


Potato Production Bischofszell

Market segment	Food	
Application market	Fruit & Vegetable	
Pumped medium	Water with raw potatoes	
Pump product	Hydraulic type F With bearing frame	
Country	Switzerland	

Challenge

The customer, a large food producer in Switzerland, processes around 60,000 tons of raw potatoes in its plant every year. These are delivered separately according to type, then cleaned, stored temporarily and, with water as the carrier liquid, transported via almost 300 meters of piping for further processing. The water is recirculated, treated and, for the most part, reused. The production of the various potato products was optimized in 2024. The existing production lines, in which the **Hidrostal type F Screw Centrifugal Pump** had already proven itself as potato supply pump over many years in three-shift operation, were to be replaced by new ones. To ensure that the high-quality requirements could also be met in the future, the customer decided at an early stage to continue using the proven technology from **Hidrostal**.

Solution

The optimization was implemented with five new production lines for the different end products (e. g. Chips, French fries etc.). With two (per line, arranged in series) **Hidrostal type F Screw Centrifugal Pumps** with closed single-channel impeller for gentle handling, the large overall head required due to the long feed lines is easily overcome. Depending on requirements, up to 40 tons of raw potatoes per hour, with a very high volume share of up to 15% in the overall flow rate, can be fed for further processing. Five **Hidrostal type F Screw Centrifugal Pumps** with open impellers are used as return flow pumps.

Benefits

The optimization was carried out to the full satisfaction of the customer. The incoming, raw potatoes can now be better separated into the different types and transported onwards. In addition, optimized supply to the individual processing steps and better control of the production quantities for the desired end products are possible. The gentle handling of the potatoes guarantees the proven maximum quality standard for the tasty products.

Quantity of units sold	10 pcs. supply pumps, 5 pcs. return flow pumps
Pump type	Supply pumps – H06F-M01 + HFS1X-L200 (2-stage in series arrangement) Return flow pumps – E06R-SMN1R + EFS1X-L200
Motor data	Supply pumps – IEC-frame size 200 / 22.0 kW / 6 pole / 50 Hz / 400 V Return flow pumps – IEC-frame size 200 / 30.0 kW / 4 pole / 50 Hz / 400 V
Material combination	Cast iron pump body and wear parts with ductile iron impeller
Duty point	Supply pumps – Flow : 80 liters per second / Head : 29.5 meters (2-stage) Return flow pumps – Flow : 80 liters per second / Head : 30.8 meters
In operation since	2024