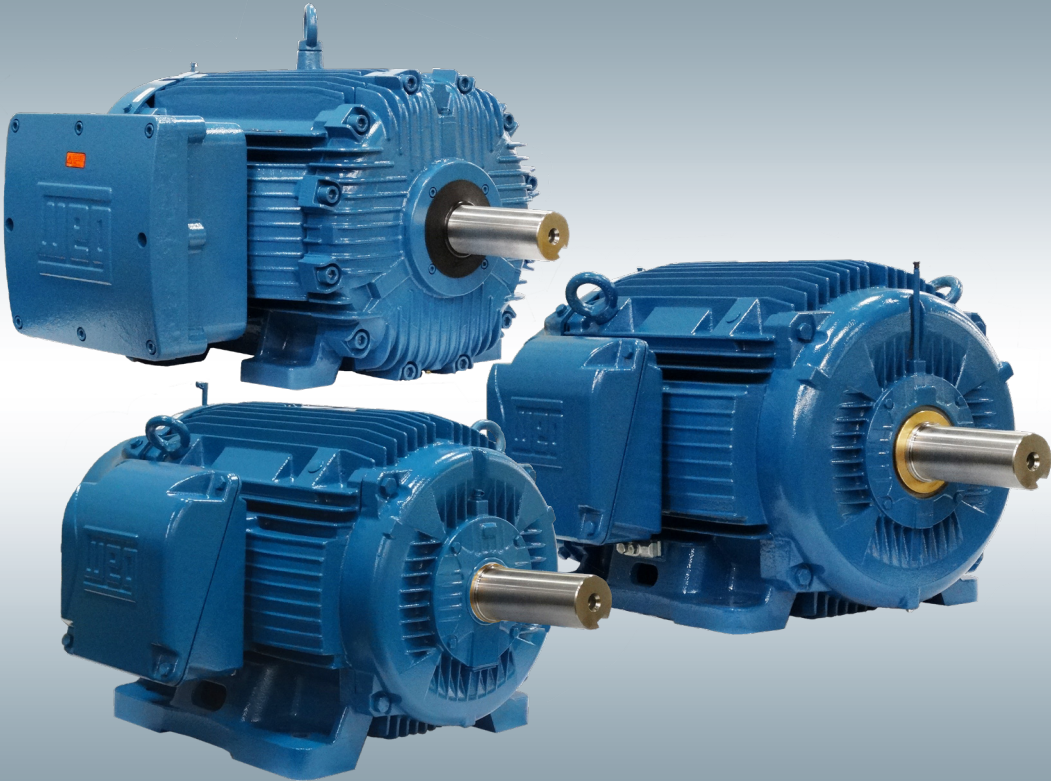


# Low Voltage Motors

Three-Phase Severe Duty & Explosion Proof Motors



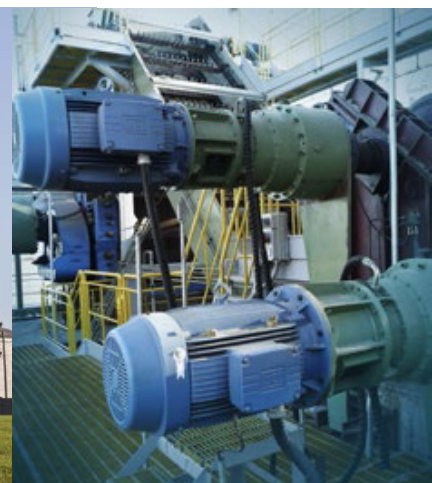


## Three-Phase Severe Duty & Explosion Proof Motors

GENERAL	W22 Severe Duty	W22 IEEE 841	W21Xd Explosion Proof
Horsepower	0.5 - 800HP	0.5 - 400HP	0.5 - 500HP
Speed (60 Hz)	3600, 1800, 1200, or 900 RPM		
Voltage (60 Hz)	200, 230/460, 460, or 575	460, or 575	230/460, 460, or 575
Frame Size	143T - 589	143T - 449	143T - 587
Enclosure	TEFC	TEFC	TEFC
Application Design	Severe Duty	Extra Severe Duty	Extra Severe Duty
<b>MECHANICAL FEATURES</b>			
Cast Iron Frame	Yes	Yes	Yes
Degree Of Protection	IP55	IP55+	IP55+
External Ground Provision	Yes	Yes	Yes
Fan Cover Material	Steel: 143 - 215 frames Cast Iron: 254 - 588 frames	Cast Iron	Steel: 143 - 215 frames Cast Iron: 254 - 588 frames
Bi-directional Rotation	Yes	Yes	Yes
Automatic Condensation Drains, Both End Brackets	Yes (Rubber)	Yes (Stainless steel)	Yes - 254 frames & above (Bronze)
Locked Bearings	Yes - 254 frames & above	Yes	Yes - 254 frames & above
L-10 Bearing Life Exceeding 100,000 Hours (Direct Coupled)	Yes	Yes	Yes
L-10 Bearing Life Exceeding 40,000 Hours (Belt Drive)	Yes	Yes	Yes
Bearing Seals	140-320 frames = V-ring 360-500 frames = Wseal 580 frames = Taconite Labyrinth	Inpro Seals	140 - 405 Frame DE: Oil seal / NDE: Lip seal 444 Frame & Larger DE: Viton oil seal / NDE: Viton lip seal
Regreasable Bearings (Grease Type)	Mobil Polyrex EM	Mobil Polyrex EM	Mobil Polyrex EM
Grease Fittings	254 & Larger: Grease fittings in DE & NDE bearings	All frames: Seamless SS grease fitting & extending tube / Carbon steel grease relief & extending tube	254 & Larger: Grease fittings in DE & NDE bearings
Rotatable in 90° Increments	Yes	Yes	Yes
Terminal Box Volume Per NEMA® Part 4	Yes	Yes	Yes
Lead Terminal Lugs	Yes	Yes	Yes
Shaft Runout 1/2 NEMA Standards	Yes	Yes	Yes
Corrosion Resistant Hardware	Yes	Yes	Yes
Motor Vibration Per IEEE 841-2009	Yes	Yes	Yes - 364 frame & larger
0.005" Verified Foot Flatness	No	Yes	No
304 SS Nameplate	Yes	Yes	Yes
Paint System Surpassing 96 Hour Salt Spray Test	Yes, exceed 200hrs	Yes, exceeds 240hrs	Yes, exceed 200hrs

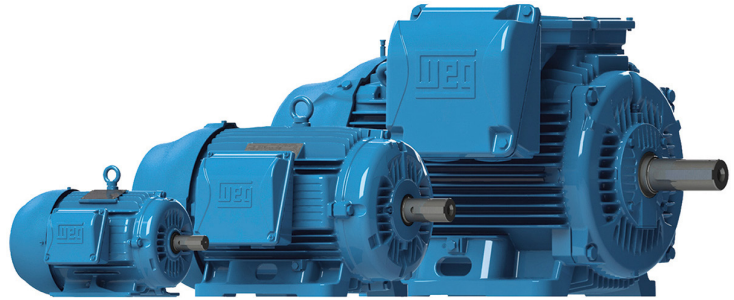


ELECTRICAL FEATURES	W22 Severe Duty	W22 IEEE 841	W21Xd Explosion Proof
Meets or Exceeds NEMA Premium® Efficiency	Yes	Yes	Yes
3 Lead Single Voltage (Multiple Strands Leads 449 Frame & Larger)	143-215 Frame = 9 Leads 254-587 Frame = 12 Leads 588/9 Frame = 6 Leads	Yes, all frames	143-215 Frame = 9 Leads 254-587 Frame = 12 Leads
Class F Insulation (Class H Magnet Wire & Varnish)	Yes	Yes	Yes
Service Factor (60Hz)	1.25 (up to 100 HP) 1.15 (125 HP & above)	1.25 (up to 100 HP) 1.15 (125 HP & above)	1.15 (up to 450 HP)
Thermal Protection	No	No	Thermostat 155°C
Space Heaters	586 & Larger	586 & Larger	586 & Larger
Low Loss Electrical Grade Core Steel (500°C Burnout) 326T & Larger	Yes	Yes	Yes
Inverter Rated	1000:1 for Variable Torque 20:1 Constant Torque up to 250HP 6:1 Constant Torque 300HP & up * Insulated housing standard on L449T & above	1000:1 for Variable Torque 20:1 for Constant Torque * Frame 586/7 250HP and up 6:1 CT and 1000:1 VT * Insulated housing standard on L447/9T and above	UL Listed - 143T - 215T only (File E87848) CSA US - all frames (Certificate 1629892) Variable Torque 1000:1 for all frames excluding 449T - Class I & II 1000:1 for 449T - Class I only Constant Torque: 20:1 for frames 143T to 215T - Class I & II 6:1 for frames 254T to 326T - Class I & II 4:1 for frame 449T - Class I only 2:1 for frame 364T to 586/7 - Class I & II
<b>ADDITIONAL NOTES</b>			
Forged Shouldered Eyebolt With Blind Hole	182 & Larger	182 & Larger	143 & Larger
Suitable for Hazardous Area	Class I Div 2, Groups A, B, C & D Class II, Div 2, Groups F & G	Class I Div 2, Groups A, B, C & D Class II, Div 2, Groups F & G	Class I, Div 1, Groups C & D Class II, Div 1, Groups F & G
Maximum Sound Power Level dBA, No Load	NEMA® Part 9	NEMA® Part 9	NEMA® Part 9



# Three Phase General Purpose Motors

W22 - CAST IRON



## Standard Features:

- 50/60 Hz rated (380V on nameplate - 400/415 available)
- Rated 50HZ at same horsepower up to 250HP 1.0 Service Factor for 2, 4 & 6 pole motors
- Rated 50Hz at same horsepower up to 125HP 1.0 Service Factor for 8 pole motors
- Class F insulation (impregnation resin and magnet wire are class H)
- F1 mounted (cast iron frames are F2 convertible). Frames 447T and up can easily be F2 converted by simply rotating the terminal box adapter
- Cast iron frames: regreasable ball bearings (frames 254T and up)
- Gasketed conduit box

## Inverter Rated\*

**1000:1 for Variable Torque**

**NEMA Premium®**

**20:1 Constant Torque up to 250HP**

**6:1 Constant Torque 300HP and up**

**\* Insulated NDE housing standard on L447/9T and above**

## Features that make a difference:

- All NEMA Premium® ratings have a 1.25 Service Factor (up to 100 HP) resulting in cooler operation and extended life of the motor
- All Cast Iron Construction, including Terminal Box and Fan Cover\*
- Solid feet for reduced vibration levels and impact absorption
- Optimized ventilation system for cooler operation and extended life
- High Grade FC200 cast iron provides superior mechanical strength and heat dissipation
- All WEG W22 motors are Totally Enclosed Fan Cooled with a true IP55 rating against dust and moisture. (IP56, IP65 and IP66 available as options)
- Exclusive W-Seal 364T and larger provides superior bearing protection
- Taconite Labyrinth seal 586 Frame and larger
- Exclusive WEG painting system exceed 200hrs ASTM 117 corrosion test (Exceeds IEEE 841 standard)
- Balanced to 0.08 inches per second vibration limits (Meets IEEE 841 standard)
- Four Bolt Conduit Cover with glued Neoprene Gasket
- Impregnation Resin and magnet wire are insulation class H
- Stainless Steel Nameplate - Laser etched with high contrast background
- Corrosion Proof Drains
- Inverter Duty per NEMA MG1, Part 31
- Certified Class I Div 2, Groups A, B, C & D, Class II, Div 2, Groups F & G
- Suitable for IEEE45 and USCG 259 – Marine Duty

\*Cast iron fan cover available as an option on 143-215T frames



# Three-Phase General Purpose Motors

## IEEE 841 - THREE PHASE TEFC - NEMA Premium®

WEG's IEEE 841 motors are specially suited for Pulp & Paper mills, Steel mills, Petrochemical Plants and diverse demanding applications requiring severe duty long life motors.

WEG's W22 cast iron platform has an improved cooling system and solid feet for cooler operation and reduced vibration and noise extending the life of the motor.

### Standard Features:

- Class F insulation (Impregnation Resin and magnet wire are class H)
- F1 Mounted (F2 convertible). Frames 447T and up can easily be F2 converted by simply rotating the terminal box adapter
- Stainless Steel Nameplate - Laser etched with high contrast background
- All frames with regreasable ball bearings
- Class I, Div. 2, Groups A, B, C & D – T3, Class II, Div 2, Groups F & G – T3C

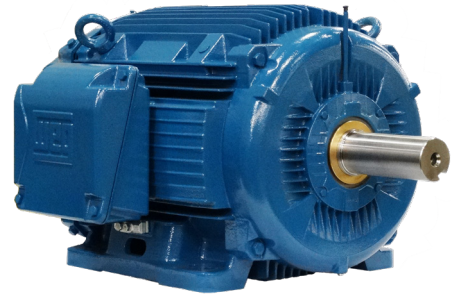
### \*Inverter Rated:

**1000:1 for variable torque**

**20:1 for constant torque**

*\* Frame 586/7 250HP and up 6:1 CT and 1000:1 VT*

*\* Insulated bearing housing on the NDE standard on L447/9T and above*



### Features that make a difference:

- 1.25 Service Factor up to 100 HP
- InproSeal Bearing Isolators both ends
- Bearing protection meets IP56
- Rubber lead separator between terminal box and frame
- Vibration: 0.04 inches per second or less
- Guaranteed foot flatness to within 0.005"
- Bearing life 50,000 hours (L-10)
- Epoxy Paint system exceeds 250hrs Salt Spray test
- Interior surfaces are epoxy coated
- Non-sparking fan
- NPT Threaded terminal box
- Seamless copper lead lugs
- Seamless Stainless Steel grease extension tubes
- Automatic grease relief fittings
- IEEE 841 Test Report in conduit box
- Suitable for IEEE45 and USCG 259 – Marine Duty



# Explosion Proof Motors

NEMA Premium® EFFICIENCY MOTORS

WEG Explosion Proof motors are suitable for applications requiring UL or CSA certification for hazardous locations.

## Standard Features:

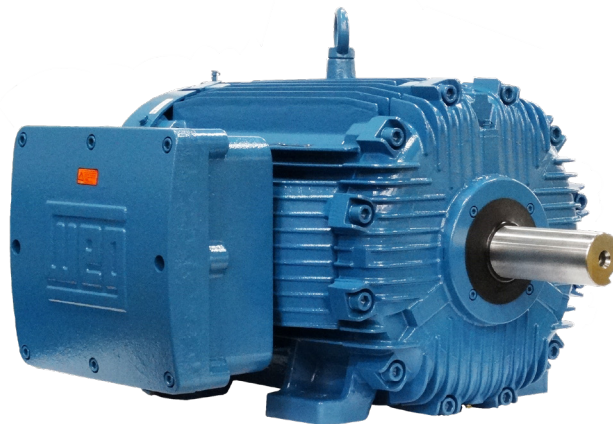
- Class F insulation (Impregnation Resin and Magnet wire are class H)
- F1 Mounted
- Stainless Steel Nameplate - Laser etched with high contrast background
- Regreasable ball bearings (Frames 254T and up)
- CSA Approved - File LR50962
  - Class I, Division 1, Groups C & D Temperature Code T3C
  - Class II, Division 1, Groups F & G Temperature Code T3C
- UL Listed - File E87848
  - Class I, Division 1, Groups C & D
  - Class II, Division 1, Groups F & G<sup>1</sup>
  - Frame (143T-326T) Temperature Code T3C<sup>2</sup>
  - Frame (364T and up) Temperature Code T3C

<sup>1)</sup> Class II UL only available as IP54 Modification.

<sup>2)</sup> T4 Temperature Code available on sine wave power as mod

Stock units are Class II only for cCSA<sub>US</sub>

Available with AEGIS® SGR Inside



## Features that make a difference:

- NPT threaded terminal box
- Non-sparking fan
- Thermostats
- IP55 rated enclosure
- VFD Service 20:1 CT; 1000:1 VT (cCSA<sub>US</sub> and excludes frames 449T & 586/7)

*CSA files are NRTL cCSA<sub>US</sub> listings*

**Inverter Rated: 143T – 586/7\***

**UL Listed - (File E87848)**

**CSA US - (Certificate 1629892)**

### Constant Torque

20:1 for frames 143T to 215T - Class I & II

6:1 for frames 254T to 326T – Class I & II

2:1 for frame 364/5T to 586/7T - Class I & II  
(Class I only for 449T)

### Variable Torque

1000:1 for all frames excluding 449T - Class I & II

1000:1 for 449T - Class I only





# The Superior Choice for **HEAVY INDUSTRIAL** Applications



## Low and Medium Voltage Motors and Drives

Large end users demand WEG products by name because they know WEG meets or exceeds the toughest specifications for Heavy Industrial applications.



WEG Electric Corp. offers the following products, and more! With a full range of IEC/NEMA Global Certifications and a full line of products, WEG can supply the right solution for your needs anywhere in the world. To learn more about WEG's products and solutions or to locate a Distributor near you, please call **1-800-ASK-4WEG** or visit **www.weg.net**.

**Low Voltage Motors, Single and 3-Phase, 1/8 – 700HP**

- General Purpose Motors
- Explosion Proof Motors
- Crusher Duty Motors
- IEC Tru-Metric Motors
- Pump Motors including JP/JM
- P-Base Pump Motors
- Oil Well Pumping Motors
- Pool & Spa Motors
- Brake Motors
- Compressor Duty Motors
- Farm Duty Motors
- Poultry Fan Motors
- Auger Drive Motors
- IEEE 841 Motors
- Stainless Steel Wash Down Motors
- Saw Arbor Motors
- Cooling Tower Motors
- Commercial HVAC Motors
- Pad Mounted Motors
- Vector Duty Motors

**Large Electric Motors**

- Low Voltage 3-phase motors up to 2,500HP
- Induction Motors up to 70,000HP and 13,200V
- Wound Rotor Systems (including starters) up to 70,000HP and 13,200V
- Synchronous Motors up to 200,000HP and 13,200V
- Explosion proof motors (Ex-d) up to 1,500kW and 11kV
- Ex-n, Ex-e, Ex-p motors

**Variable Frequency Drives**

- Low Voltage 1/4 to 2500HP, 230V – 480V
- Medium Voltage 500-10,000HP
- Multi-pump systems
- NEMA 4X
- Dynamic braking resistors
- Line and load reactors
- Plug and play technology
- Network communications: Profibus-DP, DeviceNet, Modbus-RTU
- PLC functions integrated
- Complete line of options and accessories

**Soft Starters**

- 3-1500HP
- Oriented start-up
- Built-in bypass contactor
- Universal source voltage (230-575V, 50/60Hz)
- Network communications: Profibus-DP, DeviceNet, Modbus-RTU
- Complete Line of options and accessories
- MV Soft-starter 3.3kV, 4.16kV: up to 3500HP, Withdrawable Power Stacks, & 8x PT100 Temperature monitoring

**Controls**

- Mini – Contactors
- IEC Contactors
- Thermal Overload Relays
- Manual Motor Protectors
- Molded Case Circuit Breakers
- Smart Relays
- Enclosed Starters: combination & non-combination
- Pushbuttons & Pilot Lights
- Timing & Motor Protection Relays
- Terminal Blocks

**Custom Panels**

- Custom configured to your specification.
- NEMA 1, 12, 3R, 4 and 4X cabinets
- Quick delivery of preconfigured drives and soft starters
- UL 508 certified
- Low Voltage (230-460)
- Made in the U.S.A.

**Generators**

- Brushless Synchronous Generators for diesel gen-sets up to 4,200kVA
- Hydro-generators up to 25,000kVA
- Turbo-generators up to 175,000kVA

**Power Transformers**

- Built and engineered in North America
- Voltages < 345kV
- Ratings 5-250MVA
- Station class, oil filled, round core, copper windings
- Special configurations and designs available!
- Ask your WEG Sales Representative for details.
- Designed, built, and engineered to ANSI standards.

**Custom Solution Package Sales**

- WEG can package any of its products for ease of sale! Enjoy a single point of contact for the entire package of products and assistance from quote through after-sales support. Ask your WEG Sales Representative for details.



WEG ELECTRIC CORP.  
 6655 Sugarloaf Parkway  
 Duluth, GA 30097  
 Phone: 1-800-ASK-4WEG  
 Fax: 678-249-1155  
[info-us@weg.net](mailto:info-us@weg.net)  
[www.weg.net67](http://www.weg.net67)

Please contact your authorized distributor:

