

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W22 Close Coupled Pump JM
NEMA Premium Efficiency Three-Phase
Product code : 11642183

Frame	: 143/5JM	Cooling method	: IC411 - TEFC
Insulation class	: F	Mounting	: F-1
Duty cycle	: Cont.(S1)	Rotation ¹	: Both (CW and CCW)
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line
Altitude	: 1000 m.a.s.l.	Approx. weight ²	: 24.3 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.0026 kgm ²
Design	: B		

Output [HP]	2	1.5	1.5	1.5	2	2	2
Poles	2	2	2	2	2	2	2
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	230/460	380	400	415	380	400	415
Rated current [A]	5.38/2.69	2.47	2.42	2.43	3.18	3.03	2.99
L. R. Amperes [A]	47.9/23.9	21.2	22.5	22.6	21.0	21.8	23.3
LRC [A]	8.9x(Code L)	8.6x(Code L)	9.3x(Code M)	9.3x(Code M)	6.6x(Code H)	7.2x(Code J)	7.8x(Code K)
No load current [A]	2.40/1.20	1.20	1.30	1.40	1.20	1.30	1.50
Rated speed [RPM]	3500	2915	2920	2930	2855	2880	2890
Slip [%]	2.78	2.83	2.67	2.33	4.83	4.00	3.67
Rated torque [kgfm]	0.415	0.373	0.373	0.372	0.508	0.504	0.502
Locked rotor torque [%]	270	280	310	340	200	229	250
Breakdown torque [%]	380	370	420	440	250	300	300
Service factor	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Temperature rise	80 K	80 K	80 K	80 K	80 K	80 K	80 K
Locked rotor time	21s (cold) 12s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	23s (cold) 13s (hot)	19s (cold) 11s (hot)	21s (cold) 12s (hot)	18s (cold) 10s (hot)
Noise level ²	68.0 dB(A)	62.0 dB(A)	62.0 dB(A)	62.0 dB(A)	62.0 dB(A)	62.0 dB(A)	62.0 dB(A)
Efficiency (%)	25%						
	50%	82.5	81.4	80.3	80.1	82.5	82.5
	75%	85.5	83.3	83.1	83.1	84.0	84.0
	100%	85.5	83.5	84.0	84.0	82.5	84.0
Power Factor	25%						
	50%	0.64	0.61	0.60	0.52	0.71	0.68
	75%	0.76	0.73	0.69	0.65	0.82	0.79
	100%	0.82	0.81	0.78	0.75	0.87	0.85

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

Losses (%)	P1 (0,9;1,0)	15.7	18.3	17.6	17.6	19.6	17.6	17.6
	P2 (0,5;1,0)	12.3	14.3	13.8	13.8	15.4	13.8	13.8
	P3 (0,25;1,0)	11.6	13.5	13.0	13.0	14.5	13.0	13.0
	P4 (0,9;0,5)	8.8	10.3	9.9	9.9	11.0	9.9	9.9
	P5 (0,5;0,5)	5.4	6.3	6.1	6.1	6.8	6.1	6.1
	P6 (0,5;0,25)	3.9	4.6	4.4	4.4	4.9	4.4	4.4
	P7 (0,25;0,25)	2.7	3.1	3.0	3.0	3.4	3.0	3.0

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads
Bearing type	: 6206 ZZ	6204 ZZ	Max. traction : 31 kgf
Sealing	: V'Ring	V'Ring	Max. compression : 55 kgf
Lubrication interval	: -	-	
Lubricant amount	: -	-	
Lubricant type	: Mobil Polyrex EM		

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Notes

USABLE @208V 5.60A SF 1.15 SFA 6.43A

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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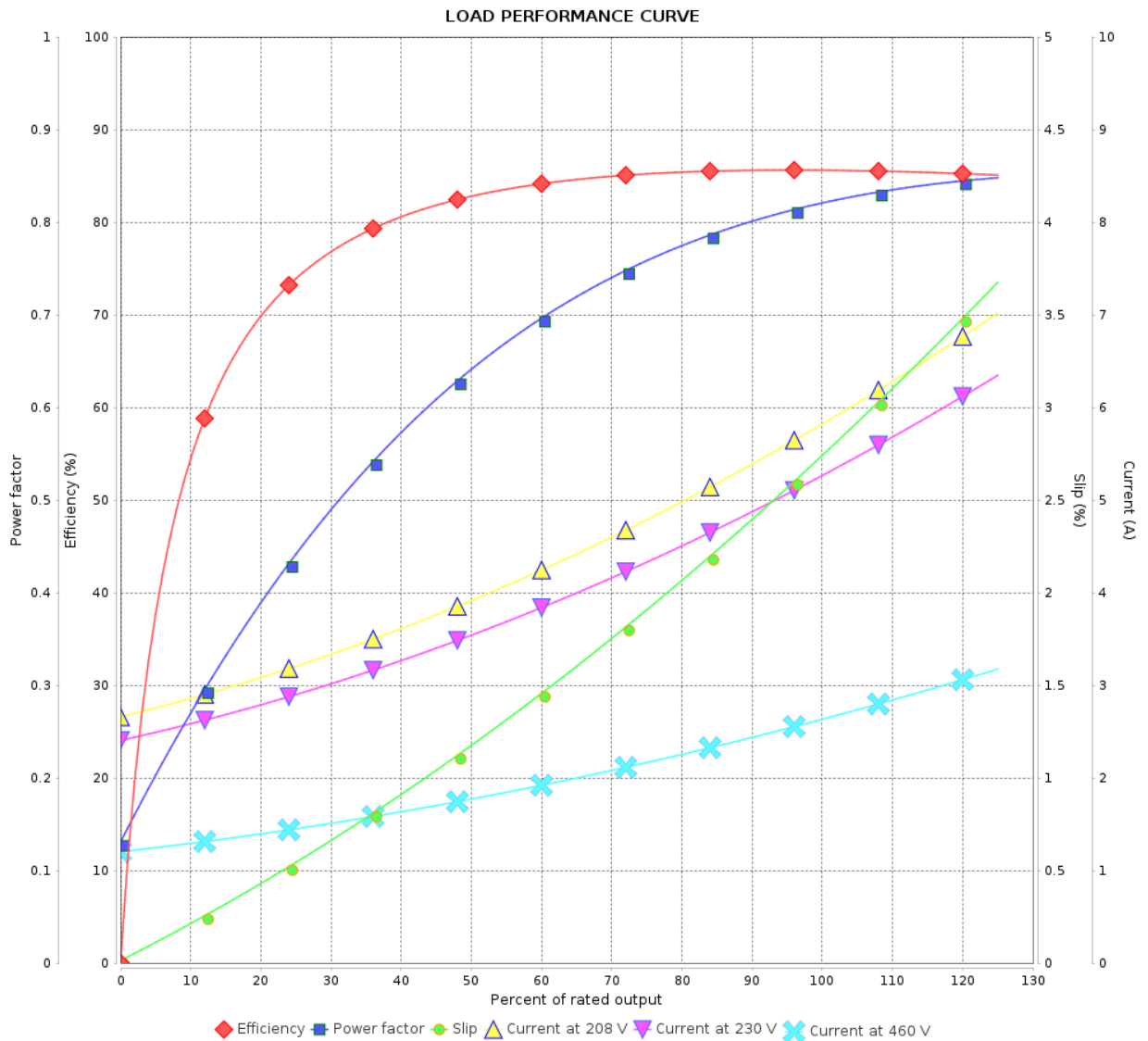
Three Phase Induction Motor - Squirrel Cage



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Product line : W22 Close Coupled Pump JM
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Performance : 230/460 V 60 Hz 2P

Rated current : 5.38/2.69 A
 LRC : 8.9
 Rated torque : 0.415 kgfm
 Locked rotor torque : 270 %
 Breakdown torque : 380 %
 Rated speed : 3500 rpm

Moment of inertia (J) : 0.0026 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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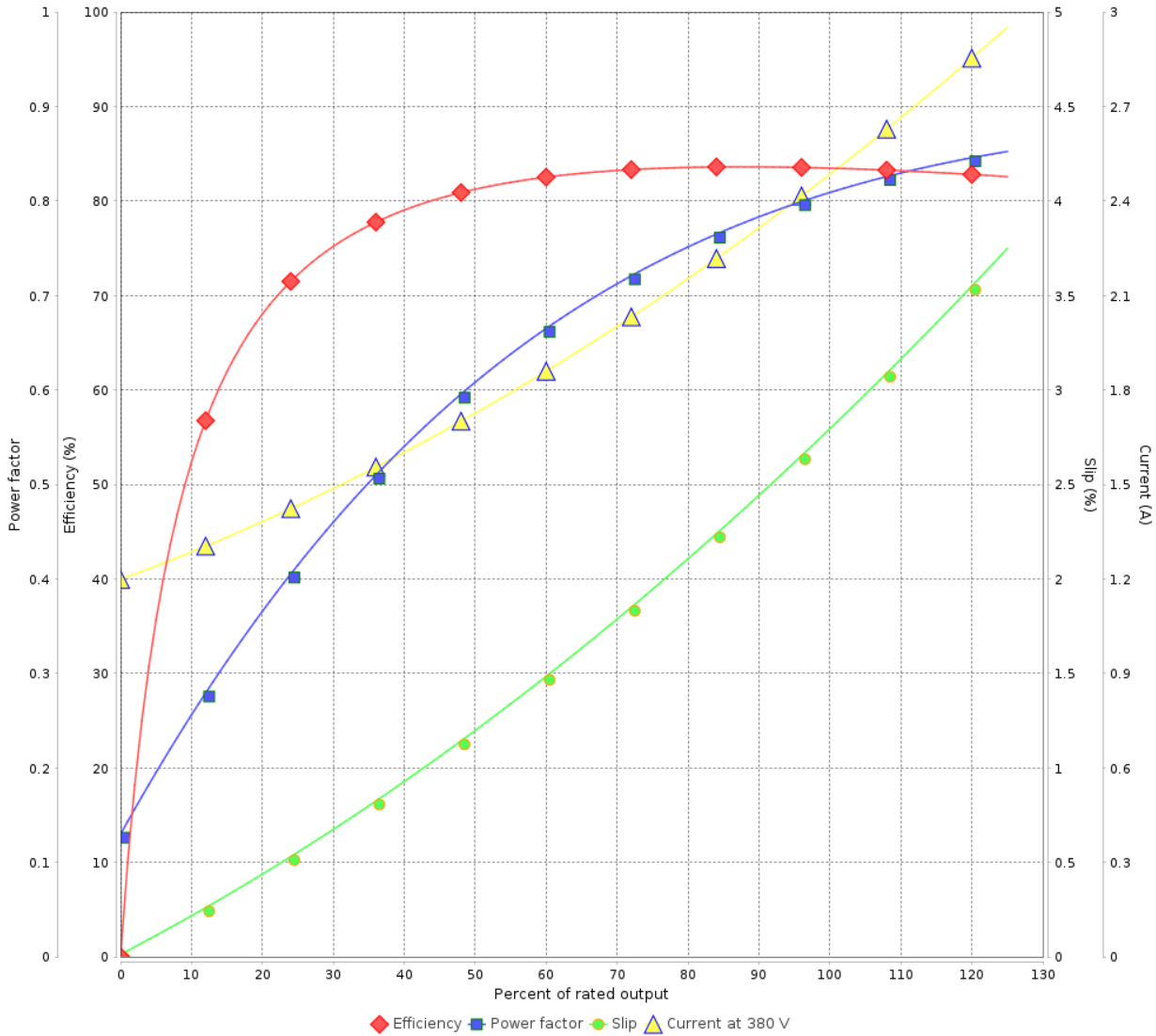
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Performance : 380 V 50 Hz 2P IE3

Rated current	: 2.47 A	Moment of inertia (J)	: 0.0026 kgm ²
LRC	: 8.6	Duty cycle	: Cont.(S1)
Rated torque	: 0.373 kgfm	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.25
Breakdown torque	: 370 %	Temperature rise	: 80 K
Rated speed	: 2915 rpm	Design	: B

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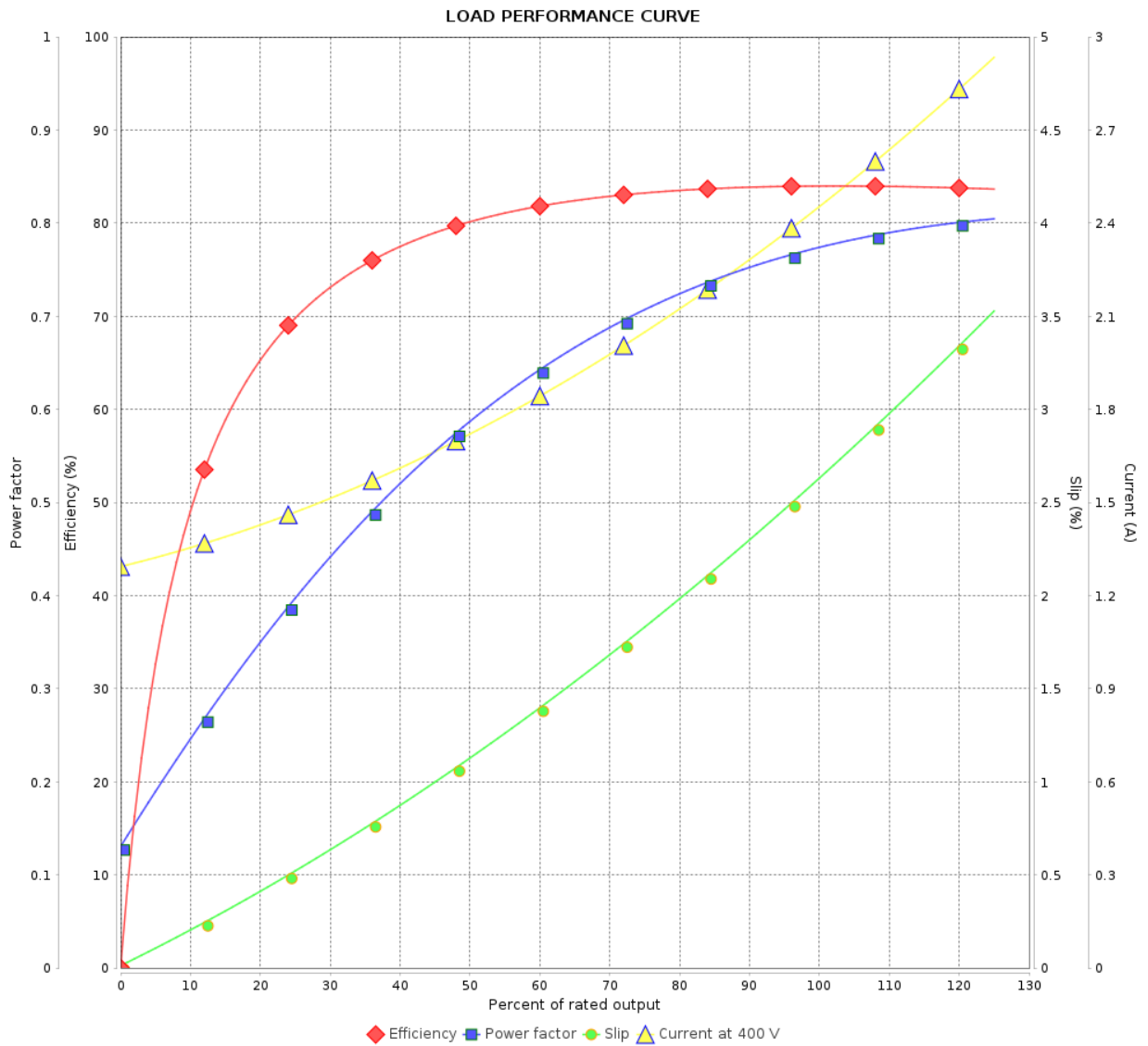
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Performance : 400 V 50 Hz 2P IE3

Rated current : 2.42 A
LRC : 9.3
Rated torque : 0.373 kgfm
Locked rotor torque : 310 %
Breakdown torque : 420 %
Rated speed : 2920 rpm

Moment of inertia (J) : 0.0026 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

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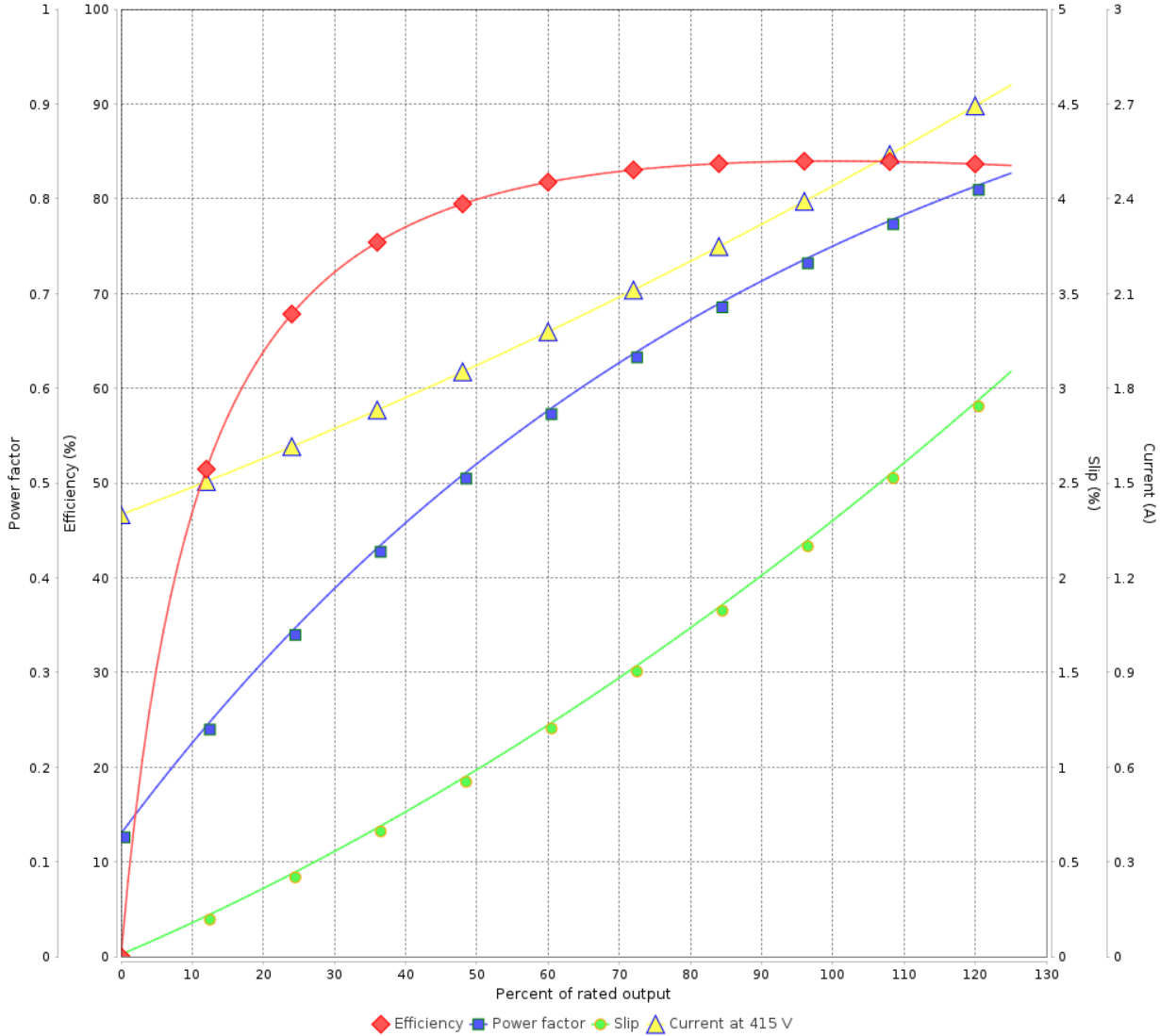
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Performance : 415 V 50 Hz 2P IE3

Rated current	: 2.43 A	Moment of inertia (J)	: 0.0026 kgm ²
LRC	: 9.3	Duty cycle	: Cont.(S1)
Rated torque	: 0.372 kgfm	Insulation class	: F
Locked rotor torque	: 340 %	Service factor	: 1.25
Breakdown torque	: 440 %	Temperature rise	: 80 K
Rated speed	: 2930 rpm	Design	: B

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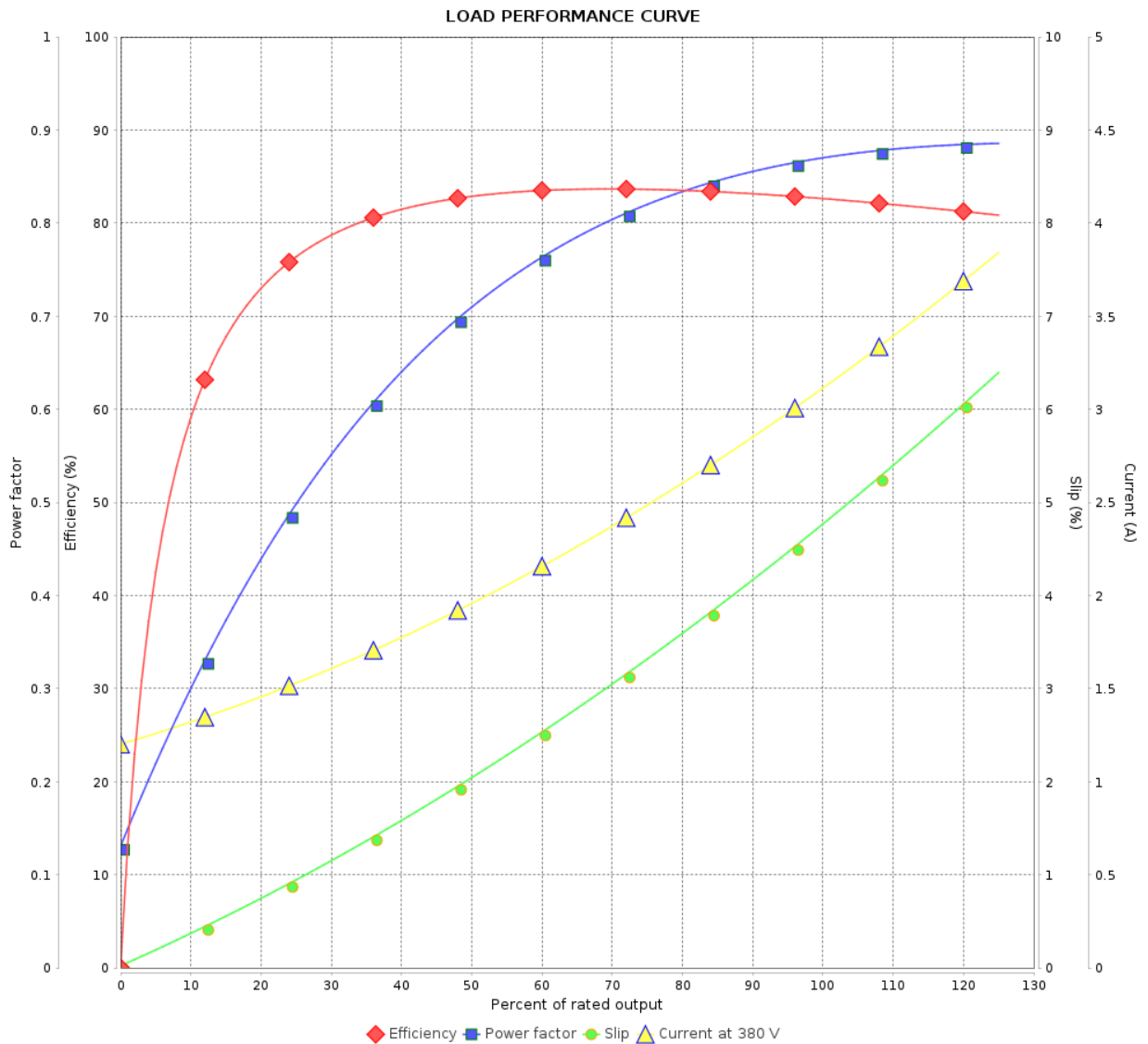
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Performance : 380 V 50 Hz 2P IE2

Rated current : 3.18 A
 LRC : 6.6
 Rated torque : 0.508 kgfm
 Locked rotor torque : 200 %
 Breakdown torque : 250 %
 Rated speed : 2855 rpm

Moment of inertia (J) : 0.0026 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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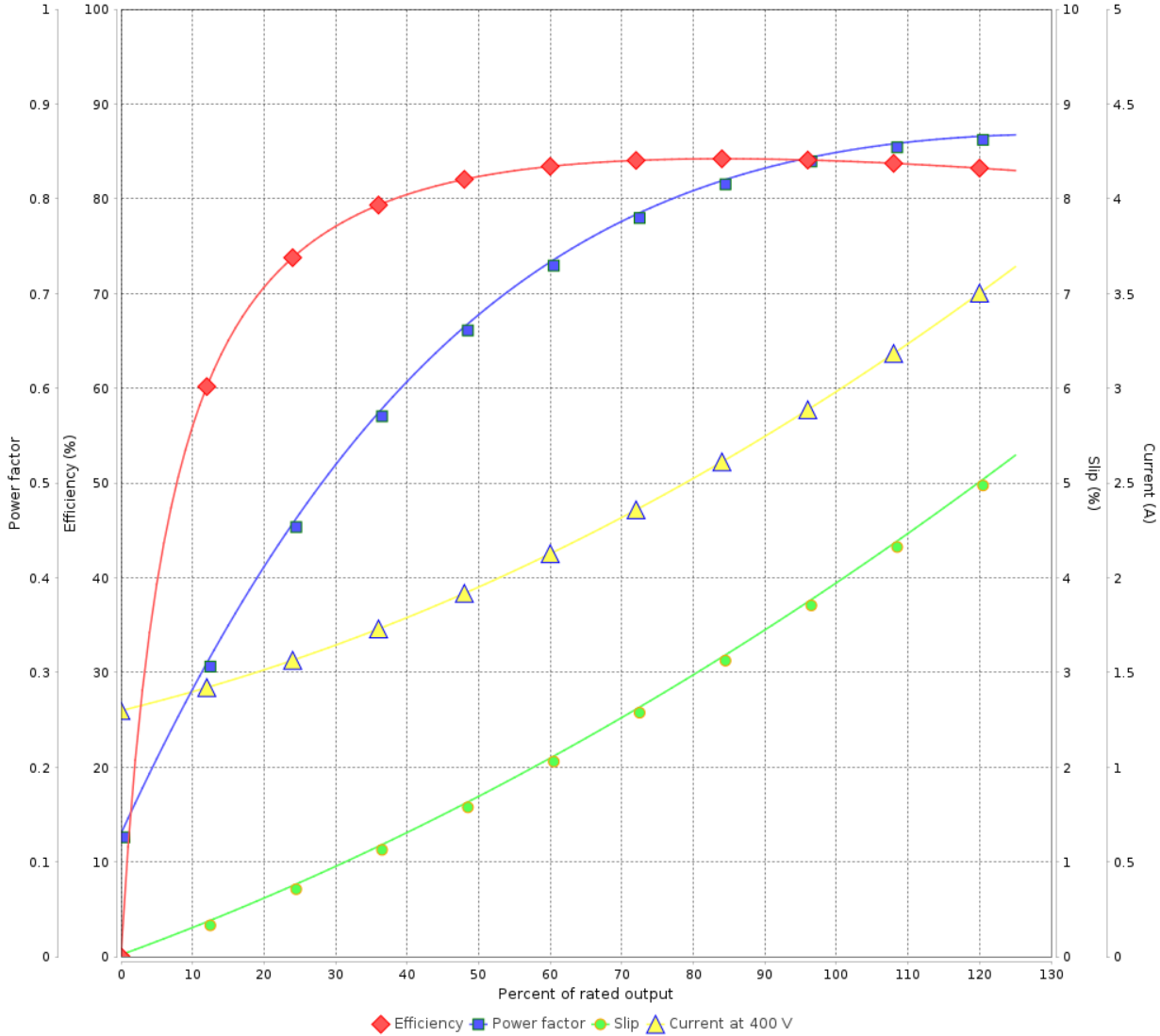
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Performance : 400 V 50 Hz 2P IE2

Rated current	: 3.03 A	Moment of inertia (J)	: 0.0026 kgm ²
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 0.504 kgfm	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.25
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 2880 rpm	Design	: B

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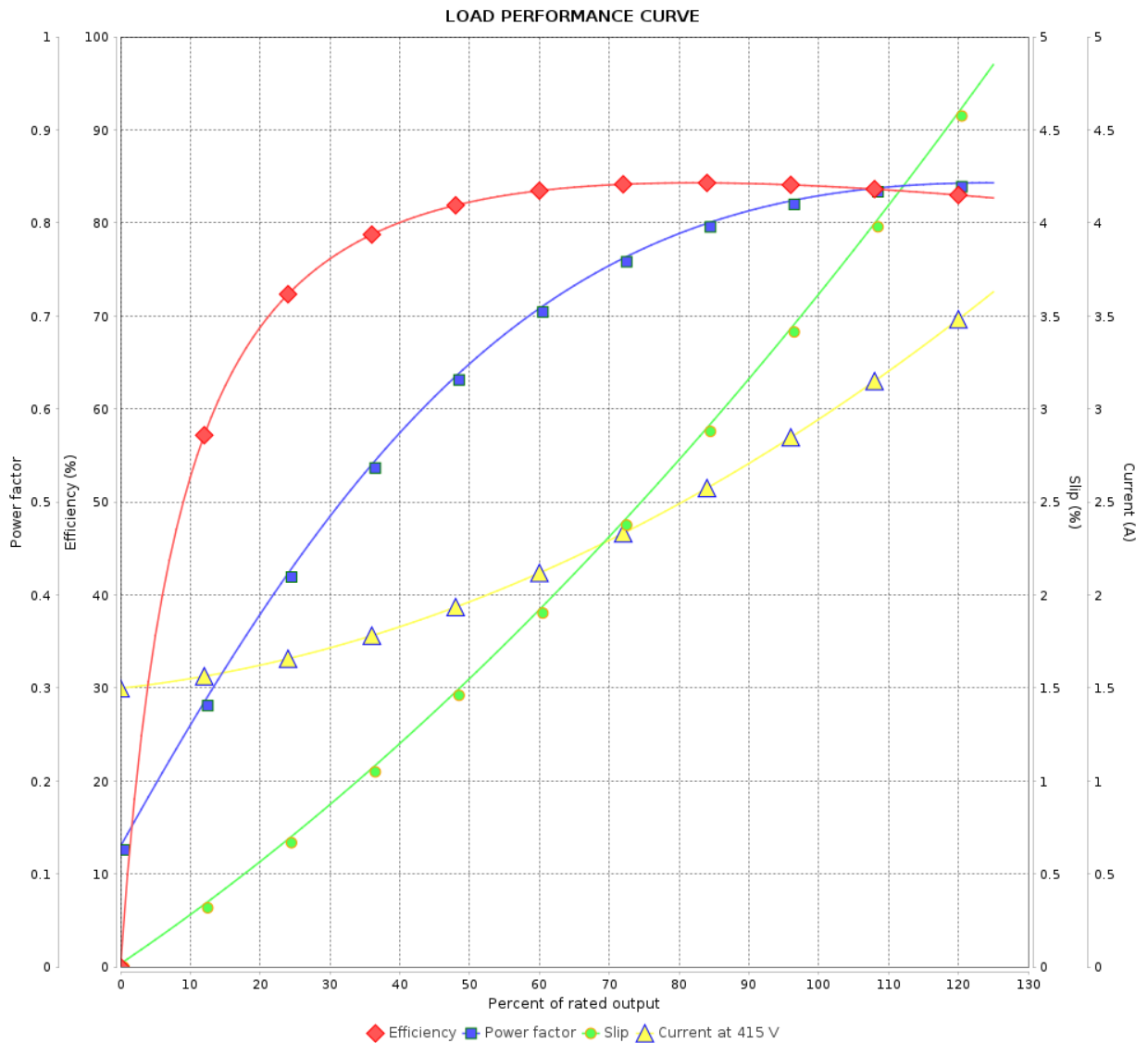
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Performance : 415 V 50 Hz 2P IE2

Rated current : 2.99 A
LRC : 7.8
Rated torque : 0.502 kgfm
Locked rotor torque : 250 %
Breakdown torque : 300 %
Rated speed : 2890 rpm

Moment of inertia (J) : 0.0026 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

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