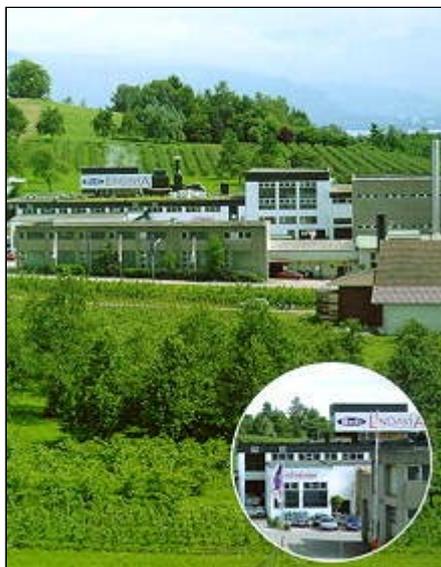


Ripe for the Picking

Anyone who knows the Swabian area in Germany knows that there is a trace of southern climes there - and not just on the beautiful island of Mainau with its world of tropical plants. The mild, scenic region around Lake Constance is a great place to take a holiday and the conditions for fruit farming are ideal. The seat of the Lindavia Fruchtsaft AG is located right in the centre of this holiday and fruit farming countryside that is very rich in tradition. The fact that the fruit juice experts are not just worried about the quality of their fruit was made clear to us when we visited their factory.



You'll find Lindavia's products everywhere, on the shelf in the supermarket, in the restaurant, on the conference table or in the household refrigerator. The fruity, refreshing delicacy from Lake Constance that carries the Lindavia label are well known both in Germany and far beyond its borders. This is just as much a coincidence as is the location of the manufacturer in Schonau, near Lindau. Here, apples, pears, cherries, plums and many types of berries, the main bulk of the raw materials needed for the fruit juices and fruit drinks produced by Lindavia can be processed fresh, straight from the harvest and without long transport routes.

The production is almost fully automated

Manual work, such as the sorting of the delivered fruit, is still a task that ensures quality assurance in the production of fruit juice. But most of the production is automated, and in most cases, that means with the aid of compressed air. The requirements placed on the air used are correspondingly high. On the one hand, it must be generated in the most economical way possible and on the other hand it must satisfy the highest quality demand criteria. 85 of the 120 employees working at the Lindau factory are employed in production. The fruit harvest is between July and October and then it is high season at Lindavia, because then both the fruit presses and the juice processing line are working in three shifts. Eight fruit presses with a daily capacity of approximately 1,000 tonnes can process up to 50,000 tonnes of fruit during the harvest period. The juices and concentrates are stored in tanks with a total capacity of 13 million litres until they are ready for bottling. The ready to drink products, juices, fruit juice drinks, mixed drinks and specialities such as apple cider or apple juice and soda water are filled in glass bottles or recyclable tetrapacks. In this way, around 50 million litres of drink finds its way to the consumer. In addition, fruit juice concentrate made of hard and soft fruits is manufactured. This is bought by the food industry, local dealers and the catering trade throughout Germany and abroad.



(l) - Up to 12,000 tetrapacks can be folded and filled hourly in the pneumatically controlled filling plant.

(m) - The fruit presses - here, three shifts are worked during the high season from July through October.

(r) - Handling and unloading pallets of empties is also one of the many uses of compressed air.

Only one principle: Quality

It is very obvious that a very sensitive product such as fruit juice or nectar needs extreme care and hygiene at all stages of manufacture. In Lindau, experienced fruit juice specialists conscientiously look after every product - from the silo to the tank and from the tank to the bottling stage. But high product quality isn't sufficient on its own in this company: Company philosophy dictates careful use of natural resources. This applies both to preliminary anaerobic treatment of sewage and to the careful use of energy. As an example, the organic gas that is produced during the preliminary treatment of sewage is used to generate steam. This steam is used in many working processes such as sterilizing tanks, the pasteurization of juice and for cleaning bottles.

The compressed air plant:
for over ten years these two oil-cooled
KAESER screw compressors have been
generating the air needed for the whole
works.



Manifold use of compressed air

As in most modern works, compressed air has gained a central place as a carrier of energy at Lindavia, too. Mostly, it is used as control air driving electropneumatic control valves for handling empties, bottling, filling and packing cartons and loading pallets. A further application is the sterilization of containers. The empty tanks are pre-surized by compressed air and then sterilized by steam. The works' air requirement per shift is 1656 m³/hour - with highest reliability. Not an easy proposition when the wide range of applications is considered. This was the reason to install two 75 kW DS 140 KAESER screw compressors with refrigeration drying and filtration downstream over ten years ago. Herbert Haug, Departmental Manager responsible for energy and maintenance: "The units work very reliably and have a low maintenance requirement. We have only had one short shutdown of one of the two compressors during the whole of their service life - and that's already two years ago."

Short CV: Lindavia Fruchtsaft AG

Founded: as a cooperative works in 1936

Location: Lindau-Schönau

Products: fruit juices, fruit juice drinks, mixed drinks
Specialities: concentrates
Annual capacity: approx. 50 million litres, i.e. 33 million bottles and approx. 30 million tetrapacks
Compressors: two KAESER DS 140s, each of 75 kW drive power
FAD: 13.6 m³/min each at 7.5 bar
Service hours to date, approx. 30,000