

Since its founding in 2000, ARMATURY Group has evolved from a domestic producer to an international player, extending its reach throughout the European continent.

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## ARMATURY Group: Mission-critical valves for demanding applications and hydrogen

Situated in the North-Eastern region of the Czech Republic, ARMATURY Group is part of the Vexve Armatury Group, a European manufacturer of valves in five segments – district energy, power, gas, metallurgy and petrochemical. The Group's focus on high-end valves for mission-critical applications has enabled it to capture a notable market share in demanding industries throughout Western Europe and the world. Today its products are exported to over seventy countries, explain Business Director Libor Kremel and Business Development Director David Styblo. "While ARMATURY Group has long been a market leader in Central and Eastern Europe,

our presence in Western Europe and beyond is expanding rapidly," says Mr. Kremel. "Our goals are to provide customers with top levels of service, share our experience in the production and operation of valves, and achieve widespread success in the industry segments we serve. Customer satisfaction remains our number one priority."

### The global Group strategy

The company received a strategy boost in 2019 when its owner, the Finnish investment company DevCo Partners Oy, acquired ARMATURY Group and combined it with Vexve

Oy to create a leading European valve manufacturer for the district energy, power, metallurgical and gas segments. The acquisition of German company ZMK Technologies in 2021, a producer of tailor-made valves for petrochemicals, completed the picture.

With a combined turnover of over EUR 130 million, the Group offers an extensive portfolio of valves for a wide range of applications. Currently, the Group operates in four locations: Finland, Germany and Czech Republic. The state-of-the-art production continues to dynamically develop the Group's product range even further with the help of significant investments in modern manufacturing technologies. The aim of the Group is to be the leading provider of mission-critical valve solu-

tions in the transition to a low-carbon future.

"We enable the wider adoption of district energy and utilisation of gas and renewable energy sources in power generation. Our service-focused businesses in the metallur-

### Serving the power industry

A current project involves the supply of two DN 3500 butterfly valves and DN 3000 assembling inserts for a hydroelectric power plant in Austria. "We manufacture the valves on a new multifunctional machining centre, which enables the machining of valves up to a seven-meter diameter. The entire assembly weighs 100 tonnes. Transporting such a colossus to a power plant site in the mountains will be difficult, but we like a challenge," says Libor Kremel about the interesting order.



gy and petrochemical sectors support our customers' energy efficiency efforts," David Styblo explains the Group's global strategy.

### More than just valves

The Group specialises in mission-critical valves, many of which are tailor-made. "Our company specialises mainly in producing industrial valves, technological units and related services," explains Mr. Kremel. "Our focus is on providing critical valve solutions which go far beyond just supplying valves; we work closely with clients to develop the best possible valve designs and characteristics and to create key solutions for end users. Today, our customers require reliable, high-quality valve technology and solutions to reduce their carbon footprint and environmental impact. We help them to achieve those goals."

ARMATURY Group's focus on working closely with clients allows it to offer a deep level of customisation, with valves tailor-made according to customer requirements.

"Our hands-on approach makes us a sought-after partner. Usually, we develop and manufacture valve solutions based on the requirements and specifications of our customers. The industry sectors we serve have stringent requirements due to various factors, such as tougher regulation on (fugitive) emissions. These requirements vary depending on the sector and specific applications. For example, such applications can be found in the power



generation industry, which is heavily regulated and has demanding requirements regarding corrosion, high-temperature and pressure applications. Today, over 70% of our products are exported, ensuring the smooth running of mission-critical operations worldwide.”

### Five business segments

At the beginning of 2022, the Group remodelled its operating structure to bring its activities closer to customer needs and realise the strategy of becoming the market leader for innovative products in Western Europe.

“Our activities are divided into five distinct segments: district energy, gas, power, metallurgy and petrochemicals,” explains Mr. Styblo. “This approach allows us to share best practices regarding new product development, production methodology, sourcing, sales representation, marketing, and service. It creates synergies by sharing expertise within the various segments across our global business. After all, if we develop solutions for a client in one country, it makes sense to share this experience. This approach will allow us to further develop our excellence in each of our core segments.”

“The clearly defined segments utilise the enormous amount of expertise built up in the company for the direct benefit of customers,” continues Mr. Styblo. “In each segment, customers work with our highly educated specialists who thoroughly understand every aspect of their business. The dedicated sales and design experts share their knowledge and experience, from designing products to after-sales service. Clients appreciate this level of expertise which they can tap into at any time.” The Group’s new strategy also creates further synergies between its four factories.



These include modular production to achieve greater product standardisation, shorter delivery times, and price advantages.

The key to the Group’s strategy is its ability to move quickly and flexibly to adapt its products to developments in the market. “This is a further advantage of working with five clearly defined market segments – each can work independently to react swiftly,” explains Mr. Kremel. “For example, our hydrogen experts constantly adjust our products and sales strategy while researching the market for new and emerging trends.”

### Global reach, local teams

In recent years the company has invested in establishing local teams across its global locations, as Mr. Kremel explains. “Across the Group, we continue to invest in growing local personnel and partners

to serve clients in their own ‘backyard’. This proved highly beneficial during the pandemic, especially in Western Europe, where we are growing rapidly. We anticipate this will remain so, as customers appreciate knowing they can rely on rapid, flexible responses from their local Vexve Armatury Group contacts. End-users, in particular, appreciate the proximity of our technical teams, who can provide fast support in their own countries and their language. For example, services such as valve diagnostics and recommendations for equipment are carried out very quickly and simply.”

### Specialised hydrogen expertise

Hydrogen is playing an increasingly important role in energy security and decarbonisation, and ARMATURY Group is leading the field in R&D for this sector. For many years, the company has worked with technical universities and industry bodies such as TÜV and DVGW (Deutscher Verein des Gas- und Wasserfaches) to develop norms and standards for the Western European market.

“There is great potential for the hydrogen market, and we foresee that it will be a source of clean energy for heavy industry and transportation. We are one of the market leaders in handling hydrogen, with specialised in-house valve testing facilities and several ongoing R&D projects. We develop hydrogen solutions for end-users such as gas suppliers and industries that are substituting fossil fuels for hydrogen in their processes to achieve their decarbonisation goals, such as the metallurgical sector and power plants. As a Group, we are deeply involved in hydrogen R&D and

often collaborate with independent third parties,” Mr. Styblo explains.

### Customised solutions with a lifetime of service

The services provided within the Vexve Armatury Group are an integral part of its mission-critical valve solutions and go far beyond selling valves.

“Services include working with customers on design elements, assisting with installation and commissioning, providing supervision during start-up, etc. Our support does not stop at the supply of the valve. Our local teams are available 24/7 for our key clients to handle any issues or inquiries they may have. We provide full support for the entire lifetime of the valves, wherever they are in the world,” Mr. Styblo explains.

In fact, the company has decades of experience in repairs and retrofits.

“While we work in the end users’ workshops to service commodity valves, sometimes we also ship the valves to our specialised premises where we have the tools, machines and cranes ready to go. This is a crucial part of our customer relationships, they appreciate that we are ready to help them wherever and whenever it’s needed.”

“We have an extensive, loyal customer base in the German and Austrian markets for whom we’ve developed solutions for many years. ARMATURY Group is not a passive sales company, we are actively helping our clients to develop niche, customised products to solve their problems.”

### Pressures on the market

The global valve market continues to face several challenges, from the ongoing pandemic to the Russian invasions of Ukraine to soaring energy prices.

### Ready for the hydrogen future

ARMATURY Group has produced the first valve for green hydrogen operations. The K92 DN 1400 ball valve has a height of 3362 mm and weighs an impressive 27,000 kilograms. The ball valve will act as the main shut-off valve for hydrogen operation.

The company works with gas network operators to prepare for future hydrogen blending into natural gas. While initial plans are to transport a mixture of natural gas with 10% hydrogen added, in the future, the proportion of hydrogen will increase to 25%, 50% and more.

Table 1. Example of ARMATURY Groups’ hydrogen valve supplies

Year	Country	AG Product	NPS	pcs
2021	Czechia	Ball valve for 10 % hydrogen	12-56	6
2021	Austria	Ball valves for 25 % hydrogen	2-24	18
2021	Poland	Ball valves for >70 % hydrogen	2	15
2022	Germany	Ball valves for 25% hydrogen	1-24	507
2022	Poland	Ball valves for 10% hydrogen	6-28	182

“The energy crisis poses particular challenges for manufacturers, but also opportunities. Historically natural gas has flowed from the East of Europe to the West, but now we are starting to see a reversal as LNG supplies start flowing from the West into the Eastern and Central regions of Europe. New LNG terminals under construction on the Atlantic coast of France, Spain, Portugal, Benelux and the UK are stimulating enormous investments in projects. The European Union will continue to support countries in Central and Eastern Europe to achieve energy security, generating opportunities for specialised manufacturers such as ARMATURY Group,” Mr. Kremel says.

### Ongoing investments; valves up to 7 m in diameter

The Group enjoys a robust plan for ongoing investments to expand capacity, improve quality, and better serve its customer base. “Recent investments include three CNC machines to massively increase the size range of our valves with diameters of up to 7000 mm. This has allowed us to cover a broader segment of certain markets such as hydro power, power generation and metallurgy. Our test bench capacity has also increased with pressure testing up to 630 bar, which is impressive! Investments in automation, including a fully automated robotic welding centre, have enabled us to improve quality and consistency while reducing our reliance on manual labour,” continues Mr. Kremel. Another significant investment in the machinery of the ARMATURY Group is the newly installed robotic welding Workstation. The installation of the equipment was completed at the end of June this year, and the first welds are currently being programmed and welded with excellent results. This modern welding equipment is expected to increase the stability of the welding process, significantly reduce working time, improve the quality of welded joints and increase welding capacity. “Looking ahead to 2023, our investment plans are ready and will continue to focus on achieving our goal of becoming a leading supplier of mission-critical valves for some of the world’s most demanding applications.”

### Giving valves a second life

For CEZ, the principal energy company in the Czech Republic, ARMATURY produced a giant ball valve DN 1400 weighing an incredible 26,000 kg. It has replaced the original valve and now works reliably in the water reservoir that supplies cooling water to the Temelín nuclear power plant. The original ball valve was refurbished at the customer’s request and then returned to where it had operated for twenty years. The refurbished ball valve will replace another piece that will be refurbished in the future.



ARMATURY provides full support for the entire lifetime of the valves, wherever they are in the world.

### Synergistic trunnion mounted ball valves for district energy

Maximising synergies between companies is one of the Group’s main objectives. As part of a synergy project, the ARMATURY Group and Vexve have developed new hot water ball valves for use in the heating industry. The new product range of trunnion mounted ball valves is manufactured in sizes DN 150-1000. The first eight units of these ball valves were produced for a heating plant in Romania.

