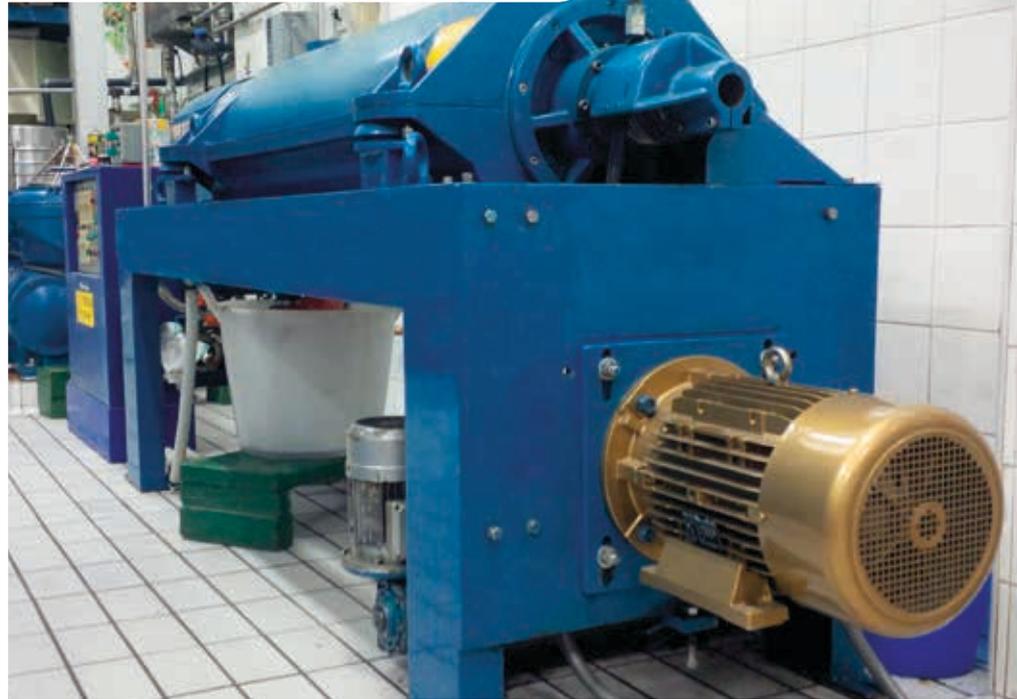


## REEL SuPremE® motor for the extra virgin olive oil production industry



### G. Fratini Oil & Grain Mill

The G. Fratini Oil & Grain Mill has been dealing with soft wheat flour and extra virgin olive oil for over three generations. The company's objective is to offer a quality product made from local raw materials and to introduce innovative techniques to improve the organoleptic properties of the product while fully respecting the environment.

Commissioning date:  
September 2014

The G. Fratini Oil & Grain Mill uses the continuous-cycle method of olive oil extraction. This system consists of a series of machines connected to each other in such a way that any interruptions in the process cycle are completely eliminated. Continuous-cycle systems arose out of the need to achieve ever better quality for the finished product, extra virgin olive oil.

The olive processing stages are washing, crushing, malaxation, centrifugation and separation. After being crushed to a paste, the olives are sent to a horizontal centrifuge separator. The decanter separates the paste into each of its three phases, i.e. oil, water and pomace, which all have different specific weights and can thus be separated using centrifugal force.

Having always kept a close eye on energy use, the Fratini company decided to replace the previous motor installed on the centrifugal separator with the new REEL SuPremE® motor. This was combined with the FlexiMova® cm frequency inverter in order to optimise energy consumption, avoid waste, maintain a high level of efficiency and improve the quality of the entire system as well as the yield of finished product.

**Benefits:**

- Energy savings by installing the REEL SuPremE® package with the FlexiMova® cm frequency inverter. The customer has reduced electricity consumption by 20%, thus saving more than 15% on energy costs.
- Increased machine reliability for more accurate speed control
- Motor bearings last longer due to low rotor temperature.

**Application: Centrifugal separator (decanter)**

The centrifugal separator (decanter) consists of a cylindrical tank with a rotating drum and works by separating components with different densities using centrifugal force. The crushed olives are poured in from above and subjected to centrifugation of up to 3700-3900 rpm. The separator is powered by the REEL SuPremE® motor which is connected to the screw conveyor and bowl. The FlexiMova® cm frequency inverter controls the motor so as to achieve an optimum speed differential: the decanter bowl rotates at high speed on the outside and

generates the centrifugal acceleration required to separate oil, water and pomace, while the inner screw conveyor rotates at a different speed (speed differential) which serves to extract the pomace. By controlling the speed differential, extraction of the solids can take a longer or shorter time to complete. This speed can be adjusted according to the properties required for the final product.



**Scope of supply**

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REEL SuPremE® motor 11 kW, 1500 rpm

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FlexiMova® cm frequency inverter

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REEL SuPremE® motor



FlexiMova® cm frequency inverter



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