

Three Phase Voltage Optimisers from GW Energy Ltd

The Easy Way To Save Power, Save Money & Help Save The Planet

- ✓ Immediately reduces your electricity consumption by up to 19%
- ✓ Three adjustable savings settings for optimum voltage control
- ✓ "BrownOut"™ low voltage seamless inhibit
- ✓ Saves you money 24hrs/day, 7days /week
- ✓ Reduces your carbon footprint
- ✓ Your electrical appliances last longer
- ✓ Works with solar PV, wind power & heat pumps etc
- ✓ Easily installed by qualified electrician
- ✓ Made in the UK
- ✓ Fully Guaranteed
- ✓ Fit and forget



**Suitable for businesses with a
Three Phase electricity supply such as:**

Hotels, Restaurants & Pubs: Savings can be made on lighting, kitchen appliances, front of house equipment and accommodation areas

Office & Retail: Savings can be made on equipment such as lighting, heating, ventilation, refrigeration and air-conditioning

Healthcare & Beauty: Dentists, GP's, vets, gyms, spas and hairdressers etc can make savings on equipment such as, tools, lighting, pumps, heating, ventilation and air-conditioning

Industrial, Manufacturing & Engineering: Savings can be made on lighting, machinery, motors, pumps, fans, air compressors & tools etc.

So what is **eco-max-commercial**?

eco-max-commercial is the smart new way for businesses to reduce their electricity bills 24hrs/day, 7days/week. It carefully uses a technique called Voltage Optimisation which reduces your voltage to around 220 Volts, reducing your energy consumption and carbon footprint, saving you money, and extending the life span of your electrical appliances.

Advances in technology have allowed us to shrink our very successful **eco-max-power** optimiser range, which have been reducing the bills of large businesses since 2002, into a smaller cost effective package.

eco-max-commercial is suitable for use in a variety of businesses, including most commercial and light industrial applications with three phase electricity supplies.

eco-max-commercial is available in a range of "off the shelf" sizes from 100 Amp to 400 Amp to suit most SME business supply sizes. All are continually fully rated and housed in floor standing enclosures that can be configured for left, right or front cable entry.

Options with **eco-max-commercial**?

Yes, two versions are available, **EMCi** and **EMC**, along with a number of additional options including a manually operated "**TrueBypass**"™ switch.

EMCi, offers an impressive range of unique features to provide enhanced flexibility and usability for both installer and end user. For instance there is a choice of three savings settings, which allow the installer to select the optimum voltage for your business. In addition to this, our unique "**BrownOut**"™ low voltage seamless Inhibit feature ensures that your optimised voltage is never too low. Multifunctional input metering, output voltage and status indication are also provided as standard.

Another unique feature is the ability to instantly demonstrate the energy saving by simply tuning a key switch to trigger the seamless inhibit feature, allowing you to monitor the energy consumption both "with and without" optimising.

EMC, has been specifically designed for businesses who wish to reduce their energy consumption but require a low cost option. Despite being our entry level optimiser the EMC version still provides the essential choice of three savings settings. It has no moving parts, is very quiet and is manufactured to the same exacting high standards that you've come to expect from GWE.

"**TrueBypass**"™, can be specified as an additional option. This feature provides you with a manually operated bypass or "wrap around" facility that can be simply operated by none technical staff. This feature provides complete peace of mind for businesses that require guaranteed security of their electrical supply.



Is **eco-max-commercial** easy to fit?

Yes, it simply fits between your electricity meter and distribution board. Installation doesn't take long and **eco-max-commercial** will start saving money from the moment it's switched on.



Why can my voltage be optimised?

Electrical equipment manufacturers produce products which can be used all over the world. Products for Europe are designed to work across the European harmonised voltage range, (207 Volts to 253 Volts).

Since 1993 all electrical equipment designed for Europe must carry a CE mark to show that it complies with this standard.

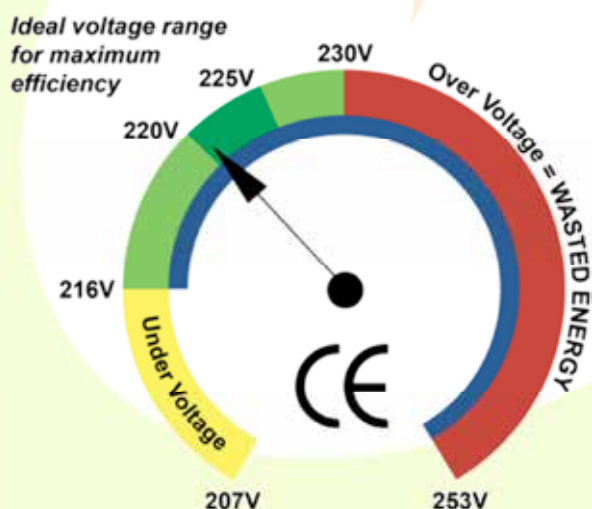


Equipment carrying the CE mark must be capable of operating between 207-253V.

Voltage optimisation is a well-established and proven technology, especially in the UK where electricity is supplied at an average of 242 Volts, which is high compared to many other countries.

Crucially, much of our electrical equipment operates most efficiently at around 220 Volts. When your voltage exceeds this level, energy is wasted in both heat and vibration, which costs you money and significantly reduces the life span of your electrical appliances. For example, with

eco-max-commercial you will not have to change your lamps so often, which will also reduce your on-going maintenance cost.



So how much will I save?

Ultimately the level of energy saving achieved will be dictated by a combination of your incoming supply voltage levels and the types of electrical equipment you use.

The higher your supply voltage is, the greater the potential to make energy savings from

eco-max-commercial. However different types of electrical equipment deliver different levels of energy saving for the same reduction in voltage.

Different types of equipment deliver different levels of energy saving for the same reduction in voltage.

Typical Saving

Very High	Mains frequency lighting	SON, Metal Halide, Mercury Switch start fluorescent Compact fluorescent Tungsten halogen
High	None thermostatically controlled heating	Towel rails Hand dryers Hair dryers Frost protection
Very Good	Fixed speed motors (lightly or intermittently loaded)	Air conditioning Air compressors Refrigeration Conveyors Presses Machine shops Pumps Fans
Good	White Goods	Fridges & freezers Microwaves Washing machines Dishwashers
Moderate	Office & IT equipment	VDU's Desktop PC's Photo copiers Printers
Modest	Continuously heavily loaded fixed speed motors	Applications such as those listed in the fixed speed motor section above
Low	Other electronic equipment	High frequency lighting LED lighting Laptop PC's UPS supported equipment
Very Low	Variable speed, DC or servo controlled motors	Applications such as those listed in the fixed speed motor section above

eco-max-commercial uniquely offers the installer a choice of three savings settings to ensure that you will achieve the maximum possible energy saving for the equipment you use by selecting the optimum voltage for your business.

In addition to this, our **"BrownOut"**™ low voltage seamless inhibit feature ensures that your optimised voltage is never too low, allowing a higher savings level to be selected.

	Supply Voltage <235V Low Savings	Supply Voltage 235-245V Good Savings	Supply Voltage >245V High Savings
Typical Saving	8%	10%	12%
Best Saving	12%	15%	19%

Typically your electricity consumption will be reduced by at least 10% but savings as high as 19% are possible!

Range & Dimensions (mm)									
Part No	Rating (Amps)	A	B	B2	B3	B4	C	C2	C3
EMC100	100A	675	528	227	755	n/a	428	n/a	n/a
EMC200	200A	675	528	227	755	n/a	428	n/a	n/a
EMC315	315A	825	728	268	996	n/a	628	n/a	n/a
EMC400	400A	825	728	268	996	n/a	628	n/a	n/a
EMC100i	100A	675	528	227	755	891	428	136	564
EMC200i	200A	675	528	227	755	891	428	136	564
EMC315i	315A	825	728	268	996	1132	628	136	764
EMC400i	400A	825	728	268	996	1132	628	136	764

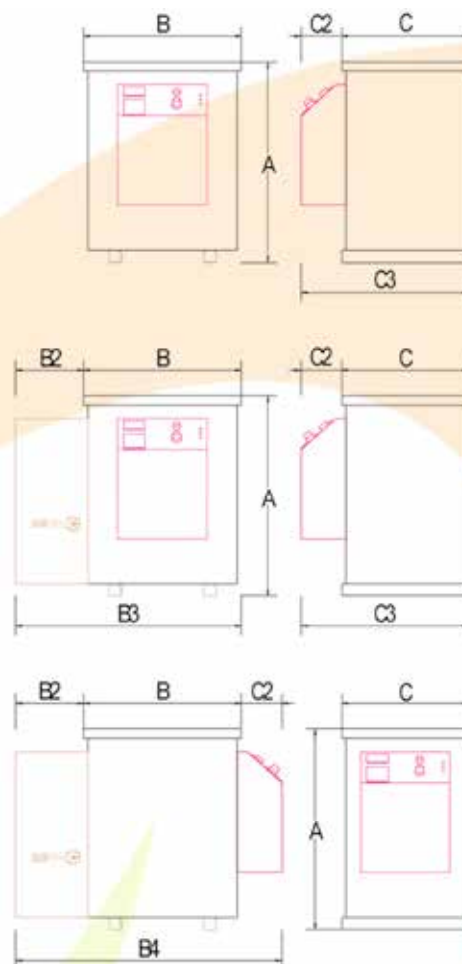
Important information when ordering

EMC models have no control box, so cable access is via the front, left and right sides. The standard configuration for all EMCi models is with the control box to the front, leaving cable access to left and right sides. For greater flexibility the control box can be positioned to the left or right sides if specified when ordering. An optional **"TrueBypass"** switch can also be specified to the left or right sides, which provides cable access to the top.

EMC100iRBL – "L" position of bypass switch ("L" left - "R" right)
 – "B" bypass switch required (blank for no switch)
 – "R" position of control box (blank front, "L" left - "R" right)
 – "i" intelligent unit (blank for EMC version)
 – "100" rating in Amps (100 – 200 – 315 - 400)
 – "EMC" ECO-MAX-COMMERCIAL

Who are GWE?

GWE have specialised in reducing electricity consumption and costs since 1994. **eco-max** was developed by ourselves in 2002 and has evolved over the years along with our impressive list of client installations, a few of which are shown below. GWE now offer the largest range of voltage and power optimisation equipment available in the UK, and all our optimisers carry the prestigious "Made In Sheffield" mark of origin and quality, reinforcing our status as the original manufacturer of UK made Voltage Optimisers.



Key Features

- ✓ **Three phase 100A – 400A continually rated**
- ✓ **Three adjustable savings settings for optimum voltage control**
- ✓ **"BrownOut"™ low voltage seamless inhibit**
- ✓ **Multifunction metering & status indication**
- ✓ **Key switch to demonstrate savings**
- ✓ **Multiple configurations for greater flexibility**
- ✓ **Optional "TrueBypass"™ switch**