



Pre-wired Auto-Transformers

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Jefferson Electric introduces a special line of pre-wired auto-transformers for faster and easier installation. Auto-transformers provide a convenient and economical way to raise or lower single and three-phase voltages from 5-20% when electrical isolation is not required. These units are smaller and less expensive than isolation transformers and can be used anywhere a standard Buck-Boost transformer is used. Choosing the proper pre-wired voltage combination simplifies the installation procedure.

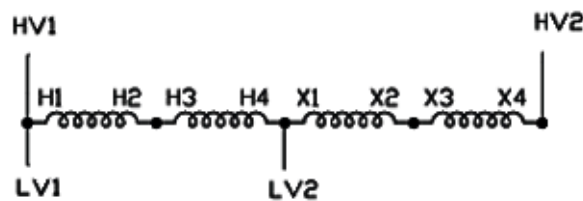
Easier to install

Standard Buck-Boost transformers can be configured to reduce (buck) or increase (boost) the input voltage to a variety of output voltages. For single phase applications the Buck-Boost installer must select the correct wiring diagram for the application and connect the four input wires and four output wires on the transformer with the two wires from the source and two wires from the machine being powered. A three phase installation uses two or three Buck-Boost units and the complexity multiplies accordingly.

Our series of pre-wired auto-transformers eliminates these problems.

The user can order a transformer for the specific input and output voltages needed and the installation is much easier, faster and therefore less expensive.

Here is the wiring diagram for a 208 to 230 application of a standard Buck-Boost transformer



Here is the wiring diagram for the Pre-Wired auto-Transformer



Faster and easier wiring lowers the costs of installation and reduces the chances of mistakes.

Where can pre-wired Auto-Transformers be used?

These units were originally designed for Tanning bed applications.

Most tanning beds are imported from Europe and require between 220 and 235 volts for proper operation while most North American line voltages are usually 208 or 240 volts. Tanning bed distributors in the U.S. must supply the proper transformer with the bed or the local salon owner must purchase the proper transformer before the bed can be installed. Part of the tanning bed line includes auto-transformers pre-wired with custom plugs and receptacles that can be installed without needing an electrician.

Any application for a Buck-Boost could be simplified with the use of a Pre-Wired Auto Transformer.

Applications include;

1. Any application with lower than normal source voltage
 - a. Remote pump stations
 - b. Utility cut-back in source voltage
 - c. Service voltage changed after equipment was installed
 - d. Voltage drop in power line

2. Any application of European equipment in North America
 - a. Tanning beds
 - b. Commercial espresso machines
 - c. Refrigeration equipment

3. OEM applications
 - a. US importers of foreign industrial machinery
 - b. US control system manufacturers that use foreign components

What voltages are available?

Single phase

Single-phase auto-transformers are pre-wired to any of five voltage combinations for easy installation. Input and output wires are clearly marked for easy identification. Some models from 20 amps to 60 amps are available pre-wired with cords and plugs to reduce on-site installation time. Custom units can be built with unique voltages and wiring configurations.

Single Phase Configurations

Input Voltage	Output Voltage	Amperage
208V	230V	20 to 100
208V	235V	20 to 100
208V	240V	20 to 100
208V or 240V	225V	20 to 100
208V or 240V	230V	20 to 100

Three phase

Three-phase auto-transformers pre-wired to any of four voltage combinations are easier to install than separate Buck-Boost transformers. Input and output wires are clearly marked for easy identification. Custom units can be built with unique voltages and wiring configurations.

Three Phase Configurations

Input Voltage	Output Voltage	Amperage
208Y	235Y	30 to 800*
208Y	240Y	30 to 800*
208Y	225Y	30 to 100
208Y or 240Y	230Y	30 to 100

* 200-800 Amp units have Taps = 1 @ 5% FCAN & FCBN

Panel boosters

Larger sized (200 Amp and higher) three phase transformers are designed to power the electrical panel for an entire building and eliminate the need for individual transformers at each piece of equipment.

More information

For more information on the use of auto-transformers read Jefferson Electric's "Buck-Boost Application Manual". It contains detailed explanations of wiring sequences for most common voltage combinations and is useful to review before choosing a transformer. The Buck-Boost Application Manual can be found on the Jefferson Electric website www.jeffersonelectric.com under RESOURCES>Technical Documents.

Also available is the "Power Unit Installation, Operation and Maintenance Instructions" document 004-0943-000. It contains safety warnings and instructions useful when installing Pre-wired Auto-transformers.

Jefferson Electric has been an innovator of transformer and reactor products since 1915. We enjoy a rich tradition of meeting the highest industry standards for quality, durability, and reliability in the commercial, industrial and OEM marketplace.

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