

# PRODUCTS

## Marine Motor Specifications

The special features required to meet the intent of the various specifications IEEE-45; American Bureau of Shipping; Coast Guard CG259; Navy 9Y and FSA: Principles of Sanitation Applicable to New Vessels are as follows:

### I. IEEE-45

U.S. Standard Class B or Class F Insulations are considered generally adequate to resist the oil and moisture atmospheres intended to be covered by this specification.

#### A. Above Deck - Totally Enclosed, Cast Iron Construction Only

This is what is termed a waterproof motor and requires the following:

1. CORRO-DUTY motor construction with a shaft slinger on the opposite pulley end. Frame surface under conduit box base must be flat to ensure full gasket fit and prevent water entry.
2. Nameplates: "Marine Motor" (Must show full load RPM).

#### B. Below Deck - All Enclosures

1. Corrosion treatment - consisting of anti-rust compounds on metal to metal fits, plated hardware, epoxy painted aluminum parts and air deflectors, stainless steel nameplate, resin and hardener or equivalent on rotor. (Reference Item B-5)
2. Nameplate: "Marine Motor" (Must show full load RPM).
3. For boiler room duty - furnish B-1 and B-2 (above).
  - Open and enclosed "U" frames - furnish Class B and Nameplate Class B, 50° C ambient.
  - Open and enclosed "T" frame - furnish Class F and Nameplate Class F, 50° C ambient.
  - Explosion-proof - Class I, group D, "U" and "T" frames - furnish Class B and Nameplate Class B 50° C ambient with a 65° C rise, this may require larger than standard frame on "L" motor.
  - Explosion-proof - Class II, group F and G, "U" and "T" frames - Nameplate Class A, 50° ambient with a 45° C rise, this may require larger than standard frame size, such as types "E" and "EA".
4. For normal duty - furnish items B-1 and B-2 (above).
  - Open type - Nameplate 40° C ambient.
  - Enclosed type - Nameplate 40° C ambient.
5. When enclosed units are required, it is suggested that CORRO-DUTY be supplied subject to insulation and ambient under item 3-c or 3-d.

### II. American Bureau of Shipping and Coast Guard, CG-259

A. Above Deck - Totally Enclosed, Cast Iron Construction Only<sup>223</sup>  
Same as IEEE-45 above deck except "Marine Motor" need not be shown on Nameplate.

B. Below Deck - All Enclosures  
Same as IEEE-45 below deck except "Marine Motor" and corrosion treatment not required.

### III. Navy 9Y - May be Specified Either "Above Deck" or "Below Deck" Duty

A. Temperate climate applications.

Same as IEEE-45, either above deck or below deck as specified.

#### **IV. FSA - Principles of Sanitation Applicable to New Vessels**

Open motors or protected motors - 1/2" rodent screens required on all openings.

#### **V. General Notes Reference All Specs:**

A. If any above deck units involve winch or hoist applications - all details must be referred to Technical Services. These are most often extremely hi-slip (Design D) motors to accomplish high pull-out and hi-starting torques.

B. Spare parts should be specified when required.

C. "Protected Motor" refers to open units and requires 1/2" mesh (or smaller) rodent screen on all openings.

D. Above deck motors covered in Item I-A are not water-proof in the sense of being able to withstand actual submergence.

E. Navy Service A and Navy Service C motors are not covered by any of the above specs. In general Navy A or C motors require technical services review. Refer to MIL-M-1706OC (Ships).

F. When Marine Duty motors are located "on board ship" bearings must be grease lubricated to allow for roll and pitch of the vessel at sea. This means that Vertical HOLLOWSHAFT motors, which are normally oil lubricated, require modification to grease lubrication.

G. Although IEEE-45 does not exclude aluminum as a motor frame or bracket material, it is suggested that aluminum construction be avoided