

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 High Efficiency Three-Phase

Product code : 12822515

|                       |                   |                             |                        |
|-----------------------|-------------------|-----------------------------|------------------------|
| Frame                 | : 284TC           | Locked rotor time           | : 41s (cold) 23s (hot) |
| Output                | : 25 HP (18.5 kW) | Temperature rise            | : 80 K                 |
| Poles                 | : 4               | Duty cycle                  | : Cont.(S1)            |
| Frequency             | : 60 Hz           | Ambient temperature         | : -20°C to +40°C       |
| Rated voltage         | : 230/460 V       | Altitude                    | : 1000 m.a.s.l.        |
| Rated current         | : 58.4/29.2 A     | Protection degree           | : IP55                 |
| L. R. Amperes         | : 356/178 A       | Cooling method              | : IC411 - TEFC         |
| LRC                   | : 6.1x(Code G)    | Mounting                    | : W-6                  |
| No load current       | : 19.0/9.50 A     | Rotation <sup>1</sup>       | : Both (CW and CCW)    |
| Rated speed           | : 1770 rpm        | Noise level <sup>2</sup>    | : 64.0 dB(A)           |
| Slip                  | : 1.67 %          | Starting method             | : Direct On Line       |
| Rated torque          | : 74.2 ft.lb      | Approx. weight <sup>3</sup> | : 390 lb               |
| Locked rotor torque   | : 220 %           |                             |                        |
| Breakdown torque      | : 240 %           |                             |                        |
| Insulation class      | : F               |                             |                        |
| Service factor        | : 1.25            |                             |                        |
| Moment of inertia (J) | : 5.11 sq.ft.lb   |                             |                        |
| Design                | : B               |                             |                        |

| Output         | 25%  |      | 50%  |      | 75%  |      | 100% |      | Foundation loads |           |
|----------------|------|------|------|------|------|------|------|------|------------------|-----------|
| Efficiency (%) | 91.5 | 92.8 | 91.7 | 91.7 | 92.4 | 91.7 | 92.4 | 90.2 | Max. traction    | : 626 lb  |
|                | 92.1 | 92.1 | 91.7 | 91.7 | 91.7 | 92.4 | 91.0 | 91.7 |                  |           |
| Power Factor   | 0.49 | 0.55 | 0.73 | 0.78 | 0.82 | 0.85 | 0.86 | 0.87 | Max. compression | : 1015 lb |
|                | 0.51 | 0.49 | 0.75 | 0.73 | 0.83 | 0.82 | 0.87 | 0.86 |                  |           |

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

|            |                |     |      |     |     |
|------------|----------------|-----|------|-----|-----|
| Losses (%) | P1 (0,9;1,0)   | 8.0 | 10.5 | 9.6 | 8.8 |
|            | P2 (0,5;1,0)   | 6.7 | 8.8  | 8.0 | 7.3 |
|            | P3 (0,25;1,0)  | 6.0 | 7.9  | 7.2 | 6.6 |
|            | P4 (0,9;0,5)   | 3.7 | 4.8  | 4.4 | 4.0 |
|            | P5 (0,5;0,5)   | 2.4 | 3.2  | 2.9 | 2.7 |
|            | P6 (0,5;0,25)  | 1.5 | 2.0  | 1.8 | 1.6 |
|            | P7 (0,25;0,25) | 1.0 | 1.3  | 1.2 | 1.1 |

|                      |   |                  |                      |
|----------------------|---|------------------|----------------------|
|                      |   | <u>Drive end</u> | <u>Non drive end</u> |
| Bearing type         | : | 6311 C3          | 6211 C3              |
| Sealing              | : | V'Ring           | V'Ring               |
| Lubrication interval | : | 15000 h          | 17000 h              |
| Lubricant amount     | : | 18 g             | 11 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<br>Revision |         |      |
| Checked by   |                 |                           |         |      |
| Date         | 28/03/2024      |                           |         |      |