



## Glass manufacturing in the Middle East

With an eye on productivity and the other on long term investments to achieve top company performance over the next decades, a leading supplier of glass containers, based in Egypt, updated the vacuum system to serve the IS machines first in 2004 with one UV50 pump and again in 2005 with the second unit UV50. Other large glassworks in Egypt followed this path due to the positive experience with air cooled UV vacuum pumps.



## Beverage Cans Production

The manufacturing process of aluminium cans for the beverage industry is strongly dependent on vacuum. Aluminium is a non-magnetic material and vacuum assists the Pick and Place and shaping processes by holding the cans tightly during different stages. The UV solution provided by Pneumofore for a major manufacturer successfully optimized production and energy savings. Further benefits include higher reliability and noise reduction on the production site.



## Airbus 310 Flight Simulation

Commissioned by Airbus, the Fraunhofer Institute near Munich in Germany is performing research on improving the impact of cabin environment on passenger health in long distance flights since 2005. Atmospheric pressure, relative humidity, vibration, and air composition all affect human comfort in an aircraft. In a simulated airplane cruising at 30.000 feet, experimental passengers are monitored for their reaction under real flight circumstances. Pneumofore supplied the vacuum system essential for generating the changing conditions. Also Honeywell in UK installed UV50 pumps for flight simulation purpose.



## Pasta Only Tastes As Good As Its Vacuum

For pasta production in Italy, vacuum plays such a crucial role that plant owners build dedicated rooms for their central vacuum systems. Production equipment and all additional machinery, as well as the expertise of pasta masters, set the foundation for the success based largely on taste. Almost an alchemical mixture of know-how over generations with the right dosing of vacuum for improved pleasure. No doubt about the leadership of Pneumofore in vacuum solutions for the irresistible spreading of the tasty Italian pastasciutta.



## Pipe Drying

Gazprom has more gas than most other gas companies in the world, with about 17% of the world's proven gas reserves, and over 60% of Russia's reserves. This makes Gazprom one of the major players on the global gas market. In 2005 the company bought 2 UV50 Pneumofore vacuum pumps for drying of gas pipelines. Results so far, have been vast. Also BJ Services offers pipe drying around the globe using air cooled UV vacuum pumps, e.g. for a relevant project in India starting in 2007.



## Vacuum Coating

Sieme Motori processes the windings of electrical motors in a receiver of 23 m<sup>3</sup> volume. To guarantee the leak-free operation of the receiver, a gasket filled with compressed air is used. The customer set and achieved the target of minor evacuation time in order to reach higher productivity. Other vacuum coating processes from glass to automotive metallization run 24/7 with lubricated UV pumps as backing pump down to ca. 50 mbar(a) where roots operate as second stage.



### Meat Packaging of Sliced Bacon

Increasingly in demand for the packaging of sliced meats and other highly perishable foods, centralized vacuum systems replace systems with multiple small vacuum pumps to eliminate oil exhaust and noise levels in the production facilities. Higher vacuum in packing results in longer shelf life due to minor moisture and less oxygen presence in the package.



### Vacuum drying of bricks and tiles

The traditional use of liquid ring vacuum pumps for the production of tiles and bricks can be improved through special pumps designed to operate under such dusty conditions. The switch to Pneumofore air-cooled rotary vane UV pumps allows lower power consumption and trouble-free operation, which offer an attractive ROI duration of about 1.5 years if compared to liquid ring pumps. Also the constant vacuum of UV pumps satisfies brick plants as it allows to maintain quality and speed of production all year round.



### Vacuum System for Thermoforming

Results from the collaboration of Pneumofore with an Italian thermoforming company: in 2005 two thermoforming machines were served by two compact pumps, each one of 180 m<sup>3</sup>/h capacity. After long discussions regarding technical details of the Pneumofore UV vacuum pumps, it was agreed to install one first UV4 with 250 m<sup>3</sup>/h to replace the two 180 m<sup>3</sup>/h pumps: less electrical power expenses and faster forming due to higher vacuum using a serious industrial UV pump instead of several cheap compact pumps with frequent failure.



### The Semiconductor Industry

In 2005 Infineon presented specs for a new vacuum system in the state-of-the-art production facility in Dresden, Germany. Pneumofore was confronted with skilled engineers from the most active competitors on the market. Different technologies to generate vacuum were analyzed in detail. The professional comparison of Life Cycle Costs, efficiency and reliability helped to select the most suitable vacuum pumps manufacturer. Also in Taiwan several UV pumps are operating for different vacuum usage in the semicon and electronics industry.



### Beer Bottling Plant

In the industry of food processing, strict food production regulations can potentially halt the entire production or cause serious fines and high costs for treating cooling liquid waste. A major beer manufacturer became painfully aware of this when inspectors imposed fines for one of their beer bottling plants as a result of new laws requiring lower tolerance for bacteriological contamination. Pneumofore tackled the problem with a special design: high operational temperature to kill all bacteria and air cooling for ease of operation with constant and precise vacuum level during all seasons.



### Higher Productivity for Swiss EPS Manufacturer

In Switzerland, near Lucern, an EPS manufacturer is producing both blocks and small moulds under severe environmental restrictions. The Swiss legislation does not allow emission of pentane in the atmosphere, therefore it is collected and burned. Such an environmental approach with considerable impact on the cost of production equipment, creates exceptional sensibility for any other ambiental aspect. UV pumps replace liquid ring with half the electrical power and higher vacuum for improved EPS production speed and quality due to minor water residual in the finished product.

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