

HPV 900 S2

Power control for the AC Induction elevator lift motor shall be an AC Elevator drive, Magnetek HPV 900 or equal with the following features:

- The drive shall use a three-phase, full-wave bridge rectifier and capacitor bank to provide a DC power supply for the drive.
- The drive shall provide a means for removing regenerated power from the drive motor during control times of an overhauling load. (This power shall be dissipated in a resistor bank or an optional regenerative power unit shall be used to reclaim energy instead of using resistive braking [select one]).
- The drive shall be able to measure primary motor characteristics and be adjusted or programmed to properly match the AC elevator hoist motor.
- The drive shall be capable of delivering a maximum of 250% current to accelerate the elevator to contract speed with rated load. The drive shall also be designed for a minimum of 100 starts per hour.
- The drive shall provide a step less infinitely variable, closed-loop speed regulator with provisions for self-generated, internal S-Curve speed profiling or the use of external analog or digital velocity reference inputs. An elevator specific speed regulator shall be used with regulation better than +/-0.5%. There shall be a provision for pre-torqueing at each start. An adjustable notch filter and high speed gain reduction features shall be available to help reject interference from rope resonance.
- Velocity feedback shall be from a dual channel incremental encoder with differential signaling electrically isolated from motor frame and shaft. Direct coupling to the elevator rope sheave is preferred. Minimum resolution should be such that the encoder produces greater than 20,000 Hz at contract elevator speed. The drive shall provide isolated +5Vdc or +12Vdc to power said encoder.
- The drive shall be able to produce full motor torque at zero speed when using “closed loop” encoder feedback.
- Open loop (encoder less) speed control operation shall be possible with some reduction in low speed performance.
- The drive shall include an easy to use all-digital parameter set up and monitoring tool with local display and text adjustment descriptions. There shall be a provision for an optional hand held programmer, serial communications to car controller, or use of personal computer for adjustment and storage of configuration and parameter set point data.
- The basic drive shall be CSA listed for motor control hardware, including an agency recognized and approved motor overload software function.