



## Quick Topics

- General
- In This Section
- DC Gearless Machines
- AC Gearless Machines
- DC Hoist Motors
- AC Hoist Motors
- Motor Generator Sets
- AC Hydraulic Motors



## Machines and Motors

### General

MCE offers machines and motors designed specifically for the elevator industry. Included are DC and AC gearless machines, DC and AC hoist motors, motor generator sets, and AC hydraulic motors - both submersible and dry.

We are pleased to offer Imperial Electric motors, which combine the finest materials available with unparalleled design and manufacturing expertise. Imperial has built an enviable reputation for total quality by focusing on contemporary elevator rotating equipment. You can expect trouble-free installation, extended equipment reliability, and responsive service.

MCE may provide motors from various sources in order to meet customer specifications, satisfy delivery commitments or address the requirements of a particular application. Depending on project requirements, a consultant or contractor can choose various machines and motors for specific applications.

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## DC Gearless Machines

Imperial DC Gearless machines are provided including a slow-speed DC motor, brake, sheave and pedestal bearings mounted to a fabricated base. The motor is designed for 230% of rated current at 70% rated speed. The fields can be forced for acceleration or deceleration. Standard sheave diameters of 26 inches (660.4-mm), 30 inches (762-mm) and 33 inches (838.2-mm) are available in a variety of grooving arrangements.

Imperial DC Gearless machines are recommended for speeds up to 1000 fpm. Class B insulation is standard (class F insulation is available). Sheave groove tolerance is  $\pm 0.009$  inches (0.2286mm). Consult your sales engineer for G.S.A. or other special applications.

## AC Gearless Machines

Three Permanent Magnet, AC, Gearless, synchronous machine models are provided:

- 470: 472 and 475 models, 1764 to 2756 lb loads
- 520: 522 and 528 models, 2000 to 5500 lb loads
- 800: 802, 805, 808 models, 2000 to 8000 lb loads

Imperial AC Gearless machines are recommended for speeds up to 1400 fpm. Class F insulation is standard. Sheave groove tolerance is  $\pm 0.009$  inches (0.2286mm). Consult your sales engineer for G.S.A. or other special applications.

## DC Hoist Motors

Rugged and dependable, Imperial DC hoist motors are renowned in the industry. Foot-mounted configurations are available for most machines. A variety of flanges are available, including NEMA C, D, Titan 1, Westinghouse, and others. Standard loop voltage is 240VDC. Special voltages available.

Imperial DC hoist motors have a 60-minute duty cycle and are available in 10 through 75 horsepower at either 1150 or 850 rpm. Specifics: Class B insulation, end thrust with dual ball bearings and drip-proof construction. Consult your sales engineer for Totally Enclosed Non-Ventilated (TENV) or other special designs.

## AC Hoist Motors

Imperial AC hoist motors are known for dependability. Foot-mounted configurations are available for most popular machine designs. A variety of flanges are available, including NEMA C, D, Titan 1, Westinghouse, and others. Specifics: frame and brackets of rugged cast iron, rotor of die cast aluminum, laminations of fully processed electrical steel, end thrust with greaseable ball bearings and drip proof construction. Totally enclosed, fan cooled models are available. Class B insulation is standard, Class F is available. A 50° C rise in temperature is standard. Motors may be ordered with factory mounted encoder.

Imperial motors designed for VVVF include closed loop, low slip (2-5%), 60 minute duty and open loop, high slip (10-13%) 30 minute duty. Motors from five to 100 horsepower are available in speed ranges from 600 to 1800 rpm. Three-phase AC voltages of 200, 208, 230, 440, 460, 480, 550, and 575 are available.

## Motor Generator Sets

Imperial Motor Generator Sets are comprised of an alternating current, constant speed drive motor coupled to a special DC generator. The drive motor and generator are mounted on a single, large diameter shaft supported by two ball bearings. Imperial brush rigging is designed for utmost dependability. Positive contact and accurate alignment are maintained throughout brush life. Low inertia, constant pressure springs eliminate the need for brush adjustment.

Power ratings of 7.5 KW through 50 KW are available. A 240 DC loop voltage is standard, special voltages are available. Three-phase AC voltages of 200, 230/460 and 575 are available.

## AC Hydraulic Motors

AC Submersible Motors are reliable. These ruggedly built, highly efficient motors are designed to mount on all major hydraulic pump units. The motor, with its extra-reach, wick-proof leads, is specially designed and sealed for submerged operation in hydraulic oil. Motors rated for 80 starts per hour are available from 15 through 50 horsepower. Specifics: Motors are 2-pole, 3600 rpm, single ball bearing type with thermostatic overheat-protection. Three-phase AC voltages of 200, 230/460 and 575 are available in Wye Start, Delta Run or Across-the-Line Delta Start design. All motors are subjected to rigorous factory testing before shipment.

AC Dry Hydraulic Motors are designed for use with belted hydraulic pump systems. These Imperial motors are exceptionally quiet, highly efficient and built for rugged duty. Totally Enclosed Fan Cooled (TEFC) designs are available. Motors rated for 80 or 120 starts per hour are available from 15 through 100 horsepower. Specifics: Motors are 1800 rpm with dual ball bearing and drip-proof construction. Three-phase AC voltages of 200, 230/460 and 575 are available in Wye Start, Delta Run or Across-the-Line Delta Start design.

 Note

Contact MCE Sales Engineering for more information on stand-alone motor sales.

