

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 High Efficiency Three-Phase Product code : 13161991

Frame	: 404/5T	Locked rotor time	: 21s (cold) 12s (hot)
Output	: 50 HP (37 kW)	Temperature rise	: 80 K
Poles	: 8	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	: 48.8 A	Protection degree	: IP55
L. R. Amperes	: 303 A	Cooling method	: IC411 - TEFC
LRC	: 6.2x(Code G)	Mounting	: F-1
No load current	: 19.2 A	Rotation ¹	: Both (CW and CCW)
Rated speed	: 875 rpm	Noise level ²	: 60.0 dB(A)
Slip	: 2.78 %	Starting method	: Direct On Line
Rated torque	: 300 ft.lb	Approx. weight ³	: 992 lb
Locked rotor torque	: 170 %		
Breakdown torque	: 240 %		
Insulation class	: F		
Service factor	: 1.25		
Moment of inertia (J)	: 34.6 sq.ft.lb		
Design	: B		

Output	50%	75%	100%	Foundation loads	
Efficiency (%)	91.7	91.7	91.7	Max. traction	: 1650 lb
Power Factor	0.70	0.79	0.83	Max. compression	: 2674 lb

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)
8.9	8.0	7.4	3.4	2.6	1.4	1.0

	Drive end	Non drive end
Bearing type	: NU-316 C3	6314 C3
Sealing	: WSeal	WSeal
Lubrication interval	: 17000 h	20000 h
Lubricant amount	: 34 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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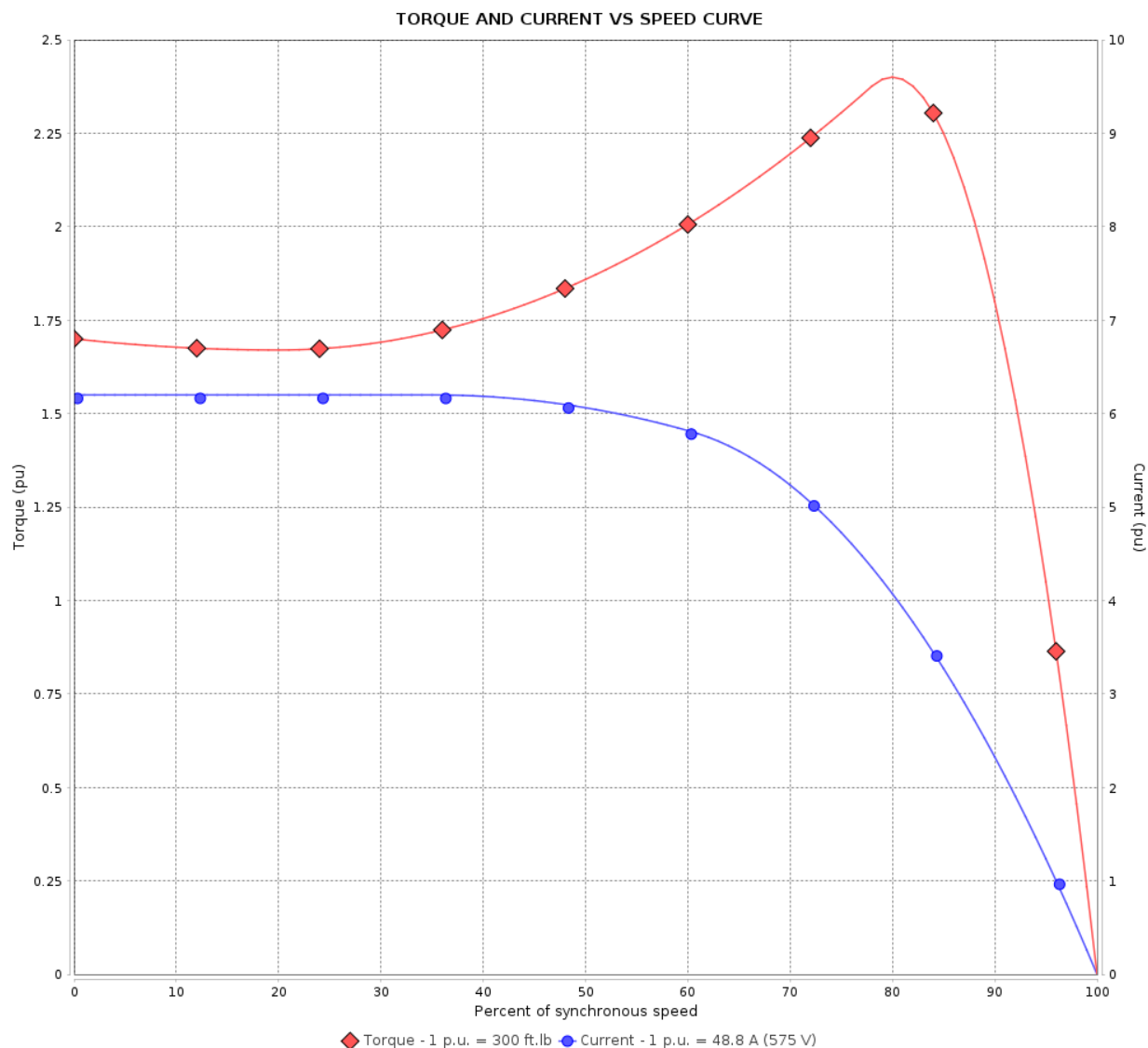
TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



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Performance : 575 V 60 Hz 8P

Rated current	: 48.8 A	Moment of inertia (J)	: 34.6 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 300 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 875 rpm	Design	: B

Locked rotor time : 21s (cold) 12s (hot)

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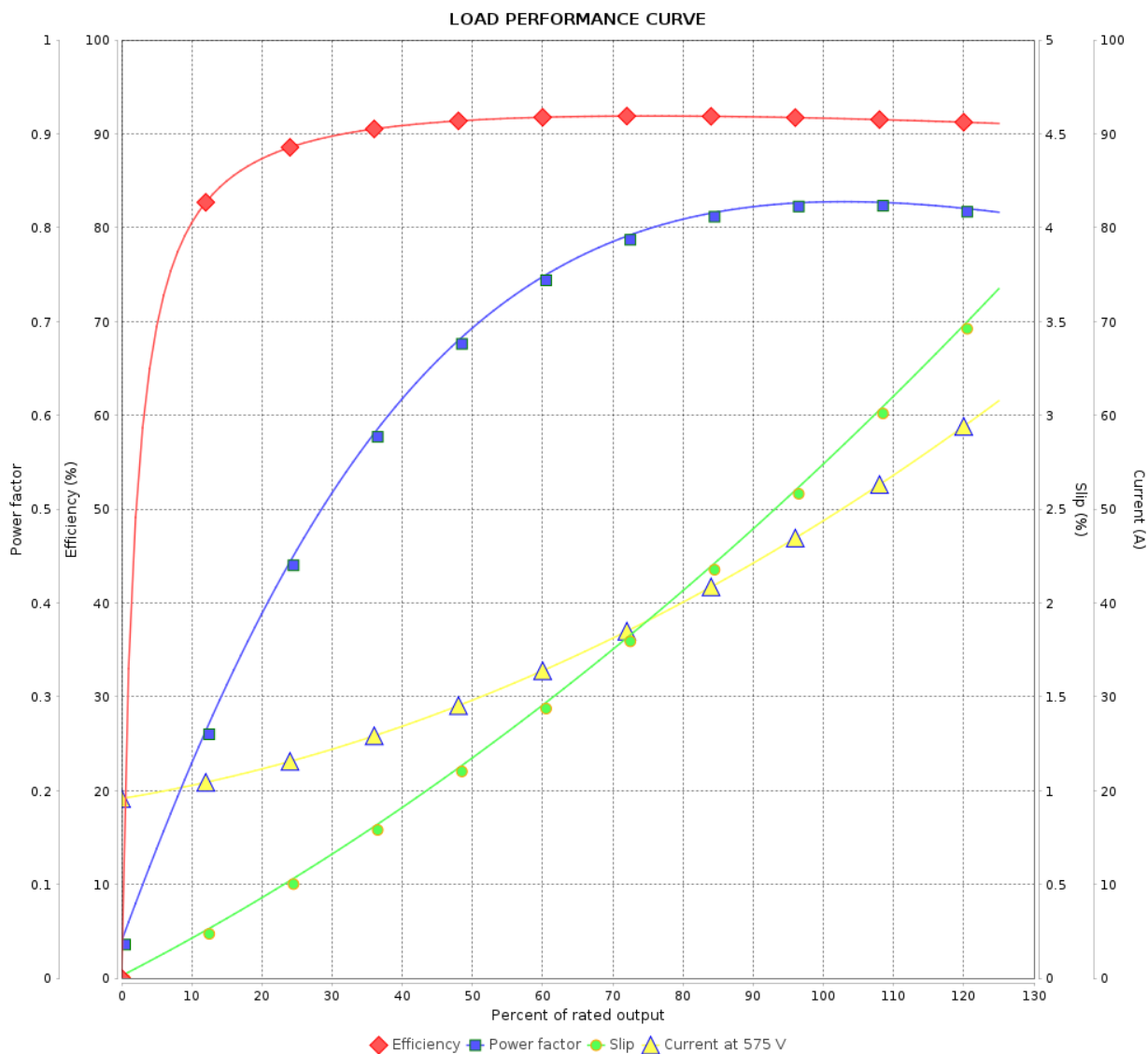
LOAD PERFORMANCE CURVE

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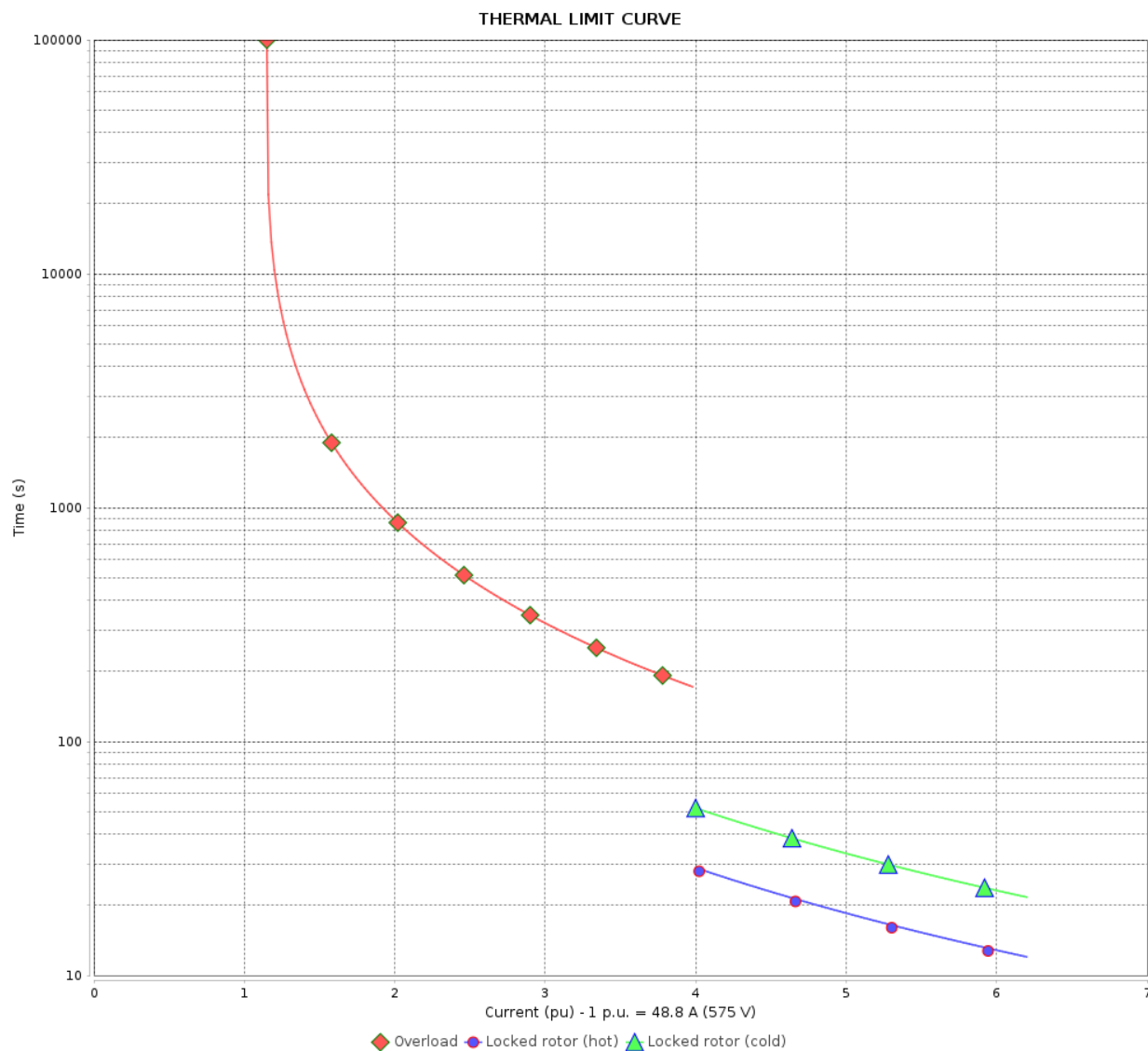
THERMAL LIMIT CURVE

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Rated torque	: 300 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 875 rpm	Design	: B

Heating constant

Cooling constant

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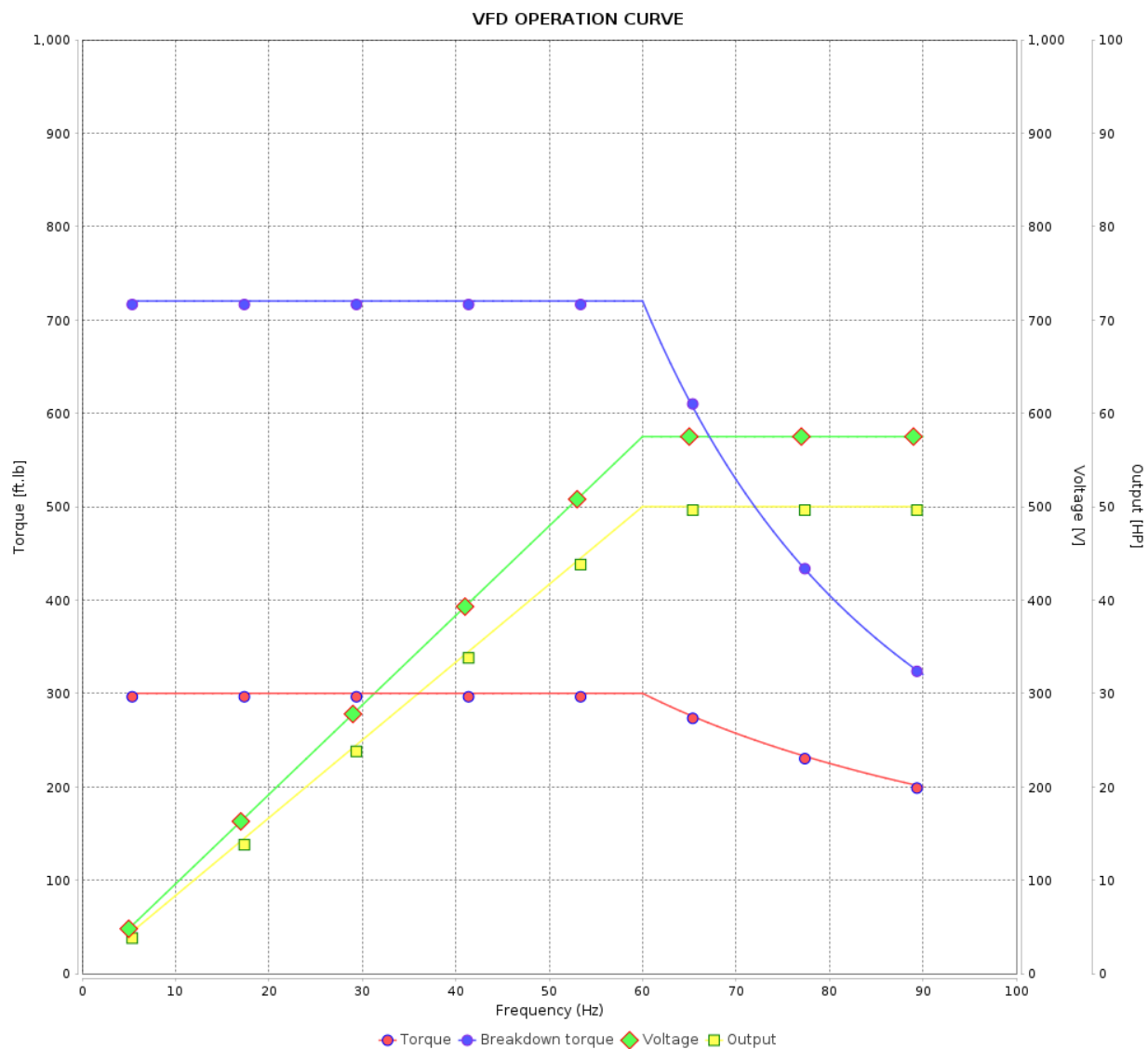
VFD OPERATION CURVE

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