Infinitum

Aircore EC+ Do More With Less.



Frame 13

1-5 HP (.75-3.73 kW)



Frame 15

5-7.5 HP (3.73-5.6 kW)



Frame 18

7.5-10 HP (5.6-7.46 kW)



Frame 20

10-15 HP (7.46-11.19 kW)

Comprehensive service, maintenance & components

5 dB quieter than conventional motors

Average $2,300 in energy savings per motor*

Applications Fans HVAC

Comprehensive, customizable power

Outperform

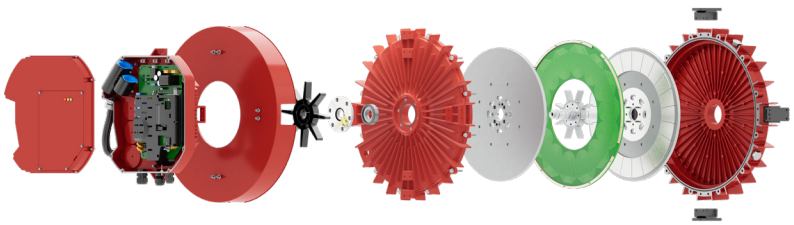
- Up to 25% higher efficiency than conventional systems
- Direct-mount design eliminates belts and mechanical losses
- Integrated VFD for precise variable speed control
- Optimized energy use during off-peak and peak loads
- Reduces total energy consumption
- Future-ready design for sustainable, high-performance HVAC

Maximize Uptime

- Fast installation — modular, lightweight design
- Easy maintenance — field-replaceable components
- Built-in redundancy — enhances system reliability
- Smart monitoring — VFD + motor control software
- Lower lifecycle costs — replace components, not full systems

Reduce Emissions

- Less copper — lightweight PCB stator reduces material use
- Smaller & lighter — minimizes material requirements and footprint
- Designed for circularity — remanufactured to reuse components and reduce landfill waste
- Unlock capital — redirect energy savings to fund other critical infrastructure initiatives



Customize your motor system and instantly generate a tailored datasheet using our Motor Selection Tool (MST).

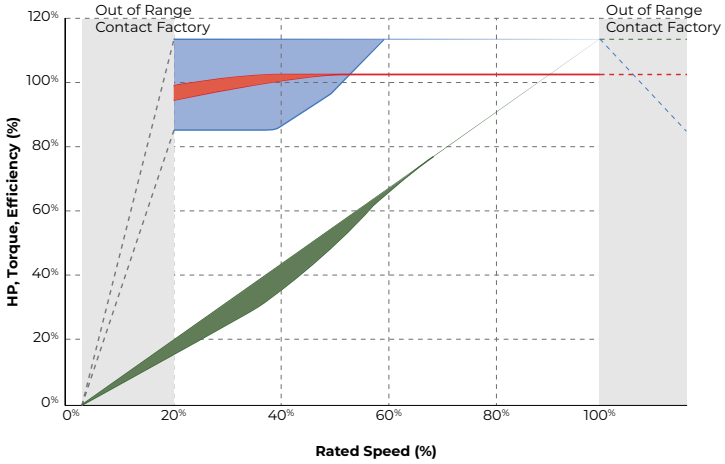
Preview power, amperage, energy savings, and more.

mst.goinfinitum.com

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Performance



The recommended RPM range for this motor is 20% to 100% of the Rated Speed. Operating below the minimum speed is not advised except during coasting or ramp-up. For operation outside of this recommended range, please contact Infinitum for a customized solution. These curves are for reference only; actual performance may vary.

- Torque (Nm)
- Power
- Efficiency

General Information

Motor Technology	Axial Flux, PCB Stator
VFD Technology	Integrated, SiC based High Efficiency Drives
System Efficiency* (Motor + VFD)	91.8% (460 V), 90.4% (415 V)
Minimum Speed	20% of the Rated Speed
Maximum Speed	120% of the Rated Speed
Duty Cycle	Continuous
Service Factor	1.0
Cooling	TEFC
Thermal Protection	Electronically Protected (EP-L)
IP Rating	IP65
Mounting	Peripheral Mount C-Face 182-TC
Mounting Orientation	Horizontal Vertical

*Calculated

Mechanical Information

Rotation	CW, CCW
Bearing (DE & NDE)	6206 Hybrid Ceramic
Grease	Permanent Mobil Polyrex
Rotor Inertia	0.49 kg.m^2
Grounding Brush	Included, DE

Electrical Information

Supply Voltage	415/460 VAC ±10% 575 VAC +/- 10%
Rated Amps*	12.0 A ±10% (460 VAC), 13.0 A ±10% (415 VAC)
Maximum Voltage Imbalance	+/-3% Phase-Phase Voltage
Short Circuit Rating (SCCR)	5kA
Insulation Class	MOT150 Class B
Grounding	Delta, HRG, Grounded Wye

Power, Speed

Frame Size	Rated Torque (Nm)	Rated Power (HP)	Rated Speed (RPM)	Weight (Lbs)
AE20-x	60	15	1800	135
AE20-x	40	15	3600	130
AE20-x	40	15	2700	130
AE20-x	40	10	1800	130
AE18-x	20	10	3600	100
AE18-x	30	10	2400	100
AE18-x	30	7.5	1800	100
AE15-x	22	7.5	2400	86
AE15-x	15	7.5	3600	86
AE15-x	20	5	1800	86
AE15-x	15	5	2400	86
AE13-x	10	5	3600	73
AE13-x	8.5	5	4200	73

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Controls & Communication

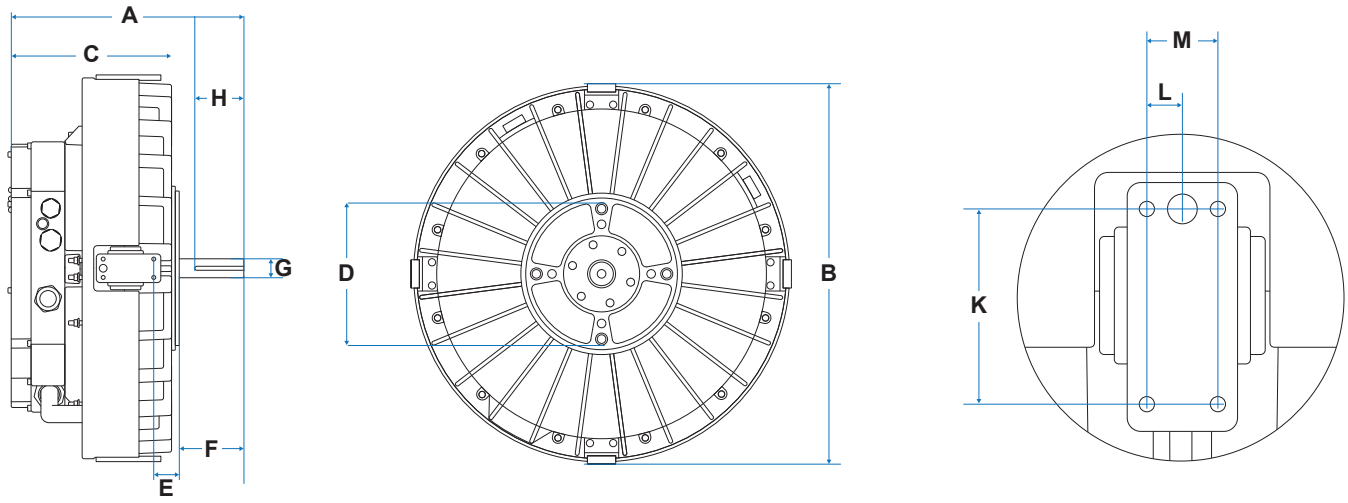
Harmonics Mitigation	Not Included
Download on the App Store	MODBUS TCP for I-con (Desktop or Mobile)
Analog Input	0-10V, 4-20mA
Analog Output	10V for Potentiometer
Digital Input	4x
Digital Outputs	2x
Relay	Analog Input
Aux Power	250mA, 24VDC

Ambient Conditions

Ambient Temp (Operation)	-13F to 104F (-25C to 40C) 2% Power Derate per 1C up to 50C
Ambient Temp (Storage)	-40F to 185F (-40 to 85C)
Altitude	0 to 3300 ft. (0-1000M) 9% Power Derate per 1000 M up to 2000 M
Humidity (Operation & Storage)	95% RH, No Condensation
Contamination (Operation & Storage)	No conductive dust

Certifications

UL 1004-7	UL 1004-1	UL 61800-5-1	CSA 22.2 N077



Frame Size	A	B	C	D	E	F	G	H	K	L	M
AE20-X	313.9	537.3	224.8	184.1	34.5	82.7	28.6	60.0	69.9	12.7	25.4
AE18-X	309.0	472.0	220.6	184.1	29.4	82.1	28.6	60.0	69.9	12.7	25.4
AE15-X	311.9	417.3	221.6	184.1	36.2	82.3	28.6	60.0	69.9	12.7	25.4
AE13-X	318.0	367.8	230.7	184.1	33.1	81.0	28.6	60.0	69.9	12.7	25.4

All measurements in mm

Mounting & dimensions

There are four mounting pad locations.

Each pad is spaced 90° apart, containing 4 mounting holes and one lifting eye hole.

The DE face of the mounting block has threaded holes for four bolts (1/2"-13).

All bolt holes should be used for secure mounting of the motor to equipment

Catalog Number Decoder

AE20-1000-1800-AAAH-AA63 Example

Family	Frame	HP	Rated Speed	Product Code
AE	20	1000	1800	AAAH - AA63
				1 2 3 4 5 6 7 8

Family	Name
AE	Aircore EC+
AM	Aircore EC+ (AFE)

Frame	Motor Diameter
13	Refer to Dimensions
15	Refer to Dimensions
18	Refer to Dimensions
20	Refer to Dimensions

HP		Motor Power
XXXX	*(Example)*	XX.XX
1000	*(Example)*	10HP
0590	*(Example)*	5.90HP
List is not exhaustive		

Rated Speed		RPM
1225	*(Example)*	1225 RPM
List is not exhaustive		

Product Code

Postion 1	Voltage
A	415V/460V* 3-phase
C	575V* 3-phase

*Check the Motor Selection Tool (MST) for compatible models.

Product Code

Postion 2	Communication
A	MODBUS RTU/Analog
B (Optional)	BACnet MS/TP/Analog

Postion 3	VFD
A	All Features

*Contact Infinitum for Custom Parameters.

Position 4	Bearings
H	Hybrid Ceramic 6206

Position 5	Shaft
A	L 3.3”, D 1.13”
B (Special)	L 4.0”, D 1.13”

Postion 6	Cable Harness
A	None

*Contact Infinitum for Cable Options.

Position 7	Ingress Protection
6	IP65

Position 8	Miscellaneous
0	Grounded Wye, EP-L
3	Grounded Wye, HRG, Delta, EP-L

Generate a tailored datasheet using our Motor Selection Tool. mst.goinfinitum.com

Contact
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We reserve the right to make technical changes or modify the contents of this document without prior notice. * Infinitum motor system compared to IE4/ NEMA Super Premium AC Induction motor + VFD over a 10-year lifetime. Efficiencies are dependent on specific motor and application.

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