

# Single Phase Converter

## Clean, Efficient Variable Speed Motor Control with Single-Phase Power

**The Single Phase Converter addresses the common issues with AC motors powered from single-phase input:**

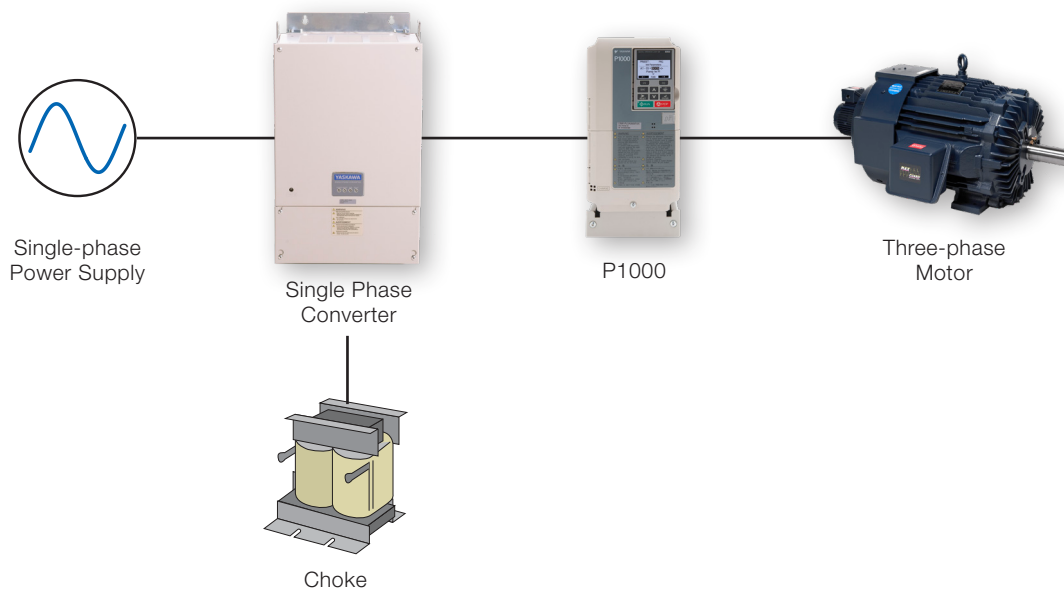
- Limited single-phase motor options
- Inefficient use of power due to choppy current harmonics
- Increased maintenance of rotating parts and tuned circuits



Yaskawa's industry leading Single Phase Converter (SPC) cleanly converts single-phase AC power to DC power for Yaskawa variable frequency drives. The SPC marries Yaskawa reliability and drive technology with motor control solutions for businesses in remote areas.

The SPC eliminates the need to oversize variable frequency drives for single-phase applications while reducing distortion to less than 10% iTHD. With lower input harmonics and near unity power factor, the SPC also eliminates the need to significantly oversize transformers in single-phase applications, reducing overall installation costs.

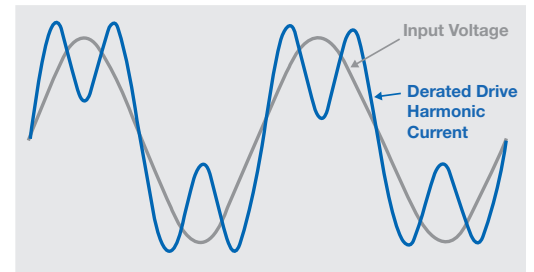
## System Diagram



# Single Phase Converter

## System Advantages

- Less than 10% iTHD reduces installation costs
- Eliminates the need for drive oversizing
- Three-phase motors are more efficient and less expensive than single-phase motors
- No rotating parts needed for phase conversion
- UL Listed



## Specifications

Item	Specification
Power Range	230 VAC: 20-60 HP 460 VAC: 30-125 HP
Input Voltage Tolerance	230-240 VAC, Single-Phase 460-480 VAC, Single-Phase Tolerance -5/+10% <sup>1</sup>
Power Factor	0.99
Ambient Operating Temperature	-10° to 50°C (14° to 122°F) Open Chassis; -10° to 40° (14° to 104°F) NEMA1
Global Certifications	UL, RoHS
User Interface	4 LED indicators: Power, Ready, Run, Fault

1. -10% minimum input voltage for 60 seconds at rated power

## Models and Ratings

Power Supply	System Kit Number <sup>1</sup>	Rated Power <sup>2</sup> HP	Input Current Amps (rms)	Output Current Amps (dc)	Height inches (cm)	Width inches (cm)	Depth inches (cm)
230 - 240 VAC	SPBC-240-20HP	20	79	57	15 (38.1)	10 (25.4)	10 (25.4)
	SPBC-240-30HP	30	116	84	15 (38.1)	10 (25.4)	10 (25.4)
	SPBC-240-40HP	40	154	112	17 (43.2)	12 (30.5)	10.5 (26.7)
	SPBC-240-50HP	50	191	139	24 (61.0)	12.4 (31.5)	11.4 (29.0)
	SPBC-240-60HP	60	228	166	24 (61.0)	12.4 (31.5)	11.4 (29.0)
460 - 480 VAC	SPBC-480-30HP	30	58	42	15 (38.1)	10 (25.4)	10 (25.4)
	SPBC-480-40HP	40	77	56	15 (38.1)	10 (25.4)	10 (25.4)
	SPBC-480-50HP	50	96	69	17 (43.2)	12 (30.5)	10.5 (26.7)
	SPBC-480-60HP	60	114	83	17 (43.2)	12 (30.5)	10.5 (26.7)
	SPBC-480-75HP	75	142	103	24 (61.0)	12.4 (31.5)	11.4 (29.0)
	SPBC-480-125HP	125	234	170	24 (61.0)	12.4 (31.5)	11.4 (29.0)

1. Kit includes open type/protected chassis Single Phase Converter and DC link choke

2. Larger power Single Phase Converter unit may be used on lower power motors

