

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase      Product code : 12438187

Frame	: 447/9TS	Locked rotor time	: 25s (cold) 14s (hot)
Output	: 300 HP (220 kW)	Temperature rise	: 80 K
Poles	: 2	Duty cycle	: Cont.(S1)
Frequency	: 60 Hz	Ambient temperature	: -20°C to +40°C
Rated voltage	: 460 V	Altitude	: 1000 m.a.s.l.
Rated current	: 320 A	Protection degree	: IP55
L. R. Amperes	: 2176 A	Cooling method	: IC411 - TEFC
LRC	: 6.8x(Code G)	Mounting	: F-3
No load current	: 65.0 A	Rotation <sup>1</sup>	: Both (CW and CCW)
Rated speed	: 3570 rpm	Noise level <sup>2</sup>	: 81.0 dB(A)
Slip	: 0.83 %	Starting method	: Direct On Line
Rated torque	: 441 ft.lb	Approx. weight <sup>3</sup>	: 2587 lb
Locked rotor torque	: 210 %		
Breakdown torque	: 240 %		
Insulation class	: F		
Service factor	: 1.15		
Moment of inertia (J)	: 58.1 sq.ft.lb		
Design	: B		

Output	25%	50%	75%	100%	Foundation loads					
Efficiency (%)	95.3	95.0	95.4	95.4	95.8	95.4	95.8	95.8	Max. traction	: 2000 lb
	95.3	95.3	95.4	95.4	95.8	95.8	95.8	95.8		
Power Factor	0.65	0.65	0.86	0.86	0.89	0.89	0.90	0.90	Max. compression	: 4587 lb
	0.63	0.61	0.85	0.84	0.89	0.88	0.90	0.90		

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

Losses (%)	P1 (0,9;1,0)	4.9	4.9	4.9	4.9
	P2 (0,5;1,0)	3.8	3.8	3.8	3.8
	P3 (0,25;1,0)	3.3	3.3	3.3	3.3
	P4 (0,9;0,5)	2.6	2.6	2.6	2.6
	P5 (0,5;0,5)	1.7	1.7	1.7	1.7
	P6 (0,5;0,25)	1.2	1.2	1.2	1.2
	P7 (0,25;0,25)	0.6	0.6	0.6	0.6

		<u>Drive end</u>	<u>Non drive end</u>
Bearing type	:	NU-314 C3	6314 C3
Sealing	:	WSeal	WSeal
Lubrication interval	:	3000 h	7000 h
Lubricant amount	:	27 g	27 g
Lubricant type	:	Isoflex NBU-15	

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.

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Customer :

Thermal protection

ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermostat - 2 wires	1 x Phase	155 °C

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