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## Happy New Year

January 2017



TCL would like to wish all our customers and agents a very happy and prosperous New Year and thank them for their continued support. The core focus of TCL remains unchanged, to provide a complete solution to turbine operators for their control system and maintenance requirements. However, we are in the process of rolling out a development program that will keep TCL at the forefront of the market place in terms of the technology that we can deliver. This development program has led to the production of a number of new products in recent years, some of which are summarised below.

Expect further announcements in the coming months of future product developments.

## New products

January 2017



### Frequency convertor: -

Following the successful development and implementation of the SmartStart system, TCL have developed a solid-state frequency convertor. The TCL frequency converter utilises the latest technology in IGBT design to provide a high efficiency low cost solution. Typical applications include:-

- Temporary generation solutions, when the generator frequency does not match the grid frequency
- Marine installations, such as ship to shore power supplies
- Variable frequency generation such as wind turbines

At present the TCL product range covers the load range 10 to 1000 kVA with frequency ranges of 2 to 400 Hz

### Avon IGV test box:-

The test box contains the necessary equipment to monitor and display the Avon IGV position against Avon speed. The IGV monitor will monitor

the following Avon parameters:-

1. Avon IGV position
2. Avon bleed valve position
3. Avon speed
4. Avon CDP

There are options to add additional inputs such as throttle position, exhaust temperature etc. A 15" TFT touch sensitive screen is fitted to provide the user interface. The monitor is housed in a rugged, waterproof equipment case.

Contact TCL Sales department for details at:- [sales@tcluk.net](mailto:sales@tcluk.net)

## TCL New Projects

January 2017



### Scandinavia

This contract builds on previous projects TCL have successfully completed in the area. The scope includes the supply and installation of liquid fuel control systems for two quad RR Avon gas turbines. The equipment supplied includes:-

1. TCL Posiflow systems and Avon modification kits
2. TCL SmartStart panels, DC soft-start for the Avon starter motor
3. IGV and bleed valve monitoring transducers
4. PT Overspeed trip monitors and speed probes

Four of the engines are the RM6 variant of the RR Avon which was built in Sweden for the air force and used on the SAAB Dracken fighter. The RM6 has a number of differences to the standard industrial RR Avon, in particular around the on-engine fuel system. This required some modifications to the standard TCL Posiflow fuel system.

The installations were completed in two phases during October and November of 2016 and have been successfully commissioned.

### Southern Africa

TCL have secured a contract for the supply and installation of LV switchgear for a gas turbine in the Southern Africa region. The switchgear controls the auxiliary drive motors of the gas turbine and includes the AC and DC LV starter panels. The AC panels utilise direct-on-line starters whilst the DC panels will be fitted with solid state soft-starters based on the TCL SmartStart technology.

The existing DC starters use switched resistors to control the current during the motor start. The 110 Vdc contactors used for switching the resistors are becoming increasingly obsolete. The TCL SmartStart offers a cost-effective alternative to the switched resistor solution, with the additional benefits of zero maintenance and increased monitoring

facilities.

[click here to see details of TCL projects>>](#)

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