

Pneumofore Vacuum Solutions: Variable Speed for Energy Savings and Constant Performances

Glassman tradeshow has become for Pneumofore a unique platform to consolidate existing business contacts and to explore opportunities on local and global markets. As traditional exhibitor, Pneumofore will present the latest vacuum solutions and technologies specially designed for the hollow glass industry.

Water and high power savings, with the guarantee of reliable and durable products, are the agenda when recommending Pneumofore centralized vacuum systems. The Lyon event will focus on the variable speed option for vacuum pumps that allows finetuning of the vacuum capacity and a constant vacuum level (mbar(a)) at the IS machine, no matter which mould size and type is used. Pneumofore and its local distributor GEFI welcomes you at Stand 66 to find the proper vacuum solutions for your production needs.

Pneumofore designs and produces since 1923 vacuum pumps and air compressors for industrial applications worldwide. With a constant focus on high efficiency, durability and cost savings, Pneumofore approaches the conti-

nuously evolving market and customer demand providing tailored solutions for large, also remote controlled 24/7 operations. Furthermore, thanks to its technological development during eight decades, Pneumofore has become the world leader in rotary vane technology and the major supplier of vacuum systems for glassworks. In past, all pumps worked with a fixed rotation speed (e.g. 1450 rpm for a Pneumofore vacuum pump powered by 400V, 50Hz, 3-phase). Constant rotation speed determines constant flow and pressure level. Since 1997 Pneumofore is working with frequency converters to test opportunities of improvement, the variable speed drive (VS) version of UV vacuum pumps is now being produced since few years. The VS drive is an electronic device that allows to set frequency / voltage of the electric motor power from 35 to 60 Hz, thus to control the motor speed from 1000 to 1750 rpm with consequent variation of the suction flow rate.

In glassworks, as in many other applications, the vacuum need may vary depending on the production workload. The VS version is able to manage any eventual variation of vacuum by changing the motor speed according to the feedback information received from a vacuum sensor installed directly on the inlet vacuum pipe. This allows to keep the vacuum in the process as constant as possible. In detail, the analogue vacuum transducer connected to one of the I/O terminals of the variable speed drive is constantly checked and, when



UV16 VS

vacuum level becomes higher than the value set by the user (the range is from 10 to 400 mbar), the variable speed drive increases the motor power voltage and frequency in order to enhance the suction flow rate of the pump, until the desired vacuum level is reached again. It is known that constant pressure on IS machines allows to obtain a higher speed and quality of hollow glass production, especially in the final forming process and for complicated bottle and containers shapes, by also reducing settle blow marks. Moreover, the control of the motor speed and, consequently, the regulation of the electric power consumption allows to save energy when glass production process does not require 100 % of potential vacuum system capacity. The benefits are clear: energy savings, a more flexible and adaptable system and the constant vacuum level; these factors are essential for IS glass machines and in many other applications. ■



UV30 VS