REQUIREMENTS

Regardless of where you operate in the helium process, WEKA's product portfolio offers a solution precisely calibrated to your application requirements. We deliver reliable components for both cold and warm applications across various pressure levels, with our engineering approach providing unmatched flexibility in developing valves tailored specifically to your helium handling needs.

HELIUM VALUE CHAIN



Extraction

- Helium is mainly extracted from natural gas fields, where it can occur in concentrations of up to 7%



Production & Processing

- Separation of helium from natural gas using cryogenic processes
- Purification and processing to various degrees of purity
- Liquefaction to LHe (liquid helium) at -268.9°C



Transport & Storage

- Transportation in special cryogenic containers
- Distribution via a network of intermediaries and distribution centers
- Special storage technologies for liquid helium



Application & Utilization

- Plasma physics and fusion research
- Basic research
- Quantum computing systems
- Space ground installation



Recovery & Recycling

- Helium recovery systems
- Purification processes for reuse
- Reliquefaction of gaseous helium

TYPICAL APPLICATIONS

Research & Science

- + Plasma physics and fusion research
- + Basic research

Quantum computing systems Infrastructure & Logistics

- + He liquefaction and refrigeration systems
- + He storage and recovery
- + He transport and distribution

Aerospace & Exploration

- + Space ground installations

PARTNER WITH THE CRYOGENIC EXPERTS

Discover how WEKA's precision-engineered components can optimize your helium systems and reduce operational costs. Contact our application specialists today for a personalized consultation on your specific cryogenic requirements, or request our detailed technical specifications to see why leading research institutions and industrial facilities worldwide rely on WEKA solutions.

CONTACT

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www.weka-ag.ch



FUSION REACTOR TOKAMAK

HELIUM IN PLASMA PHYSICS, FUSION RESEARCH AND BASIC RESEARCH

LIQUEFACTION AND REFRIGERATION

LHe / GHe control and shut-off valves,
couplings, check valves and ejectors.

STORAGE AND DISTRIBUTION

LHe / GHe control and shut-off valves,
couplings, check valves and ejectors.

IDEAL FOR

LIQUEFACTION
REFRIGERATION
STORAGE
DISTRIBUTION



BELLOW VALVE



EJECTOR



COLD CHECK VALVE

HELIUM IN QUANTUM COMPUTING

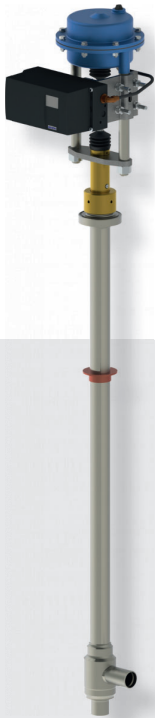
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LHe / GHe control and shut-off valves,
couplings, check valves and ejectors.

STORAGE AND DISTRIBUTION

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IDEAL FOR
LIQUEFACTION
REFRIGERATION
STORAGE
DISTRIBUTION



BELLOW VALVE

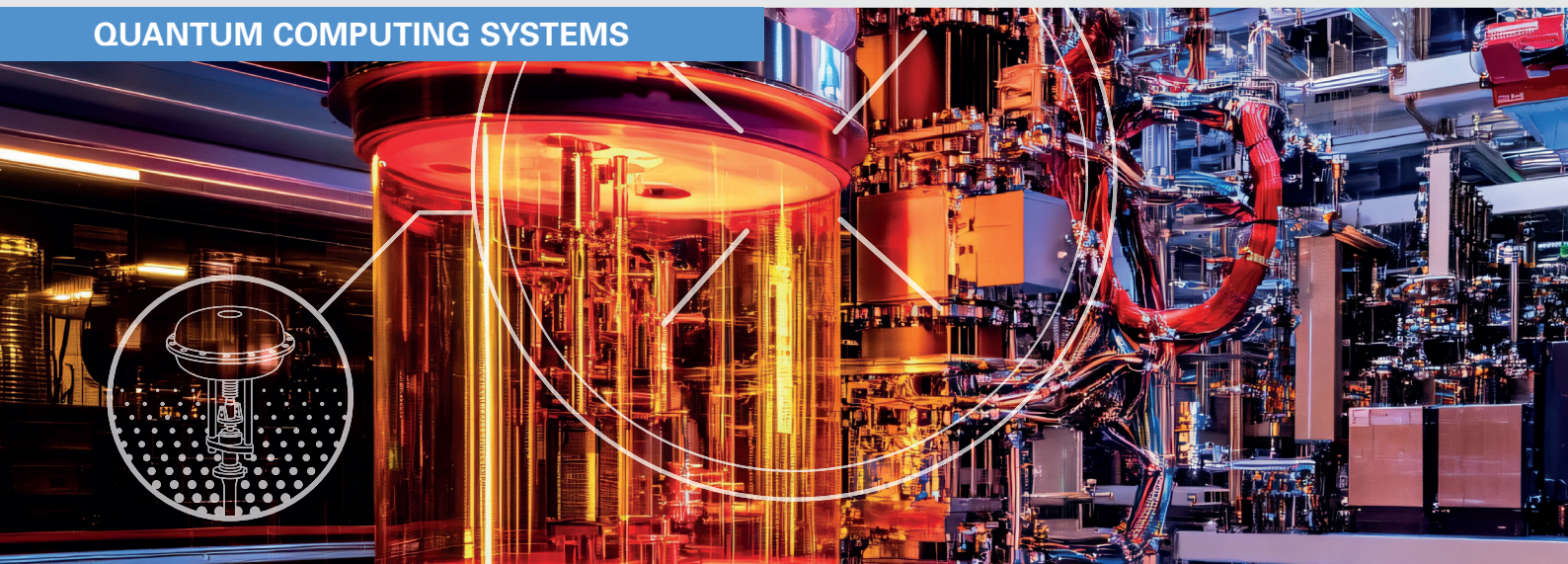


MULTILINE COUPLING



COLD CHECK VALVE

QUANTUM COMPUTING SYSTEMS



HELIUM IN INFRASTRUCTURE AND LOGISTICS

IDEAL FOR

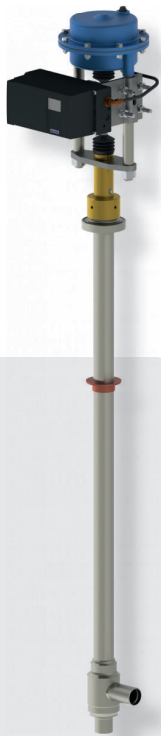
LIQUEFACTION
REFRIGERATION
STORAGE
DISTRIBUTION

LIQUEFACTION AND REFRIGERATION

LHe / GHe control and shut-off valves,
couplings, check valves and ejectors.

STORAGE AND DISTRIBUTION

LHe / GHe control and shut-off valves,
couplings, check valves and ejectors.



BELLOW VALVE



MULTILINE COUPLING



COLD CHECK VALVE

He LIQUEFACTION FACILITY





ARIANE SPACE GROUND INSTALLATION

© ESA and
CNES/Arianespace

HELIUM IN SPACE GROUND INSTALLATION



HIGH PRESSURE
VALVES



CUSTOMIZED
CHECK VALVES



BELLOW VALVE

IDEAL FOR

STORAGE
DISTRIBUTION
FUELING
SAFETY

STORAGE AND DISTRIBUTION

LHe / GHe control and shut-off valves,
couplings, check valves and ejectors.

TANK PRESSURIZATION

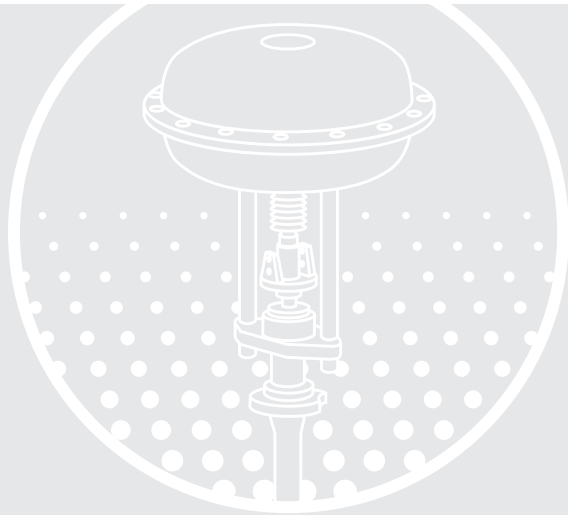
Control and shut-off valves and check valves.

PURGE AND INERTING

Control and shut-off valves and check valves.

HANDLING He WITH SWISS PRECISION

To ensure that large-scale plants around the world function safely and smoothly, our employees take care of every last detail, pedantically, meticulously – typically Swiss.



Thus, we develop and produce components that make the handling of helium safe and reliable. Our products meet all applicable standards and offer the corresponding certificates:

- + CE
- + ASME
- + SIL

WEKA TECHNOLOGY AT A GLANCE

SWISS PRECISION

WEKA – YOUR FIRST CHOICE FOR

- + cryogenic valves and components for service temperatures down to 1 K (-272 °C)
- + cryogenic control and shut-off valves, bellow sealed towards outer environment
- + sizes up to DN250
- + pressures up to PN 1000
- + Johnston couplings, multi coaxial couplings, warm and cold check valves
- + customer specific development according to requirements
- + cryogenic valves and components with market specific certifications



ENGINEERING

WEKA SERVICE THAT SUITS YOU BEST

ENGINEERING EXCELLENCE & CUSTOMIZED SOLUTIONS

WEKA delivers cryogenic valves and level measurement technology that meet the highest standards through comprehensive training, modern tools, and extensive practical experience. Our project management system efficiently supports everything from small orders to complex developments.

We excel at developing tailored solutions for specific customer requirements when our standard portfolio doesn't meet your needs. Our customers value our collaborative approach to achieving optimal results.

COMPREHENSIVE SERVICE COMMITMENT

Our service philosophy is built on speed, efficiency, accuracy, and professionalism. WEKA's commitment extends far beyond product delivery, with our qualified engineers and technicians available to provide:

- + Product training and remote support
- + On-site installation assistance and troubleshooting
- + Emergency service with minimal downtime
- + Commissioning instruction for new customers

Our experienced team can solve most problems on-site without component dismantling, saving you valuable time and money. For complex cryogenic applications, our preventative commissioning support ensures smooth operation from day one.

Contact us to design your individual service package backed by WEKA's technical expertise.





APPLICATIONS

CONVEY, REGULATE, SHUT OFF,
CONTROL, MEASURE,
DISPLAY – **WEKA SOLUTIONS**
MAKE IT POSSIBLE.

CHEMICAL, OIL AND GAS



CHEMICALS AND PHARMACEUTICALS



OIL AND GAS INDUSTRY/PETROCHEMICALS

INDUSTRY AND TRADE



EXPLOSION-PROOF PLANTS



MECHANICAL AND PLANT ENGINEERING

ENERGY, SPACE AND RESEARCH



HYDROGEN INFRASTRUCTURE



SPACE INFRASTRUCTURE

WITH STANDARD AND
CUSTOMIZED SOLUTIONS,
THE WEKA TECHNOLOGY
IS AT HOME IN MANY
APPLICATION AREAS.

LIQUIDS AND GASES

For more than 80 years, our range of cryogenic components and magnetic level indicators have been improving the operations of many important applications in a wide variety of industries.

If your business is one of them, we look forward to hearing from you soon.



LIQUEFACTION OF GASES



GAS RECIRCULATION SYSTEMS



WATER MANAGEMENT



SHIPBUILDING

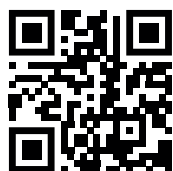


PLASMA AND FUSION RESEARCH



BASIC RESEARCH

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For more information visit
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