MAX-E1® Construction

- TEFC, IP54/ IP55 Rating (IP55 for Motor Frame Sizes 5000 and Larger).
- Cast Iron Frame, End Brackets, Fan Cover and Terminal Box
- Multi-Mount Construction (145T/ 143T Drilled Foot Holes Up Through 449T Frame)
- Automatic Grease Discharge Fittings
- Protects the Vacuum De-Gassed Re-Greasable Motor Bearings From Over Pressure
- Vacuum De-Gassed Re-Greasable Ball Bearings (or Rollers) Using Polyrex EM Grease on 280TS Frames
- Paint System: Phenolic Rust Proof Base Plus Polyurethane Top Coat (Color: Light Grey - Munsell N5.0)
- Labyrinth-Type Metal Flinger on Both Ends of 280TS to 6800 Frames.
- Stainless Steel Name Plate
- Motors 150 hp and Larger are 460V only.
- Foot Mounted with C-Flange or Round Body with C-Flange: 1-300 hp
- 1.15 Continuous Service Factor
- Internal Components with Class F Insulation, 2 Dips in PAR Varnish then Bake
- Designed for 400C Ambient Conditions with Class B Temperature Rise
- 1045 Carbon Steel Shaft with Bi-directional Rotation (2 Pole Motors Having 5000 Frames and Larger are Uni-Directional)
- Aluminum Die Cast, Squirrel Cage Rotor for Smaller Motors (5000 Frame and Smaller). Copper/ Copper Alloy Rotor for Larger Motors (5800 Frame and Larger).
- Insulated, Non-Drive End Bearings on 2 Pole Motors, 600 hp and Larger
- Oversized Terminal Box, Rotatable in 90° Increments, Fully Gasketed, NPT Entrance
- Inverter Duty Service Capability, Single Shielded Bearings, Ground Terminal in Terminal Box, Inverter Duty Magnet Wire Capable of Withstanding Voltage Spikes of Up to 2200V
- UL Recognized and CSA Approved for Inverter Duty Per NEMA Standards (Service Factor: 1.0)
- 6 Leads (150 hp and Larger)
- 9 Leads (5 hp and Smaller)
- 12 Leads (7.5 - 125 hp)

MAX-E1® Totally Enclosed Fan Cooled
Severe Duty

Non-Sparking
Non-Corrosive Producing Fan
Neutral Grounded Oil-Tight (Oil-Free)
Non-Sparking, Non-Corrosive Producing Fan
Grease Inlet Fittings
Inverter Duty Magnet Wire
Cast Iron Hub
Precision Balanced Rotor
Regreaseable Bearing
Regreaseable Bearing
Grease Discharge Plug
C-Flange
Cast Iron Bracket
Bolts
Breather Drain Holes (Underneath)
Grounding Terminal
Dual Drilled Bolt Holes* (Only on Longer Motor Frames)
6 - 12 Leads**

SM-MXE1 10-15
MAX-E1® FEATURES AND BENEFITS

Product Scope

Horsepower
3/4 to 800 hp

Speed
3000, 1800, 1200, or 900 RPM

Voltage
230/460V or 237V

Enclosure
Totally Enclosed Fan Cooled

Frame Size
143T Through 6066

Construction
Cast Iron

Vibration
(Undifferented)
For NEMA MG 1, Sec. 1, Paragraph F.B.1.
Velocity < 0.15 inches (peak)
Displacement < 0.0025 in (p-p)
Acceleration < 0.1 g (peak)

Insulation
Class F: Exceeds NEMA MG 1, Part 31 (Inverter Duty)

MAX-E1® NEMA Premium Efficiency Motor

Frames 5000 and Larger

MAX-E1® FRAME SIZES

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<th>Frame Size</th>
<th>Inches</th>
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</table>

POWER SUPPLY:
MAX-E1® motors will operate satisfactorily on voltages within +/- 10% fluctuation of rated voltage, in frequency within +/- 5% combined fluctuation, not to exceed 10%.

AMBIENT TEMPERATURE:
Standard ambient temperature is -20°C to 40°C (149°F); however, motors with 1.15 service factor can be operated at an ambient temperature up to 50°C (122°F) at a 1.0 service factor. For lower of higher ambient temperature applications, refer to TECO-Westinghouse for modification options.

ALTITUDE:
Standard MAX-E1® motors can operate at all altitudes up to 3,300 feet (1,000 meters) above sea level; however, motors with 1.15 service factor can be operated at an altitude of 10,000 feet (3,000 meters) above sea level with a service factor of 1.0. Motion having a service factor of 1.0 can operate at altitudes up to 5,300 feet (1,600 meters).

TYPICAL APPLICATIONS:
- Crushers, Grinders
- Compressors
- Reciprocating Machinery
- Water and Wastewater
- Mixers

APPLICATION OF V-BELT SHEAVE DIMENSIONS:
To assure satisfactory MAX-E1® motor operation, the selected sheave diameter shall be not smaller than, nor shall the selected width be greater than, the dimensions listed below.

MAX-E1® CONNECTION DIAGRAMS:
1) 3/4 hp - 8 hp: Connected Internally 1/2 hp (5 to 12) hp: Across-The-Line Start
2) 150 hp and Up (Up to 400 hp): 460V, Y - Δ Start

MODIFICATIONS AVAILABLE:
- Class F and H Insulation
- Space Heaters
- Thermal Protection
- Woundings
- Bearings
- Special Paint Finish
- Double End Shaft or Special Shaft Dimensions
- 50 Hz Operation
- Shaft Grounding
- Insulated Bearings
- Blower Kits for VFD Service
- Encoders
- Mounting Flange Options: C or D Design
- Terminal Box Position F1 or F2
- Contact TECO-Westinghouse for Additional Modifications

APPLICATION OF V-BELT SHEAVE DIMENSIONS: