

Reduce electricity waste at the source with up to 18% site-wide savings through power quality optimisation.

enPact FilterPro is an advanced power conditioning solution designed to help businesses reduce their electricity costs by up to 18% - without replacing or disrupting existing systems. By improving the flow and quality of electrical energy across your site, **FilterPro** directly addresses the invisible energy losses caused by voltage fluctuations, load switching, and power system noise. It's a smart, fully retrofit solution ideal for sites with high concentrations of motors, compressors, refrigeration systems, and other inductive loads.

Employing the principles of spintronics, the enPact FilterPro aligns magnetic wave energy with the power system, activating previously unusable electron spin energy during the standard power supply process. This activation enhances the transmission efficiency of electrical energy.

Furthermore, the technology optimises current flow through the supply of magnetic wave energy, facilitating energy generation during consumption. Ultimately, it reduces overall energy consumption by compensating for lost energy, improving the power environment, and curbing unnecessary power usage.



The Process for enPact FilterPro:

- 1.Acquire half hourly data & energy loads
- 2.Proposal
- 3.Guaranteed savings
- 4.Installation
- 5.Savings report

Performance variations according to load type:

- Higher electrical density correlates with improved power efficiency
- Electrical density diminishes when it interacts with a load
- Notably, the density of electricity is lower in inductive loads compared to resistive loads
- This product is designed to enhance the reduced electrical density
- Consequently, it exhibits superior performance under inductive loads

The optimal locations for the application of inductive loads include a variety of settings such as hotels, restaurants, factories, and supermarkets. The implementation of these loads can yield energy savings of up to 18%

WHAT WE DO:

- Assess the type and load of your site
- Estimate your potential savings rate
- Calculate payback period
- Analyse current trends in electricity consumption
- Conduct a site survey
- Monitor energy usage over one week and provide guaranteed savings recommendations



OPTIMISATION OF
POWER SUPPLY



REDUCED ELECTRICITY
CONSUMPTION



LOWER EXPENSES



INCREASED
PRODUCTIVITY



IMPROVE
PROFITABILITY



Climateqa
cutting carbon since 2010

enPact FilterPro

THE BENEFITS

- Environmental improvement:

The continuous depletion of energy resources necessitates a reduction in energy consumption through enhancements in the electrical energy environment

- Efficiency enhancement:

Our product, which incorporates cutting-edge carbon nanotube technology (CNT), effectively mitigates noise generated during load operations, thereby promoting energy savings

- Energy cost savings:

With rising electricity prices, enPact FilterPro offers a viable solution for reducing your energy bills

- Lifespan of 20 years
- 8-18 month payback
- Energy saving rate of up to 18%
- Fast installation
- Saves costs on electricity bills

SECTORS

A

Heavy industry, manufacturing facilities and equipment, theme park

B

Light industry, manufacturing facilities and equipment

C

Facilities with high operating rate of heating and cooling facilities (supermarkets, department stores, grocery stores)

D

Buildings, hotels, restaurants and domestic properties

E

Facilities with high proportion of lighting in total electricity use (concert halls, stadiums)

MODEL	SECTOR				
	A	B	C	D	E
NF-1000	Under 6.5 months	Under 8 months	Under 10 months	Under 13 months	Under 20 months
NF-500 IPF-300	Under 6.5 months	Under 8 months	Under 10 months	Under 13 months	Under 20 months
NF-300 IPF-300	Under 6.5 months	Under 8 months	Under 10 months	Under 13 months	Under 20 months
NF-200 IPF-200	Under 6.5 months	Under 8 months	Under 10 months	Under 13 months	Under 20 months
NF-100 IPF-100	Under 6.5 months	Under 8 months	Under 10 months	Under 13 months	Under 20 months
NF-50 IPF-50	Under 6.5 months	Under 8 months	Under 10 months	Under 13 months	Under 20 months
NF-30 IPF-30	Under 6.5 months	Under 8 months	Under 10 months	Under 13 months	Under 20 months
NF-20 IPF-20	Under 6.5 months	Under 8 months	Under 10 months	Under 13 months	Under 20 months
NF-20 IPF-20	Under 11 months	Under 13 months	Under 16 months	Under 21.5 months	Under 32.5 months

Nike factory in Indonesia

Nike implemented the IPF-300 industrial energy-saving solution at one of its factories. Following installation, daily energy consumption dropped by 12.9%, from 10,392 kWh to 9,052 kWh. Importantly, this reduction occurred without any changes to operations, load, or production.

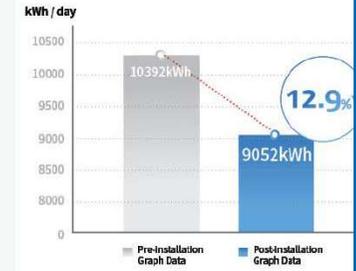
- Before installation: 10,392 kWh/day
- After installation: 9,052 kWh/day
- Payback 12 months

This case demonstrates substantial energy savings in large industrial environments using the IPF-300 device

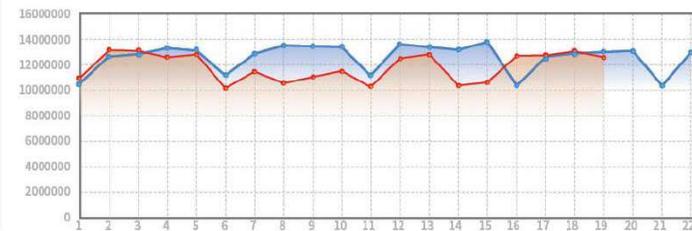


In September 2017, IPF-300 was installed at Nike factory located in Indonesia, and monthly electricity usage was measured before and after installation. As a result, Nike factory's total power consumption after installation was reduced by 12.9% compared to before installation. During the trial period, there will be no significant changes in operating procedures, loads, or sales. After installation in Nike factory, the ROI is around 12 months.

Reduction in Normalized Consumption (kWh / day)



Reduction in Normalized Consumption (Wh / day)



Location	Nike Shoes Factory, Indonesia
Type of Business	Factory
Business Hours	24hrs / 365days
Type of Product	Industrial
Product Model	IPF-300
Saving Rate	12.9%
Payback	12 Month



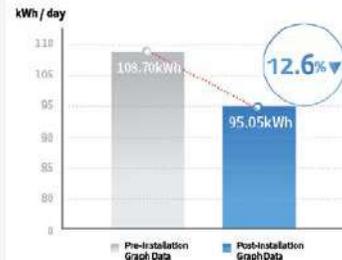
7-Eleven convenience stores are a famous chain mart in Korea that sells sundry goods and groceries to consumers. Since it treats food, it is composed of refrigerating, freezing machines, consisting of inductive loads and composed of lights.

Compared the 24hr power use, a week before the installation and a week after the installation. The energy saving was 13.65kWh a day after installation which is about 12.6% saving rate.

Before and After Installation Date Analysis Graph



Reduction in Normalized Consumption (kWh / day)



Location	7-ELEVEN, South Korea
Type of Business	Convenience Store
Business Hours	24hrs / 365days
Type of Product	Commercial
Product Model	IPF-30
Saving Rate	12.6%
Payback	12 Month

7-Eleven convenience store in Korea

A 7-Eleven convenience store operating 24/7 installed the IPF-30 commercial energy-saving device. The store, which consumes significant power due to refrigeration, freezing, and lighting equipment, achieved a 12.6% reduction in daily energy consumption, saving 13.65 kWh per day after installation.

- Before installation: 108.70 kWh/day
- After installation: 95.05 kWh/day
- Payback: 12 months

This case highlights the product's effectiveness in reducing energy usage in continuously operating retail environments

Save energy and lower carbon emissions immediately and continuously

The National Grid supplies an average voltage of 242 volts to users across the UK. However, electrical equipment operates most efficiently at 220 volts, with any supply above this threshold resulting in unnecessary waste. According to Ohm's Law, optimising voltage can yield immediate savings of up to 12% in kilowatt-hours (kWh), leading to a prompt reduction in electricity bills and a smaller carbon footprint. Furthermore, as outlined in the UK's wiring regulations (BS7671), electrical equipment designed to operate at 242 volts may experience a reduction in operational lifespan of up to 46%

In essence, voltage optimisation is a specialised form of voltage management aimed at reducing energy consumption. By adjusting and controlling voltage levels at a user's site, it is possible to achieve energy savings of up to 12%

Voltage optimisation employs transformer-based technology, designed to deliver a voltage level more suitable for the specific electrical devices, thereby enhancing their performance. This technology adheres to the limits set by European harmonised voltage standards. The fundamental design features a low-loss, series-connected transformer that optimises either an entire site or individual loads, targeting those most amenable to improvement

BENEFITS

Suitable for businesses with a three phase electricity supply

- Delivers an immediate reduction in electricity consumption of up to 12%
- Sustains reduced electricity consumption continuously, 24/7 and throughout the year
- Offers a swift payback period
- Contributes to lowering carbon emissions
- Extends the lifespan of electrical equipment
- Enhances overall power quality
- Compatible with on-site power generation systems including solar and wind
- Features adjustable settings for improved control and savings
- Provides an easy-to-install, "fit and forget" solution
- Fully guaranteed

Manufactured in the United Kingdom*

*Established technology with a proven UK track record since 2002

OPTIONAL FEATURES

True Bypass

Ideal for use by non-technical staff, this manual switch allows you to bypass the optimiser unit and converts the supply to its original, non-optimised level. Ideal for testing new equipment or when you have an electrical fault

BrownOut

Our innovative BrownOut low-voltage-seamless-inhibit feature guarantees that your optimised voltage remains at an appropriate level. We offer multi-functional input metering, along with output voltage and status indication monitoring systems. A distinctive aspect of our solution is the ability to instantly demonstrate energy savings by simply activating a key switch, which triggers the seamless inhibit feature. This allows for real-time monitoring of energy consumption both with and without optimisation.

Total Power Quality

The Eco-Max-Power version is custom-manufactured to meet the specific requirements of each site, ensuring that no two systems are identical. This flexibility enables integration with any other power quality solutions that may be specified for the location. By incorporating additional technologies such as power factor correction, harmonic filtration, and surge protection, the Eco-Max-Power can serve as a comprehensive power quality solution for your entire site.

APPLICATIONS

Industrial, manufacturing & engineering

Savings can be made on lighting, machinery, motors, pumps fans, air compressors and more

Hotels, restaurants & pubs

Savings can be made on lighting, kitchen appliances, and in accommodation areas with HVAC system, and more

Office & retail

Savings can be made on electrical equipment such as lighting, HVAC systems, and more

Healthcare & beauty

Dentists, GPs, vets, gyms, spas, and hairdressers can make savings on equipment such as tools, lighting, pumps, HVAC systems, and more.



Our EnOSplatform integrates on-site operational technology with cloud-based intelligence to provide real-time energy data, along with data-driven carbon monitoring, reporting, and abatement solutions.

Energy Monitoring

- Monitor your energy consumption in real-time with our advanced IoT technology.
- Identify energy conservation measures utilising the capabilities of artificial intelligence.
- Receive alerts in the event of overconsumption in any of your showrooms.

Carbon Reporting

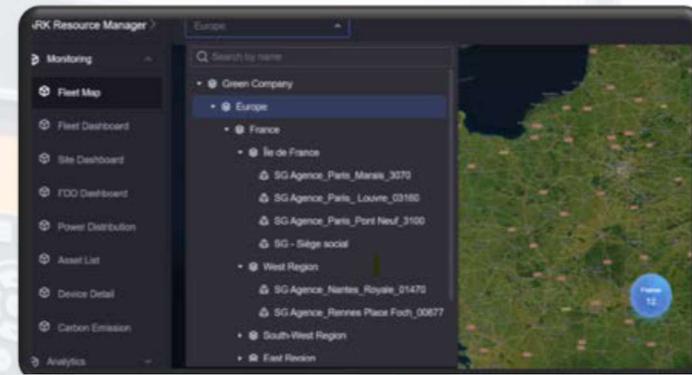
- Utilise real-time data to assess, benchmark, and report CO2 emissions both at individual sites and across the entire portfolio.
- Strategically plan and prioritise abatement initiatives based on these assessments.

Savings Identification

- Analyse actual consumption data in comparison to your established energy baseline to identify discrepancies.
- Integrate a real-time AI module to monitor and report on energy savings.
- Analyses site-level performance to detect inefficiencies and deliver data-driven optimisation strategies to reduce energy - generating on average an additional potential saving of 25%.

Track Performance Against Targets

- Establish energy and carbon targets in alignment with the Science Based Targets initiative (SBTi) and monitor the performance of each showroom relative to these objectives.



Portfolio View
asset View
Site View



Customisable site dashboard:
aggregated energy consumption data



Set up energy performance KPI's based on the site's specifics



enPact FilterPro

Contact

Climateq Ltd
Bourne House
23 Hinton Road
Bournemouth, Dorset
BH1 2EF

Office Tel: +44 (0)1202 201480

Office Email: info@climateq.co.uk

Website: www.climateq.co.uk