

KAESER Compressors on Route 66 ...

Untapped Potential Released

When it comes to blow-moulding PET containers, KAESER is one of the USA's leading providers of customised system packages.

"Essence Bottling" in Albuquerque, New Mexico, fills 5000 bottles of mineral water an hour. A steady, growing business, but as the company had to source bottles from distant suppliers due to a lack of local bottle producers, sharply rising freight costs were becoming a real problem. A logical solution was to invest in a blow-moulding system and to manufacture the bottles on site. However, to turn this idea into a reality the existing compressed air system would have to be completely upgraded. Up until that point the company's compressed air demand had been very low and was met by a single, noisy 11.5 kW rotary screw compressor. The new system would not only have to provide significantly more air of a much higher quality, but also deliver a considerable increase in pressure.

A mineral water bottling plant in New Mexico is making considerable savings after installing a "SIGMA PET AIR" system and, into the bargain, has also been able to open up a new business opportunity.



Patrick Chaver and John Wilson like their new PET air station a lot

System planning

Once the specifications for the bottle manufacturing plant had been determined, KAESER vendors, Larry and Gary Trujillo from "Advanced Compressor Systems" in Albuquerque, provided a comprehensive quotation for the entire system, which included all piping and installation work.

As Albuquerque lies 1500 m (5000 ft) above sea level, the compressed air system had to be designed to allow for this altitude –

KAESER offers complete system solutions for PET bottle plants

a factor competitor vendors had not considered. Accordingly, the Trujillo brothers recommended a KAESER SIGMA PET AIR-System comprising: 1 KAESER ESD 250 rotary screw compressor with 1:1 direct drive for the 13 bar network, a refrigeration dryer installed downstream from this compressor to treat the air and a KAESER N1400G EP high pressure reciprocating compressor to boost the pressure to 40 bar for the required blowing air.

Minimal noise a prerequisite

"Essence" had also requested that the system should operate as quietly as possible, which of course was no problem for the ESD 250 rotary screw compressor. Sound levels were further reduced, as the booster unit is water-cooled and the ESD package is positioned in front of it to act an additional noise buffer. Noise levels were a major consideration, particularly as the compressed air supply had to be installed in close proximity (15 m/50 ft) to the blow-moulding installation which is located in the open-plan workshop. Quiet operation was therefore essential for "Essence" – and the new system was a pleasant surprise.

Customer satisfaction right from the start

Albert Murray, Chief Executive Officer, and John Wilson, Executive Vice President for "Essence", accepted the Trujillo brother's proposal and a date for the installation was set. The new compressed air system was installed without interruption to the plant's production schedule and at last the moment of truth had arrived. Albert Murray came to inspect the new system and asked for it to be turned on. What he had not realised however, was that the system was already running! As John Wilson remarked "it's ten times as big as our old 15 hp compressor, but ten times quieter!"

Future savings

Since the installation was commissioned, the blow-moulding system at "Essence" has been saving 3 US cents per bottle, which adds up to more than \$ 1200 per 8 hour shift – more than enough to justify investment in the new equipment. It also provides the entire facility with compressed air, whilst the dry, clean air for bottle production ensures consistent bottle quality with minimal scrap levels. "Zero problems," is how John Wilson de-



Here comes the future ...



PET bottles are lightweight and recyclable



The moulds with air inlets



Fine tuning the booster

scribed the KAESER system. In fact the new line is so successful that "Essence" is changing its entire business focus from bottling to blow-moulding in order to fill the gap in the regional market for quality plastic bottles. With a precisely tailored compressed air system solution the possibilities are endless.

Author: Angela Kelly
Contact: angela.kelly@kaeser.com