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## Phase Converters...

TURN SINGLE PHASE INTO **THREE PHASE** ELECTRICITY!



### HP Rating

- 3
- 5
- 7.5
- 10
- 15
- 20
- 25
- 30
- 40
- 50
- 60
- 75

*Prices subject to change without notice*

#### Standard Features:

- Built-in Motor Starter
- Motor-integrated Soft Start reduces inrush (starting) current by up to 83%
- Exclusive phase converter generator made by Baldor Electric in the USA
- Limited lifetime rotor warranty
- Power Factor Correction
- Balanced Voltage for CNC and other sensitive loads
- Quiet, continuous operation
- Made in the USA

#### Options & Upgrades:

- UL Listed Available
- Outdoor TEFC
- NEMA 3R and 4X
- Isolation Mounting Feet
- DIN rail accessories such as contactors, overloads, timers for automatic switching, etc.

All unit stocked at factory  
 All units tested and certified before shipping  
 24 month warranty  
 Custom Baldor motors

*Pricing is current and valid as of 12/01/08. Prices, specifications, and availability are subject to change without prior notice. All information contained within this quotation must be confirmed prior to or at the time of sale.*



## General Information about Phase Converters:

There are basically three types of phase converters – static phase converters, rotary phase converters (which include CNC phase converters), and digital solid state phase converters (or more simply stated, digital phase converters). Rotary phase converters and digital phase converters can be used to convert single-phase electricity to 3-phase power. Static phase converters are only used to start 3-phase motors. Phase converters are commonly used to power 3-phase commercial and industrial grade equipment and electric motors. There are several key differences in the way the different types of rotary phase converters, static phase converters, and digital phase converters work and also in their reliability.

- **What are rotary phase converters?**

Rotary phase converters are electrical devices used to convert single phase power to three phase power for the purpose of running 3-phase equipment at or near 100% of its rated horsepower.

- **What are static phase converters?**

Static phase converters simply act as a means to start an electric motor. Once that motor has been started, the static phase converter disengages - leaving the electric motor to run on single-phase power. The power is unbalanced and though it does work, the equipment can only operate up to about two-thirds the rated horsepower before forcing too much current through the motor windings. The unbalanced output and "single-phasing" of a 3-phase motor is hard on 3-phase equipment and may shorten the life of the motor itself. While fine to use in some applications, static phase converters are inefficient and tend to be hard on 3-phase equipment and therefore, their use is limited.

## How To Size Phase Converters

**ROTARY PHASE CONVERTERS:** Full load 3-phase current (FLA) is represented by the Max. Amps in the tables. For running loads, figure a +/-5% voltage balance at 50% (FLA) load and +/-10% at 75% (FLA). For starting, figure at least one size up from load hp for a light load, 2 times larger for a hard load, and 3 times for an extremely hard load. Converter must be additionally oversized for multiple speed motors, older motors (pre-T-frame), foreign motors, and custom motors. Always consult our technical sales staff for sizing help, especially for multiple motors, CNC loads, mixed loads of resistive and motor loads, and other complex loads.

General rules-of-thumb and formula for determining electrical load & sizing your rotary phase converter

total 3 phase amps being run by converter x 1.732 = single phase amp load on your electrical panel

-or-

single phase amp load on your electrical panel = 5 amps per 3 phase HP being run by converter

**STATIC PHASE CONVERTERS:** Motor should fall within the hp range of the static phase converter. However, if the motor is not a standard 1700-1800 RMP T-frame motor, use the weight equivalent of a modern T-frame motor. This will be useful in sizing older motors, foreign motors, and custom motors. Direct motor loads only, no 2 or 3 speed motors, no controls that use a 3 lines, no multiple motor loads.

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