

# ShopBot PRTalpha POWER REQUIREMENTS

## Domestic

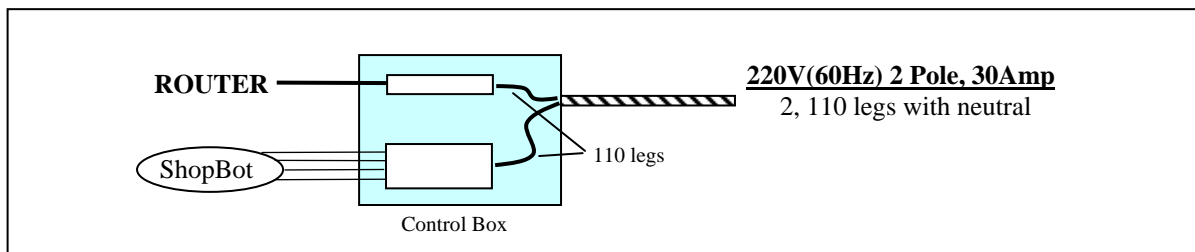
- 1 -

**This information is intended to serve as an outline of the different power configurations available for a ShopBot and a guide for your electrician. All circuits and connections should be rated by your licensed electrician according to your local electrical codes.**

- **Power to the ShopBot Control Box and router/spindle requires a fused disconnect(s) by a licensed electrician.**
- **The power requirements for the Control Box and router/spindle vary according to your configuration. The table below outlines some of the power requirements for different configurations.**
- **Since the ShopBot Control Box is set up differently for a router than for a HF (high frequency) spindle, when you order you will need to specify: the router and/or HF spindle type; voltage and frequency available for the router/spindle and the Control Box.**
- **The intent of this document is to give a basic understanding of the electrical requirements for a ShopBot. Refer to the wiring and component diagrams included in the Control Box for more detailed information on the power connections.**

### US Standards: Wiring Configuration for Routers

#### 1 Router / US Standard #10204

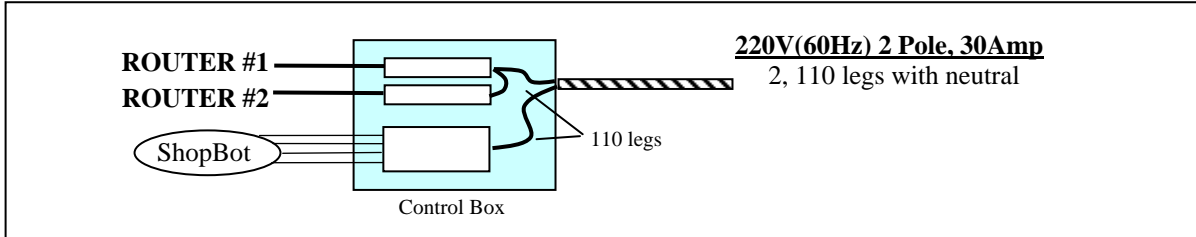


220V 2 pole, 30A circuit. The 2 legs will be split into two 110V circuits inside the Control Box: one to the control circuits, and one for the router. Refer to drawing 000941-00 for detailed wiring information, included in the Control Box or available from ShopBot.

# ShopBot PRTalpha POWER REQUIREMENTS Domestic

- 2 -

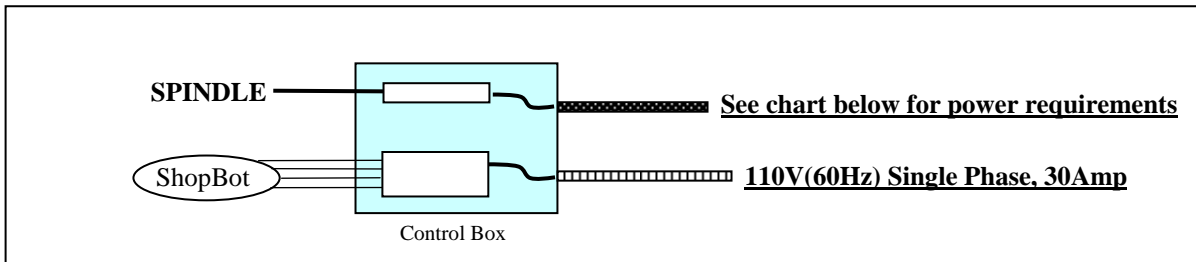
## 2 Router / US Standard #10210



220V 2 pole, 30A circuit. The 2 legs will be split into two 110V circuits inside the Control Box: one for the control circuits, and one for the two routers. Refer to drawing 000941-00 for detailed wiring information, included in the Control Box or available from ShopBot.

## US Standards: Wiring Configurations for HF Spindles

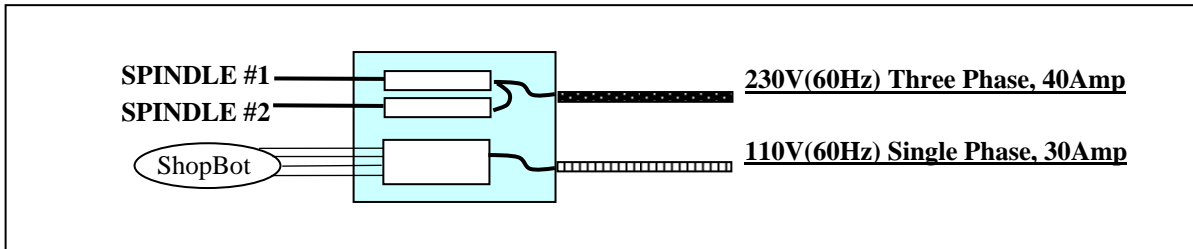
### 1 Spindle / US Standard (requires 2 circuits) #10219(3 Phase), #10216(2pole; single phase)



110V single phase, 30A circuit for the Control Box plus 230V 3-phase or 220V 2 pole circuit for the HF spindle (see pg 4 for Colombo spindle power specifications). For detailed information refer to drawing 000942-00 for Three Phase wiring and 000945-00 for 2 Pole wiring, included in the Control Box or available from ShopBot.

# ShopBot PRTalpha POWER REQUIREMENTS Domestic

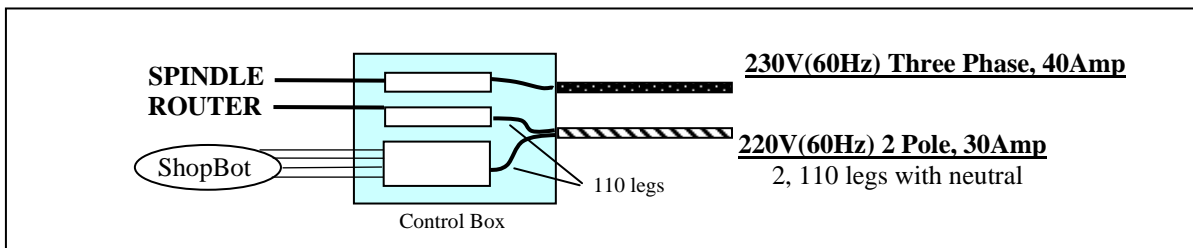
## 2 Spindle / US Standard (requires 2 circuits) #10228(3 phase), 10225(2 pole; single phase)



110V single phase, 30A circuit for the Control Box plus the 230V 3-phase circuit for the HF spindles (see pg 4 for Colombo spindle power specifications). In the case of two HF spindles, double the current. For detailed information refer to drawing 000942-00 for Three Phase wiring and 000945-00 for 2 Pole wiring, included in the Control Box or available from ShopBot.

**NOTE: This Control Box is only rated for two 3-phase HF spindles. Two single phase spindles cannot be connected to the control box.**

## 1 Spindle / 1 Router / US Standard (requires 2 circuits) #10237



220V 2 pole, 30A circuit, one leg for the Control Box and for the Router, plus a 230V 3-phase circuit for the HF spindle (see pg 4 for Colombo spindle power specifications). Refer to drawing 000944-00, included in the Control Box, for detailed wiring information.

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## Colombo Spindle power requirements:

- The Control Box must be set up to use a HF spindle when the order is placed. To upgrade from a router to a HF spindle at a later date, the ShopBot Control box must be returned to ShopBot for an upgrade.
- Your licensed electrician will be required to wire the power cable from the HF inverter into Contactor #2 or #6. Refer to the wiring diagrams included in the Control Box for more detailed information on HF spindle power connections. Check the rotation direction of the HF spindle, if it is running backwards (Counterclockwise), reverse the appropriate wires.
- Check the input current rating of user supplied spindles to rate the power circuits appropriately.

<b>Colombo Spindle Voltage and Input Current (US Standard, 60 Hz)</b>			
HP	Phase	Voltage (V)	Current (A)
5	3	230	20.6
5	2	220	34
3	3	230	15.5
3	2	220	22