

Power Factor Correction from Marshall-Tufflex



At Marshall-Tufflex, we understand that in today's tough economic climate, many organisations need to reduce their energy bills. At the same time they need to comply with environmental legislation to reduce their carbon footprint.

With over 70 years experience in the electrical industry and with a reputation for quality and innovation, we provide a range of effective energy management

products. These products deliver many different awareness and energy reduction solutions to a wide range of businesses and organisations.

Using established, proven technology, we have developed a range of Power Factor Correction units to improve operating efficiency of electrical systems and reduce electricity costs for our customers. Marshall-Tufflex Power Factor Correction units use high quality, reliable capacitors that compensate for the re-active power demand; restoring power factor as near to unity as is possible.

What is power factor?




Power factor is a way of describing how efficiently electrical power is being used. Power (kVA) is made up of two components, useful power (kW) and re-active power (kvar). Useful power is the power required to successfully complete the task whilst re-active power does not contribute to achieving the task, however costs the customer in additional kWh charges.

Useful Power	The power required to complete a task	measured in kW
Reactive Power	Drawn in addition to useful power but doesn't contribute to achieving the task	measured in kvar
Apparent Power	Total power drawn from the network	measured in kVA

Why install a system?

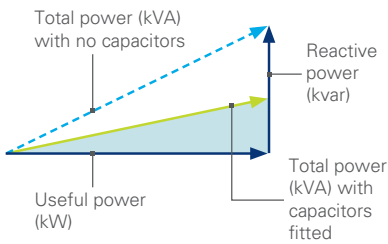
By installing a Power Factor Correction unit, you will reduce electricity costs, improve the quality of power supplied to electrical equipment, and increase the supply capacity.

Poor power factor correction adds costs in three main ways:

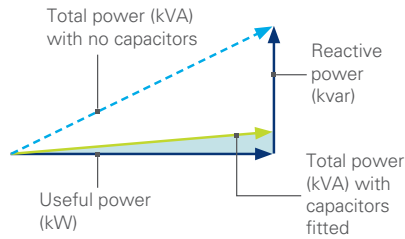
-  Additional 'reactive power charge' from utility company
-  Unnecessary current drawn from the network
-  Reduction in electrical equipment life expectancy

The effect of capacitors on power factor

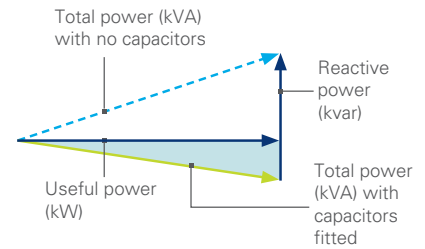
$$\text{Power factor} = \frac{\text{Useful power}}{\text{Total power}}$$



Wasted power with some capacitors



Near-perfect power factor correction with capacitors



Over-correction of power factor with too many capacitors

Benefits of Power Factor Correction

- ⚡ Reduced power consumption
- ⚡ Lower electricity bills
- ⚡ Extra kVA from existing supply
- ⚡ Reduced transformer and distribution equipment losses
- ⚡ Voltage drop reductions in long cables
- ⚡ Increased supply capacity
- ⚡ Manufactured in the UK
- ⚡ Increased life expectancy of electrical equipment

Product range

Product code	Description
PF50	50kvar Power Factor Correction unit
PF100	100kvar Power Factor Correction unit
PF150	150kvar Power Factor Correction unit
PF200	200kvar Power Factor Correction unit
PF300	300kvar Power Factor Correction unit
PF400	400kvar Power Factor Correction unit

Marshall-Tufflex
Churchfields Industrial Estate
Hastings, East Sussex
TN38 9PU, UK

T +44 (0)1424 856610
F +44 (0)1424 856640
E info@marshalltufflexenergy.com

Technical Hotline: +44 (0)1424 856688

www.marshalltufflexenergy.com



In pursuance of our policy of continued improvement, Marshall-Tufflex reserves the right to change the design or specification of its products without notification.

EY141 / 13025



EMS 539245
Registration BS EN
ISO 14001:2004



Q05393
Registration BS EN
ISO 9001:2008