

The single to three phase MultiPhase™ converter



The MultiPhase converter is designed for use with CNC machines, machines with large inverters and all other three-phase machinery including welders. It reliably maintains the output voltage symmetry within narrow limits at all times and under all load conditions. The three-phase outputs provide pure 400V sine waves. Digital displays provide information on the output voltage and current.

The standard supply voltage is 230V. Versions of 16kW and above can be ordered for 460V split-phase supply. All versions have an input for a 400V two-phase supply.

The well documented installation process involves connecting a single-phase cable from a switched single-phase wall socket to the input terminal block of the converter, and then connecting a cable from the three-phase output terminal block of the converter to as many 400V three-phase wall sockets as there are machines.

The power electronics contain solid-state switching elements that controls a group of binary-weighted high-voltage capacitors with millisecond precision whenever the difference in the sine wave is precisely zero volts. This achieves an output voltage symmetry of $\pm 4\%$ at all loads and unrivalled longevity of all components. Our smart controllers are capable of outputs of up to 95kW. This is why leading converter manufactures world wide use them in their products.

When selecting a MultiPhase converter, it is advisable to choose a model with a kW rating that is at least 10% higher than the maximum load. The 100% duty cycle facilitates uninterrupted 24/7 operation at full load. The overload capability is up to 300% for up to 10 seconds. The MultiPhase 8 (8kW) is capable of supporting a welder of up to 300A, while the MultiPhase 12 (12kW) is capable of supporting a welder up to 450A.

MultiPhase converters contain oversized components such as transformers, quiet running service-free generator-motors and 900V long-life capacitors. All components are housed in steel cases measuring 800 x 410 x 370 mm each. Converters with outputs above 8kW are housed in multiple interconnected enclosures of 8kW each.

The free part replacement warranty is five years. MultiPhase converters and their intelligent digital controllers are designed and manufactured in New Zealand.

