



Direct Drive PM Motor

Industrial Mixing



**Direct
Drive**

No Gearbox.
No Belt.



**No Water
Cooling**

No Pipes.
No Leaks.



**Reliable
Performance**

Full Torque at
Any Speed.



**High
Efficiency**

Up to 97%
Efficiency.

EMF Motor[®]

SQM Torque Motor delivers **high torque at low speeds** and has wide application areas such as *mining, ceramics, chemical production, food & beverage, pharmaceuticals, and more.*

Advantages

Direct Drive

No gearbox, no belt drive

No Oil, No Leakage

Zero contamination risk

Low Maintenance

No oil changes, no belt replacement, no gearbox and no water cooling servicing

No Water Cooling

IC410 convection cooling
no pipes, no antifreeze,
no cooling circuit to maintain.

Adjustable Speed, Full Torque

Full torque at any speed even
at very low RPM.
Precise speed and torque control.

Up to 97% Efficiency

IE6 class efficiency.
Significantly lower energy bill
vs. conventional drives.

Low Vibration & Noise

Smooth, quiet operation
no gear mesh harmonics or belt
slap.

Environmentally Friendly

No oil, no coolant, no waste.
Compact and symmetric design.

Simple Inverter Control

Compatible with standard V/f inverter
OLV / CLV control via PM motor driver

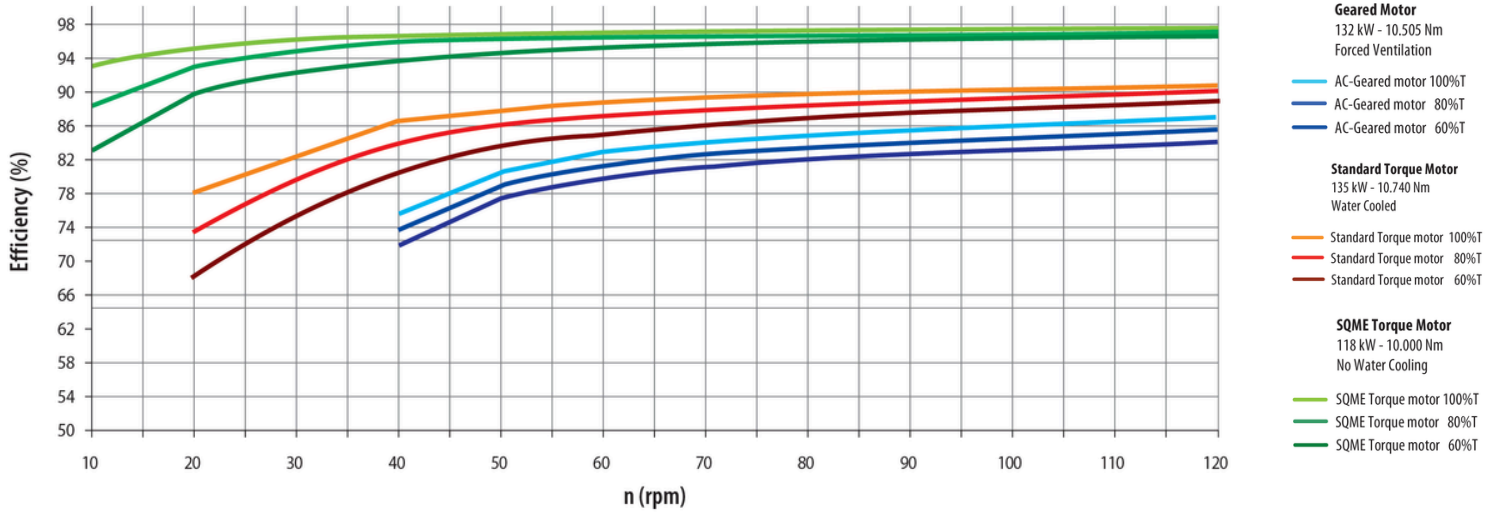
Comparison



	Motor + Gearbox	Water-Cooled DD	EMF Motor
Drive System	Gearbox	No gearbox	No gearbox
Energy Loss	High	High	Low
Maintenance	High	High	Low
Vibration & Noise	High	Low	Low
Leakage Risk	Oil risk	Water risk	No risk
Low-Speed Stability	Unstable	Stable	Stable
Installation	Complex	Complex	Simple
Failure Risk	High	Medium	Low
System Complexity	Medium	High	Low
Reliability	Low	Medium	High

Low-Speed Efficiency — Where Mixing Actually Happens

Efficiency Across the Full Speed & Torque Range



Technical Specifications

Motor Technology	Permanent Magnet Synchronous Motor (PMSM)
Efficiency Class	IE6 Ultra Premium — up to 97%
Frame Sizes	73 – 100 – 132 – 160 – 200 – 250 – 400 *
Torque Range	Up to 17,000 Nm
Pole Count	66 – 88
Rated Voltage	110 / 220 / 400 / 460 V AC
Cooling	No water cooling
Protection Class	IP54 standard (optional: IP55, IP65, Ex-proof, IP69K)
Thermal Protection	PTO standard; PT100, PT1000, PTC, KTY84 optional
Feedback	Hiperface, EnDat encoder, sensorless control available
Control	V/f controller compatible (no servo drive required)

* NEW UPGRADE! Upcoming frame size 400

Direct Drive Washdown Motor (IP69K)

- **Stainless steel body**
- **High-pressure washdown ready**
- **Hygienic direct drive**



Up to 97% Efficiency
Lower energy consumption

Minimal Maintenance
No gearbox, no oil, no water system

No Leakage No Contamination
Safe for hygiene-critical environments

Long Life High Reliability
Designed for 24/7 continuous duty

Proven in Demanding Mixing Applications

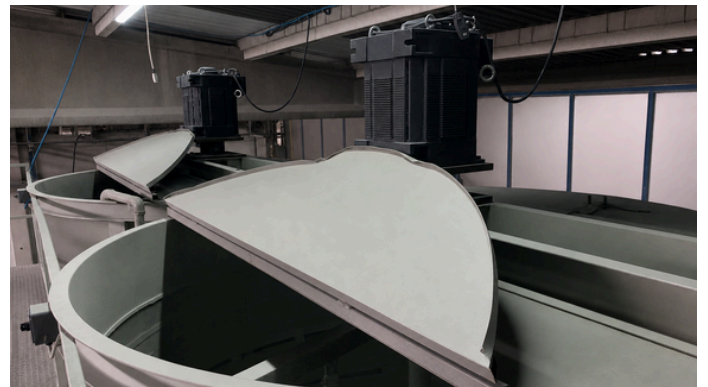
EMF direct drive motors are installed worldwide in a wide range of mixing processes; delivering reliability, efficiency and lowest total cost of ownership.



High efficiency. No leakage risk.
Built for continuous operation.



No gearboxes, no belts, no cooling system.
Just reliable performance.



Stable at low speed.
Where mixing actually happens.



Trusted by leading industries worldwide.
Mining, Ceramics, Chemical production, Food & Beverage, Pharmaceuticals, and more.

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