

WOLONG
Power your future

EMR-Bulldozer®

Ferrite-Assisted Synchronous
Reluctance Motor Drive System
Product Series



Wolong Electric Group

Add: No. 555, West Fuxing Road, Shangyu District,
Shaoxing, Zhejiang 312300, China
Web: www.wolong-electric.com

Wolong Electric America LLC

Add: 3050 Post Oak Boulevard,
Suite 630, Houston, TX 77056
Email: Contact@wolongamerica.com

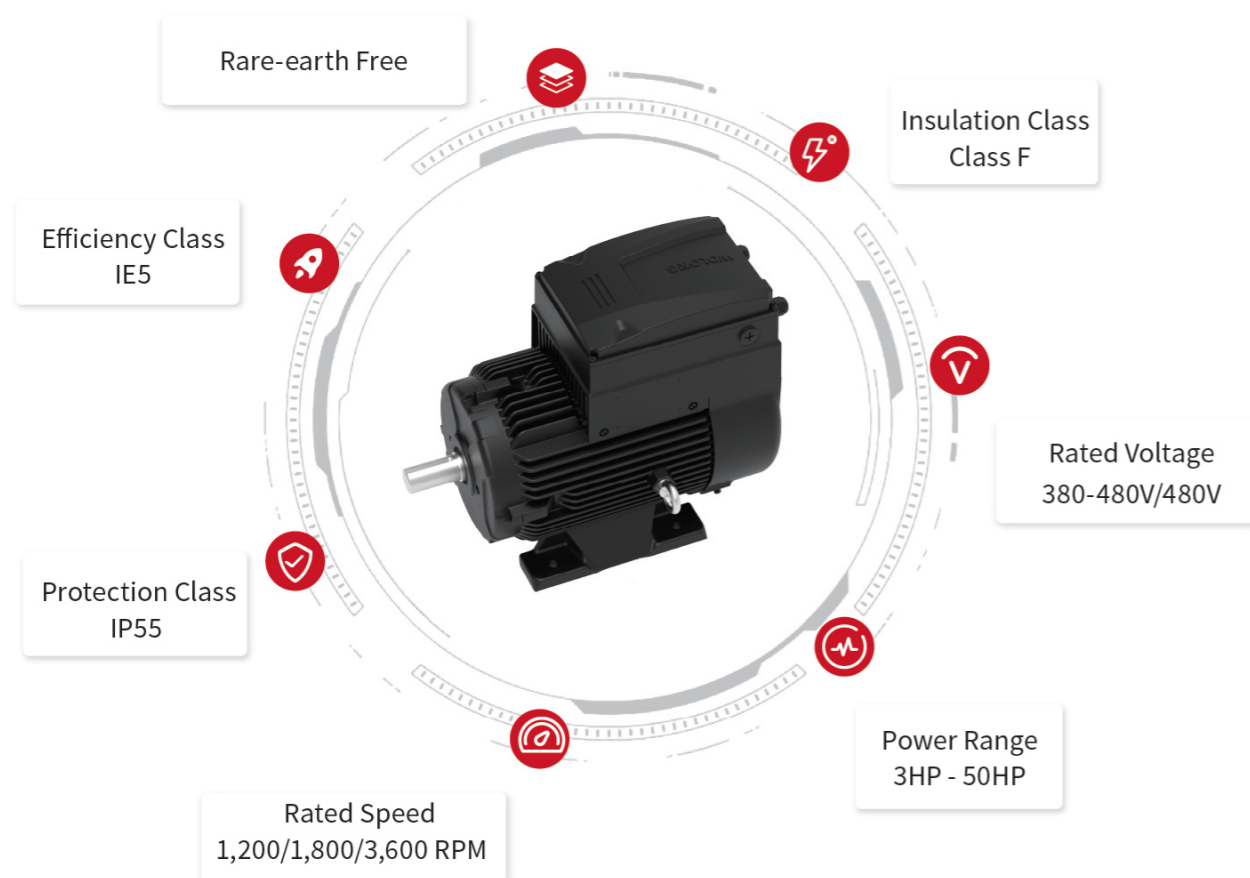
WOLONG
Power your future

EMR-Bulldozer® System Product Overview

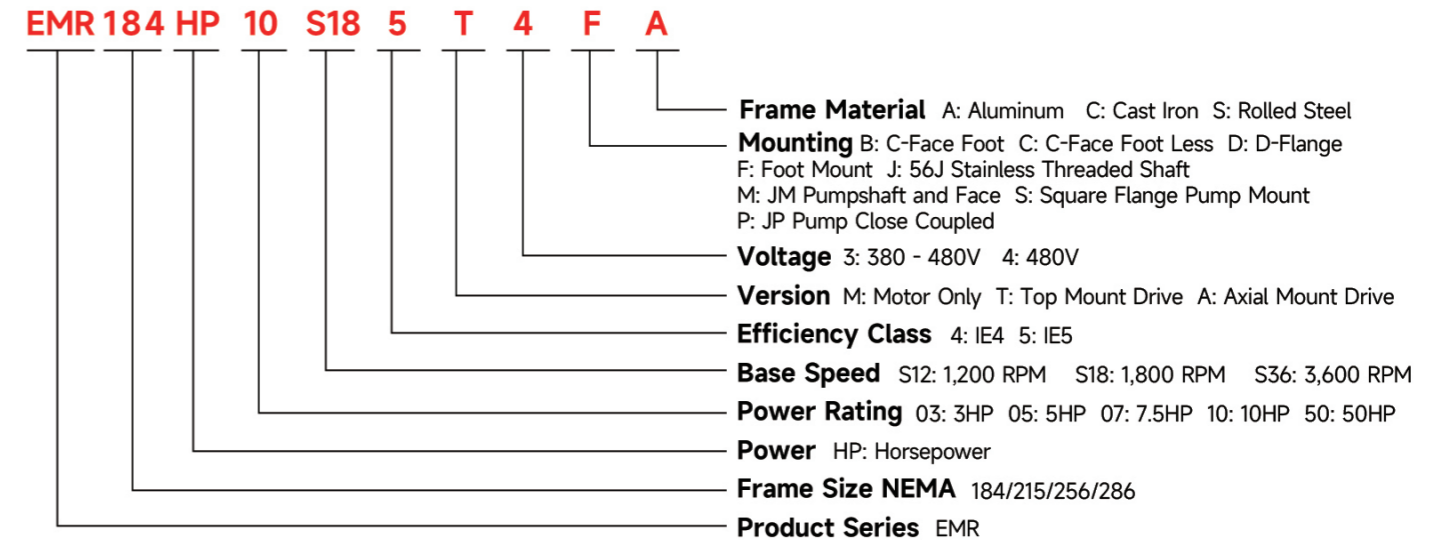
Wolong is introducing a new series of ferrite assisted synchronous reluctance motor drive system products under the EMR-Bulldozer® branding. As the name suggests, the Bulldozer® patented system design offers a strong and robust performance profile while still managing exceptionally high energy efficiency. As high-performance integrated electronically controlled motors, the Bulldozer® products are composed of a top-mounted controller unit and a ferrite-assisted synchronous reluctance motor.

Wolong sees the EMR-Bulldozer® as the solution to many design concerns. With the EMR-Bulldozer® system design, the motor torque is primarily produced by the reluctance torque. This characteristic allows the motor drive systems producing such high efficiency at a wide operational speed range, from low speed settings to high rated speeds, and even in an extended constant power control range above the rated speed. The EMR-Bulldozer® drive system products offer the advantages of system integration, high efficiency, and small footprint, etc., typically providing the best solution for fans, pumps, and compressors' variable speed driven applications.

Product Feature



Nomenclature



Technical Specification

AC Input	Voltage	380 - 480V/480V
	Frequency	50/60Hz
Performance	Motor Control	Direct Flux Control
	Rated Speed	1,200/1,800/3,600 RPM
	Maximum Speed	2,100/3,200/4,320 RPM
	Speed Range	10% Rated Speed - Maximum Speed
	Constant Power Zone	Rated Speed - Maximum Speed
	Speed Accuracy	±0.5%
	Speed Setting Resolution	1 RPM
	Overload Capacity	110% - 10min, 136% - 10sec
Speed Setting	Operation Mode	Terminal, Modbus, Keypad
	Command Source	DI, AI, RS485
Terminal	Input	Digital (x4), Analog (x2, 0 - 10V/4 - 20mA), Temp (x1)
	Output	Digital (x1), Analog (x2, 0 - 10V/4 - 20mA), Relay (x1)
	Communication	RS485 (x2)
	Auxiliary Power	24V (50mA Max, Short Circuit Protection), 10V (50mA Max, Short Circuit Protection)
Motor	Type	Ferrite-Assisted Synchronous Reluctance
	Efficiency Class	IE5
	Rated Speed	1,200/1,800/3600 RPM
	IP Rating	IP55
Protection	Locked Rotor, Loss of Phase, Over Current, Overload, Over Voltage, Under Voltage, Over Temperature, Communication Fault, Current Feedback Fault, EEPROM Fault	
Environment	Ambient Temperature	-20°C to 60°C
	Storage Temperature	-40°C to 85°C
	Humidity	5% - 95% (Non-Condensing)
	Vibration	1.6G Peak at 5 - 500Hz (Operating), 2.2G Peak at 5 - 500Hz (Non-Operating)
	Maximum Altitude	1,000 m
	Pollution Degree	PD2
Certification	UL/cUL	

Products Parameters

Foot mounted, C-Face Foot, D-Flange

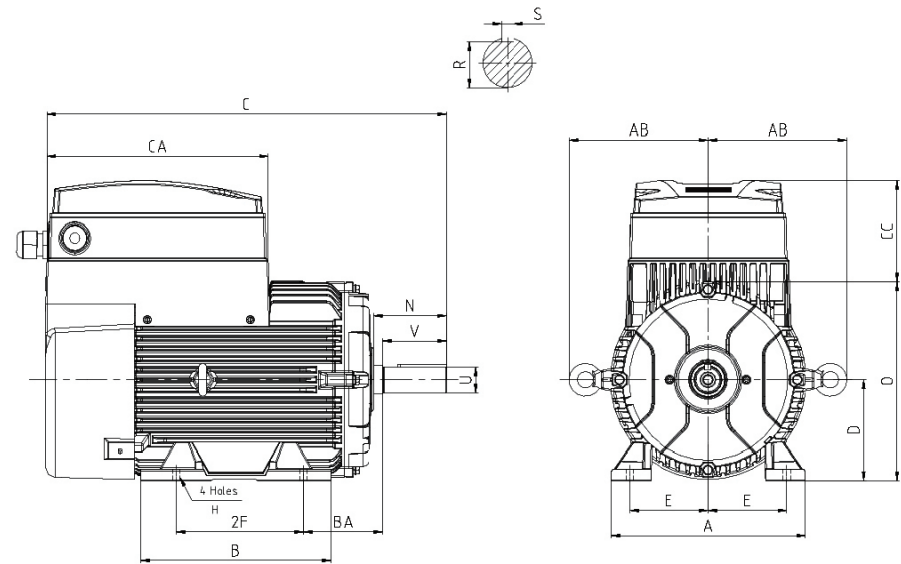
Rated Power (HP)	Base Speed (RPM)	C.H. Speed (RPM)	NEMA Frame	Catalog Number	Aprx. wt. (lb)	Motor Efficiency (%)	Motor Input Amps (A)	Drive Input Voltage (V)	Drive Module	Drive Input Amps (A) @480V
3	3,600	4,320	184T	EMR184HP03S365T3*A	60	90.2	4.28	380-480	ERD4A5D0I	3.40
5	3,600	4,320		EMR184HP05S365T3*A	66	91.8	7.08	380-480	ERD4A8D3I	5.49
7.5	3,600	4,320	215T	EMR215HP07S365T3*A	77	92.6	10.31	380-480	ERD4A12D5I	8.31
10	3,600	4,320		EMR215HP10S365T3*A	88	93.3	13.94	380-480	ERD4A16D8I	11.01
15	3,600	4,320	256T	EMR256HP15S365T3*A	141	94.0	20.53	380-480	ERD4A25D2I	17.67
20	3,600	4,320		EMR256HP20S365T3*A	164	94.5	27.23	380-480	ERD4A34D3I	25.64
25	3,600	4,320		EMR256HP25S365T3*A	184	94.9	33.53	380-480	ERD4A42D9I	32.47
30	3,600	4,320	286T	EMR286HP30S365T3*C	387	95.1	40.15	380-480	ERD4A50D0I	36.02
40	3,600	4,320		EMR286HP40S365T3*C	426	95.5	54.47	380-480	ERD4A67D4I	48.52
50	3,600	4,320		EMR286HP50S365T3*C	457	95.8	65.04	380-480	ERD4A82D2I	57.06

3	1,800	3,200	184T	EMR184HP03S185T4*A	64	91.4	3.35	480	ERD4A4D1I	3.70
5	1,800	3,200		EMR184HP05S185T4*A	82	92.8	5.62	480	ERD4A5D8I	5.60
7.5	1,800	3,200	215T	EMR215HP07S184T4*A	95	91.9	8.51	480	ERD4A9D5I	8.60
7.5	1,800	3,200		EMR215HP07S185T3*A	95	93.4	10.44	380-480	ERD4A12D5I	8.31
10	1,800	3,200		EMR215HP10S184T4*A	106	92.6	11.14	480	ERD4A12D0I	11.30
10	1,800	3,200		EMR215HP10S185T3*A	106	94.0	13.40	380-480	ERD4A16D8I	11.01

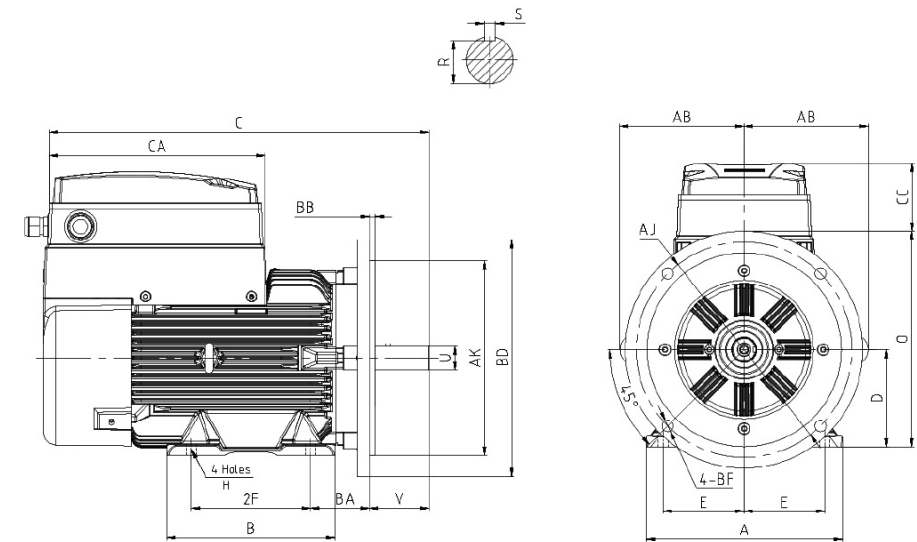
Rated Power (HP)	Base Speed (RPM)	C.H. Speed (RPM)	NEMA Frame	Catalog Number	Aprx. wt. (lb)	Motor Efficiency (%)	Motor Input Amps (A)	Drive Input Voltage (V)	Drive Module	Drive Input Amps (A) @480V
15	1,800	3,200	256T	EMR256HP15S185T4*A	181	94.6	16.70	480	ERD4A18D3I	18.60
20	1,800	3,200		EMR256HP20S185T4*A	224	95.1	22.15	480	ERD4A24D8I	25.80
25	1,800	3,200		EMR256HP25S185T4*A	231	95.3	27.63	480	ERD4A30D9I	32.00
30	1,800	3,200	286T	EMR286HP30S185T4*C	427	95.5	33.44	480	ERD4A39D7I	37.40
40	1,800	3,200		EMR286HP40S185T4*C	488	95.9	43.93	480	ERD4A52D2I	48.60
50	1,800	3,200		EMR286HP50S185T4*C	510	96.1	55.99	480	ERD4A62D8I	58.10

3	1,200	2,100	184T	EMR184HP03S125T3*A	73	89.7	4.35	380-480	ERD4A8D3I	3.40
5	1,200	2,100	215T	EMR215HP05S125T3*A	97	91.4	6.96	380-480	ERD4A12D5I	5.50
7.5	1,200	2,100		EMR215HP07S125T3*A	108	92.2	10.58	380-480	ERD4A16D8I	8.40
10	1,200	2,100	256T	EMR256HP10S125T3*A	227	92.9	14.00	380-480	ERD4A25D2I	11.10
15	1,200	2,100		EMR256HP15S125T3*A	234	93.7	20.59	380-480	ERD4A34D3I	17.80
20	1,200	2,100	286T	EMR286HP20S125T3*C	431	94.3	27.58	380-480	ERD4A50D0I	25.80
25	1,200	2,100		EMR286HP25S125T3*C	452	94.6	34.37	380-480	ERD4A50D0I	32.50
30	1,200	2,100		EMR286HP30S125T3*C	492	94.9	40.67	380-480	ERD4A67D4I	36.40
40	1,200	2,100		EMR286HP40S125T3*C	514	95.3	54.58	380-480	ERD4A82D2I	48.60

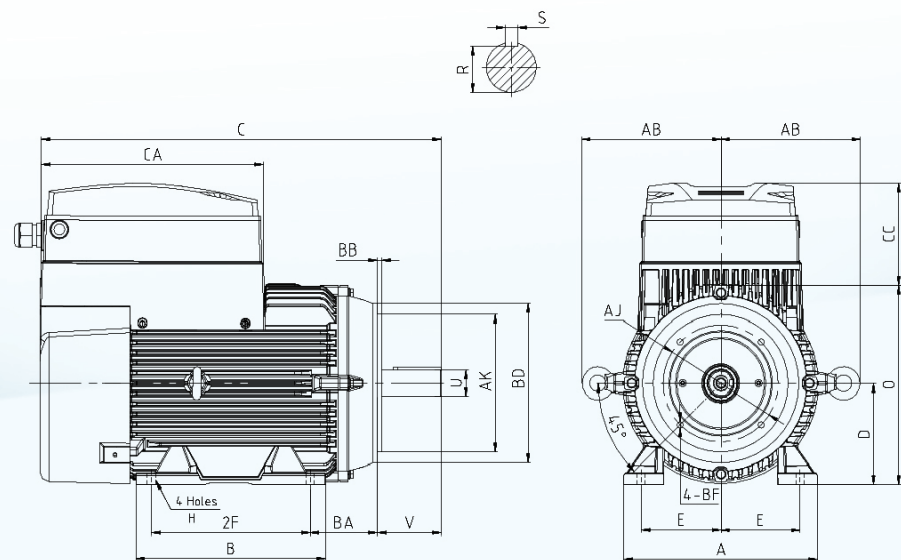
Drawings and Dimensions



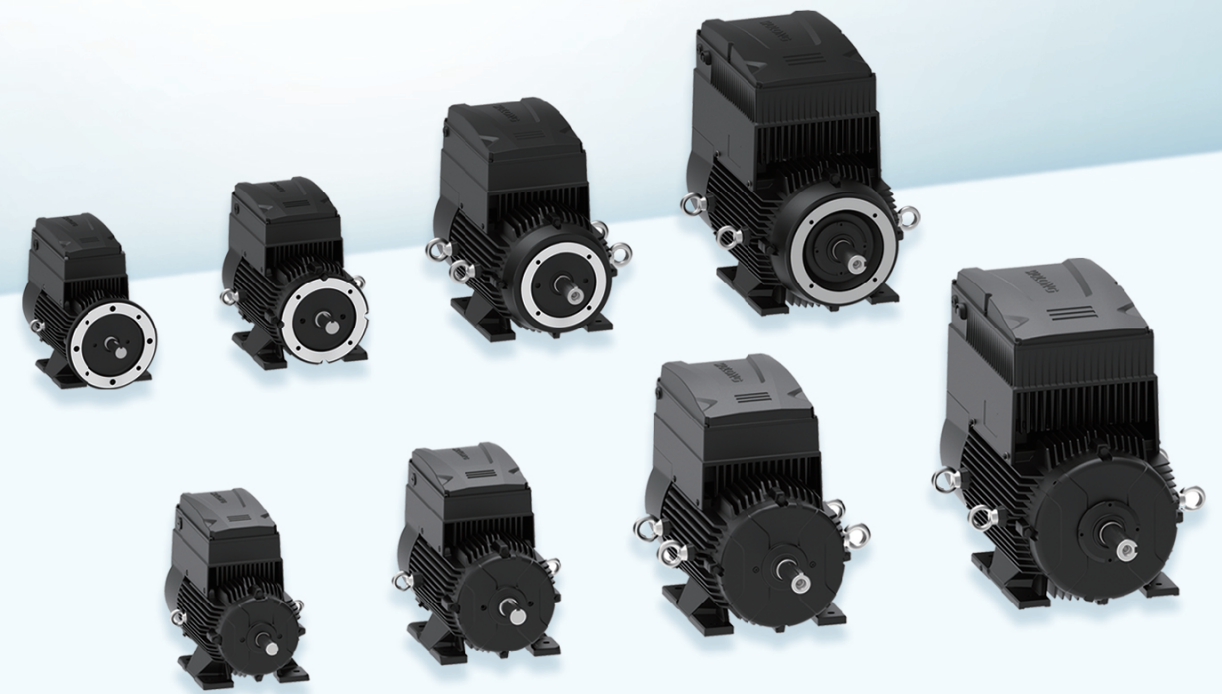
NEMA Frame	Foot Mount: Frame Dimensions (Inch)																
	A	D	E	2F	B	BA	H	U	V	N	R	S	O	AB	CA	C	CC
184T	9.07	4.50	3.75	5.50	7.80	2.75	0.47	1.13	2.75	2.95	0.99	0.25	8.54	5.80	10.30	17.90	4.86
215T	10.31	5.25	4.25	7.00	9.84	3.50	0.47	1.38	3.38	3.62	1.20	0.31	10.13	6.98	10.63	19.90	4.63
256T	12.21	6.25	5.00	10.00	11.98	4.25	0.53	1.63	4.00	4.57	1.42	0.38	12.32	8.76	13.98	25.24	6.38
286T	13.75	7.00	5.50	11.00	13.45	4.75	0.53	1.88	4.62	4.78	1.59	0.50	13.90	10.25	18.50	30.54	9.70



NEMA Frame	D-Flange: Frame Dimensions (Inch)																				
	A	D	E	2F	B	BA	H	U	V	R	S	O	AB	CA	C	CC	BB	BD	AJ	AK	BF
184T	9.07	4.50	3.75	5.50	7.80	2.75	0.47	1.13	2.75	0.99	0.25	8.54	5.80	10.30	17.90	3.16	0.25	11.00	10.00	9.00	0.53
215T	10.31	5.25	4.25	7.00	9.84	3.50	0.47	1.38	3.38	1.20	0.31	10.13	6.98	10.63	19.90	3.89	0.25	11.00	10.00	9.00	0.53
256T	12.21	6.25	5.00	10.00	11.98	4.25	0.53	1.63	4.00	1.42	0.38	12.32	8.76	13.98	25.24	5.38	0.25	14.00	12.50	11.00	0.81
286T	13.75	7.00	5.50	11.00	13.45	4.75	0.53	1.875	4.62	1.59	0.50	13.90	10.25	18.50	30.54	9.38	0.25	14.00	12.50	11.00	0.81



NEMA Frame	C-Face: Frame Dimensions (Inch)																				
	A	D	E	2F	B	BA	H	U	V	R	S	O	AB	CA	C	CC	BB	BD	AJ	AK	BF
184T	9.07	4.50	3.75	5.50	7.80	2.75	0.47	1.13	2.75	0.99	0.25	8.54	5.80	10.30	17.90	4.86	0.25	9.00	7.25	8.50	0.50
215T	10.31	5.25	4.25	7.00	9.84	3.50	0.47	1.38	3.38	1.20	0.31	10.13	6.98	10.63	19.90	4.63	0.25	9.00	7.25	8.50	0.50
256T	12.21	6.25	5.00	10.00	11.98	4.25	0.53	1.63	4.00	1.42	0.38	12.32	8.76	13.98	25.24	6.38	0.25	9.84	7.25	8.50	0.50
286T	13.75	7.00	5.50	11.00	13.45	4.75	0.53	1.88	4.62	1.59	0.50	13.90	10.25	18.50	30.54	9.70	0.25	11.25	9.00	10.50	0.50



Notes: * The data may be changed without further notice.
 * Wolong Electric Group Co., Ltd has the final interpretation right.
 * Copyright 2025 Wolong, all rights are reserved.