At Busworld in Kortrijk, Belgium, BITZER is presenting its new SPEEDLITE scroll compressors for use in buses, trains and other vehicles

**Compact on the road**

- Smaller, more lightweight and more versatile but just as high-performance
- An innovative combination of scroll spiral, electric motor and frequency inverter
- High system efficiency

*Kortrijk/Sindelfingen, 02.10.2015. 80 years of experience and innovation. From 16 to 21 October, BITZER, the world's largest independent manufacturer of refrigeration compressors, is presenting its new SPEEDLITE scroll compressors for mobile applications at Busworld (stand 110, hall 1).*

The company driving innovation in the refrigeration and air conditioning sector has brought two new series of scroll compressors along to the trade fair. One special feature is that the ELV21 and the ELV51 are significantly more compact and more lightweight while providing at least as much or even more performance than previous models. At the same time they offer outstanding efficiency and versatility. This is made possible by their modern aluminium design and the ideal combination of scroll spiral, electric motor and frequency inverter. All three of these components have now been brought together in one compact system.
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Compact power in a neat package

Just as powerful as their predecessors but much quieter, with less vibration and more compact – that’s how you might describe the new scroll compressors. The ELV21 is eight kilograms lighter and 17 centimetres shorter than the ECH209Y. The ELV51 is a hit thanks to its low total weight of just 20 kilograms and it is ten centimetres shorter than the EL7 series. This opens up options for completely new applications. For example, the ELV21 can be used in compact air conditioning systems in construction and agricultural machinery as well as in camper vans. With its low height, the ELV21 is ideally suited for roof-mounted and frontal systems. Despite their compact design, the SPEEDLITE compressors are very powerful. The ELV21 is available in two flow rates, with a cooling capacity from 0.9 kW to 3.5 kW (ELV2109) or from 0.9 to 5.5 kW (ELV2113). The larger ELV51 achieves a cooling capacity of between 7.5 kW and 27 kW.

Innovation in a growth market

“An electrically operated scroll compressor with a frequency inverter enables a completely new system design with compact dimensions, a low amount of refrigerant and increased system efficiency” said Rainer Große-Kracht, Chief Technology Officer at BITZER. “In light of the trend towards the electrification and hybridisation of drive technology in buses, this market has great potential. With the SPEEDLITE compressors BITZER is one of the most innovative providers and is in an excellent position. As we see it, this type of scroll technology will take up a significant share of the market in mobile, electrical air conditioning applications.”

Flexible to use

The integrated frequency inverter in the ELV21 and ELV51 permits the cooling capacity to be smoothly controlled over a large speed range from 2,000 to 9,000 rpm. “That makes it possible to ideally match the capacity to the requirements of the system concerned” said Mr Große-Kracht. “And the cherry on top is that the choice of refrigerant for SPEEDLITE compressors is not limited to R134a.” On request, BITZER will also offer the scroll compressors for the refrigerants R407C, R404A,
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R410A and R290. What’s more, thanks to their modular design, the flexible Rotalock and brazed connections as well as several fixing points, both series of compressors have been developed for a variety of applications, including for use in heat pumps down to an evaporation temperature of minus 18 degrees Celsius. SPEEDLITE scroll compressors are available in versions for several voltages and are equipped with an EC motor so that they are suitable for the widest range of applications.

Performance you can rely on

Intensive tests ensure that both SPEEDLITE compressors always provide the quality BITZER customers have come to rely on. In many thousands of hours of tests on service life, specialists from this traditional company have put the scroll compressors through their paces by subjecting them to the most demanding operating conditions. Only when the subsequent field tests have been passed do the two new scroll compressors for mobile applications go into series production. The ELV21 will be available from spring 2016 and the ELV51 from autumn 2016.

The BITZER Group is the world’s largest independent manufacturer of refrigeration compressors with sales companies and production sites for reciprocating, screw, and scroll compressors as well as pressure vessels all over the globe. In 2014, 3,400 employees generated sales of €657 million.
Overview of images

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Image 1: The ELV21 is eight kilograms lighter and 17 centimetres shorter than the ECH209Y

Image 2: The ELV51 is a hit thanks to its low total weight of just 20 kilograms and it is ten centimetres shorter than the EL7 series
Image 3: Bitzer scroll compressors: SPEEDLITE ELV21

Image 4: With their low construction height, SPEEDLITE scroll compressors are ideal for installation in rooftop and front systems