Motors Made Easy

Nameplate Explanation

Understanding your motor's nameplate is essential. You can use this guide to understand what the markings on your NAE motor nameplate means. Please contact our team if you have any additional questions.

These nameplates shown do not reflect NAE's full line of motors and are meant to a be a general representation of NAE motor nameplates only.

Motor Terms A-Z

A

AC Induction Motor: Type of Motor.
AMB/Ambient Temperature: Allowable surrounding air temperature.
AMPS: The current load the motor can carry for an undefined amount of time.

B

Base Diameter: Measurement across the middle of the base of the motor.
Bottom Bearing: Size and type of the bottom bearing.

C

CAT NO./Category number: The motor's model number.
CC#: Compliance Certification number assigned by the Department of Energy. Indicates that this motor meets the DOE energy efficiency requirements.
CE Mark: Shows that the motor complies with European Low Voltage Directive.
Code: KVA electric motor code.
Connection: The way the motor is wound internally.
Connection Diagram: Shows how to connect power to the motor.
CSA Mark: Certified by the Canadian Standards Association with the file number listed below.

D

Date: Date the motor was manufactured.
DE BRG/Drive end bearing: Bearing type and size for the bearing installed on the Drive End of the motor.
DES/Design: NEMA Design letter.
Description: Operational environment(s).
Down Thrust: Maximum amount of thrust in pounds.
Duty: Indicates how long the motor can operate safely.

E

EFF/Full load efficiency: Output power divided by input power at the full load specified.
EHT: Extra High Thrust
ENCL/Enclosure: Indicates the type of enclosure and the protection level the motor has.

F

FLA/Full Load Amps: The max amps used by the motor when running at maximum torque and hp
Frame: Size and mounting of the motor.

H

HP/Horsepower: Indicates the horsepower, which measures the motors mechanical output or power.
HZ/Hertz: Input frequency of power supply. Number of cycles in a time period. (typically 1 second)

I

INS/Insulation: Insulation Class.
IP/Ingress Protection: Protection of the enclosure to solids and liquids, defined by IEC 34-5.
ISO Mark: Shows that the organization meets the international standard for a quality management system (QMS).

L

LUB/Lubricant: Lubricant type required for the motor's bearings.

M

Max Ambient: The maximum temperature the motor can operate at.
MIN/Min EFF/Minimum efficiency: Lowest efficiency at rated load. When operating at rated voltage and frequency, the full load efficiency will not be less than the minimum efficiency.
Motor Weight: The weight of the motor in pounds.

N

NAE logo: Indicates which company produced the motor.
NEMA Code: Code that identifies the torque and specifications of the motor
NEMA Premium: Indicates that the motor meets premium efficiency standards set by NEMA.
NOM EFF/Nominal Efficiency: Average efficiency for a substantial number of identical motors tested
Non-Reverse-Ratchet-Ball-Type: Indicates that the motor has a non-reversing rotation when the power is turned off. This prevents the motor from rotating in reverse when the power is turned off.

O

ODE BRG/Opposite Drive end bearing: Bearing type and size for the bearing installed on the Opposite Drive End of the motor.
Oil Capacity: How many quarts of oil the motor can hold.

P

P.F/Power factor: True power compared to apparent power.
PH/ Phase: Indicates the number of phases for the motor.

R

Rating Continuous: The maximum load a motor can give continuously over an amount of time.
RPM/Revolutions per minute: Describes the motor's speed.

S

S.F/Service factor: Indicates the percentage of the stated horsepower at which the motor can safely operate.
S/N: Serial number.

T

Type: Indicates the motor enclosure type. Most common types are TEFC and ODP.

U

Upper Bearing: Size and type of the upper bearing.

V

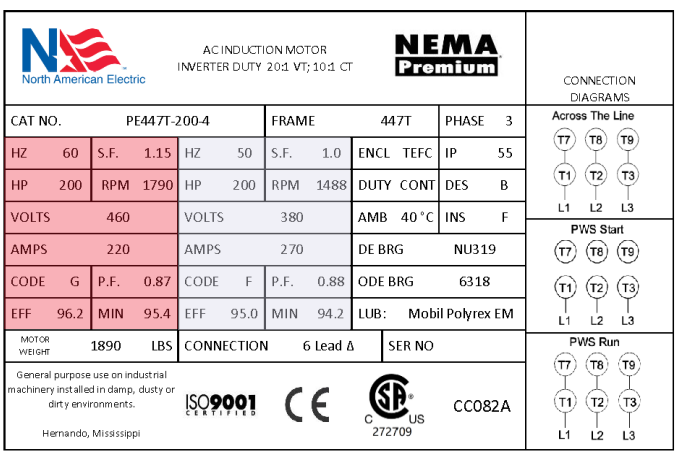
Volts: Voltage rating of the motor at the operating frequency.

W

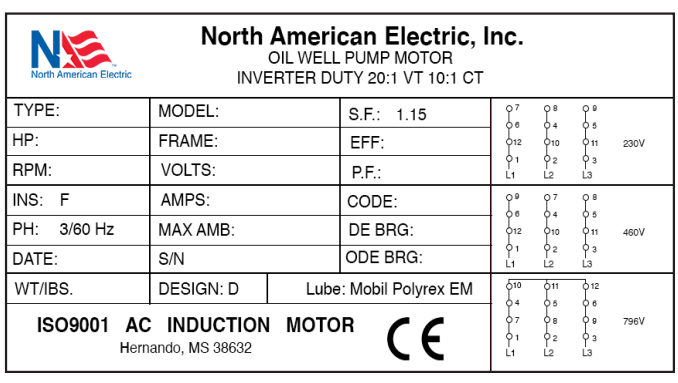
WT/LBS: How much the motor weighs in pounds.

Example Plates:

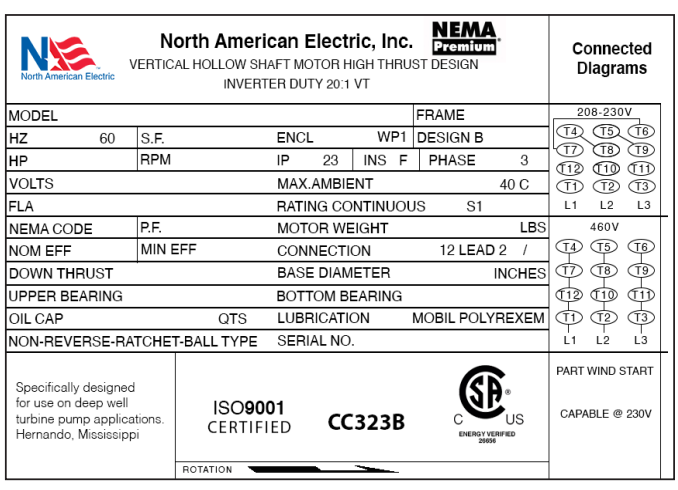
Plate shown below is for a General Purpose motor.
The sections highlighted in red and blue display the same type of information, but apply to different countries. The red section is most common for U.S. operation, while the blue is more common in European countries.



NAE Nameplate shown below is for an OWP motor.



NAE Nameplate shown below is for a VHS motor.



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https://electrical-engineering-portal.com/nema-definition-of-motor-full-load-nominal-efficency-standard-mg1-12-54-2
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