

What are Static Converters and how they work.

A Static Converter is essentially a 3-phase motor starter and NOT a way to provide constant 3-phase power*. The third leg necessary to start a 3-phase motor with single-phase power, is only generated momentarily. The red light located on the front of the Static Converter is only lit when the artificially created third leg is being generated and will turn off shortly after the motor is running. Once the 3-phase motor is running, the Static Converter switches off, discharges any remaining current in the circuit, and the 3-phase motor will be running on single-phase power.

Running a 3-phase motor on single-phase power using a Static Converter, you can expect a loss in horsepower from 1/3 to 1/2 depending on the type of motor, and where the motor was made. For many applications this is acceptable and sufficient, which makes the Static Converter a very economical solution for your 3-phase power needs.

Static Converters are very specific to the motor they are sized with. “The bigger, the better” is not a rule or mindset to apply with Static Converters. When sizing a motor to a Static Converter, try to get the motor horsepower as close to the max side of the converter’s range as possible.

Finally, not every application is compatible with a Static Converter. Such applications include, but are not limited to: CNC machines, pumps that start instantly loaded, any application involving heating coils/elements, battery chargers, welders, and A/C units. Also, if a motor’s RPM is under or can drop below 1200 RPMs, a Static Converter will not work. For a more comprehensive list, please review the ‘Technical Notes’ PDF located in the “Product Information” box.

If you have any questions regarding our Static Converters or need to be sized for one, please click on the ‘Sizing Assistance’ tab of our home page and select the option that best suits your needs. Complete the form as best you can, send it to us and a technician will contact you as soon as possible. Also, you are welcome to call our office and ask to speak with the technical support team.

Thank you.

**Only Rotary Converters can provide constant 3-phase power.*