



GUTOR MAINTENANCE

Maintain your UPS operation at its optimum throughout its lifetime

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The regular preventive maintenance systems provides a comprehensive visual, environmental, and electronic inspection of your Gutor UPS systems to ensure that components are performing to defined specifications.

Selecting a Gutor specialist for the maintenance work of your system, you will receive access to highly trained and experienced engineers with proven procedures and technical skills.

We support you throughout the life cycle of your system with maintenance planning and scheduling. Maximizes your return on investment by making sure your assets are always running in top form, extending equipment life and reducing unplanned downtime.

What is included?

- Critical components replacement which is essential to ensure UPS optimum operation.
- Different options available to optimize OPEX depending on your UPS installation environment, site conditions and industry.
- System health check and major components functional test.
- Tailor-made recommendations for our clients to meet their needs in installed base management.

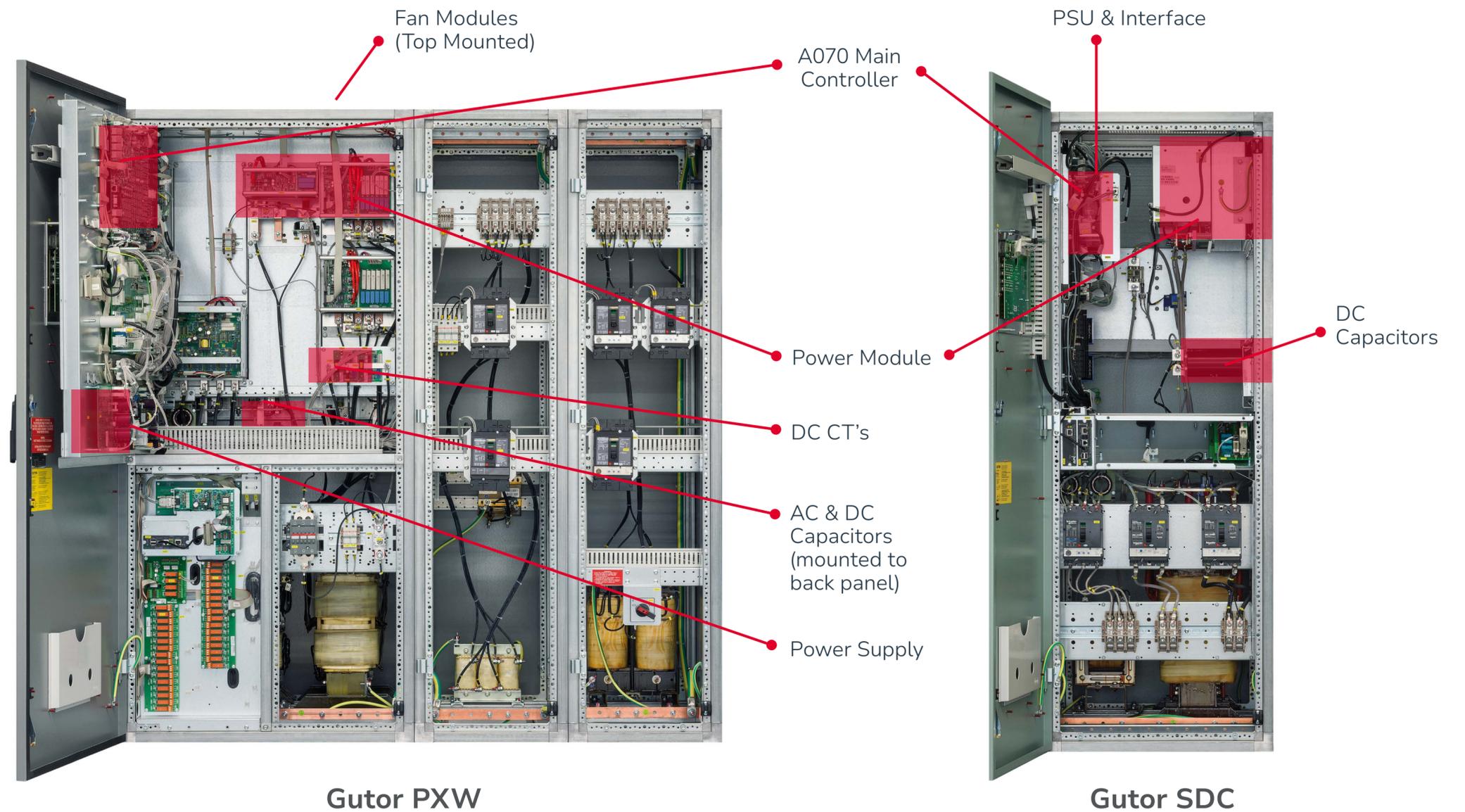
How to plan ahead

Understand the major parts replacements in your UPS systems on the next page. They should be replaced according to the replacement cycle indicated in the following schedules.

IMPORTANT: Failure to perform preventive maintenance will inevitably result in failure of parts that have limited operational lifetimes. This can expose your load to an unreliable utility source without secure backup, thus jeopardizing availability.

INTRODUCTION TO THE PARTS

The common parts in an UPS system and a DC power supply system.



Product shown is for illustration purpose.
Actual product may vary due to product enhancement



STANDARD REPLACEMENT SCHEDULE

As part of the standard replacement schedule, the following components need to be replaced:

Spare part	SDC	XXW	PXP/PXC	GUM	Replacement cycle
Fan module	x	x	x	x	4-6 years
Legacy Controller accessories (i.e RAM, RTC)	x	x	x		8-10 years
DC current sensors		x			8-10 years
Capacitors	x	x	x		6-9 years
Power supply	x	x		x	8-10 years
Power module (including DC capacitors)			x		8-10 years
Interface board	x				8-10 years
Battery bank	Please contact us for Battery Replacement Guideline				
Air filter	Must be checked every 6 months. Replacement depending on level of contamination.				



EXTENDED REPLACEMENT SCHEDULE

As part of the extended replacement schedule, the following components need to be replaced:

Spare part	SDC	XXW	PXP/PXC	GUM	Replacement cycle
Main controller	x	x	x	x	8-10 years
Interface board		x			8-10 years
HMI display	x	x	x	x	8-10 years
Fan monitor/control board	x	x		x	8-10 years
SBS controller		x			8-10 years
Parallel controller board		x	x		8-10 years
External connection board	x	x	x	x	8-10 years
Power extension board		x			8-10 years
Rectifier module	x	x			8-10 years
Inverter module		x			8-10 years
Static switch		x			8-10 years
AC/DC, DC/DC converters	x	x	x	x	8-10 years
Static transfer switch	x	x	x	x	8-10 years
Harmonics filter	x	x			8-10 years

IMPORTANT: These additional replacement is required if the system is exposed to harsh environmental conditions (i.e.: vibration, extreme climate, consistent high temperature exceeding design temperature, air ambient pollution). Consult us for an appropriate recommendation.

REPLACEMENT OF BATTERIES

Why and when to replace batteries

Battery life varies between 4 – 20 years depending on the battery types, ambient conditions, and degree of maintenance. Unplanned and inconsistent maintenance often leads to a shortened service life. Eventually, the battery banks will lose the capability of supplying power to the load and forced to be replaced. The best way to monitor battery health and detect weak batteries is to perform regular battery discharge tests (even on low-maintenance batteries).

To advance battery health management and monitoring, we strongly recommend [Gutor Battery Management System \(G.BMS\)](#).

For more information please contact us for a consultation.





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