

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 13572086

Catalog # : 20036ET3G504S-W22

Frame : 504/5TS  
Output : 200 HP (150 kW)  
Poles : 2  
Frequency : 60 Hz  
Rated voltage : 460 V  
Rated current : 222 A  
L. R. Amperes : 1510 A  
LRC : 6.8x(Code G)  
No load current : 50.0 A  
Rated speed : 3575 rpm  
Slip : 0.69 %  
Rated torque : 294 ft.lb  
Locked rotor torque : 200 %  
Breakdown torque : 260 %  
Insulation class : F  
Service factor : 1.15  
Moment of inertia (J) : 44.7 sq.ft.lb  
Design : B

Locked rotor time : 30s (cold) 17s (hot)  
Temperature rise : 80 K  
Duty cycle : Cont.(S1)  
Ambient temperature : -20°C to +40°C  
Altitude : 1000 m.a.s.l.  
Protection degree : IP55  
Cooling method : IC411 - TEFC  
Mounting : F-1  
Rotation<sup>1</sup> : Both (CW and CCW)  
Noise level<sup>2</sup> : 81.0 dB(A)  
Starting method : Direct On Line  
Approx. weight<sup>3</sup> : 2292 lb

| Output         | 25%  |      | 50%  |      | 75%  |      | 100% |      |
|----------------|------|------|------|------|------|------|------|------|
| Efficiency (%) | 93.6 | 94.0 | 94.1 | 94.1 | 95.0 | 95.2 | 95.4 | 95.2 |
|                | 93.8 | 93.7 | 94.0 | 93.9 | 95.2 | 95.2 | 95.3 | 95.3 |
|                | 95.2 | 95.2 | 95.0 | 95.0 | 95.4 | 95.4 | 95.0 | 95.0 |
|                | 94.0 |      | 94.5 |      | 95.0 |      | 95.4 | 95.4 |
| Power Factor   | 0.60 | 0.59 | 0.81 | 0.82 | 0.87 | 0.88 | 0.89 | 0.90 |
|                | 0.54 | 0.52 | 0.79 | 0.77 | 0.86 | 0.85 | 0.89 | 0.88 |
|                | 0.65 | 0.61 | 0.85 | 0.82 | 0.89 | 0.88 | 0.90 | 0.89 |
|                | 0.57 |      | 0.79 |      | 0.86 |      | 0.88 |      |

Foundation loads  
Max. traction : 971 lb  
Max. compression : 3263 lb

Losses at normative operating points (speed;torque), in percentage of rated output power

| Losses (%) | P1 (0,9;1,0)   | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 |
|------------|----------------|-----|-----|-----|-----|-----|-----|-----|
|            | P2 (0,5;1,0)   | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
|            | P3 (0,25;1,0)  | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
|            | P4 (0,9;0,5)   | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
|            | P5 (0,5;0,5)   | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
|            | P6 (0,5;0,25)  | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
|            | P7 (0,25;0,25) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |

|                        |                  |                      |
|------------------------|------------------|----------------------|
|                        | <u>Drive end</u> | <u>Non drive end</u> |
| Bearing type :         | 6314 C3          | 6314 C3              |
| Sealing :              | WSeal            | WSeal                |
| Lubrication interval : | 4000 h           | 4000 h               |
| Lubricant amount :     | 27 g             | 27 g                 |
| Lubricant type :       | Mobil Polyrex EM |                      |

Notes:

This revision replaces and cancel the previous one, which must be eliminated.

- (1) Looking the motor from the shaft end.
- (2) Measured at 1m and with tolerance of +3dB(A).
- (3) Approximate weight subject to changes after manufacturing process.
- (4) At 100% of full load.

These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.

| Rev.         | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------|---------|------|
|              |                 |           |         |      |
| Performed by |                 |           |         |      |
| Checked by   |                 |           |         |      |
| Date         | 28/03/2024      |           |         |      |

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