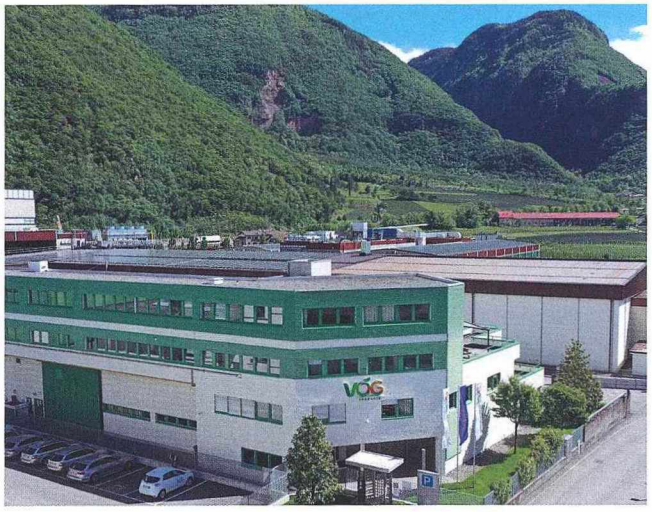
Finest apple juice from VOG with Flottweg presses and centrifuges

| Apple Juice | Belt Press | Juice Extraction | Separation Technology | Separator | Yield Maximisation |



The VOG Products co-op is the largest fruit processor in the region, and one of its most important products is apple juice.

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South Tyrol's largest fruit processing plant processes up to 4,000 tons of raw goods per day. Thanks to modern separation technology from Flottweg, this gets done economically and with high efficiency.

The main product of the South Tyrolean fruit farmers is apples, which are primarily grown in the Überetsch-Unterland district, in the valleys between Bolzano and Merano and in Vinschgau. Apple production is of great importance in terms of quantity and economy. The apple orchards cover a total area of 45,450 acres and over 987,000 tons of apples were harvested in 2020. The VOG Products co-op is the largest fruit processor in the region, and one of its most important products is apple juice. Processing the enormous quantities of fruit requires machines that guarantee reliable and economical production and also ensure the apple juice quality for which VOG Products and the entire region are renowned. Production is realized with the help of belt presses and separators from the Bavarian centrifuge and press specialist Flottweg.

South Tyrol and fruit growing are two things that have belonged together for decades. As a result, large fruit processing companies are also located in this region. VOG Products is a joint venture between 18 cooperatives and four producers that processes the harvests of roughly 13,500 fruit growers. In apple juice production, up to 4,000 tons of fruit are processed into juice every day during the peak season, which of course can only be achieved with the most modern machinery offering high performance and reliability. Flottweg belt presses and separators are the main components for processing the large quantities and, above all, ensuring consistent juice quality.

Maximum yield for maximum profitability

When using large machines, two of the most important metrics are throughput and efficiency. In a short time, VOG Products aims to process as many apples as possible as well as obtain the maximum amount of juice from the fruit, while maintaining a consistently high product quality. VOG Products has been working with Flottweg machines since 2005. Flottweg belt presses are used for juicing, as they can handle enormous quantities without any problems and have proven for years to be reliable and economical.

In the production process, Flottweg belt presses form the central unit for juice extraction after washing, presorting and crushing the apples. Flottweg presses offer various special features that are particularly important for fast and economical production at VOG Products. In particular, this includes the controlled charging of the fruit mash, the various roller profiles and the special belt guide, which ensure alternating pressure and shear loads and result in optimum yield – with an integrated cleaning function after the pomace has left the machine.

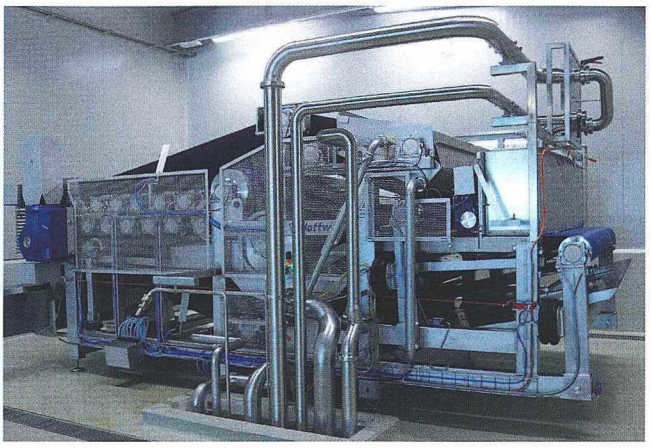
The fruit mash is added to the belt via an automatic and sensor-controlled feeding unit and partially juiced under the first roller. Depending on the quality of the raw goods, the width and height of the mash cake can be adjusted to optimize the processing. The L-profile roller then increases the pressure on the mash, followed by more rollers which further intensify the pressure. Control of the entire juice

extraction process is fully automatic, for maximum yield with a constant load on the machine.

A key advantage of belt presses compared to other juice removal methods, such as hydraulic presses, is the continuous juice extraction process. There is no need to interrupt production for mash and pomace exchange. The Flottweg belt press continually processes the fruit mash, almost non-stop.

"It is extremely important to us that this production step is as efficient as possible. This is where valuable apple juice is obtained from the raw goods. Flottweg belt presses achieve a yield of 75 percent with a very high quality. In peak periods, we process up to 25 tons of apples per hour, resulting in 19 tons of apple juice. That's an extremely good ratio," says Thomas Meran, Plant Manager at VOG Products. "Maybe we could press a little more juice out of the pomace with extremely powerful hydraulic presses, but at the cost of a much higher technical outlay and not in a continuous, fast run. We also found in tests that the naturally cloudy apple juice from the belt presses is of a higher quality than that from hydraulic presses."

At VOG Products, however, the economic efficiency of juice extraction is not solely attributed to the juice yield aspect. The better the fruit mash is juiced, the drier the remaining pomace. A pomace with low liquid content and therefore lower volume can be stored in significantly less space and can also be processed more easily for other products.



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Rotation follows pressure

Though in principle the apple juice is ready after pressing, it cannot be sent to the consumer yet. The end consumer demands that the juice always has the same quality and turbidity depending on the variety and brand. Therefore the turbidity, and thus the particle size and quantity of the