

## 841XL AC MOTORS

# DESIGNED TO MEET YOUR SEVERE DUTY NEEDS

As an original member of the NEMA Energy Task Force, We have a longstanding commitment to our customers to help you reduce your electrical consumption, improve system reliability, and achieve greater cost savings.

We have been manufacturing true Premium® efficient motors since 1977, and are now proud to offer you our newest AC motor for severe-duty applications—the totally enclosed Reliance® 841XL Premium efficient motor.

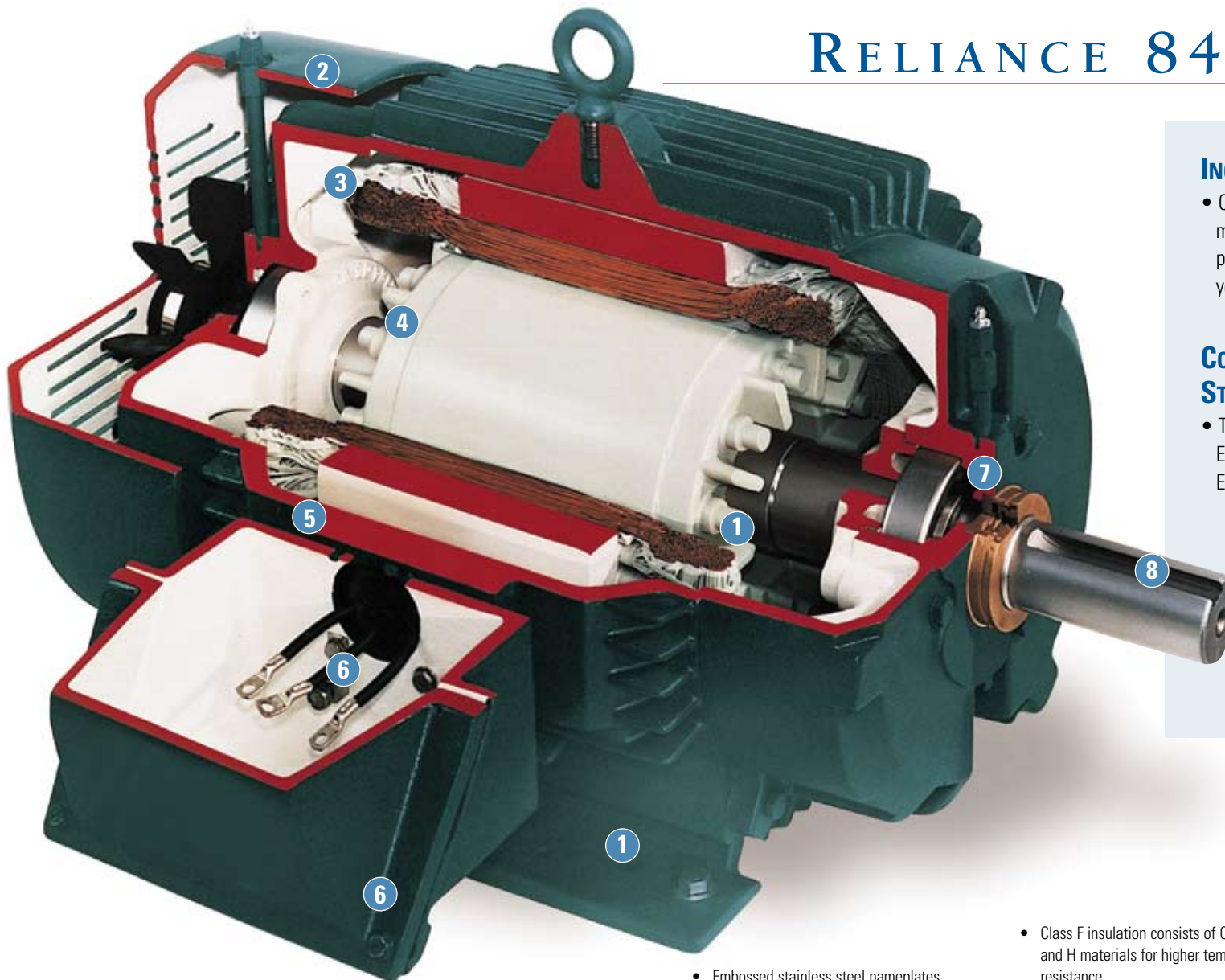
When conditions are severe and dependability is beyond question, this AC motor is at its best.

Designed and manufactured to meet or exceed IEEE 841 Standards, the Reliance 841XL motor offers unmatched reliability, energy efficiency, and performance. Its rugged design and extra-tough features minimize vibration, as well as provide years of low-maintenance service in moist, contaminated, or harsh environments.

**RELIANCE  
ELECTRIC**



# RELIANCE 841XL MOTORS



## INCLUDES A 5-YEAR WARRANTY

- Confidence in the design and manufacture of these motors is why Reliance will repair or replace any properly installed 841XL motor that fails within 5 years of shipment.

## CONFORMS TO ENERGY EFFICIENCY STANDARDS:

- The 841XL motor meets or exceeds 1997 U.S. Energy Policy regulations. It also meets CSA® Efficiency Verification Program requirements.

### 1) IEEE 841 Motor Standards

- 841XL NEMA Frame Motor Features Exceeding Specification
- Foot flatness tolerance is increased to a foot pad planity within 0.005 inches for precision alignment to driven equipment and smooth operation.
- The draft angle on top of all mounting feet is 1.50 or less to make proper mounting easier.

- High strength cast iron frame is designed to reduce vibration and assure accurate mounting dimensions.
- Durable cast iron end shields are machined to close tolerances for exacting alignment of bearings and rotor.
- All hardware is hex head, high strength and zinc-plated.
- All internal rotor, stator and shaft surfaces are epoxy coated.

- Embossed stainless steel nameplates include all required NEMA data plus actual motor weight and *guaranteed minimum efficiency*.

### 2) Quiet Operation

- Operating sound levels are below 90 dBA sound power.

### 3) Longer Winding Life

- Non-hydroscopic, chemical and humidity resistant Class F insulation.

- Class F insulation consists of Class F and H materials for higher temperature resistance.
- Coil heads are laced on both ends to prevent movement prior to a heavy build application of varnish.
- All windings are tested before and after insertion into the frame to NEMA MG.1 high potential voltage standards.
- Insulation system meets the requirements of NEMA MG.1 Part 31 Section IV for VFD use and are considered inverter capable.

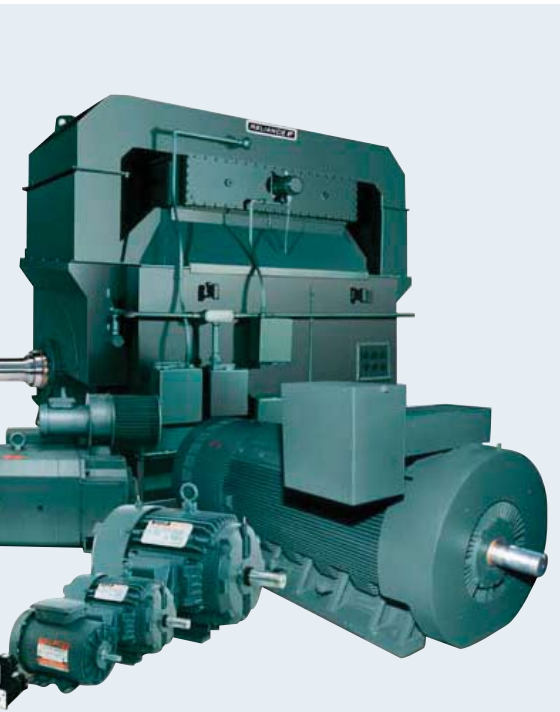
### 4) Reduced Vibration

- Rotors are dynamically balanced to 0.04 inches-per-second peak-to-peak velocity.
- Every motor is guaranteed to meet IEEE 841 vibration standards. A vibration test report is shipped with each motor.
- Precision cast conductor bars on the rotor minimize vibration and extend service life.

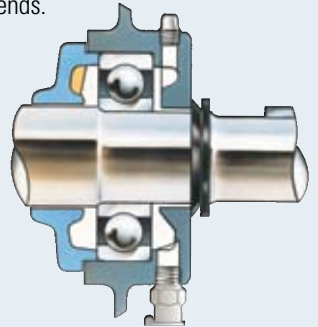
### 5) Increased Energy Efficiency

- Motor efficiency exceeds the requirements of the 1992 U.S. Energy Policy Act.
- Motor efficiency meets or exceeds Canadian Federal Efficiency Levels defined in CSA C390-93.

# MEET OR EXCEED IEEE 841 MOTOR STANDARDS



For long life and superior protection, the 841XL motor features the exclusive Positive Lubrication System Plus (PLS<sup>®</sup>), which channels grease directly into the bearing track, and Inpro<sup>™</sup> non-contact labyrinth seals, which are incorporated on both ends.



Reliance motors are available in over one-million ratings, types, styles, and sizes from fractional to 25,000 horsepower. 841 Features may vary for non-NEMA ratings.



## 6) Protected Electrical Connections

- Corrosion-resistant oversized cast iron conduit box exceeds the volume required by NEMA standards.
- Neoprene conduit box gaskets prevent the entry of moisture and contaminants.
- All motor leads have lugs for easy electrical connections.
- A drilled and tapped hole for a ground lug is provided on the frame.
- A clamp type ground lug is provided in the conduit box.

- Automatic grease reservoir drain plug with spring-loaded relief (Gits Cup) extends out of the fan cover.
- Bearing contamination from moisture, dust, dirt, or other materials is prevented with the installation of Inpro<sup>®</sup> bearing isolators on both ends of the motor in all frame sizes.
- Bearings are sized to provide high load capacities and degassed for maximum durability.
- Exclusive PLS<sup>™</sup> Plus (Positive Lubrication System Plus) assures proper bearing lubrication in all mounting positions. It channels grease directly into the bearing track. Easily accessible lubrication fittings are positioned in the front and back end shields.

- Cast iron bearing inner-caps provide accurate alignment and prevent bearing contamination.

## 7) Longer Bearing Life

- Bearing lubricant life is increased by minimizing temperature rise to below 50° C for 2 pole motors and 45° C for 4 pole motors.

## 8) Closer shaft Tolerances

- Permissible shaft runout is reduced by 50% of previous standards-0.001 inch (T.I.R.) for shaft diameters to 1.625 inches, and 0.0015 inch for larger shafts.