

## Case Study

### Sweet success for sugar mill's high-powered centrifuge

A sugar producer has increased the performance and reliability of a high-powered centrifugal machine after changing the variable frequency drive (VFD) used to control the motor.

PTPN XI PG Kedawung is a major producer of sugar in Indonesia. It owns many plantations and sugar factories in the country.

One of its centrifugal machines was underperforming and had become unreliable. This resulted in downtime and maintenance costs, as well as affecting the quantity and quality of the sugar product.

One of seven stages in the sugar production process is the separation of the sugar crystals in the massecuite from surrounding molasses. It does this by spinning the product in the centrifuge at speeds of up to 1,200rpm using a high-powered motor.

The existing VFD was deemed unreliable by engineers and Sumitomo Cyclo Drive Asia Pacific Pte Ltd was brought in to provide a solution.

“The problems with the existing drive were impacting on production at the sugar mill. We considered the power requirements of the motor and the intense production schedules and quickly identified the Optidrive P2 VFD as a good replacement,” said Deddy Christian, Area Sales Manager at SHI Cyclo Drive Asia Pacific.

“The drive had to be robust and powerful enough for the application, while ensuring its size was compact to fit into the existing cabinet without any problems.”

“The customer was impressed at how easy the drive was to install and set-up, as well as its size which was smaller than the previous competitor drive, creating more space in the control cabinet.”

There were also energy efficiencies created as a result of installing the new drive due to the accurate motor control produced by the VFD.

A 160kW, 380V, 3PH in, 3PH out P2 drive frame size 7 was used. Its IP55 enclosure rating meant it could more than cope in the conditions.

The Optidrive P2 high-powered drive is available in IP20, IP55 and IP66 / NEMA 4X enclosures; single and three-phase input of between 200v to 600v, 0.75kW to 250kW and 1HP to 350HP. It supports all motor types, including IM, PM, BLDC and SynRM.

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**Notes to the Editor**

**Invertek Drives**

Invertek Drives Ltd is dedicated to the design and manufacturing of electronic variable frequency drives for controlling electric motors. Established in 1998 it has grown year-on-year and is now one of the world's leading innovators in VFD technology.

In November 2019 it was acquired by Sumitomo Heavy Industries Ltd (SHI), a leading global manufacturer and distributor of power transmission and control equipment. Invertek's UK headquarters, located at Welshpool, Powys, UK, houses specialist facilities for research and development, manufacturing and global marketing.

All operations, including research and development, are accredited to the exacting customer focused ISO 9001 quality standard whilst its Environmental Management System is accredited to the ISO 14001 quality standard.

In 2019 a new 5,500 sq metre global manufacturing and distribution facility was opened at the headquarters, allowing production of up to 400,000 VFDs a year. Invertek's products are sold globally by a network of specialist distributors in over 80 different countries.

Invertek Drives unique and innovative Optidrive range is designed for ease of use and meets with recognised international design standards for CE (Europe), UL (USA) and CTick (Australia). More details can be found by visiting [www.invertekdrives.com](http://www.invertekdrives.com).