

OVERVIEW

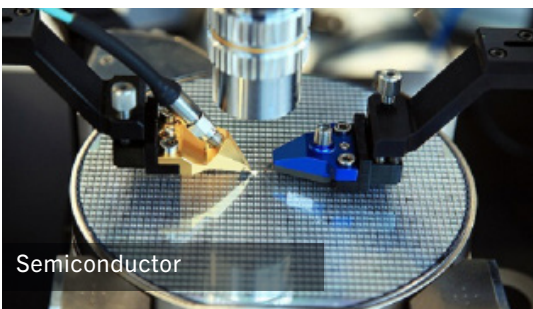
Sensitive industrial processes necessitate not only an uninterrupted power supply, but also a high level of power quality. Even minor voltage fluctuations or micro-cuts can have significant technical and economic consequences for users in industries such as food and beverage, pharmaceutical, semi-conductor, and heavy manufacturing.



Food and Beverage



Pharmaceutical



Semiconductor

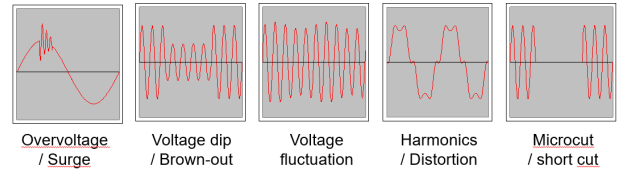


Processing Facilities

OUTSTANDING VOLTAGE CONDITIONING AND MICRO-CUT PROTECTION

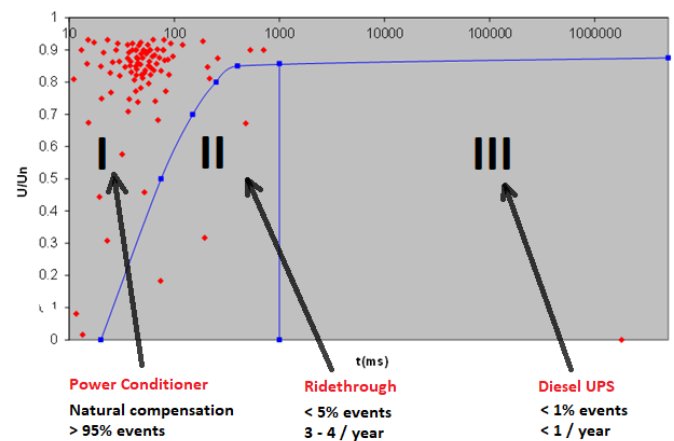
IEM Power Systems has created ideal solutions to protect sensitive loads from electrical disturbances such as micro-cuts, voltage transients and fluctuations, flickers, harmonics, and other disruptions.

The Rotabloc RBQ employs simple, efficient, conventional electrical and mechanical components, resulting in a machine that is highly robust and reliable. The system consists of a standard synchronous generator coupled to a low-speed steel flywheel in the air. Its design results in a longer life expectancy (> 25 years) and very low maintenance costs.



NORMAL OPERATION

The Rotabloc RBQ continuously protects facilities from the most common disturbances, such as voltage dips and spikes, slow voltage variations, harmonics, and flickers. These problems account for more than 99% of the power quality disturbances that occur on a daily basis.



By filtering out these disturbances, the Rotabloc RBQ:

- Prevents wear and damage on facility infrastructures.
- Eliminates maintenance downtime necessary to repair and restart production lines.
- Avoids loss of high value manufactured products.

SHORT INTERRUPTION

The Rotabloc RBQ maintains the power supply at its correct voltage and frequency while protecting the load during a significant voltage drop or brief power outage. This is accomplished through a direct mechanical transfer of the energy stored in the kinetic accumulator into the alternator without the need of any electronic power conversion or other complicated technologies. When a stable power supply is restored, the Rotabloc RBQ safely returns the load to the utility and is ready to act again.

PRODUCT RANGE (60HZ - 480V)

Product	Power (kVA)	Power (kW)
RBQ-1200	1200	960
RBQ-1600	1600	1280
RBQ-1900	1900	1520
RBQ-2400D	2400	1920
RBQ-2600D	2600	2080
RBQ-3300D	3300	2640
RBQ-3800D	3800	3040

For greater power, multiple modules can be easily connected in parallel, providing scalable and flexible solutions in both low and medium voltage.

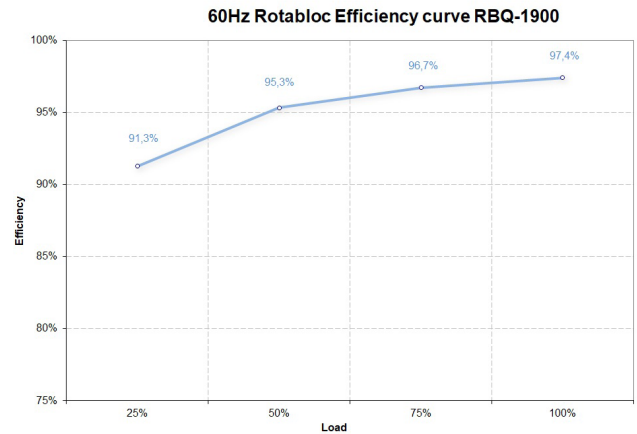
The Rotabloc RBT product line covers lower power ratings starting from 400 kVA. Contact IEM for further information.

SAFETY AND RELIABILITY

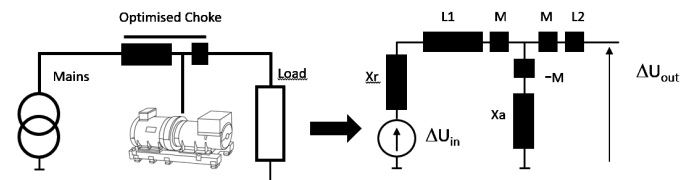
- Purely electromagnetic system without batteries or capacitors: no risk of fire, explosion or release of hazardous gases.
- Work at ambient temperature (up to 50°C): no need for air conditioning.
- Operation and maintenance accessible to standard technicians.
- Full automatic lubrication. No stopping required.

ELECTRICAL FEATURES

- High efficiency at full and partial load

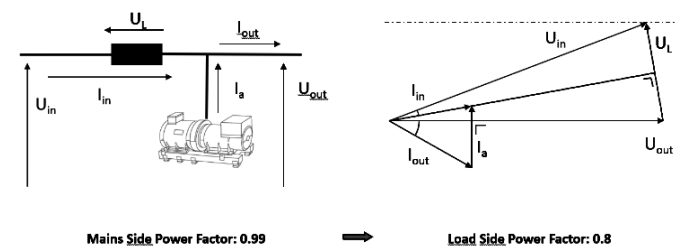


- Voltage sag correction



$$\Delta U_{out} = \frac{X_a - M}{X_r + L1 + M + X_a - M} \Delta U_{in} \rightarrow \frac{X_a \ll L1}{X_a \sim M} \rightarrow \Delta U_{out} \sim 0$$

- High short-circuit power: 15 to 20x I_n
- Harmonic Currents Filtering: $\geq 95\%$
- Power Factor Compensation



Mains Side Power Factor: 0.99

Load Side Power Factor: 0.8



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