

In an industry where safety and reliability are of critical importance, the correct regulators and valves are vital to help keep gases under control, with unwanted mixtures and accidental contaminations potentially leading to serious health and safety and environmental issues.

Using the correct regulators and valves is a fundamental necessity in helping to control gases; regulators modulate their pressures and valves control their flow rates. The Cavagna Group has been a pioneering innovator and key partner of industries, gas companies and original equipment manufacturers (OEMs) in delivering these crucial regulation and control technologies for compressed gases for almost 70 years.

It designs, manufactures and distributes a wide range of valves and regulators for different types of high-pressure gas applications worldwide, from high-purity and medical care to industrial, welding, liquefied petroleum gas (LPG) and liquefied natural gas (LNG) applications, as well as alternative energy vehicles and cryogenics.

Today, its range includes medical gases valves with integrated pressure regulators, high-pressure cylinder valves for industrial gases, specialty gas diaphragm valves, valves and regulators for cryogenic containers, and a variety of other compressed gas equipment for special applications.

It's a portfolio that has inexorably evolved since Cavagna's inception in 1949 to cater for developing markets and customer-specific demands – but what is driving trends in compressed gas equipment in the industry today? *gasworld* spoke exclusively to Miriam Cavagna, Director of Marketing and Communication, to find out about the company's latest technological developments, why its new cleanroom is helping to channel growth, and the areas in which it plans to make future investments to stay ahead of the game.

High-performance

Predominantly, Cavagna identified that the safety and reliability elements of gas control equipment are still chief growth drivers behind product developments, stating, "There is a higher request for compact, high-performance valves that are integrated with regulators that provide exceptionally consistent gas flow and reliability, with in-built features that guarantee safe operations. Inevitably, our products grew in this direction."

As a result, she said that market requirements for improved efficiencies and higher safety levels, whilst also keeping costs under control, has driven the Italian outfit to 'constantly challenge' itself to continue to deliver these features – a notion that was grasped via an investment in a new cleanroom in November 2016.

Cavagna's Medical and Specialty Gases Devices Division

invested in the strategic expansion to support the development of its range of products for medical and industrial gases. The new 500m² cleanroom flanks Cavagna's existing facility in Brescia, northern Italy, and has more than doubled the company's production output. With 800m² of cleanroom space now in the company's possession, Cavagna said the new site adds enhanced flexibility and crucial safety compliance to ensure its constant growth in the field of medical and specialty gas products.

It was created by Pergola, an Italian subsidiary of the group that's wholly dedicated to manufacturing medical and specialty gas valves and regulators. Typically used in manufacturing operations, a cleanroom is an environment that stringently controls the level of contaminating pollutants inside – an imperative element in the gas control equipment fabrication process. The new site boasts several enhanced features to streamline the valve manufacturing process. For starters, it's

already equipped to reach ISO Class 5 for applications in medical gas valves, with the reference class currently standing at Class 7.

Cavagna made sure that the facility features the most modern, state-of-the-

art qualities, with its energy efficiency, contingency and flow of materials designed to work at optimum levels. It saves energy thanks to the use of the latest technology in air handling units, as well as the use of walls and materials that offer low particle release and the most advanced sealing techniques. For cooling, Cavagna uses water from a purpose-built well to reduce the energy consumption needed to run the facility's air conditioning.

The new plot has been designed and built to ensure continuity of operation should a line be temporarily interrupted, and Cavagna has also applied 'mini-factory' logic to different areas of the cleanroom to ensure that components are kept in close proximity to their assembly areas. Under additional investment, Cavagna purchased two new vertical warehouses to facilitate this concept. Building the new cleanroom was just one step in a long march of investment and expansion projects for the company in recent years, including reinforcing its presence in Latin America with a new operating unit in São Paulo and purchasing the assets of African Oxygen Limited's (Afrox's) Gas Equipment last year (see an *Interview of the Month* with Cavagna Group, page 32 of *gasworld's* June 2017 issue).

Long-term vision

What further investments does the company have on the horizon to enhance its gas control equipment line? Whilst keeping specific plans under wrap, Cavagna did emphasise that the group continually looks for the most advanced manufacturing technologies 'by vocation' and said, "In addition to cutting costs, →

In the cleanroom

The high-performance space of gas control equipment

By Rhea Healy



→ these technologies create speed, precision, efficiency, flexibility in the manufacturing process and an increased ability to customise products and processes,” she underlined. “Our aim is to have the best manufacturing set-up in the industry to support our customers.”


Whilst Cavagna’s High Pressure Equipment business division, one of Cavagna’s six operating units, is well-established, Cavagna reinforced, “The main objective is to offer advanced solutions for gas control and to ensure that gas is used safely, practically and efficiently in all fields of application. Thus, it is not simply a matter of manufacturing products like valves, regulators and accessories. On the contrary, it is truly a long-term vision that is characterised by both innovation and reliability.”

“To be realised, that vision needs innovative solutions to meet the increasingly challenging demands of global markets and new fields of applications and it needs reliable solutions that use the highest technology for gas control.”

Technologically, Cavagna revealed that the future of valves and equipment for gas control is heading towards yet further operational efficiencies, with gas company leaders highlighting a ‘data deluge’ as the area that needs the most improvement to

“...that vision needs innovative solutions to meet the increasingly challenging demands of global markets and new fields of applications...”

drive business improvement. Productivity-enhancing solutions are channelling growth in compressed gas control equipment, alongside reduced costs from asset monitoring, workforce efficiencies, improved logistics and more – with Cavagna stressing that her company is keeping its eye on all of the opportunities to be had.

“Our business principles go hand-in-hand with our corporate vision; to be the leader in gas control technology,” she concluded. 

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