An introduction to...

MicroBulk

In today's economy, most market sectors have been challenging and business professionals need ways to profitably grow their business. A MicroBulk system enables industrial gas distributors (from the independent to the international gas companies) to provide improved service to their customers.

MicroBulk is a system of liquefied gases distribution developed by Chart industries, Inc. in the US. With MicroBulk, instead of transporting high-pressure cylinders or transportable liquid cylinders to customer sites and exchanging them full for empty, the gas is filled directly on the customer's site from a dedicated delivery truck into small stationary liquid cylinders with volumes from 230 to 2000 litres and pressure from 22 to 37 bar permanently installed on the customer's site.

Chart's ORCA, with a submerged pump, offers unique benefits regarding cooling down time and product losses, and reduces maintenance frequency compared to an external pump. A submerged pump supports the lean initiatives that so many companies are trying to incorporate into their operations nowadays, by eliminating the unnecessary waiting time at each delivery point that is otherwise necessary in order to provide sufficient cool down for an external pump.

As a result, up to 10-15 minutes are gained at each stop, making it possible to increase the number of fills by 2-3 per day compared to conventional pump transfer delivery trucks, or even by 3-5 per day compared to pressure transfer delivery trucks. With MicroBulk systems, gas distributors can reduce delivery costs and assure their customers that they are paying only for product they consume.

MicroBulk brings several benefits and savings for gas distributors as well as for their customers. Using MicroBulk systems results in extensive time savings during the gas delivery procedure; it is just a one man operation, no handling of cylinders results in less injuries, there is no gas interruption, no gas contamination, there is easy administration and less activities related to the gas delivery, easy asset management and better control of the equipment.

The heart of the whole ORCA delivery system is the incorporated Flowcom flow meter. Its flow metering section, located directly in the sump together with the pump, allows for accurate flow measurement even for the very small deliveries that are so typical for MicroBulk distribution. Besides, the flow meter with an incorporated PumpSmart system provides an efficient pump protection in case of dry running or cavitation. By protecting the pump from being operated outside of its performance curve, it further contributes to long pump maintenance cycles that are typically in time spans of more than five years rather than six months as in the case of conventional external pumps. In connection with liquid cylinders, the flow meter processor automates the whole filling process making it a very safe and simple one-button operation for a driver.

© Chart
With MicroBulk, the gas is filled directly on the customer's site from a dedicated delivery truck.

It is now 15 years since the first ORCA was put into operation in Europe (a few years after the first ORCA was manufactured in the US) initially in the UK, followed by MicroBulk distribution in Germany and Poland. Today ORCA MicroBulk trucks operate in most of the countries in Western Europe with gas distributors, as well as their customers, experiencing a lot of benefits and savings compared to traditional packaged gas distribution methods, Chart explains.

Based on its experience, Chart strongly believes that MicroBulk distribution will expand to all European countries in a few years as MicroBulk is 'the most logical step in gas distribution development for all gas distributors'.

The MicroBulk concept and system is applicable in all areas, such as hospitals and laboratories for argon, oxygen, nitrogen, and allows gas suppliers to concentrate on their core business by eliminating what has been perceived as a normal activity in the monitoring, moving, changing and worry of what should be maintenance-free, uninterrupted gas supply. Various medical and industrial accounts around the world have benefited from the convenience of MicroBulk supply, while it is thought that laser cutting applications in metal fabrication have also embraced the gas supply mode change from conventional cylinders.

"MicroBulk is largely seen as a method that is significantly more efficient than handling multiple cylinders"

In a nutshell, MicroBulk is largely seen as a method or approach to the supply of argon, nitrogen and oxygen (in its liquid state) that is significantly more efficient than the handling of multiple cylinders. So much so that many of the major players in the industrial gas and equipment business have integrated MicroBulk delivery systems into their offerings. ❑

WITH THANKS...

While acknowledging there are a wide range of companies offering MicroBulk solutions, **gas**world would like to thank Tomas Knobloch Chart Ferox, Packaged Gas Sales Support Manager and Regional Salesman for contributing this month's equipment profile.

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