



TEI DirecDrive™
PERMANENT MAGNET TECHNOLOGY

Manufactured by Baldor Electric Company

Improved System Safety, Reliability, Efficiency and Reduced Noise

Improvements in system safety, reliability, efficiency and reduced noise are now possible with the introduction of new motor and drive technology applied to cooling tower applications. The same electric motor and control technology that is being used to power today's most sophisticated hybrid vehicles is now being adapted for cooling tower drive applications. Advances in motor power density using laminated steel frame construction combined with high flux strength permanent magnet salient pole rotor technology results in a high torque, slow speed, low profile motor that is mounted directly to the fan and operates at variable speed to maximize system efficiency. Permanent Magnet Rotor (PMR) construction using high flux strength Neodymium Iron Boron (NdFeB) magnets allows the motor to be manufactured in a compact form factor. The same basic motor design requirements for a hybrid vehicle: high torque, efficient, low weight, reliable, quiet and highly compact apply to the cooling tower application as well.

TEI DirecDrive™ Motor

The TEI DirecDrive™ Motor (Baldor RPM AC Cooling Tower Direct Drive Motor) is a synchronous industrial motor with high power density designed exclusively for the cooling tower industry. Similar Baldor RPM AC motors are currently used with proven reliability in the most demanding industrial applications including steel mill, paper mill and drill rig applications. The cooling tower version of this motor utilizes interior PMR technology and is designed to be mechanically interchangeable with many existing cooling tower gearbox designs. The fan mounts directly to the motor. This direct drive arrangement eliminates the entire gearbox and driveshaft torque transmission components, which greatly improves system safety.



TEI DirecDrive™ Variable Frequency Drive (VFD)

Unlike a typical AC Induction Motor, the TEI DirecDrive™ Motor cannot run across the line and requires a specially designed AC Drive for operation. To ease selection of the proper drive, we have combined the new motor with the TEI DirecDrive™ Variable Frequency Drive (Baldor VS1CTD VFD). These motor/drive packages are designed for cooling tower applications and will function “out of the box” with very little tuning or commissioning required. The VFD is easy to setup and supports all the common HVAC Communication Interfaces for Monitoring and Control including BACnet, Johnson Controls Metasys-N2, LonWorks and MODBUS-RTU.



Features and Benefits

- ❖ Permanent Magnet Technology
- ❖ Adjustable Speed Capability
- ❖ Lower Energy Consumption
- ❖ Reduced Maintenance Costs
- ❖ Improved Safety
- ❖ Improved Reliability
- ❖ Quiet Operation
- ❖ 5 Year Warranty
- ❖ Built-in Anti-rotation Capability
- ❖ Indoor/Outdoor Applications

Cost Effective

Compared to a conventional drive equipment arrangement, the TEI DirecDrive™ System cost is very competitive. When combined with the Features and Benefits, the savings associated with the TEI DirecDrive™ System will more than pay for itself.



Low Maintenance, Easy Retrofit or New Installations

The TEI DirecDrive™ System is designed with the user in mind. The motor is designed to be in the air stream with shaft sealing protection to keep out water and contamination. The special end brackets and overall length profile are designed to be directly interchangeable with many existing gearbox designs.

***FINALLY, A DRIVE THAT
WON'T DRIVE YOU CRAZY!***

ISO 9001:2008 certified

