



Search:

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[Site Map](#)

**Find it Here**

- Phase Converters
- Static Converters
- Rotary Converters
- Digital Solid State
- Transformers
- Safety Switches
- Baldor Generators
- Air Compressors
- Electric Motors
- Frequency Drives
- Load Centers
- Machinery
- Parts
- Accessories
- Articles

American Rotary :: > [Three Phase Converters](#)

## Three Phase Converter... Run 3-Phase Equipment from 1-Phase Power

**24/7 TECH SUPPORT**  
TOLL FREE 1-888-743-6832

GENTEC American Rotary manufactures and distributes the largest three phase power converter selection online. Our three phase converters are indicated wherever utility three phase isn't available. Our custom converter designed by GENTEC and Baldor utilizes a custom soft start three phase generator with power factor correction that ensures extremely smooth and balanced three phase output that will operate 3-phase machinery safely and economically with balanced 3-phase power. Manufactured in the USA.

[Pricing and Specifications >](#)  
[Sizing Information >](#)



(Rubber Isolation Mounts Sold Separately)

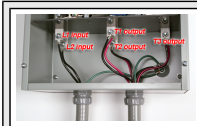
**FEATURES:**

- Custom Integrated Soft-Start
- GENTEC/Baldor Design
- PowerGuard™
- CNC Precision Balanced
- Heavy-Duty / Hard-Starting
- Multiple Mounting Options
- 3-Wire Latching Motor Starter
- Emergency Stop
- Easy Installation
- Expandable / Energy Saver System
- Run Multiple Motors



**Rubber Isolation Mounting Feet:**

Protect your phase converter investment for as little as \$19.95/set.  
[Learn More](#)



**Easy Installation:**

View American Rotary's step-by-step easy installation pictorial online!  
[Learn More](#)

Basic Specifications:

Size (HP)	Size (kW)	1-Phase / 3-Phase Amps (Max)	Full Load Transformer	Idle Power	Weight (Lbs)	Buy It Now	Detailed Information
3	2.2	19 / 9.5	6 Kva	.31 kW	64	<b>\$ 345</b>	<a href="#">3HP Specifications</a>
5	3.7	30 / 15	6 Kva	.48 kW	86	<b>\$ 395</b>	<a href="#">5HP Specifications</a>
7.5	5.6	44 / 22	9 Kva	.70 kW	107	<b>\$ 495</b>	<a href="#">7.5HP Specifications</a>
10	7.4	56 / 28	15 Kva	.89 kW	146	<b>\$ 645</b>	<a href="#">10HP Specifications</a>
15	11.2	84 / 42	30 Kva	1.34 kW	210	<b>\$ 895</b>	<a href="#">15HP Specifications</a>
20	14.9	108 / 54	30 Kva	1.72 kW	258	<b>\$1045</b>	<a href="#">20HP Specifications</a>
25	18.6	136 / 68	30 Kva	2.16 kW	276	<b>\$1295</b>	<a href="#">25HP Specifications</a>
30	22.4	160 / 80	45 Kva	2.55 kW	362	<b>\$1595</b>	<a href="#">30HP Specifications</a>

40	29.8	208 / 104	45 Kva	3.31 kW	427	<b>\$1995</b>	<a href="#">40HP Specifications</a>
50	37.3	260 / 130	75 Kva	4.14 kW	479	<b>\$2375</b>	<a href="#">50HP Specifications</a>
60	44.7	300 / 150	75 Kva	5.03 kW	583	<b>\$2695</b>	<a href="#">60HP Specifications</a>

[Back to Top](#)> [Back to Home](#)>

See also: [Transformers](#)> [Load Centers](#)> [Safety Switches](#)> [Electric Motors](#)> [Parts](#)> [Accessories](#)>

## DETAILED FEATURES LIST:

### **Integrated Custom Soft Start:**

GENTEC's proprietary motor-integrated solid state soft-start is built right in o the generator housing. Starting (inrush) current is reduced drastically by softening the initial starting torque used to spin the generator. The GENTEC and Baldor engineering departments designed our motor/generator as a phase converter generator that could minimize the inrush current upon start-up. The result was an 83% reduction! These results gave the GENTEC/Baldor motor generator a Soft-Start rating. The GENTEC/Baldor generator design is proprietary and is available only through American Rotary. [Back to top](#) >

### **Protection by PowerGuard :**

PowerGuard™ technology is designed to protect your equipment in power failure and brownouts. Even when the power is restored, the converter will remain in the default "OFF" position until an operator starts the unit again. Any equipment down the line from the converter that may be lacking built-in power protection is protected by this technology. [Back to top](#) >

### **Precision Balanced for CNC:**

Each single phase to three phase converter is balanced under load and no-load conditions to better than +/-5% (essential for CNC applications and more than adequate for heavy-duty applications). Inverter Spike Resistant, or ISR, magnet wire is utilized to virtually eliminate spikes common to CNC equipment. Motors wound with IST are 100 times more resistant to transient voltage spikes, high frequencies, and short rise time pulses (common to CNC equipment, inverters, and VFD's). ISR magnet wire extends the life of the motor/generator. [Back to top](#) >

### **Heavy-Duty / Hard-Starting:**

Our GENTEC single phase to three phase converters are rated industrial "Heavy-Duty" - making them ideal for instant motor reversing, tapping, and other hard-start and heavy-load equipment. [Back to top](#) >

### **Flexible Mounting Options:**

Our phase converter panels offer several mounting options for your convenience. The motor generator can be housed anywhere - even in a separate room or structure away from the control panel. The control panel can simply be mounted right alongside existing service. [Back to top](#) >

### **Built-In 3-Wire Latching Motor Starter:**

### **Do you know....**

GENTEC American Rotary takes pride in supporting domestic resources. Many motor manufactures have moved their production overseas. Our custom three phase converter generator is manufactured 100% in the United States!

### **Better Business Bureau:**

Serving the industry since 1991, GENTEC American Rotary's team is dedicated to product excellence and total customer satisfaction.

### **Sizing Assistance:**

Our technicians are available 24/7 to answer your hardest questions and assist you in sizing a three phase electric converter specific to your equipment and application. [Learn More](#) >

### **Have a Question?**

**TOLL FREE**  
**24/7 TECH**  
**SUPPORT**  
**1-888-743-6832**

### **The Ultimate in Phase Converter Technology!**

GENTEC American Rotary's solid state digital phase converters deliver a 1% voltage balance under any load condition! Truly - the ultimate phase converter! [Learn More](#) >

### **UL Listed Phase Converter**

GENTEC American Rotary converters are wired with a 3-wire latching motor starter that automatically starts the converter at a simple touch of the "START" button. Each converter is pre-wired for remote start and time delay. [Back to top >](#)

#### **Emergency Stop:**

When the converter is powered "ON" and the LED is illuminated, the "STOP" button is raised for emergency shut-off and enhanced operational safety. [Back to top >](#)

#### **Easy Installation:**

Busbars are conveniently and safely located in a roomy compartment just below the firewall. This simple and proven design eliminates messy wiring and cluttered conduit boxes common to many phase converters. Trained technical support representatives are available toll free 24/7 to answer any questions you may have. Our easy to wire three phase converter systems are shipped with a complete instruction manual and three phase power converter schematics for your reference. Please [click here](#) to view the step-by-step installation pictorial online. [Back to top >](#)

#### **Expandable / Energy Saver System:**

GENTEC American Rotary phase converters can be run in series with one another. As growing shops purchase additional equipment, it may become necessary increase the capability of the phase converter. Prior to GENTEC's development of a soft-start phase converter generator, this option was also used to reduce energy consumption. Although less beneficial as a power saving technique with the integration of our soft-start motor/generator, two or more converters can still be run in series with each other for these purposes. Please be sure to contact our toll free technical support line for assistance with these options at 1-888-7GENTEC. [Back to top >](#)

#### **Run Multiple Motors:**

GENTEC phase converters are capable of running up to three times the rated horsepower of the converter. Please call our technical support line toll free at 1-888-7GENTEC for assistance with this option. Because every GENTEC American Rotary phase converter is balanced from a no-load condition, much smaller motors (with no minimum) can safely be run with any of our rotary converters. For example, a 2HP mill can run safely on our 40HP phase converter without damaging the smaller motor, and while still maintaining a properly balanced voltage. [Back to top >](#)

#### **The GENTEC/Baldor Design Advantage**

Industry leaders: [GENTEC](#) - a respected OEM phase converter manufacturer, and [Baldor Electric](#) - one of the most well-known motor manufacturers in the world, have come together in the design of our exceptional three phase power converter. The integrated soft start Baldor phase converter generator with power factor correction took over a year to develop and was designed especially for phase converter applications. [Back to top >](#)

GENTEC American Rotary's *Phase Perfect*® digital single to three phase converter line is UL/CSA listed and meets all "new construction" code requirements. [Learn More >](#)

#### **Static Phase Converter**

GENTEC American Rotary's complete line of static phase converters are in stock and ready to ship! [Learn More >](#)

#### **Why Are They So Quiet?**

This informative article describes the different kinds of noise associated with a typical three phase rotary converter, and why American Rotary phase converters are so quiet! [Learn More >](#)

#### **Better Business Bureau**



GENTEC American Rotary is a proud member of the Better Business Bureau and strictly adheres to Truth in Advertising, ethics, and privacy standards. [View Report >](#)

#### **Have a Question?**

**TOLL FREE**  
**24/7 TECH**  
**SUPPORT**  
**1-888-743-6832**

#### **Do-It-Yourselfers!**

Do you know how to build a single to three phase converter, and need a resource for components? American Rotary has what you need to build a single phase to 3 phase converter! [See Selection >](#)

**GENERAL SIZING GUIDELINES:**

Please call toll free 1-888-743-6832 for assistance.

The load type of your application must first be determined when properly sizing an American Rotary phase converter. The following are some guidelines to assist you in determining the load type of your equipment:

Easy Load - no flywheel, clutch, little resistance/inertia, 1-2 times full load current on start-up

Medium Load - machine inertia, medium resistance, 3-4 times full load current on start-up

Hard Load - flywheel, no clutch, Start against load, 5-6 times or locked rotor current on start-up

Very Hard Load - elevators, hydraulic pumps under continuous load etc.

Frequent Start - reversing, heavy running loads

CNC - turning centers, PLC's, EDM, CNC machining

Resistive Load - heater, transformer, welder, power supply etc.

**Single Motor Loads (Non-CNC, Non-Resistive)**

Examples: milling machines, blowers, band saws, lathes, pumps, etc.

1. Size to the load type by the following formulas:

- Easy Loads: Choose the converter HP that is one size larger than the load.
- Medium Loads: Choose the converter size by multiplying HP by 1.5 and round up.
- Hard Loads: Choose the converter size by multiplying HP by 2.0 and round up.
- Very Hard/ Frequent Starting Loads: Choose the converter size by multiplying HP by 2.5 and round up.

2. Check that the total running current is no more than 75% of full load 3-phase current.

3. Increase the converter size by one if there are foreign or high efficiency motors, or motors that have locked rotor currents larger than 6 times full load current.

4. Increase the converter size by the ratio of load RPM to 1800 (common for 2-speed motors).

[Back to top >](#)

**Single Motor Loads (CNC, Non-Resistive)**

Examples: CNC machining, turning centers, PLC's, EDM, etc.

1. Determine the converter size by either of the following formulas:

- multiplying HP (of the spindle) by 2.0 for all standard axis equipment, or
- multiply the machine kW by 2.7, then round up to the nearest HP converter.

2. Increase the converter by one size for any non-standard equipment (such as an additional axis, bar feeders, etc.)

2. Check that the total running current is no more than 60% of full load 3-phase current.

3. Increase the converter size by one if there are any motors that are foreign, high efficiency, or have locked rotor currents larger than 6 times full load current.

4. Increase the converter size by the ratio of load RPM to 1800 (common for 2-speed motors).

Note: Typically, you do combine other loads with CNC applications unless they are small compared to the loads rating. Call technical support toll free 1-888-7GENTEC for assistance.

[Back to top >](#)

**Single Motor Loads (Resistive)**

Examples: heaters, transformers, welders, power supply, etc.

1. Divide the equipment current rating (use the 230 Volt amperage of the equipment) by 0.6
2. Round the resulting number up to the nearest full load current of the converter to maintain a 5% voltage balance.

If only KW are known, estimate the current by multiplying the kW by 3.75.

kW x 3.75 = current (amps)

[Back to top >](#)

**Multiple Motor Loads**

Examples: 2 milling machines, a dust collector and table saw, etc.

Note: Our phase converters are rated to run multiple machines up to 3X's the rated horsepower of the converter. Please call 1-888-743-6832 for a sizing recommendation if you are considering running multiple machines. Our engineers and computer simulation models will determine a correctly sized converter for your application. Running multiple machines on a single converter is common, but specific conditions must be satisfied:

- The motor loads must all be simple (no resistive, CNC, or hard starting loads).
- The motors must all be light to medium loads. These lightly loaded 3-phase motors become a part of the phase converter system and assist in generation of the 3rd line.

1. Use the Single Motor Loads formulas above to determine the largest converter needed for each piece of equipment. Your converter cannot be smaller than this. For multiple motor starting, size each piece and add the converter sizes together.

2. The other equipment (totaling no more than 2 times the rated HP of the converter) may be started, assuming the loads are not heavy.

Note: Combined motor loads and resistive loads must be sized by subtracting the resistive current

