Technical Note

Severe Duty Motors

Motors

Motors operating outdoors or within chemical or food processing plants are subjected to corrosive conditions. Large temperature and humidity variations draw moist air inside the motor's stator. As the motor cools, the moist air condenses. As the condensation accumulates, corrosion occurs. Eventually, corrosion degrades the wire insulation, causing the windings to short and the motor to fail.

SEW-Eurodrive motors and brakemotors are available with Severe Duty (-KS) protection. This option is available with induction motors, permanent magnet servomotors, and Movimot® motors.

Features of Severe Duty Protection

- 6mm drain holes are drilled into the motor stator, the conduit box, and endshields at the lowest location for the given mounting position. These holes allow the draining of all condensation inside the motor. (Exception: Movimot® motors and motors with TENV, IP55, or IP65 ratings do not have drain holes.)
- Internal surfaces including the stator bore, windings, endshields, and conduit box are coated with Dolph's Spray ER-41, Class F polyurethane red insulator.
- Mating surfaces of the endshields are sealed.
- All fastener hardware is plated or stainless steel.
- Paint process includes a primer base coat followed by a corrosion resistant topcoat.
- 1.15 Service Factor on motor
- Clamps are attached to the sealing band of the brake.

Optional Features

- Drain holes may be sealed with threaded plugs for applications involving partial or temporary submersion of the motor.
- Stators with an encapsulated winding and conduit box are available for extremely corrosive or moisture-laden applications. Refer to **Technical Note GM-038** for additional information.
- Tropical duty may be substituted for Severe Duty. The only difference is the type of insulator used to coat the internal surfaces. Tropical Duty includes an insulator that contains an anti-fungal agent.
- Heat strips may be added to the stator for applications involving low ambient temperatures. Heat strips prevent condensation from freezing, allowing it to drain.