

## Diesel Rotary UPS Systems (DRUPS)

A reliable and resilient support infrastructure mitigates operational risk and thereby optimizes the availability of power to the business. Functional design requirements must meet key business objectives and the management philosophy of the site. The need for scalability of

Capital investment modularity in approach and increasing power density influence the choice of UPS systems for providing conditioned, uninterruptible and continuous power supply to critical loads. The UPS from HITEC PowerPRO series meets all of these requirements.



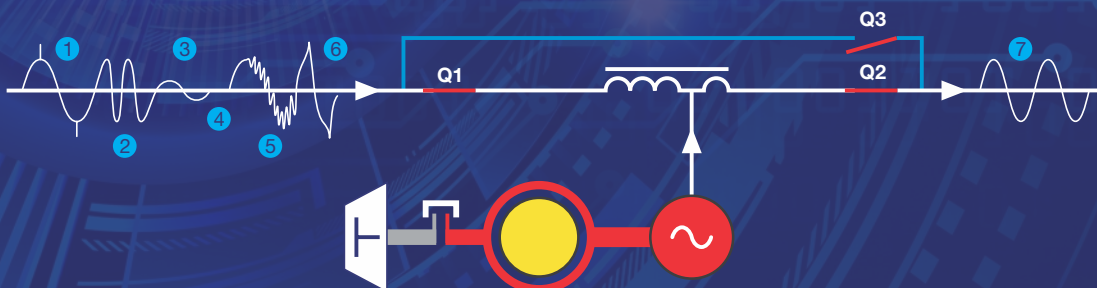
### PowerPRO2700 Features

- Automatic bearing lubrication
- Ducted air cooling and filtration
- Integrated noise reduction
- Plug and play connectivity
- Visual health and system status
- Remote monitoring and support
- Performance based reporting

### The new standard in continuous power that delivers:

- Lowest possible TCO
- Greatest reliability and uptime
- Highest available system efficiency
- Unrivalled monitoring and reporting
- Rapid and straightforward installation
- Intuitive control and operation
- Compact footprint, highest power density
- A sustainable and battery-free solution

### Exceptionally High No-Break UPS Ratings Predictable Lowest Total Cost of Ownership Optimized for Highest Efficiency



- 1 Voltage peaks
- 2 Frequency variation
- 3 Brown-outs/voltage drops
- 4 Black-outs/outages
- 5 Radio frequency interferences
- 6 Harmonic distortions
- 7 Continuous quality power

A Hitec PowerPRO acts as a filter for all sorts of utility disturbances



**1 The diesel engine** is kept in optimal condition to enable a short start and quick load acceptance. Emission optimized engines are available to comply with carbon emission standards from EPA or TA. Diesel Start Delay function is available to prevent unnecessary diesel starts.

**2 The free-wheel clutch** is a robust mechanical machine, self-lubricating and with low maintenance requirements. It operates without any external control thereby ensuring a “shock-free” delivery of power.

**4 The Energy Transfer Module (ETM)** is the heart of the system. It transfers the kinetic energy stored in the flywheel to the generator, so guaranteeing an uninterrupted supply of power.

**3 The generator** is matched with the nominal load and reactor ensuring good dynamic system response. Careful design of the exact characteristics of the generator and reactor provides an active filter to remove both utility and load-borne anomalies like voltage spikes, frequency variations and harmonic distortions. Load and utility short circuits can be cleared without the need to switch the load to bypass. The generator also enables power factor correction close to unity.

**5 The flywheel** is available in different sizes to match the required output power and ride-through time. With variable speed controls, the amount of energy stored can be controlled, to match the power need, hence increasing the overall system energy efficiency significantly, especially at partial loads. (Applicable for PowerPRO3600)

## SYSTEM ADVANTAGES:

### Reliability

A straightforward design with proven technology, a brushless system and low speed flywheel ensure high reliability.

### Efficiency

The most efficient fully operational UPS system in the market, up to 97%.

### Power factor correction

The input power factor remains close to unity, minimizing power factor charges from the utility.

### Dynamic filter

The choke and generator act as a rotating filter, removing harmonics from both the input and output.

### Voltage regulation

The output voltage is controlled independent of the input voltage.

### Small footprint

The installed size of the system is 40 to 60% less when compared with static UPS systems.

### Energy Storage Optimization mode

Energy Storage Optimization mode (ESO mode) reduces the accumulated flywheel energy to the level that is needed to guarantee UPS function, thus saving energy.

### Diesel Start Delay

Diesel Start Delay mode (DSD mode) prevents unwanted diesel starts for short utility interruptions, saving fuel and equipment wear.

## AUTHORISED BUSINESS PARTNER

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