# Static Phase Converter's Applications & Sizing.

You can Run 3-Phase 230VAC motors with 230VAC single Phase power using a Static Phase Convertor, just **keep in mind that it will only give 2/3 of the Motor's Rated HP**. Your motor will run fine as long as you keep the load lower than 60% all the time.

If the motor is loaded beyond 60% you must use a Rotary type phase converter (You can make your own with our DIY-KIT ARPS-XX). OR unload the Motor by reducing the motor's pulley by 1/3 load OR increase the Motor's HP by 50% to compensate the loss of power.

To find out what Static Converter size you should use, you need to know your Motor's HP and select the Static Phase Converter with a HP range that falls within the minimum and maximum HP. For example: If you motor is a 10HP you should select the one that is for 8 to 12 HP. Two speed motors are usually dual HP, example: a 3HP, 3600 RPM motor is 1.5HP at 1800 RPM, so you should select a Static Phase Converter with a minimum and maximum range that will support both HP ranges.
With Taiwanese and Chinese motors, the larger horsepower should be at the lower range of the converter whether it is a two-speed motor or not. Example: A 5 HP Taiwanese or Chinese motor should use a 4 to 8 HP converter, even if it is a two-speed motor with 2.5 HP on the low speed. This is because Taiwanese and Chinese motors draw more amperage during start-up (Usually 8 to 12 times more, due lower efficiency) than American made motors and therefore require the use of a slightly larger converter.

## Static Phase Converters will ONLY run Medium to Light Loads like:

Lathes, Mills, Grinders, Drills, Saws, Metal and Wood working equipment, Sewing Machines, Meat Grinders, Dough Mixers, Food Blenders, Elevator Belts, Conveyors, Printing equipment, Garbage Disposals. When installing the Static Phase Converters with Motor Starters ALWAYS make sure the Starter's Coil is fed from L1 & L2 ONLY AND If the Machine has Phase Loss Detector it MUST BE Disabled. Static Phase Converters DO NOT Generate the 3rd Phase!

Rotary Phase Converters are for FULL loaded equipment or where you need more than 60% of the Motor's HP or applications where you need 3-Phase Power. You can make your own Rotary Phase Converter using our DIY-KITs ARPC-XX, all you need is a 3-Phase 230VAC Motor, 1750/3550 RPM double the HP of the Motor or load you want to run. Example: If you want to run a 10HP, 3-Phase, 230VAC Motor's Blower you will need a 20HP, 3-Phase, 230VAC Motor which will be used as your 3-Phase Generator (will run Idle), that way you'll get FULL Power!

**The Following MUST be used with Rotary Phase Converter Type;**
**Static Phase Converters WILL NOT RUN these Loads:**

- Pumps, Blower, Air & Refrigeration Compressors, AC Units, Hydraulics, CNC Machines, Welders, Lasers, Motors less than 1200 RPM, WEG Motors, Vacuum, Fans.
- Heating Elements, Battery Chargers, Plasma Cutters, Variable Frequency Drives (3-Phase)
- Transmitters – Radio/TV, SCR Controls (3-Phase), Rectifier Units, Transformers.
- And any other equipment where you need 3-Phase Power, Rotary Converters Generate the 3rd Phase.

If you need assistance with your equipment please contact us at: info@aucontrols.com