



## Knowledge Base > Installation and Maintenance > Adapting 3-phase Machines to Run on Single Phase

The information in this article applies to the following machine models:

- Barudan Multi-head machines, generally 12 heads or more

### SUMMARY

Many larger Barudan embroidery machines, typically 12 or more heads, are supplied with 3 phase transformers. These provide the smoothest power to the machine, and are more efficient. Customers purchasing these machines used may not have 3 phase power. This article describes the options available to run these machines.

### OPTIONS FOR 3 PHASE MACHINES:

There are several options for getting power to the machines, and one option to avoid. These are listed in order of preference:

#### 1. Upgrade to 3 Phase Power



The best solution is to add 3-phase power service. However, this may not be possible, or may be too expensive.

#### 2. Install a Barudan Single Phase Transformer



The next best choice is to replace the 3-phase transformer in the machine with a Barudan Single Phase transformer. It is important to get the proper transformer. Barudan machines monitor the power input to the machine, and may either shut down, or not work properly, if the wrong power source is used.

To determine the proper transformer, please call or email the Barudan Service department. To select the proper transformer we must know the version of the DRIVER BOX on the machine. This is located below the tabletop, on the right hand side of the machine. We need to know the "UAD" number; this is a roman numeral, for instance, "UAD-IX." Please provide the Machine model number too, as we can use this to verify the proper transformer. It is very important to know the UAD number, because these transformers are heavy and cost a lot of money to ship.

### 3. Rotary Phase Converter

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The third choice is to use a Rotary Phase Converter. These look like motors, because, they are! They have a motor and additional windings that generate the other 2 phases needed by the machine.

The output of the Rotary Phase Converter is connected to the power input of our machine. A local electrician can be contracted to install one of this device. He will need to know the wattage/power consumption of the machine to match up the proper size Rotary Phase Converter. The wattage rating for the machine is located on the Serial number plate on the machine. These larger Barudan machines typically have a rating of 1.5 KWatts. This size converter will cover every machine we've made thus far.

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### Important Note on Converters!

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There are (2) types of Phase Converters on the market. Rotary Phase Converters and Static Phase Converters.

**NOTE: Static Phase Converters DO NOT Work with our equipment!**

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If the only option is a converter, make sure it is a Rotary Phase converter. If you are unsure of what converter to buy, look at a picture. A rotary phase converter is a 3-phase motor as big as the motor on our machine or larger. There should be no mistaking a Rotary Phase Converter, because it looks, and is, a 3-phase motor with maybe an additional connection box mounted to the top of it. On the other hand, the static phase converters are usually small rectangular enclosure boxes that look nothing like a motor.

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If you have any questions on this issue, please don't hesitate to call Barudan Service and we'll get you pointed in the right direction.

*If you'd like more info on Converters, Do a "Google" search on "Phase Converters". There are many links to information on these (2) devices, as well as, where to buy these devices.*