



In focus...

Medical and Healthcare Equipment



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We are born. We live, and then we die. Central to all of these stages of life is the Medical and Healthcare sector. For this reason alone it can be no surprise that this section of the industrial gases world is booming. A number of high value acquisitions from Tier One companies, like Air Liquide, in the healthcare sector are responsible for significant financial performance boosts – specifically 6.8%. Linde’s acquisition of Lincare in August 2012 is also demonstrative of the value that can be added to a company in this market – adding to its already impressive annual turnover of €3bn (2013 statistics).

So what are the trends in the market and, more importantly, where is the growth? In this ‘In Focus’ we speak with those in this sector to discover what they believe is happening in this exciting market.

Growth Drivers

Rachel Mason, Business Manager, Hospital care at BOC Healthcare, commented, “BOC Healthcare is focused

on providing a portfolio of medical gases, services and equipment for use in hospitals and other healthcare institutions such as vets, dentists, first response units and primary care facilities.”

“The hospital care market is dominated by public procurement pressures i.e. the need to take cost out of healthcare systems whilst attempting to improve patient experience and meet the increasing demands driven by an ageing population.”

As stated by Mason, the Medical and Healthcare Equipment sector, addressed in this feature, is multifaceted. There are gas systems and plants, to gas control equipment and storage sectors – and many more besides. At the coalface, which is the hospital or surgery levels, there’s a common consensus – the space equipment takes up, and not time using it, is money. For this reason, with the group Novair/OxyPlus Technologies, growth is found in its plug and play systems that are in demand from healthcare professionals. Explaining this, Valérie Bokobza, from the company says, “Hospital and Clinic Directors and Technical staff will all agree: the space allocated to medical gas supply in their facility is less space for patients and for profitability, and often a source of cost and worry.”

She added, “For a growing number of hospitals, they have decided to switch to a plug & play medical gas supply system in autonomous containers.”

“Novair/OxyPlus Technologies is a pioneer in the development of such solutions, with plug & play systems delivered to field hospitals as much as to regular hospitals for nearly 20 years. The group now offers cutting edge technology and advanced features in their “OXYFACTORY” and “MEDGAS FACTORY” containerised systems.”

The device, in no more than 14sqm (500 cubic feet), and includes:

- Two full medical oxygen concentrators
- Two medical air production units
- A full high pressure manifold system including two racks of compressed O₂ cylinders for back up
- A cylinder filling system
- Also available optionally : centralised vacuum unit

“All machines are installed and interconnected inside so that the container can be connected to a medical gas piping network a few hours after arrival on site,” concluded Bokobza.

The growth experienced in this sector is not exclusive to just the gas production markets as cylinder manufacturing companies, too, have growth strategies in place to capitalise on such a lucrative market.

Melis Kilimci, from MES Aluminium, says, “The main factors of this growth lies in the advances in medical and diagnosis technology, as well as the increasing population and improving life expectancy.”

“At MES, we noticed the healthcare market to be a stable and constantly growing market unlike others. But what’s really important is, we feel the highest level of responsibility and commitment with our healthcare products, because these products touch human life directly.”

She added, “With this fact in mind, we have defined our growth strategy in the medical market to be focused on the optimisation of our products, instead of diversification.”

Clarifying this point, she says that rather than delivering new and different products to the market – the company is choosing to instead improve the quality and performance of existing products to perfection while bringing down the cost. Therefore this enables the offering of the optimised highest quality product to the end user.

“Our experiences have proved to us so far that, once we maximize the quality and properties of a product, we can then proudly and successfully offer it to the widest range of markets globally, which drives our growth,” proclaimed Kilimci.

Investment in capabilities to serve this growing medical market can also be a wise move. A company may not currently have the ability to reach the standards required for this market – but it can be achieved with suitable investment and a solid business development plan.

In 2013 m-tech launched an ISO class 7 clean room certified to DIN EN ISO 14644-1 in its company facilities in Germany for maintaining the high safety and purification standards required for oxygen operations.

This state-of-the-art clean room, together with the efficient cleaning and storage concepts, set a new standard for the production of high-pressure valves and fittings.

Carlos Riveros, Managing Director at m-tech, said, “We only do high pressure valves and they are capable for use with oxygen, which is the highest standards required by valves. These valves are made in our clean room - which itself goes far beyond the usual standards of a valve manufacturer’s set-up (except for those involved in clean industries).”

“We invested in establishing the clean room to consolidate the company’s position of leadership. We are well known for quality, innovation and experience in gas filling applications.”

Technological trends

As with many industries, technological advancements over the last 20 years in the medical and healthcare sector have made everyday life much easier than could be previously imagined. Lightweight



materials, that do not substitute strength or quality, ensure those in the homecare sector are no longer restricted by the cumbersome cylinders they were forced to carry around with them on a daily basis.

But, it’s this very progressive nature of the industry that results in companies having to move with the times and latest developments in the market. In this market, medical gases have become indispensable in medicine and are irreplaceable components in many forms of modern diagnosis and therapy. Medical oxygen, for example, is used for respiratory support; nitrous oxide helps to relieve pain and is used for anesthesia and helium is needed for magnetic resonance imaging (MRI).

For m-tech’s Riveros, the proof of the company’s technological capability is the feedback from customers.

He said, “When it comes to medical filling, one of the Tier One gas manufacturers insists on installing our filter-non-return valve combination MPG 12 FI-CV as an additional safety component in the gas inlet line of the system. It helps to maintain the high level of gas purity and protects the entire system from any kind of pollution as well as high pressure strokes.”

“Our independent filling trolley for medical oxygen applications is a new type of system combining the formerly ground-installed safety cage in a complete solution making it possible to use the system in

any place. The integrated safety panels, made of stainless steel, are equipped with customer friendly mechanisms that ensure easy and safe insertion of the cylinders.”

Riveros concluded, “So m-tech has realised a solution which increases the flexibility of its customers changing from a fixed installed filling station to a complete and moveable filling trolley that meets all standards in safety and is suitable for oxygen service, also in the field of medical filling.”

Focusing just on medical valves for a moment, from Muller Gas Equipment, a technological trend is the shift in the pressures being used – exemplary again of a company’s need to move with the times.

“For the valve manufacture the technological trend is the shift from 200bar cylinders to 300bar for medical gasses. With this shift the gas companies can utilise Muller’s VIPR range that integrates all functions in one and is a safer product that is simple to use,” states Bo Christensen, Sales and Marketing Director.

Closing this month’s ‘In Focus,’ the medical cylinders market is analysed for technological trends – confirming the previously stated trend of weight-reduction.

Kimlici says, “By the nature of our products that we offer in healthcare market, we certainly notice it to be most important that the product is lightweight. Our products are mainly used by either older people, or for newborn treatment, or as emergency life support equipment. For all those purposes, it is crucially important that the product is lightweight and easily mobile.”

“Besides the medical gas cylinders, we at MES Aluminium also produce aluminium alloy parts for patient chairs and stretchers. There is no doubt that aluminium material is highly preferred over other options both with cylinders and other various products, because it is safe and lightweight.”

She added, “As a side advantage, the aluminium material is non-corrosive and also non-magnetic, which makes it a necessity to be preferred if to be used with MR equipment.”