

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 Tru-Metric IE2 Three-Phase

Product code : 13025542

Frame : 280S/M  
Output : 60 HP (45 kW)  
Poles : 8  
Frequency : 50 Hz  
Rated voltage : 380 V  
Rated current : 89.8 A  
L. R. Amperes : 584 A  
LRC : 6.5  
No load current : 36.0 A  
Rated speed : 735 rpm  
Slip : 2.00 %  
Rated torque : 429 ft.lb  
Locked rotor torque : 180 %  
Breakdown torque : 220 %  
Insulation class : F  
Service factor : 1.15  
Moment of inertia (J) : 64.3 sq.ft.lb  
Design : N

Locked rotor time : 57s (cold) 32s (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 : B3L(E)  
Rotation<sup>1</sup> : Both (CW and CCW)  
Noise level<sup>2</sup> : 59.0 dB(A)  
Starting method : Direct On Line  
Approx. weight<sup>3</sup> : 1556 lb

| Output         | 25%  |      | 50%  |      | 75%  |      | 100% |      |
|----------------|------|------|------|------|------|------|------|------|
| Efficiency (%) | 93.0 | 91.8 | 93.3 | 92.5 | 93.9 | 93.5 | 94.0 | 94.1 |
|                | 90.2 |      | 91.0 |      | 93.6 |      | 94.1 |      |
| Power Factor   | 0.42 | 0.34 | 0.66 | 0.58 | 0.77 | 0.70 | 0.81 | 0.77 |
|                | 0.38 |      | 0.63 |      | 0.74 |      | 0.78 |      |

Foundation loads  
Max. traction : 1785 lb  
Max. compression : 3341 lb

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

|            |                |     |     |     |
|------------|----------------|-----|-----|-----|
| Losses (%) | P1 (0,9;1,0)   | 6.0 | 5.9 | 5.9 |
|            | P2 (0,5;1,0)   | 4.5 | 4.4 | 4.4 |
|            | P3 (0,25;1,0)  | 3.9 | 3.8 | 3.8 |
|            | P4 (0,9;0,5)   | 3.5 | 3.4 | 3.4 |
|            | P5 (0,5;0,5)   | 2.1 | 2.1 | 2.1 |
|            | P6 (0,5;0,25)  | 1.6 | 1.6 | 1.6 |
|            | P7 (0,25;0,25) | 1.1 | 1.0 | 1.0 |

|                      |   |                  |                      |
|----------------------|---|------------------|----------------------|
|                      |   | <u>Drive end</u> | <u>Non drive end</u> |
| Bearing type         | : | 6316 C3          | 6316 C3              |
| Sealing              | : | WSeal            | WSeal                |
| Lubrication interval | : | 20000 h          | 20000 h              |
| Lubricant amount     | : | 34 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 |                 | Page<br>1 / 1 |         |      |
| Checked by   |                 |               |         |      |
| Date         | 26/03/2024      |               |         |      |
|              |                 | Revision      |         |      |