
American Rotary Advantage

American Rotary has been making premium rotary phase converters for more than a decade. For more than 10 years, American Rotary has led the industry in innovation and design. We have introduced, field-tested, and proven several technologically advanced features which have driven increases in the reliability and precision voltage balancing capabilities of phase conversion unmatched in the industry.

We provide the industry leading telephone support for technical, application and sizing issues. We stand behind our products with the best warranty in the industry. We use premium components to ensure that our products perform for you. American Rotary is a UL Certified Control Panel Builder, and our rotary phase converters are available UL Listed to US and Canadian Safety Standards. We have partnered with Baldor Electric one of the world's largest and most respected manufacturers to supply our custom-engineered idler/generators. The engineers at American Rotary worked with the engineers at Baldor for over a year designing a custom induction generator for phase conversion, which reduced the inrush current on start-up so drastically (83% reduction...a stock motor requires 600% more inrush) that American Rotary's induction generator was granted a Soft Start rating, and a resulting reduction in operating cost!

American Rotary is listed with D&B as well as the Better Business Bureau, and we are committed to high ethical and privacy standards.

American Rotary offers 3 different types of Rotary Phase Converters

**AR Series**

perfect for light to medium duty, general purpose loads

**AD Series**

if the AR series is like a carbureted engine, the AD series is fuel injected...more powerful, reliable, and precise. Runs w/fully programmable MicroSmart controller

**ADX Series**

in addition to the AD, the ADX series adds nitrous... 250% more starting power, for compressors, pumps, flywheel loads, etc. w/fully programmable MicroSmart controller

(continued on next page)

Standard Features

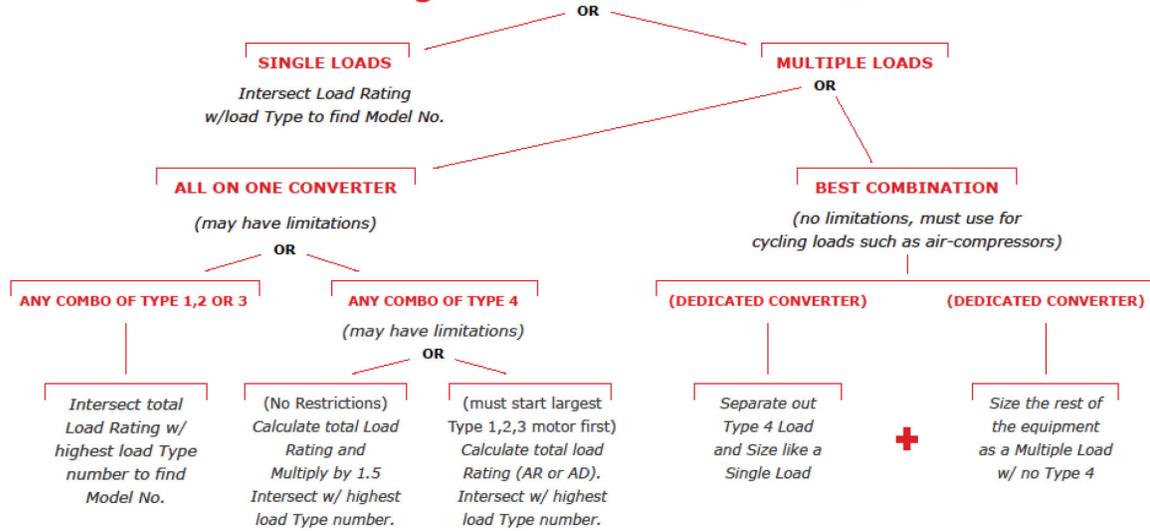
American Rotary engineers the entire phase converter system to provide optimum performance. We are the only manufacturer that has developed a read induction Generator, along with two separate optimized start and run circuits. For ease of installation, we build the starter into the converter.

	AR	AD	ADX
Made in the USA	✓	✓	✓
Modular & Expandable	✓	✓	✓
VIT Generator	✓	✓	✓
Full Current Latching Starter	✓	✓	✓
3 Phase Breaker and Receptacle Slots	✓	✓	✓
MicroSmart Digital Industrial Programmable Controller		✓	✓
CTR Transient Reactor			✓

(continued on next page)

Sizing

Sizing Guide (use table below and round up)



FIND LOAD TYPE

A			B			C			Type 1 Load	Type 2 Load	Type 3 Load	Type 4 Load		
Single or Group Load Rating Total									General Purpose, moderate load, non-computer	Hard Loads that develop Full HP during use.	High Inertia, Start under load.	CNC, VFD, current protected, precision voltage balanced, computer, rectified, resistive.		
									Good for general purpose loads such as manual mills, table saws, clutched lathes, drill press, etc.	Best for voltage sensitive & resistive loads such as CNC equipment, ovens, EDM, welder, plasma cutter, etc.	Precise enough for CNC and other voltage sensitive equipment yet powerful enough to handle high inertia and heavy duty loads such as HVAC, pumps, flywheels, belt sanders, vacuum pumps, bandsaws, etc.	Best for voltage sensitive & resistive loads such as CNC equipment, ovens, EDM, welder, plasma cutter, etc.		
HP	kW	@240V amps	Model No.			Model No.			Model No.			Model No.		
			*AR, AD, ADX, AMP, AI			*AD, ADX, AMP, AI			*ADX, AMP, AI			*rec AD, ADX, AMP, AI		
1	0.75	2.8	5			5			5			5		
2	1.49	5.6	5			5			5			5		
3	2.24	9.6	10			10			10			10		
5	3.37	15	10			10			10			10		
7.5	5.59	22	15			15			15			15		
10	7.46	28	20			20			20			20		
12.5	9.32	35	25			25			25			25		
15	11.2	42	30			30			30			30		
20	14.9	54	40			40			40			40		
25	18.6	68	50			50			50			50		
30	22.4	80	60			60			60			60		
40	29.8	104	75			75			75			75		
50	37.3	130	100			100			100			100		
60	44.7	150	120			120			120			120		
75	55.89	210	150			150			150			150		
100	74.52	280	200			200			200			200		
150	111.77	420	300			300			300			300		

note: *We offer the following product model offerings: AR 5,10,15,20 | AD 5-75 | ADX 5-300 | AMP 5, 10, 20 | AI 20-300

(continued on next page)

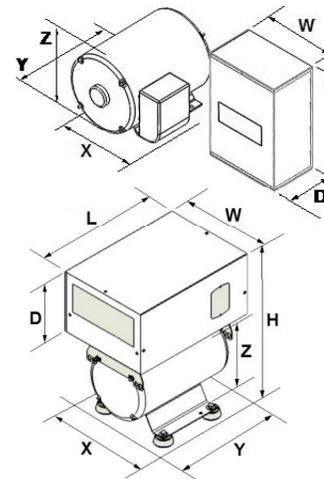
Specifications

Converter Selection & Load Chart (208-240V)					
Model Rating	Largest Motor Start	Max Total HP(Amps) For Optimal Performance	Min. Recommended Wire Gauge		
			1-Phase Input	3-Phase Output	Panel to Idler Wiring
5	2.5	5 (14)	8	12	12
7	3.5	7 (19.6)	8	10	12
10	5	10 (28)	8	10	12
15	7.5	15 (42)	6	8	10
20	10	20 (56)	4	6	10
25	12.5	25 (70)	2	6	8
30	15	30 (84)	1	4	8
40	20	40 (112)	1/0	3	6
50	25	50 (140)	3/0	2	4
60	30	60 (168)	4/0	1/0	3
75	37.5	75 (210)	250 MCM	2/0	2

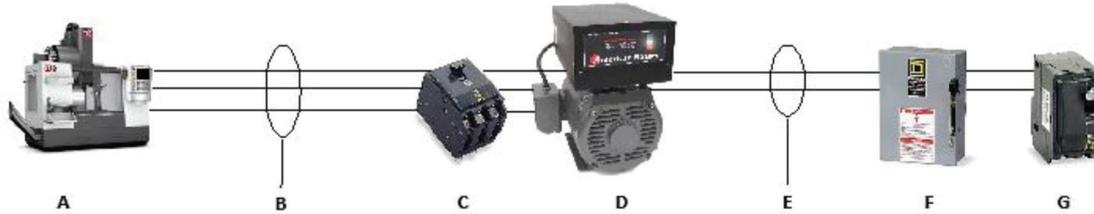
Converter Selection & Load Chart (480V)					
Model Rating	Largest Motor Start	Max Total HP(Amps) For Optimal Performance	Min. Recommended Wire Gauge		
			1-Phase Input	3-Phase Output	Panel to Idler Wiring
5	2.5	5 (6)	12	14	12
7	3.5	7 (9)	12	14	12
10	5	10 (13)	10	12	12
15	7.5	15 (19)	10	12	10
20	10	20 (25)	8	10	10
25	12.5	25 (31)	8	10	10
30	15	30 (38)	6	8	10
40	20	40 (50)	4	6	8
50	25	50 (63)	2	4	6
60	30	60 (75)	1	3	4
75	37.5	75 (94)	2/0	2	3

Dimensions & Weights

Part Number	5	7.5	10	15	20	25	30	40	50	60	75
AR AD ADX											
L (in.)	15.8	15.8	15.8	15.8	15.8	19.3	19.3	23	23	23	23
W (in.)	11.3	11.3	11.3	11.3	11.3	13.5	13.5	19	19	19	19
D (in.)	7.75	7.75	7.75	7.75	7.75	8.25	8.25	8.3	8.3	8.3	8.3
X (in.)	11.5	13	12.5	14.5	17.5	17.5	20.5	23	23	22	22
Y (in.)	12	12.5	12	15.5	14	17	18.5	21	21	21	22
Z (in.)	8.5	9.5	10	11	12	13	14	16	16	17	17
H (in.)	17.4	18.4	18.9	19.9	20.9	22.5	23.5	26	26	27	27
Weight (lbs.)	123	142	168	249	296	320	382	398	506	568	617



Installation



Load FLA (full load amps)	3 ph. Wire gauge	3 ph. Breaker or Fuse	Panel to Generator wire gauge	1 ph. Wire gauge	1 ph. Safety Disconnect	1 ph. Breaker or Fuse										
Amps @ operating voltage	Load FLA x 1.2 (round up)	3 ph. Wire amp rating x 1.25 (round up)	3 ph. Wire from Phase converter panel to idler/generator	3 ph. Load amps x	1 ph. Amps (round up)	1 ph. Wire amp rating x 1.25 (round up)										
240V = HP X 2.8 = (Kw X 2.8)/PF = Kva / 2.75	increase wire size for every 50 feet		Caution: This is a minimum rating for a breaker or Fuse for proper performance and operation of the phase converter and may not meet applicable local, state or national electric codes.	Converter HP wire size 5 12 7.5 12 10 12 15 12 20 10 25 8 30 8 40 6 50 4 60 3 75 2	1.5 for AR, AD, ADX voltage balanced phase converters or 1.9 for other rotary type phase converters by other manufacturers	available in these common sizes 30 A 60A 100A 200A 400A 600A										
	480V = HP x 1.4 = (kW x 1.4)/PF = kVA / 1.4	wire size amps 14 20 12 25 10 35 8 50 6 65 4 85 3 100					Caution: This is a minimum rating for breaker or Fuse for proper performance and operation of the phase converter and may not meet applicable local, state or national electric codes.	increase wire size for every 50 feet.	Use table in column B to find wire size.	also commonly available in fused or non-fused						
208V = HP X 3.2 = (Kw X 3.2)/PF = Kva / 3.15		2 115 1 130 1/0 150 2/0 175 3/0 200		Caution: This is a minimum rating for breaker or Fuse for proper performance and operation of the phase converter and may not meet applicable local, state or national electric codes.							increase wire size for every 50 feet.	Use table in column B to find wire size.	also commonly available in fused or non-fused			
	PF (power factor) typical motor = .8 resistive heater = 1 welder = .85	4/0 230 250 255 300 285 350 310												Caution: This is a minimum rating for breaker or Fuse for proper performance and operation of the phase converter and may not meet applicable local, state or national electric codes.	increase wire size for every 50 feet.	Use table in column B to find wire size.

NOTE: Ground all equipment. This table is not intended to replace or supersede Local, State or National Electric codes.