

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 11944242

|                       |                           |                             |                        |
|-----------------------|---------------------------|-----------------------------|------------------------|
| Frame                 | : 404/5TSC                | Locked rotor time           | : 25s (cold) 14s (hot) |
| Output                | : 100 HP (75 kW)          | Temperature rise            | : 80 K                 |
| Poles                 | : 2                       | Duty cycle                  | : Cont.(S1)            |
| Frequency             | : 60 Hz                   | Ambient temperature         | : -20°C to +40°C       |
| Rated voltage         | : 575 V                   | Altitude                    | : 1000 m.a.s.l.        |
| Rated current         | : 89.6 A                  | Protection degree           | : IP55                 |
| L. R. Amperes         | : 582 A                   | Cooling method              | : IC411 - TEFC         |
| LRC                   | : 6.5x(Code G)            | Mounting                    | : F-1                  |
| No load current       | : 20.8 A                  | Rotation <sup>1</sup>       | : Both (CW and CCW)    |
| Rated speed           | : 3545 rpm                | Noise level <sup>2</sup>    | : 79.0 dB(A)           |
| Slip                  | : 1.53 %                  | Starting method             | : Direct On Line       |
| Rated torque          | : 20.5 kgfm               | Approx. weight <sup>3</sup> | : 0.0 kg               |
| Locked rotor torque   | : 240 %                   |                             |                        |
| Breakdown torque      | : 260 %                   |                             |                        |
| Insulation class      | : F                       |                             |                        |
| Service factor        | : 1.25                    |                             |                        |
| Moment of inertia (J) | : 0.5561 kgm <sup>2</sup> |                             |                        |
| Design                | : B                       |                             |                        |

|                |       |      |      |      |                  |           |
|----------------|-------|------|------|------|------------------|-----------|
| Output         | 25%   | 50%  | 75%  | 100% | Foundation loads |           |
| Efficiency (%) | 0.000 | 93.0 | 94.1 | 94.1 | Max. traction    | : 524 kgf |
| Power Factor   | 0.00  | 0.83 | 0.88 | 0.89 | Max. compression | : 524 kgf |

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

| P1 (0,9;1,0) | P2 (0,5;1,0) | P3 (0,25;1,0) | P4 (0,9;0,5) | P5 (0,5;0,5) | P6 (0,5;0,25) | P7 (0,25;0,25) |
|--------------|--------------|---------------|--------------|--------------|---------------|----------------|
| 5.9          | 4.6          | 4.4           | 2.8          | 1.6          | 0.9           | 0.5            |

|                      |   |                    |                      |
|----------------------|---|--------------------|----------------------|
|                      |   | <u>Drive end</u>   | <u>Non drive end</u> |
| Bearing type         | : | 6314 C3            | 6314 C3              |
| Sealing              | : | Taconite Labyrinth | Taconite Labyrinth   |
| 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 |
|--------------|-----------------|---------------------------|---------|------|
|              |                 |                           |         |      |
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| Checked by   |                 |                           |         |      |
| Date         | 23/10/2024      |                           |         |      |

# LOAD PERFORMANCE CURVE

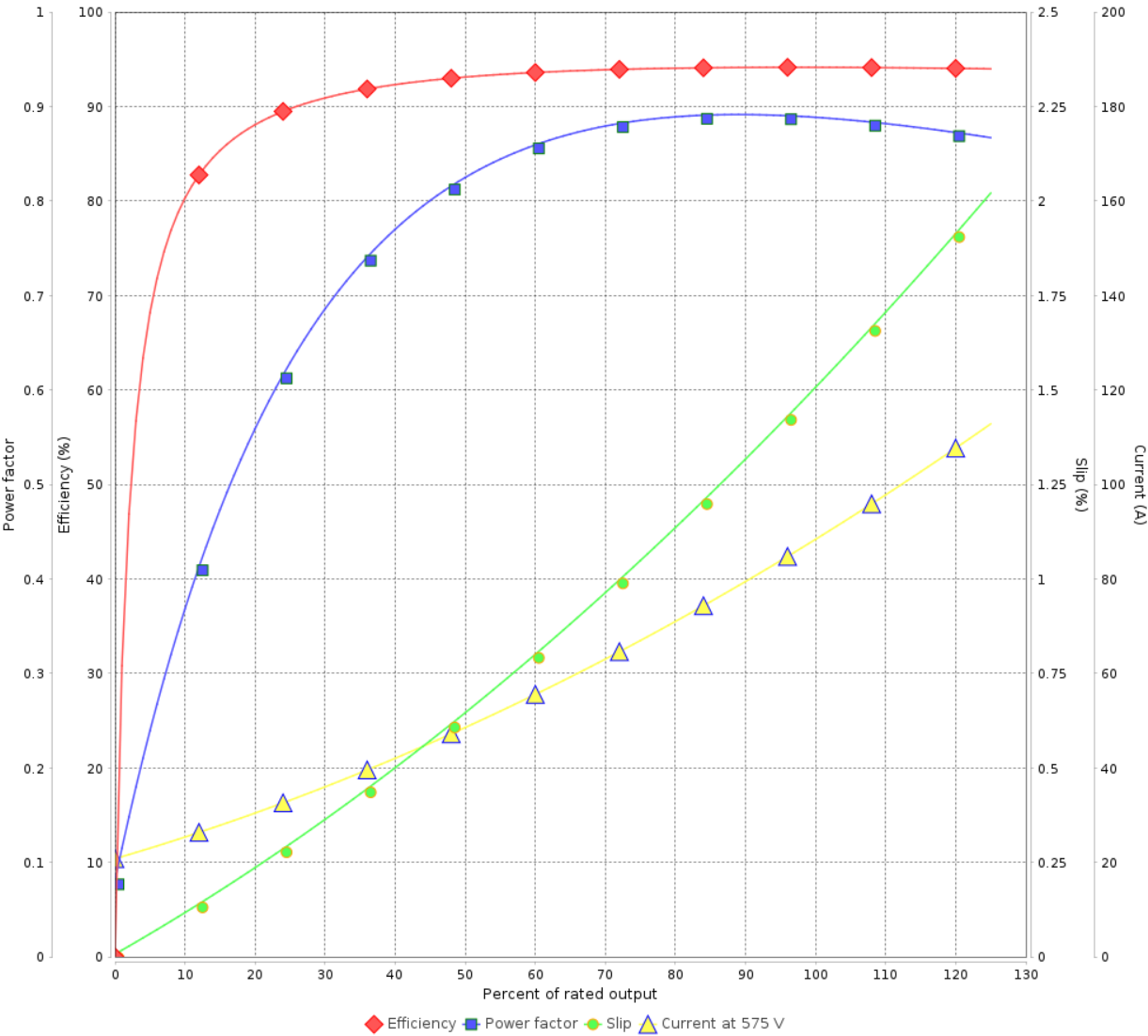
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LOAD PERFORMANCE CURVE



|                              |             |                       |                           |
|------------------------------|-------------|-----------------------|---------------------------|
| Performance : 575 V 60 Hz 2P |             |                       |                           |
| Rated current                | : 89.6 A    | Moment of inertia (J) | : 0.5561 kgm <sup>2</sup> |
| LRC                          | : 6.5       | Duty cycle            | : Cont.(S1)               |
| Rated torque                 | : 20.5 kgfm | Insulation class      | : F                       |
| Locked rotor torque          | : 240 %     | Service factor        | : 1.25                    |
| Breakdown torque             | : 260 %     | Temperature rise      | : 80 K                    |
| Rated speed                  | : 3545 rpm  | Design                | : B                       |

| Rev.         | Changes Summary |  | Performed | Checked       | Date     |
|--------------|-----------------|--|-----------|---------------|----------|
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