

Putting The Power In Powder Transport

THE PERFORMANCE CAPABILITIES OF THE NEW MX12 SERIES SCREW COMPRESSOR FROM MOVEX® ALLOW LOMAS DISTRIBUTION TO MAXIMIZE UNLOADING TIMES WITH HARD-TO-HANDLE DRY-BULK PRODUCTS

By Jean-Marc Bernard



In 25 years of operation, United Kingdom-based Lomas Distribution has grown into one of Western Europe's largest privately owned haulage companies. Its capabilities in dry-bulk transport recently received a boost with the installation of a new MX12 Series Screw Compressor from Movex® on a tipper trailer. The MX12's ability to easily and reliably produce two bars of air pressure enables the trailer to experience significantly lower unloading times, even with hard-to-handle granular and powdery products like fly ash, lime and ferrous sulfate.

Introduction

With his broad-shouldered stature, walrus-style mustache and deep, gritty voice, no one would ever mistake Kevin Mears for an adolescent. But to hear the veteran transport-truck driver talk about the capabilities of the MX12 Series Screw Compressor from Movex®, you could easily envision him as a young boy who had just become the first kid on the block to be gifted with the hottest new video-game system or shiniest new bicycle.

"Other drivers want to know how I can build so much air so quick; it's not a problem for me, it's a problem for them," Mears said with a sly chuckle.

The "air" that Mears is referring to is the two bars (29 psi) of pressure that are required when he is tasked with unloading granular or powdery substances like fly ash, lime and ferrous sulfate.

"A lot of the products are heavy products, granular stuff, so it's lumps and powder, and we need two bar to get it going," he explained. "[The MX12] is a fantastic bit of kit, really strong, powerful, does the job. Gets straight up to two bar and holds it there. That's where I need to be, two bar."

QUICK FACTS

- Company:** Lomas Distribution
- Location:** Buxton, Derbyshire, United Kingdom
- Market:** Liquid and Dry-Bulk Transport
- Distributor:** Meller Flow Trans, Ltd., Bradford, West Yorkshire, UK
- Challenge:** Identify and deploy a truck-mounted screw compressor technology that can consistently and reliably create the air pressure needed to unload hard-to-handle dry-bulk products
- Solution:** Movex® MX12 Series Screw Compressors

The Winning Ticket

Excuse Mears if, in addition to feeling like a privileged child, he also considers himself a lottery winner. That's because it was his transport tipper trailer that was recently chosen by his employer, Lomas Distribution, to be outfitted with an MX12 screw compressor on a trial basis. It was quite the honor since Buxton, Derbyshire, United Kingdom-based Lomas Distribution – which is celebrating its 25th anniversary this year – is one of Western Europe's largest privately owned liquid and dry-bulk haulage companies, and employs a rolling fleet of more than 1,300 vehicles. In fact, Lomas Distribution was recently named the "Tanker Operator of the Year" at the Tip-ex Tank-ex Awards 2019. These awards, which are part of the annual Tip-ex Tank-ex convention, honor the individuals, teams and businesses that are shaping the tipper, tanker and bulk-haulage industries.

Lomas Distribution itself was chosen to field test the MX12 screw compressor by Meller Flow Trans (MFT), Ltd., Bradford, West Yorkshire, UK. Founded in 1960, MFT focuses on and specializes in developing liquid- and powder-based product-transfer solutions for the transport market, regardless of industry. MFT has been a preferred distributor for Auxerre, France-based Mouvex, a product brand of PSG®, Oakbrook Terrace, IL, USA, for more than 25 years and in 2018 was actually named Mouvex's "Distributor of the Year."

The relationships MFT has built with both Lomas Distribution and Mouvex over many years and successful installations has helped make Lomas a regular user of Mouvex products. In fact, Lomas was one of the first UK haulage companies to embrace the innovative Mouvex MH6 Series Screw Compressor, which combines the power takeoff (PTO) mechanism with the compressor. Therefore, it was almost natural that Lomas would beta test the MX12.

"MFT has been a key supplier to Lomas Distribution for many years and our partnership with Mouvex goes back over 25 years," said Mike Conway, Key Account Manager for MFT. "The Mouvex MX12 is the latest compressor to join the Mouvex family and it is perfect for the UK 6x2 tractor market."

That tractor market is governed by the Euro 6 regulation that puts limits on the size and weight of transport vehicles in Europe. To ensure that product-transport payload capacities can remain as they were, truck manufacturers have begun designing lighter tractor-trailers that have very little space inside the truck frame for ancillary components, such as compressors and pumps.

The MX12 overcomes this challenge by being the lightest, most compact compressor on the market, at a weight of just 110 kilograms (242 pounds).



Lomas Distribution driver Kevin Mears, right, received an early Christmas present when Mike Conway, Key Account Manager for Mouvex® distributor Meller Flow Trans, Ltd., recommended an MX12 Series Screw Compressor be installed on a trial basis on Mears' tipper trailer. "It is a fantastic bit of kit," Mears raved about the MX12's performance.



The compact size and light weight (just 110 kilograms) of the MX12 Series Screw Compressor allows it to fit easily within the smaller amounts of real estate that are available inside the truck frame, a result of the Euro 6 regulation that mandates that new European transport trucks weight less than older models.

"Tractors are now extremely tight, space is at a premium, and the MX12's unique design allows for a very compact installation," said Conway. "It has been designed to maximize the space that is available."

Take A Load Off

While being able to place an MX12 on the new generation of Euro 6 transports is nice, the ultimate requirement is this – can it reliably perform, especially when handling a substance such as ferrous sulfate, which is an essential component in cement that is used to reduce the toxicity level of the chromate in the cement.

This is where Mears – and his undying need for those two bars of air pressure – reenters the picture.

"The best delivery time I've had is 22 minutes for 29 tons," Mears marveled. "That was for ferrous sulfate, which is a granular product that you need a lot of air for. [The MX12] produces so much air, I even have to bypass it at times because it's producing too much."

When Mears' payload has been fly ash – a byproduct of burned coal that is another common ingredient in cement – Mears has achieved a top unloading time of 15 minutes for 22 tons.

These eye-opening unloading times can be produced because the two bar of air pressure that the MX12 creates enables it to achieve flow rates of up to 1,130 m³/hr (18,833 L/min). That capability enables Mears to, on average, unload a 28-ton trailer in 35 to 45 minutes, a process that would previously take more than an hour to complete.

The MX12 also checks all of the other boxes for optimized screw-compressor performance, specifically those pertaining to vibration and noise levels.

"The shaft stops where it is, no rumbles, no tweaks or anything; super smooth," said Mears. "There's no vibration on it, it sits and runs perfectly, always straight in line, no problems whatsoever. I really enjoy using the Mouvex MX12, it's a fantastic compressor, easy to use, quiet."

The configuration of the MX12's ports allows for quick, simple installation, while its large and variable inlet speeds are able to match up with basic PTOs with low motor speeds. Should they ever be needed, repairs can be performed quickly and easily due to the MX12's modular design, which is also a benefit if the operator desires to make modifications or upgrades to the compressor system.



The ability of the MX12 to create two bars (29 psi) of air pressure is critical when unloading dry-bulk products. Higher air pressures do not only shorten unloading times, but they also eliminate any material hangups at the discharge port, which can occur when handling products like animal feed, gravel and cereal.

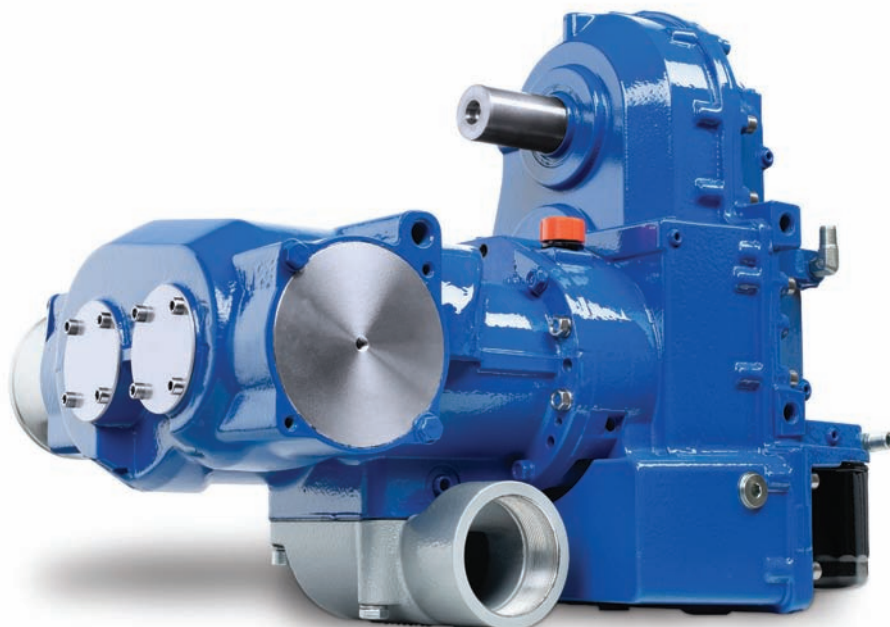
All of these benefits make the MX12 ideal for use with, as illustrated, powdery or granular substances, but also such diverse dry-bulk products as plastics, gravel, animal food and cereals.

The capabilities of the MX12 also fit hand-in-glove with the very unique business strategy that Lomas Distribution has recently developed. Namely, the company has made the conscious decision to have none of its 1,300-strong vehicle fleet be in service for more than three years before replacement, which is very atypical for the transport market. As such, Lomas strives to outfit its transport fleet with the best equipment and systems available – with the MX12 ably filling that demand.

“As an organization, they are very demanding,” said Conway. “Their focus and their ethos are based on safety, green technology and green solutions wherever possible, with exceptional customer service. They expect to provide exceptional customer service and, as a result, they demand that from their key suppliers.”

Conclusion

In 25 years, Lomas Distribution has grown into one of Western Europe’s leading haulage companies, with upwards of £75 million (US\$95.5 million) in sales revenue in 2018. This has been possible because Lomas has completely dedicated itself to meeting the needs of its clients in the most efficient, reliable and cost-effective way possible. Playing a role in achieving that goal have been partners that share the same level of dedication and commitment – in this case, Meller Flow Trans and Mouvex – with the development and recommendation of the MX12 Series Screw Compressor being the latest tangible example.



The design and operation of the new Mouvex® MX12 Screw Compressor checks all of the boxes for optimized compressor performance: reliably high air pressures, no vibration, reduced noise levels, compact size and extreme light weight.

“The Mouvex MX12’s performance and low noise levels make it an ideal choice for a variety of different products and tractors in the powder market,” said Conway. “It provides maximum performance with extreme lightweight capability, quiet operation and maximum reliability.”

About the Author:

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