

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 11943024

Frame	: 324TS	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 ³	: 0.0 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.2063 kgm ²
Design	: B		

Output [HP]	40	30	30	30	40	40	40
Poles	2	2	2	2	2	2	2
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	460	380	400	415	380	400	415
Rated current [A]	46.3	41.0	39.4	38.4	56.9	53.7	51.7
L. R. Amperes [A]	292	295	296	292	285	301	321
LRC [A]	6.3x(Code G)	7.2x(Code H)	7.5x(Code H)	7.6x(Code H)	5.0x(Code E)	5.6x(Code F)	6.2x(Code G)
No load current [A]	11.0	12.0	11.0	12.0	10.0	11.0	12.0
Rated speed [RPM]	3555	2960	2965	2970	2930	2940	2950
Slip [%]	1.25	1.33	1.17	1.00	2.33	2.00	1.67
Rated torque [kgfm]	8.17	7.36	7.34	7.33	9.91	9.87	9.84
Locked rotor torque [%]	250	240	270	290	180	200	220
Breakdown torque [%]	240	250	280	310	200	210	229
Service factor	1.25	1.00	1.00	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	105 K	105 K	105 K
Locked rotor time	39s (cold) 22s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)
Noise level ²	76.0 dB(A)	72.0 dB(A)	72.0 dB(A)	72.0 dB(A)	72.0 dB(A)	72.0 dB(A)	72.0 dB(A)
Efficiency (%)	25%						
	50%	91.7	90.9	90.3	90.7	91.7	91.7
	75%	92.4	91.8	91.7	92.1	91.7	92.4
	100%	92.4	92.7	92.7	92.7	91.0	91.7
Power Factor	25%						
	50%	0.80	0.77	0.75	0.73	0.84	0.80
	75%	0.86	0.85	0.83	0.82	0.88	0.86
	100%	0.88	0.88	0.87	0.86	0.88	0.88

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

Losses (%)	P1 (0,9;1,0)	8.9	8.6	8.6	8.6	10.8	9.9	9.9
	P2 (0,5;1,0)	7.3	6.9	6.9	6.9	9.0	8.2	8.2
	P3 (0,25;1,0)	6.5	6.2	6.2	6.2	8.3	7.4	7.4
	P4 (0,9;0,5)	4.4	4.2	4.2	4.2	5.2	4.8	4.8
	P5 (0,5;0,5)	2.8	2.7	2.7	2.7	3.4	3.1	3.1
	P6 (0,5;0,25)	1.8	1.7	1.7	1.7	2.2	2.0	2.0
	P7 (0,25;0,25)	1.2	1.1	1.1	1.1	1.5	1.4	1.4

Bearing type	: 6312 C3	Non drive end	6212 C3	Foundation loads	
Sealing	: Taconite		Taconite	Max. traction	: 285 kgf
	: Labyrinth		Labyrinth	Max. compression	: 285 kgf
Lubrication interval	: 12000 h		15000 h		
Lubricant amount	: 21 g		13 g		
Lubricant type	: Mobil Polyrex EM				

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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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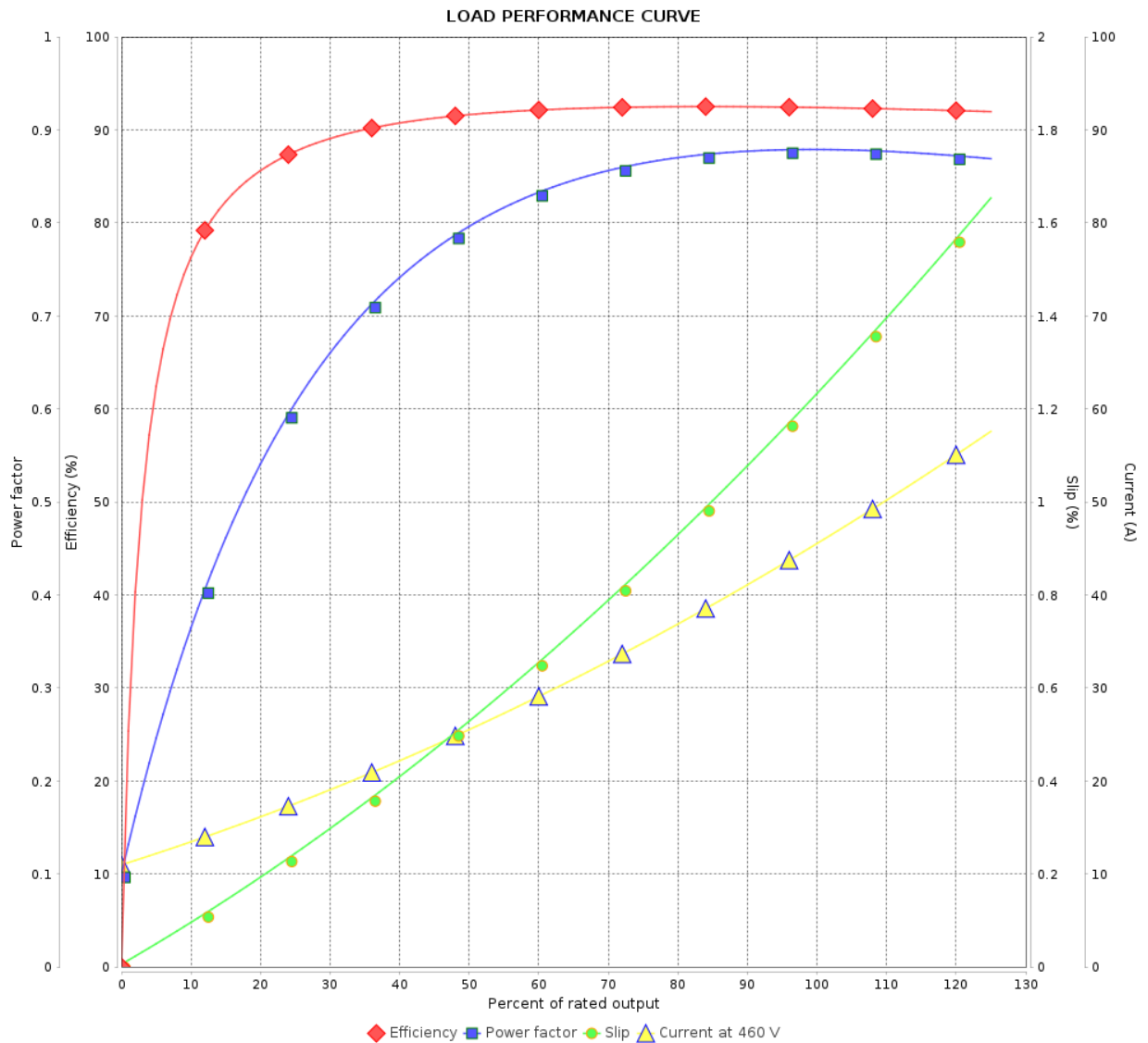
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11943024



Performance : 460 V 60 Hz 2P

Rated current : 46.3 A
LRC : 6.3
Rated torque : 8.17 kgfm
Locked rotor torque : 250 %
Breakdown torque : 240 %
Rated speed : 3555 rpm

Moment of inertia (J) : 0.2063 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

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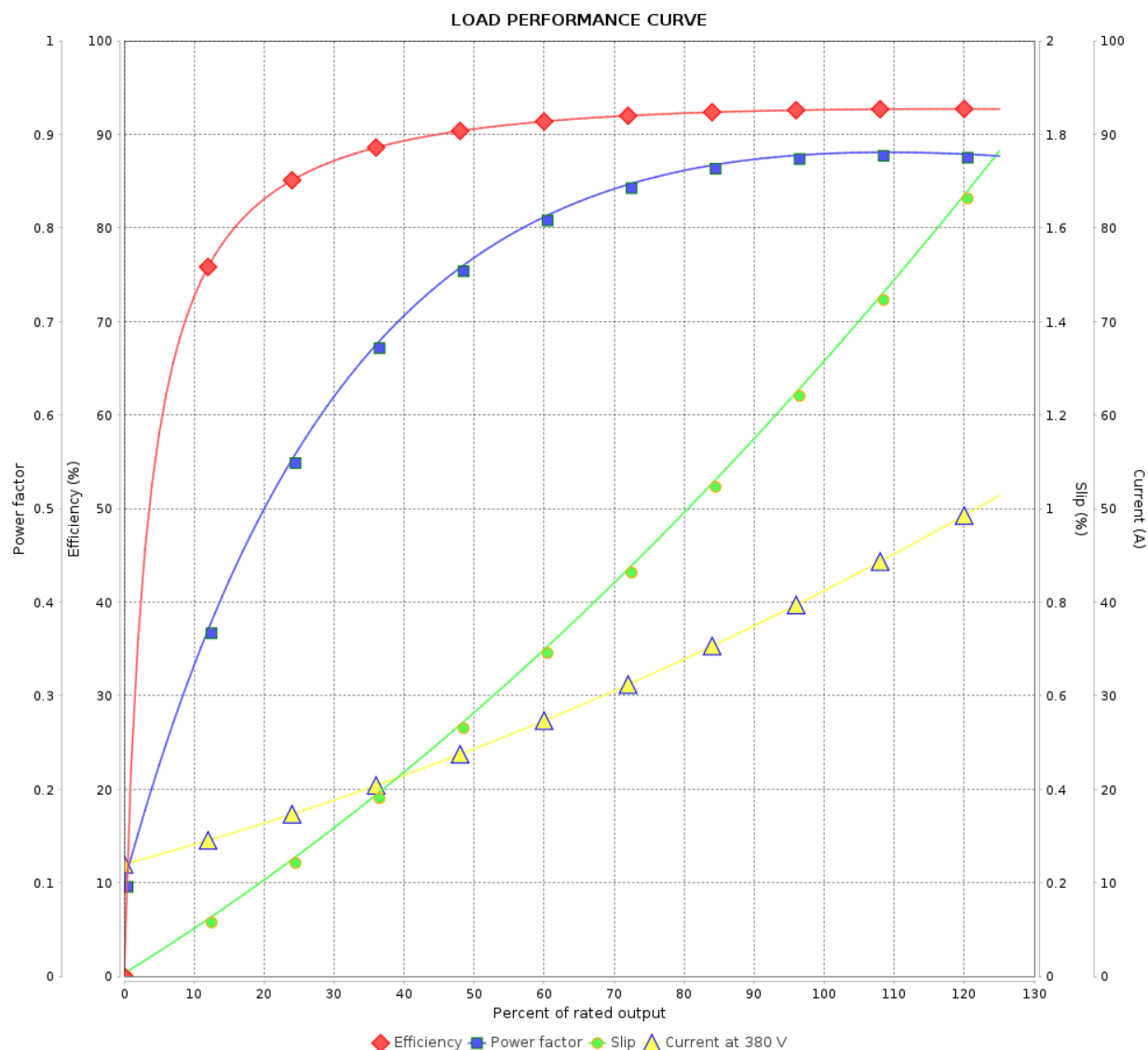
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium
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Product code : 11943024



Performance : 380 V 50 Hz 2P IE3

Rated current : 41.0 A
LRC : 7.2
Rated torque : 7.36 kgfm
Locked rotor torque : 240 %
Breakdown torque : 250 %
Rated speed : 2960 rpm

Moment of inertia (J) : 0.2063 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

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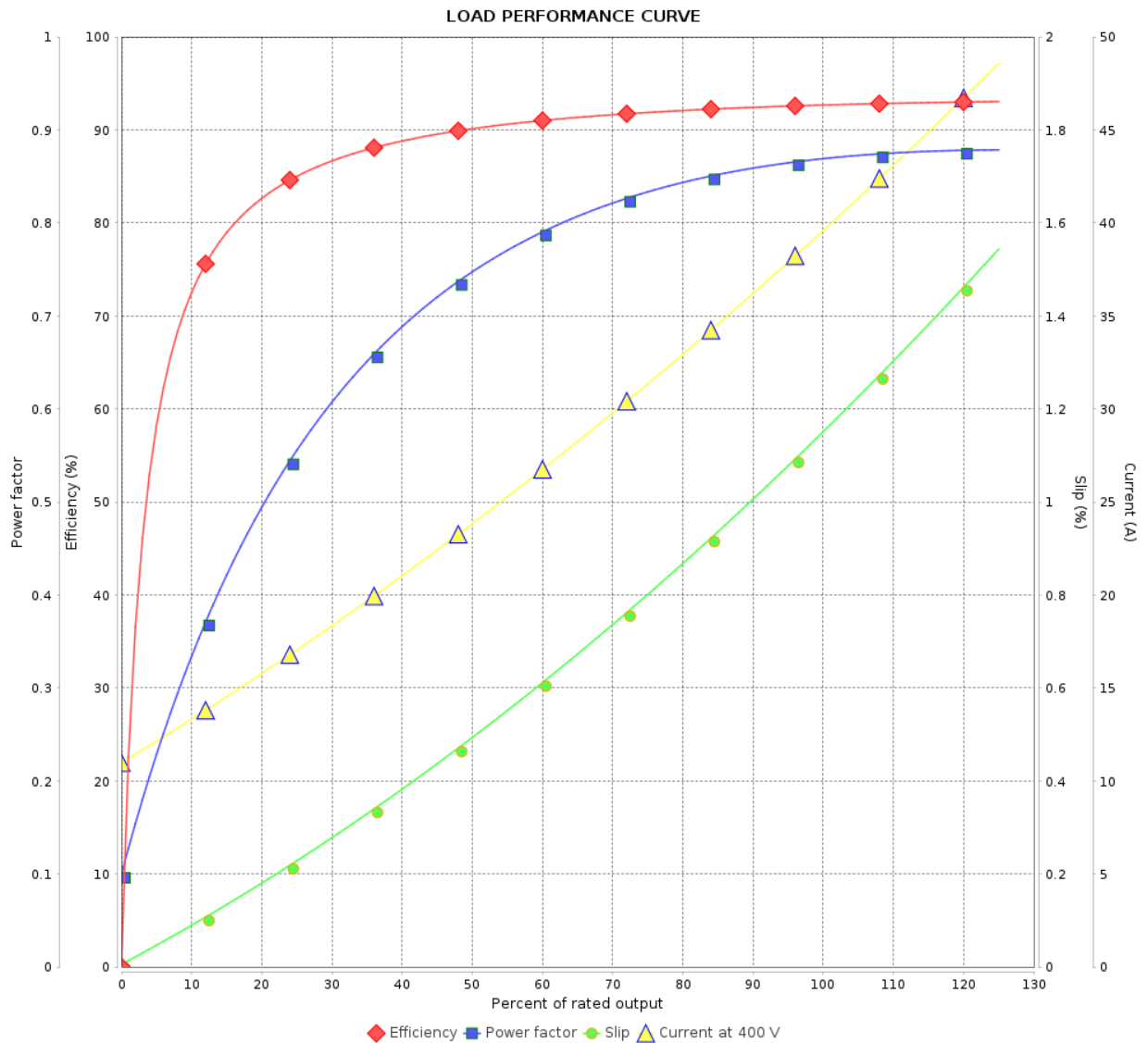
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Performance : 400 V 50 Hz 2P IE3

Rated current	: 39.4 A	Moment of inertia (J)	: 0.2063 kgm ²
LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 7.34 kgfm	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 2965 rpm	Design	: B

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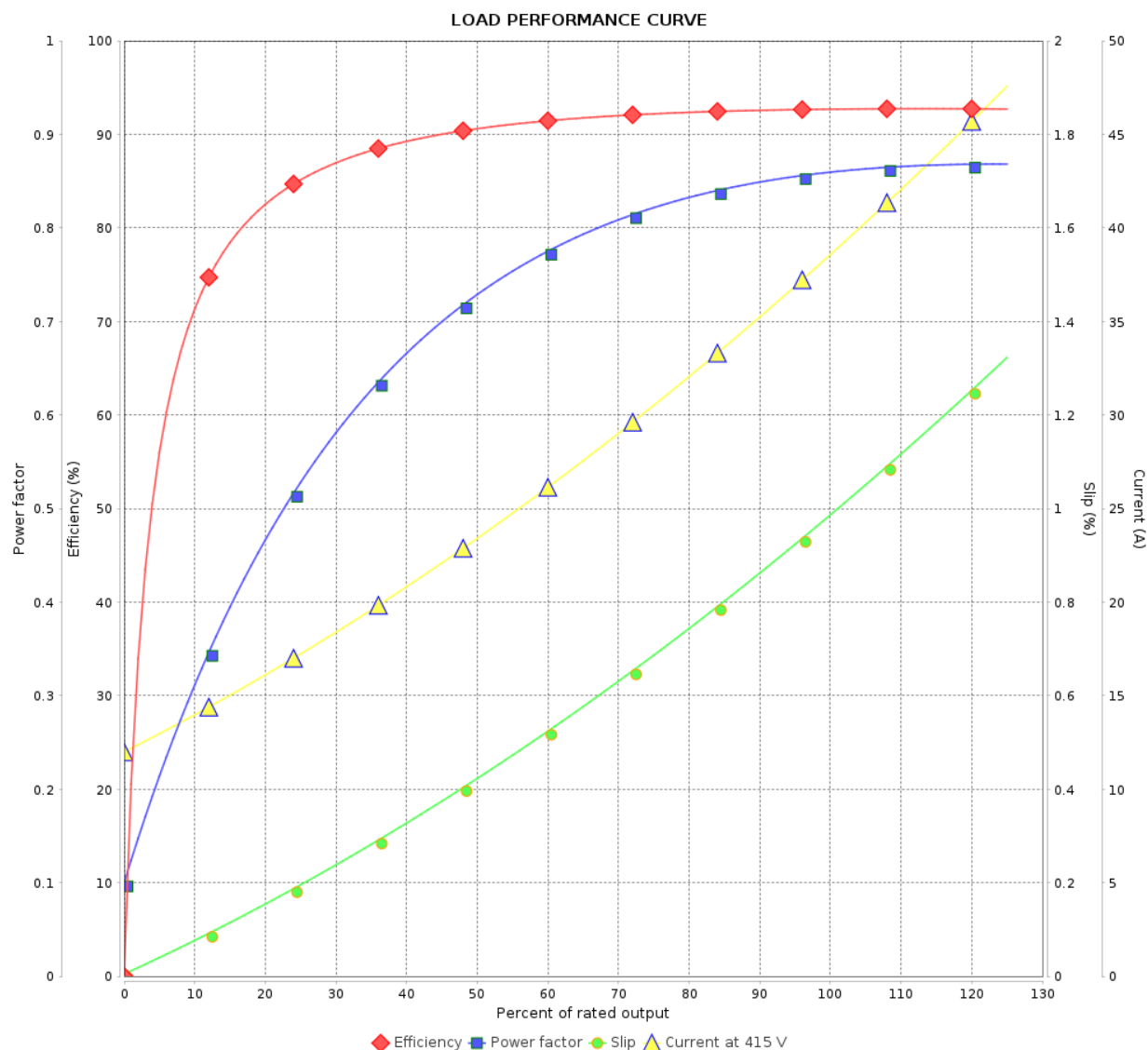
Three Phase Induction Motor - Squirrel Cage



Customer :

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Performance : 415 V 50 Hz 2P IE3

Rated current : 38.4 A
LRC : 7.6
Rated torque : 7.33 kgfm
Locked rotor torque : 290 %
Breakdown torque : 310 %
Rated speed : 2970 rpm

Moment of inertia (J) : 0.2063 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

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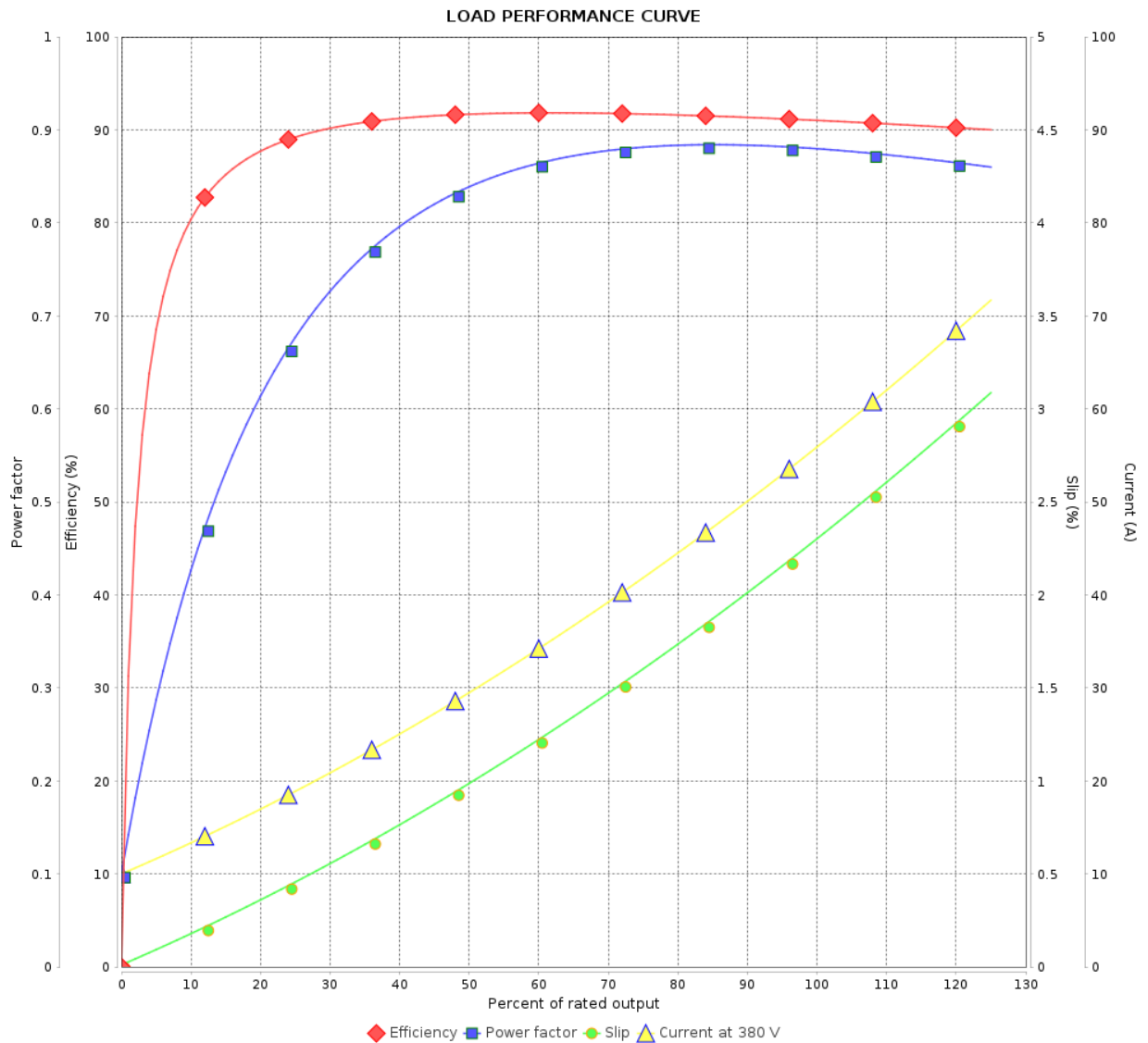
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Performance : 380 V 50 Hz 2P IE1

Rated current	: 56.9 A	Moment of inertia (J)	: 0.2063 kgm ²
LRC	: 5.0	Duty cycle	: Cont.(S1)
Rated torque	: 9.91 kgfm	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 105 K
Rated speed	: 2930 rpm	Design	: B

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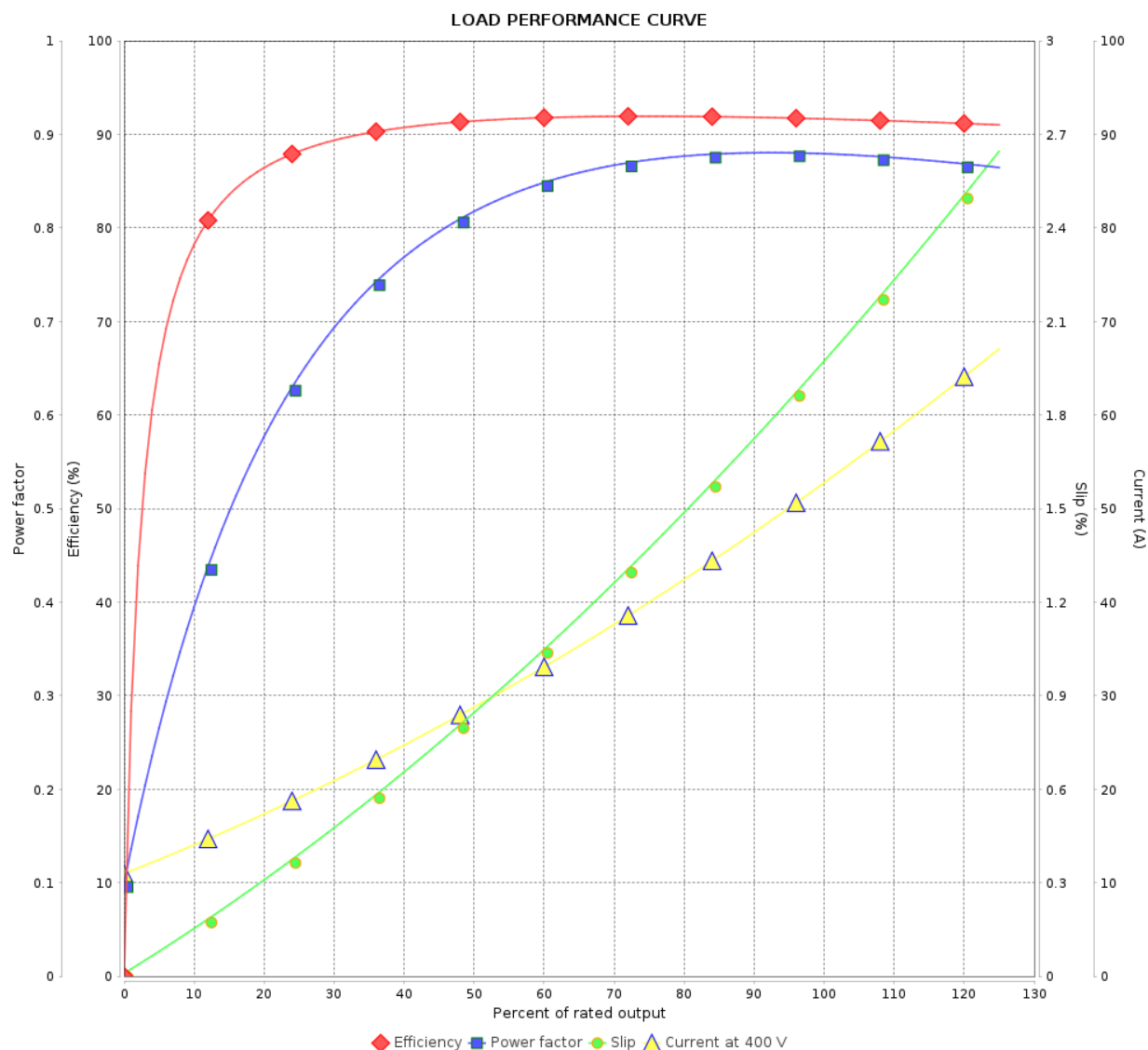
Three Phase Induction Motor - Squirrel Cage



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Performance : 400 V 50 Hz 2P IE1

Rated current : 53.7 A
LRC : 5.6
Rated torque : 9.87 kgfm
Locked rotor torque : 200 %
Breakdown torque : 210 %
Rated speed : 2940 rpm

Moment of inertia (J) : 0.2063 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 105 K
Design : B

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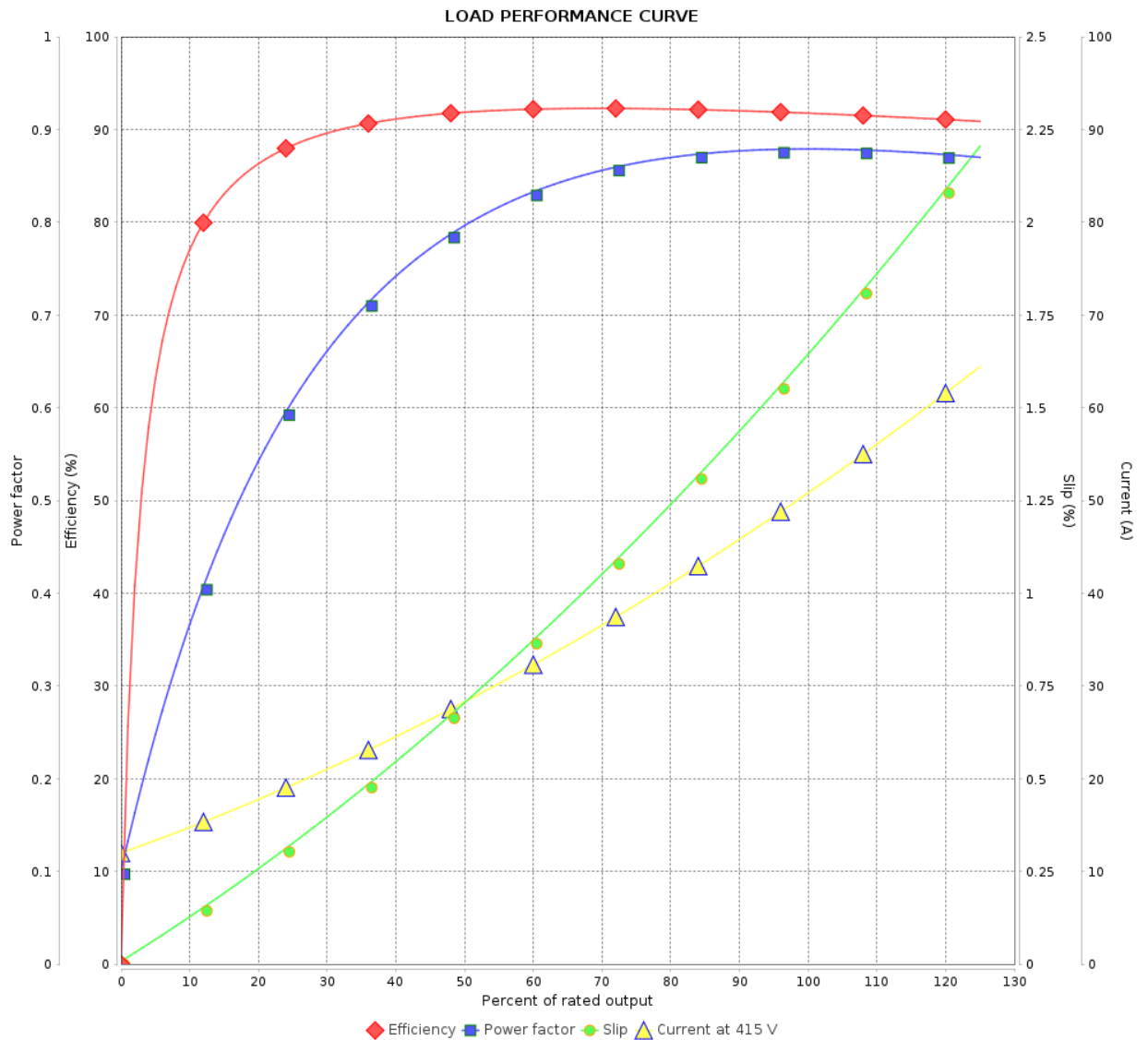
Three Phase Induction Motor - Squirrel Cage



Customer :

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Performance : 415 V 50 Hz 2P IE1

Rated current : 51.7 A
LRC : 6.2
Rated torque : 9.84 kgfm
Locked rotor torque : 220 %
Breakdown torque : 229 %
Rated speed : 2950 rpm

Moment of inertia (J) : 0.2063 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 105 K
Design : B

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