

WOLONG
Power your future



EMR-Bulldozer™ Series
IE5 Efficient
Integrated Drive LV Motors

Ultra High Efficiency Industrial-Duty Performance

IE5 efficient EMR-Bulldozer™ Series ferrite-assisted synchronous reluctance integrated drive motors can meet the requirements of various complex industrial environments. It has the reliability of an induction motor and the high performance of a permanent magnet motor. EMR motors can deliver the same power and torque as an induction motor in a smaller frame.

EMR-Bulldozer motors have an integrated drive design with an efficient but also work well with multiple other top brands of general frequency converters. They are suitable for applications with strict requirements on speed regulation, accurate control at low speed, low noise in a compact design.

Comparisons to Induction Motors

- EMR motors are 3-5% more efficient at 25-100% load in VFD applications. This gives a very quick payback in energy savings.
- The innovative low component rotor results in 40% lower energy losses.
- EMR motors are just as easy to maintain.
- Cooler core, stator, and bearing temperatures lead to longer life.
- Accurate speed and torque control through VFD's lead to more system reliability and longevity.
- Lower noise levels due to streamlined internal components.
- Standard NEMA sizes for easy drop in replacements.
- Lower cost of required drive equipment - Near unity power factor enables the use of smaller-rating VFD's by supplying reduced motor currents.
- Non-rare earth ferrite compound permanent magnet are made mostly of common iron oxide, and have excellent corrosion resistance.

Efficiency Comparison - 1500 RPM, 400 V

HP	IE3 IM w/ VFD	SynRM w/ VFD
7.5	88.2%	93.7%
10	89.1%	93.7%



Technical Features

NEMA Frames	184T - 215T
Poles	4
Horsepower Range	3 - 10
Voltage	480 V
Speed	1200, 1800, 3600 RPM
Agency Approvals	UL
Altitude	3300 ft
Maximum Ambient	60°C
VFD	Integrated top mount, DFC control
Efficiency	Equivalent to IE5
Service Factor	1.0
Enclosure	TEFC, IP55
Frame / Conduit Box	Aluminum
Frequency	60Hz or variable through drive
Insulation	Class F Non-Hygroscopic and Anti-Fungus



Typical Applications



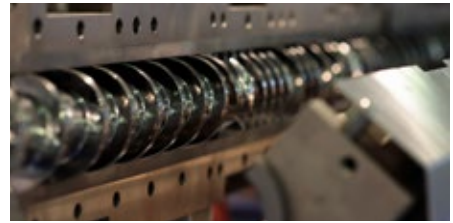
EMR-Bulldozer™ Series permanent-magnet synchronous reluctance motors are ideal for pump, fan, compressor, extruder, and conveyor applications in several heavy industries.

Drop-in Replacement

Ultra efficient EMR motors are ideal for motor retrofits. They are the same size as induction motors, eliminating mechanical modifications.

High-Performance

With virtually no rotor losses, EMR motors are cool running and extremely power dense (up to three frame sizes smaller than conventional IE2 motors). They also deliver up to twice the output of induction motors the same size.



Potential energy savings for a wide variety of commercial and industrial applications.

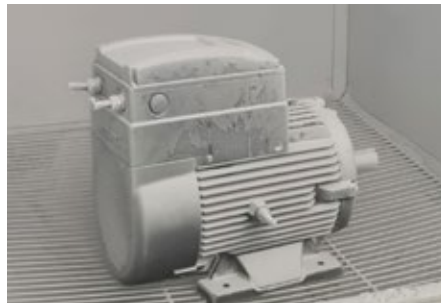
Air Handling		Liquid Handling		
Centrifugal and Axial Fans		Pumps		
Arrays	Exhaust	Booster	Jockey	Refiner
Condensers	Cooling	Liquid Cooling	Transfer	Washing
Handlers		Water Injection	Evaporator	Bleaching

Testing



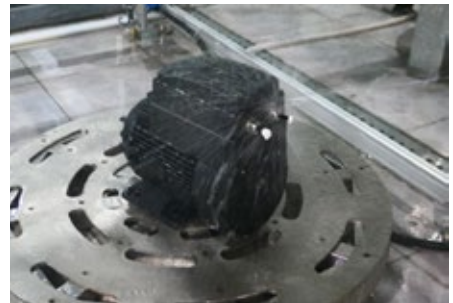
Temperature Shock, Temperature and Humidity Alternating

Temperature: $60^{\circ} \pm 2^{\circ}$, Relative humidity: $93\% \pm 3\%$ levels according to UL requirements



Dustproof Test

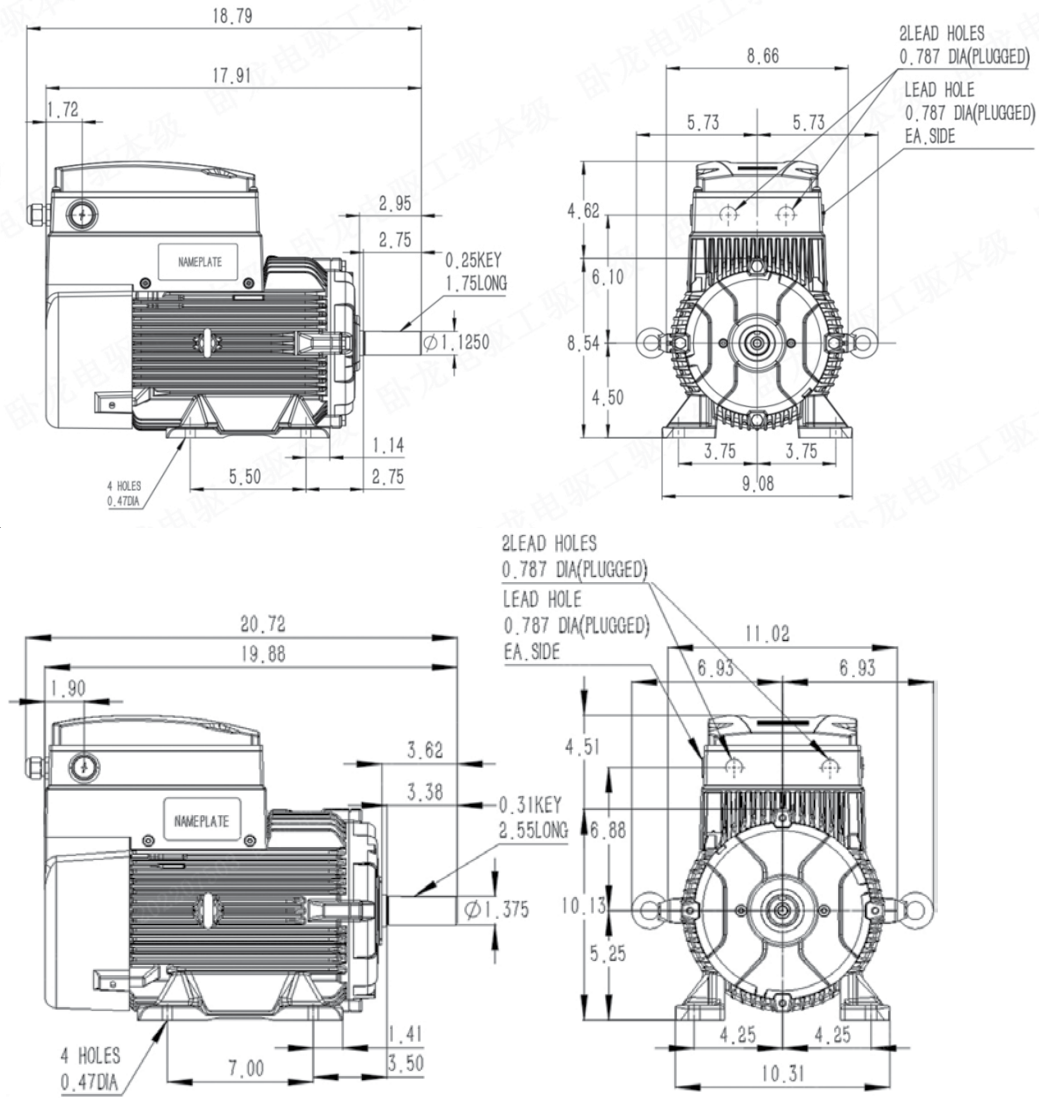
Enclosure protection level (IP5X) test requirements includes machine in a particulate test box (without vacuuming) for 8 hours.



Waterproof Splinkler

Enclosure protection level (IPX5) test requirements.

Standard Ratings



Model No.	HP	Poles	Hz	Frame	Speed	Tq (ft.lbs)	Eff. %	Amps	dBA	Wgt (lbs)
EMR184HP03S185M4FA	3	4	60	184T	1800	8.8	91.4	3.7	55	64
EMR184HP05S185M4FA	5	4	60	184T	1800	14.6	92.8	5.6	55	82
EMR215HP07S185M4FA	7.5	4	60	215T	1800	21.9	93.4	8.6	61	95
EMR215HP10S185M4FA	10	4	60	215T	1800	29.2	94	11.3	61	106



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