PHASE-A-MATIC™

220V ROTARY PHASE CONVERTER MULTIPLE UNIT APPLICATION

INSTRUCTION SHEET

Larger HP phase converter systems may be obtained by connecting multiple Rotary Converters in parallel as shown below.

CAUTION: ALWAYS START CONVERTER BEFORE APPLYING LOAD

1. Magnetic controls or **single-phase** loads (including electronics, microprocessors, etc.) must always be energized by lines T1 and T2. Never connect a ground or neutral to line T3 (manufactured phase), which can easily be identified as the line with the highest voltage to ground with the converter running. Properly ground all electrical equipment.
2. It is essential that careful consideration be given to your wiring length and size to prevent slow starting due to a voltage drop. Consult National Electrical Code for proper wire sizing.
3. Due to the high starting current (in-rush current) common to electric motors, a drop of starting torque may occur when using a converter that is too small. Because of this, it is NOT advised to size an application HP for HP. The vast majority of applications require sizing the converter 50% larger *or more* than the largest HP rated motor of your equipment. Contact Phase-A-Matic, Inc. for further details.
4. Table shows approximate idle current at 230V. Higher line voltage will cause idle current to increase. Excessive amperage could also be caused by incorrect installation.
5. Converter should reach full speed within 2 to 3 seconds.
6. Lubricate every 12 months for normal operation, or every 6 months for continuous (24-hour) operation. Use high-temp bearing grease: "Exxon POLYREX®EM" polyurea grease or equivalent, available from Phase-A-Matic, Inc.
7. Voltage sensitive equipment (CNC/PLC, 3-phase powered electronics, etc.) may require a Phase-A-Matic™ Voltage Stabilizer designed to reduce phase voltage imbalance. Refer to Voltage Stabilizer brochure or call 1-800-962-6976.
8. **CAUTION:** Converters are intended for use in clean, dry locations with access to an adequate supply of cooling air. In addition, there should be protection from, or avoidance of, flammable or combustible materials in the area of converters as they can eject flame and/or metal in the event of an insulation failure.

MODEL	LARGEST MOTOR HP See #1 below	MULTIPLE MOTORS LIGHTLY LOADED See #2 below	APROX. IDLE CURRENT	DISCONNECT SWITCH FUSE (TIME DELAY FUSES) Per single converter	NEMA STARTER SIZE Per single converter	STARTER AMPERAGE Per single converter	MINIMUM SINGLE PHASE SUPPLY See #3 below	SHIPPING DIMENSIONS In inches
R-1	1	3	1.5 AMPS	10 AMPS	00	4.8 AMPS	15 AMPS	15 x 10 x 10
R-2	2	6	2	10	0	7.7	15	15 x 10 x 10
R-3	3	9	2.5	15	0	10.4	20	19 x 12 x 13
R-5	5	15	3	30	1	15.9	30	19 x 12 x 13
R-7	7.5	22	5	40	1	26	40	16 x 16 x 16
R-10	10	30	7	45	2	35	60	16 x 16 x 16
R-15	15	45	8	60	3	48	100	31 x 24 x 21
R-20	20	60	10	80	3	63	125	31 x 24 x 21
R-25	25	75	11	100	3	80	160	31 x 24 x 21
R-30	30	90	12	125	3	94	200	31 x 24 x 21
R-40	40	120	13	150	4	117	250	31 x 24 x 24
R-50	50	150	15	200	5	145	300	31 x 24 x 24
R-75	75	225	29	300	5	235	375	31 x 24 x 24
R-100	100	300	48	400	5	300	600	41 x 41 x 33

1. LARGEST MOTOR HP: Almost all machines require sizing the converter 50% larger or more than the largest HP motor of your machine. See #3 above.

2. MULTIPLE MOTORS: HP shown in chart reflects maximum HP allowable under specific conditions. Example: Multiple machinery, not started at the same time, and that is running lightly loaded. For larger sizes consult factory.

3. MINIMUM SINGLE-PHASE SUPPLY: Single-phase supply shown is for absolute maximum output of the Rotary Converter. Most of the time the converter is oversized to provide the high starting current for the motor. It is not always necessary to size the single-phase breakers this large. Contact Phase-A-Matic for smaller single-phase breaker qualifications.

4. DISCONNECT SWITCH FUSE, NEMA STARTER SIZE & STARTER AMPERAGE: Sized for individual starters for each converter unit.

IMPORTANT: This chart is simplified and cannot reflect the many types of applications possible. Contact Phase-A-Matic, Inc. at 1-800-962-6976 to verify your phase converter requirements.

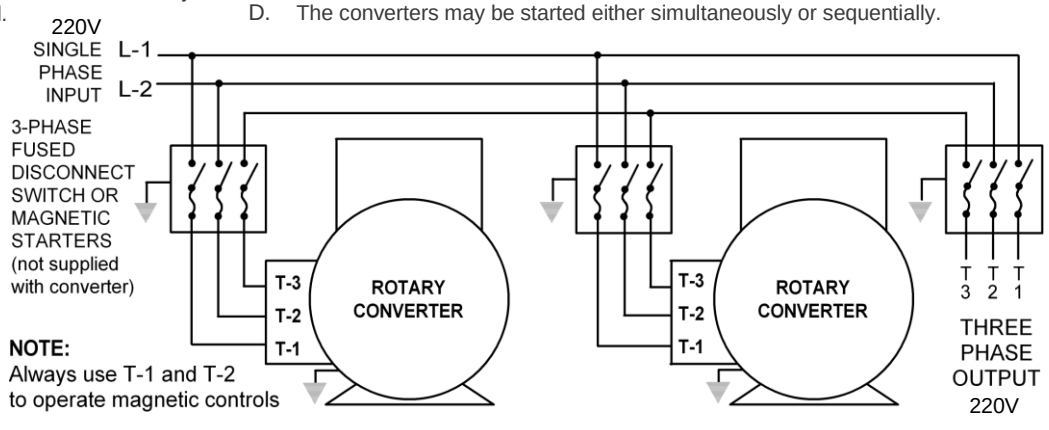
A. Larger HP phase converter systems may be obtained by connecting multiple Rotary Converters in parallel as shown below. This is necessary for models larger than 100 HP, but can also be done with any two or more Phase-a-Matic™ Rotary Converters of equal HP connected in parallel.

B. Care must be taken to connect all T-1 lines together and all T-2 lines together. Cross wiring may result in damage to the converters.

C. Fuses or magnetic starters should be sized for the individual converters and not for the total load.

D. The converters may be started either simultaneously or sequentially.

NOTE: Measure voltage between lines #3 before connecting them together to ensure proper phase rotation. Voltage should be less than 50 volts.



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