

CHAPTER 5

MOTORS

GENERAL

Motors connected to NAED's system must be of a type to use minimum starting current and must conform to the requirements of NAED and the applicable electrical code as to wiring, equipment type and control devices.

Before purchasing any motor, the customer should contact NAED to verify the nominal utilization voltage, phase characteristics of the service to be supplied and the, maximum allowable lock rotor current values.

LIMITATION OF SIZE

NAED reserves the right to refuse service to the following:

- Single phase motors larger than 5hp. Single phase motors of larger rating may be permitted, providing NAED's facilities are adequate to supply the service and provided the use of such motor does not interfere with the quality of service to other customers.
- Polyphase motors larger than 5hp operated from a single phase service by use of a phase converter.
- NAED further reserves the right to limit the size of the largest motor which may be operated on any part of the system.

PROTECTION AGAINST SINGLE PHASE OPERATION

Three phase motors shall be protected against the possibility of the failure of any one phase of the supply circuit through the use of three overcurrent (overload) devices unless the motor is protected against single phase operation by other approved means.

UNDERVOLTAGE PROTECTION

Motors that cannot be safely subjected to full voltage at starting, or motors the starting of which on return of normal voltage after an interruption would endanger life or property, should be provided with automatic undervoltage protection. Such protective device should insure that with either no voltage or undervoltage the motor will be disconnected from the line or the starter will be returned to the off position.

OVERLOAD PROTECTION

All motors should be protected against overload by the installation of adequate overcurrent thermal devices or their equivalent in all three phases, which will operate as to prevent excessive motor winding temperatures.

PROTECTION AGAINST PHASE REVERSAL

On motors for passenger or freight elevators, cranes, hoists and other equipment where reversal of direction or rotation might cause property damage or injury, a reverse phase relay should be installed so the motor circuit will be opened in the event of a phase reversal or the loss of any phase. The operation of this relay should be instantaneous.

DAMAGE TO EQUIPMENT

NAED will not be responsible for damage caused to customer owned equipment where such damage is caused by absence or failure of any of the above protective devices.

