

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 Tru-Metric IE2 Three-Phase

Product code : 12470271

Frame : 315S/M  
Output : 100 HP (75 kW)  
Poles : 8  
Frequency : 50 Hz  
Rated voltage : 380 V  
Rated current : 147 A  
L. R. Amperes : 867 A  
LRC : 5.9  
No load current : 52.5 A  
Rated speed : 740 rpm  
Slip : 1.33 %  
Rated torque : 710 ft.lb  
Locked rotor torque : 160 %  
Breakdown torque : 190 %  
Insulation class : F  
Service factor : 1.15  
Moment of inertia (J) : 77.5 sq.ft.lb  
Design : N

Locked rotor time : 54s (cold) 30s (hot)  
Temperature rise : 80 K  
Duty cycle : S1  
Ambient temperature : -20°C to +40°C  
Altitude : 1000 m.a.s.l.  
Protection degree : IP55  
Cooling method : IC411 - TEFC  
Mounting : B3T  
Rotation<sup>1</sup> : Both (CW and CCW)  
Noise level<sup>2</sup> : 62.0 dB(A)  
Starting method : Direct On Line  
Approx. weight<sup>3</sup> : 2220 lb

| Output         | 25%  |      | 50%  |      | 75%  |      | 100% |      |
|----------------|------|------|------|------|------|------|------|------|
| Efficiency (%) | 94.5 | 93.4 | 94.4 | 93.8 | 94.5 | 94.4 | 94.3 | 94.7 |
|                | 93.4 |      | 93.6 |      | 94.5 |      | 94.5 |      |
| Power Factor   | 0.47 | 0.39 | 0.72 | 0.64 | 0.80 | 0.75 | 0.82 | 0.80 |
|                | 0.40 |      | 0.65 |      | 0.77 |      | 0.81 |      |

Foundation loads  
Max. traction : 2146 lb  
Max. compression : 4366 lb

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

|            |                |     |     |     |
|------------|----------------|-----|-----|-----|
| Losses (%) | P1 (0,9;1,0)   | 5.7 | 5.2 | 5.5 |
|            | P2 (0,5;1,0)   | 4.0 | 3.7 | 3.9 |
|            | P3 (0,25;1,0)  | 3.3 | 3.1 | 3.2 |
|            | P4 (0,9;0,5)   | 3.2 | 2.9 | 3.0 |
|            | P5 (0,5;0,5)   | 1.9 | 1.7 | 1.8 |
|            | P6 (0,5;0,25)  | 1.4 | 1.3 | 1.3 |
|            | P7 (0,25;0,25) | 0.8 | 0.8 | 0.8 |

|                      |   |                  |                      |
|----------------------|---|------------------|----------------------|
|                      |   | <u>Drive end</u> | <u>Non drive end</u> |
| Bearing type         | : | NU-319 C3        | 6316 C3              |
| Sealing              | : | WSeal            | WSeal                |
| Lubrication interval | : | 15000 h          | 20000 h              |
| Lubricant amount     | : | 45 g             | 34 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         | 26/03/2024      |           |         |          |
|              |                 |           | Page    | Revision |
|              |                 |           | 1 / 1   |          |