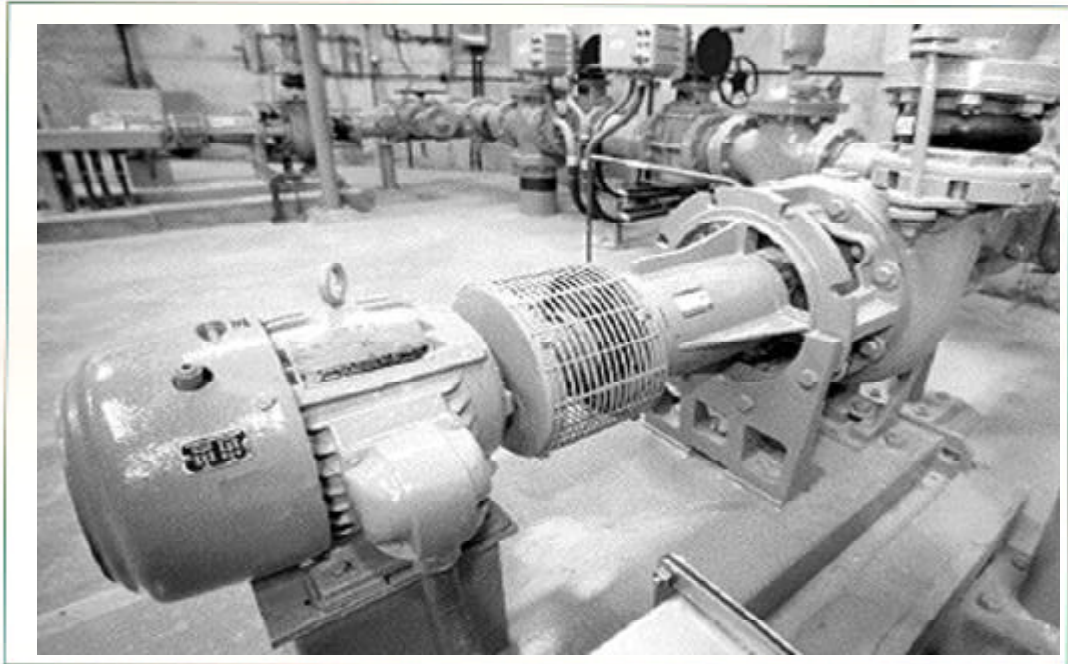
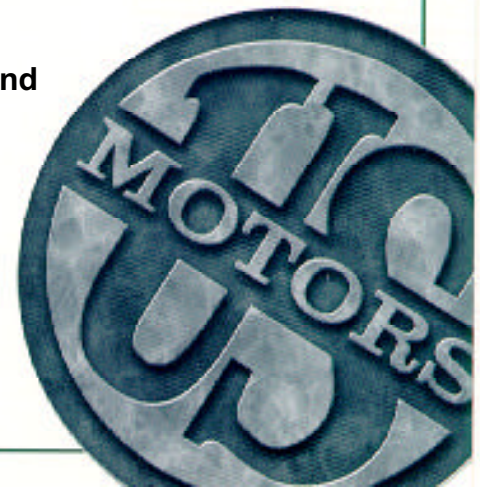


# Product Data Sheet

## Horizontal A.C. Motors *Totally Enclosed Fan Cooled Premium Efficient Corro-Duty®*



- **Designed for Severe Environments Found in Pulp & Paper, Petro/Chemical, and other process industries**
- **Totally Enclosed Fan Cooled Designs with Corrosion Resistant Mill & Chemical Duty Paint**
- **1 - 400 HP; 3600 through 720 rpm; 230/460, 460 and 575 volt**
- **Cast Iron Inner Bearing Caps on 182T frame and above**
- **100% Solids Polyester Varnish on Wound Stator and Rotor Core**
- **Class F Insulation With Class B Temperature Rise at Full Load**
- **Allguard Motor Quality System**
- **.08ips Peak Vibration Maximum**



## Product Overview

### Proven Performance - Reduced Operating Costs

The **Premium Efficient CORRO-DUTY®** motor provides an all cast iron construction package with some of the highest efficiency levels in the marketplace. This is one of the most rugged and reliable electric motors on the market today for the most demanding of applications. Typical applications for the Corro-Duty motor are: petroleum processing, plastics compounding and mixing, gum and wood chemicals, glue and gelatin producers, pulp and paper mills, chemical processing, flotation cells, lumbering, cooling towers, and rubber processing.

This all cast iron machine includes an external shaft slinger on the drive end which meets IP54 - the nameplate is stainless steel and the hardware is plated to allow use in hostile environments. The **CORRO-DUTY** motor has non-braided, no wicking leads, with a compression-type ground lug in the conduit box. The bearings are regreasable with a standard L-10 bearing life of 30,000 hours or more based on NEMA belting loads. And, the motor can be modified to accommodate oil mist lubrication.

Internal protection incorporates oxide primer coating on bracket and frame surfaces and non-hygroscopic epoxy varnish on the rotor core. The stator with class F insulation materials has an additional coating of varnish to extend thermal and mechanical life of the motor. The **CORRO-DUTY** motor is rated

Class B rise at 1.0 service factor and Class F rise at 1.15 service factor with full Class F or better insulating materials. All stock ratings up to 40 horsepower and 1800 and 1200 rpm ratings up to 100 horsepower have actual operating temperature rise @ below Class A at full load.

The conduit boxes are larger than NEMA standard and are diagonally split and rotatable in 90 degree increments with gaskets between the frame, base and top cover. The **CORRO-DUTY** paint and oxide primed system is designed to withstand a 250 hour salt spray test.

The motor consists of an all cast iron construction to withstand corrosive atmospheres and abnormal shocks and vibrations. All stock motors utilize premium efficient designs which translate into lower energy and operating costs and are backed by a two year warranty.

Many modifications are available to the Corro-Duty motor, including:

- ◆ Inverter Duty
- ◆ Brakes
- ◆ C-face & D-flange
- ◆ Special Voltages
- ◆ 50 Hertz
- ◆ High altitude or ambient
- ◆ Special shafts

Contact your local sales representative with your specific modification needs.

## Features and Benefits

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### All Cast Iron Construction

A rugged cast iron construction to withstand abnormal shocks and vibrations in harsh environments (steel frame & fan cover on 140T).

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### Shaft Slinger

A neoprene shaft slinger on the motor's pulley end minimizes the entrance of moisture and dust.

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### Corrosive Resistant Paint

External protection includes an oxide primer and the Corro-Duty top coat of mill and chemical duty paint to protect the frame from exposure to corrosive materials. 250 hour salt spray.

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### Insulation System

The Corro-Duty motor utilizes Class F materials with B temperature rise at full load and non-braided, non-wicking lead wires. Multiple coats of epoxy varnish on the wound stator core extend thermal and mechanical life.

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### Premium Efficiency

Exceeds the federal requirements of EPACT '92 by 2 to 3 NEMA bands, - lowering your energy and operating costs.

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### Lubrication System

Readily accessible provision for regreasing and purging allow for easy maintenance. Cast iron inner bearing caps on (182T frame and above) prevents grease from entering and causing harm to the stator.

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### F-1 to F-2 Conversion

The conduit box is easily adaptable to F-1 or F-2 assembly position through field conversion.

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### Oversized Conduit Box

Oversized conduit box is diagonally split and rotatable in 90° increments with dual gaskets to protect the frame, base, and top cover from harmful contaminants and position the motor leads.

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## The Premium Efficient Corro-Duty® Motor

The Premium Efficient Corro-Duty motor addresses efficiency while continuing to provide one of the most rugged electric motors on the market today for the most demanding of applications.

With energy legislation in effect and utilities continuing to look for ways to reduce electrical demand, the **CORRO-DUTY** motor line exceeds both the U.S. and Canadian Federal standards for efficiency on average by well over two NEMA bands.

Use the simple formula shown to calculate your power cost savings or contact U.S. MOTORS for a more sophisticated analysis.

### Compare Premium Efficiency CORRO-DUTY® with the Competition

$$S = 0.746 \times \text{HP} \times C \times \left( \frac{100}{E_A} - \frac{100}{E_B} \right)$$

- S = Savings in Dollars Per Year  
 HP = Horsepower Rating of Load  
 C = Energy Cost, Dollars Per Kilowatt Hour  
 N = Running Time, Hours Per Year  
 E<sub>A</sub> = Efficiency (%) of Std or Competitive Motor at Specified Load  
 E<sub>B</sub> = Efficiency (%) of Premium Efficiency CORRO-DUTY at Specified Load



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