



***30 years ago, in 1978, the first Packo pump was designed, and today, some 250,000 pumps later, Packo has developed into a renowned manufacturer of stainless steel pumps. They are used with an enormous range of products in various sectors all over the world.***

We spoke to Paul Vandenberg, who after 32 years is still working for his first employer. He has run the pump department in Diksmuide for the past 20 years.

#### **Pump department**

"Originally, we only built pumps for milking installations, but a strategic decision was quickly taken to develop a complete pump range. The pumps were mainly suited for the general food industry, but could also be used as all-round stainless steel pumps in other sectors.

#### **Knowledge and know-how**

A knowledge of hydraulics is required to construct pumps. We didn't want to rely on copying other brands, so to start with we mainly invested in developing mathematical models to calculate the pump geometry of impellers and volute casing. The know-how in stainless steel manufacturing had been present at Packo since 1960. The combination of the two led to a series of pumps which offered high efficiency and a gentle pump action. Even today, investments are still made every year in development and testbeds. We now

have four extensive testing stations which are used exclusively for research. The last of these was brought into use in 2006 for flow rates of up to 1000 m<sup>3</sup>/h and up to 110 kW (see Illustration 1).

#### **Applications**

The first pump series were specifically developed for pumping milk and other foodstuffs, the application for which the Packo pump is also best known. Even so, we have been guided for many years in the development of new pumps by the specific requirements of other applications and industrial sectors.

For the pharmaceutical industry, we have developed pumps which meet the most stringent (international) hygiene standards. They are used in the preparation of drips or medicines. But we have also developed pumps for less hygiene-dependent applications, for which (cast) iron is increasingly being replaced by stainless steel and for which low-cost stainless steel pumps can easily become blocked. Examples include wastewater treatment, chemical baths, solvents, highly flammable liquids (ATEX), and so on. This year, we have built a number of pumps with a 75 kW explosion-proof motor for a power station in Romania. We also supply around a thousand pumps a year in the textile industry for dyeing and washing fabrics, and new applications are being added all the time.

#### **International cooperation**

Packo also develops pumps on behalf of other firms which make use of our

specific know-how. These include some of the world's largest pump firms. They market these pumps under their own name. Thus, for example, we construct pumps for the refrigeration systems on the high-speed trains which run across Europe.

#### **Worldwide exports**

We build over 11,000 pumps a year. They are sent all over the world. Most of them stay in Europe, though, where we are represented by our 30 distributors in virtually every country. All the distributors are firms with added value in terms of both pumps and pump applications. We also have 15 active dealers on the other continents, from Canada to Chile and from South Africa to Japan. The



***Illustration 1. Test station with 300 mm bore pipes and a 110 kW frequency converter for pumps with a flow rate of up to 1000 m<sup>3</sup>/h.***



**Some examples: fruit juices, wine, dairy products, ultra-pure water for pharmaceutical preparations, beer, biodiesel, potatoes, vegetables, powder paint, textile finishes.**

distributors are vital for the constant growth we have experienced for the past 20 years, and we regard it as our top priority to give them technical and commercial support. A highly effective pump selection package has been developed especially for this purpose. Among other things, it includes pump curves, parts lists, detailed drawings and photos together with some 20,000 DXF drawings of pump units. You can also calculate the pipe resistance in an installation or curves at variable rotational speed for different viscosities and many other things besides. It's probably the most complete selection package on the market.



**Packo stainless steel centrifugal pump type FP2**

**Every pump is tested**

Among the other vital factors behind Packo's success and continuous growth are quality and reliability. The customer gets what he orders. The pump curve of all industrial pumps is measured, at the voltage and frequency of the destination country. Using a computer they are compared online with the pump curve in the catalogue, and the identification plate is only printed once it is within the tolerances. It's a 100% guarantee that every pump delivers the requested

capacity. Very few pump manufacturers do this for each pump.

**Trendsetter**

Looking back after 30 years, we can proudly note that Packo has introduced a number of innovations in the world of centrifugal pumps for the food industry.

1. Packo was the first manufacturer to start using electrolytic polishing as a final surface treatment for all stainless steel components. For over 30 years, Packo has had its own electrolytic polishing installation, one of Europe's largest. This process makes the surface smoother and much more corrosion-resistant than manual grinding. For the pharmaceutical industry, it is a standard process. Packo has been using it for the past 30 years for all pumps in all industrial sectors.

2. When EHEDG began gaining in importance for bacteriological cleanability in the early 90s, Packo was the very first centrifugal pump that was successfully tested. Packo has now developed its own test methods for visualising the cleanability of new designs.

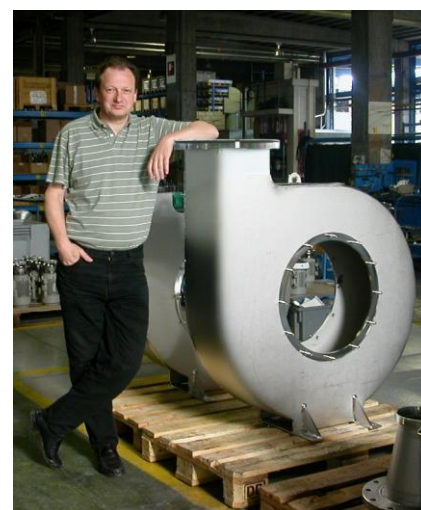
3. The standardisation of mechanical seals was also introduced by Packo, i.e. a single diameter per pump series and the use of standardised seals. As a result, the stock of components held by the end customer can be significantly reduced, and the customer can even purchase his own spare seals directly if he so wishes.

4. Finally, the use of standardised motors. 20 years ago, pumps for the food industry often had a special motor with an extended shaft and special terminal box, but Packo very quickly introduced the standard motor. As a result, the customer himself can

choose which make of motor he wants to fit on the pump. Special voltages and explosion proof versions can also be supplied more easily.

**The future**

In past years, there has been continual investment in Diksmuide. Extra building work was carried out both 12 and 6 years ago, and a further extension is planned for next year: as well as the pump department, the other two departments in Diksmuide, the milking components department and surface treatment, have also experienced continuous growth. Before the end of 2008, the number of employees will have risen above 120. These extensions demonstrate that Packo is serious about the future. We continue to work to develop new products and adapt our existing product range to the increasingly exacting requirements and expectations of our customers.



**Paul Vandebon next to a potato pump that has now been installed in Australia**