

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 12424297

Frame	: 284/6TS	Cooling method	: IC411 - TEFC
Insulation class	: F	Mounting	: F-1
Duty cycle	: Cont.(S1)	Rotation <sup>1</sup>	: Both (CW and CCW)
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line
Altitude	: 1000 m.a.s.l.	Approx. weight <sup>2</sup>	: 183 kg
Protection degree	: IP56	Moment of inertia (J)	: 0.1135 kgm <sup>2</sup>
Design	: B		

Output [HP]	25	20	20	20	25	25	25
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]	29.1	28.5	27.4	26.7	35.7	33.6	32.5
L. R. Amperes [A]	183	177	189	200	175	185	202
LRC [A]	6.3x(Code G)	6.2x(Code G)	6.9x(Code H)	7.5x(Code J)	4.9x(Code E)	5.5x(Code F)	6.2x(Code G)
No load current [A]	8.20	8.00	8.20	8.70	7.70	8.20	8.70
Rated speed [RPM]	3545	2945	2950	2955	2920	2930	2935
Slip [%]	1.53	1.83	1.67	1.50	2.67	2.33	2.17
Rated torque [kgfm]	5.12	4.93	4.92	4.91	6.21	6.19	6.18
Locked rotor torque [%]	240	220	250	240	180	200	220
Breakdown torque [%]	250	240	270	300	200	200	240
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	30s (cold) 17s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)
Noise level <sup>2</sup>	72.0 dB(A)	67.0 dB(A)	67.0 dB(A)	67.0 dB(A)	67.0 dB(A)	67.0 dB(A)	67.0 dB(A)
Efficiency (%)	25%	90.8	89.0	89.4	88.9	88.8	90.8
	50%	91.0	90.2	90.3	89.8	89.0	91.0
	75%	91.7	90.7	91.1	91.1	89.5	91.0
	100%	91.7	91.9	91.9	91.9	89.5	91.0
Power Factor	25%	0.54	0.55	0.52	0.50	0.62	0.56
	50%	0.78	0.79	0.76	0.73	0.83	0.79
	75%	0.85	0.85	0.84	0.83	0.87	0.86
	100%	0.87	0.87	0.86	0.85	0.88	0.87

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

Losses (%)	P1 (0,9;1,0)	8.5	8.5	8.5	8.5	8.5	8.5
	P2 (0,5;1,0)	6.7	6.7	6.7	6.7	6.7	6.7
	P3 (0,25;1,0)	6.4	6.4	6.4	6.4	6.4	6.4
	P4 (0,9;0,5)	4.3	4.3	4.3	4.3	4.3	4.3
	P5 (0,5;0,5)	2.5	2.5	2.5	2.5	2.5	2.5
	P6 (0,5;0,25)	1.6	1.6	1.6	1.6	1.6	1.6
	P7 (0,25;0,25)	1.0	1.0	1.0	1.0	1.0	1.0

Bearing type	: 6311 C3	Non drive end	6211 C3	Foundation loads	
Sealing	: Inpro/Seal	Inpro/Seal		Max. traction	: 120 kgf
Lubrication interval	: 14000 h	17000 h		Max. compression	: 304 kgf
Lubricant amount	: 18 g	11 g			
Lubricant type	: Mobil Polyrex EM				

This revision replaces and cancel the previous one, which must be eliminated.

(1) Looking the motor from the shaft end.

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 : \_\_\_\_\_

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# LOAD PERFORMANCE CURVE

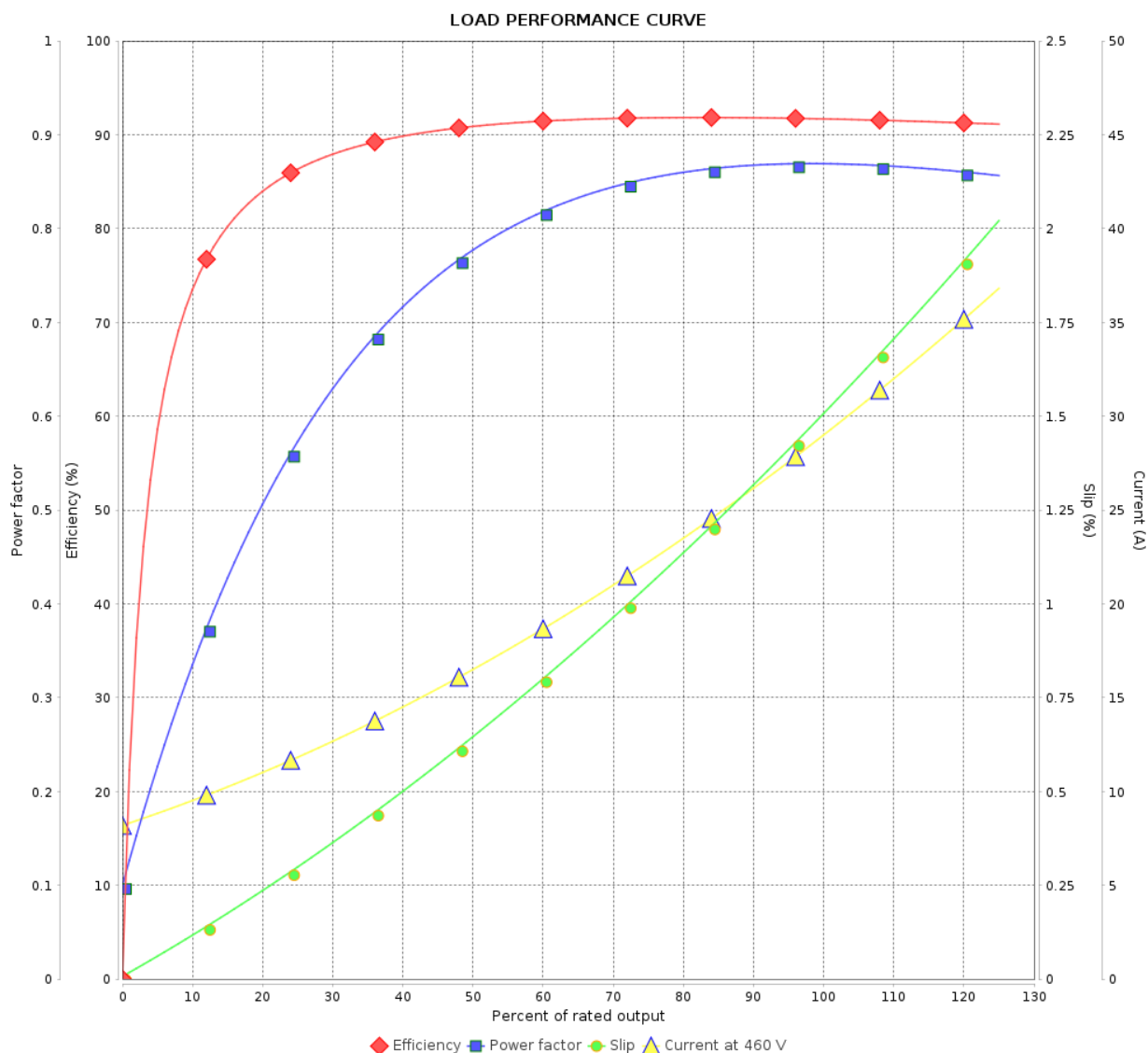
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12424297



Performance : 460 V 60 Hz 2P

Rated current : 29.1 A  
LRC : 6.3  
Rated torque : 5.12 kgfm  
Locked rotor torque : 240 %  
Breakdown torque : 250 %  
Rated speed : 3545 rpm

Moment of inertia (J) : 0.1135 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
Temperature rise : 80 K  
Design : B

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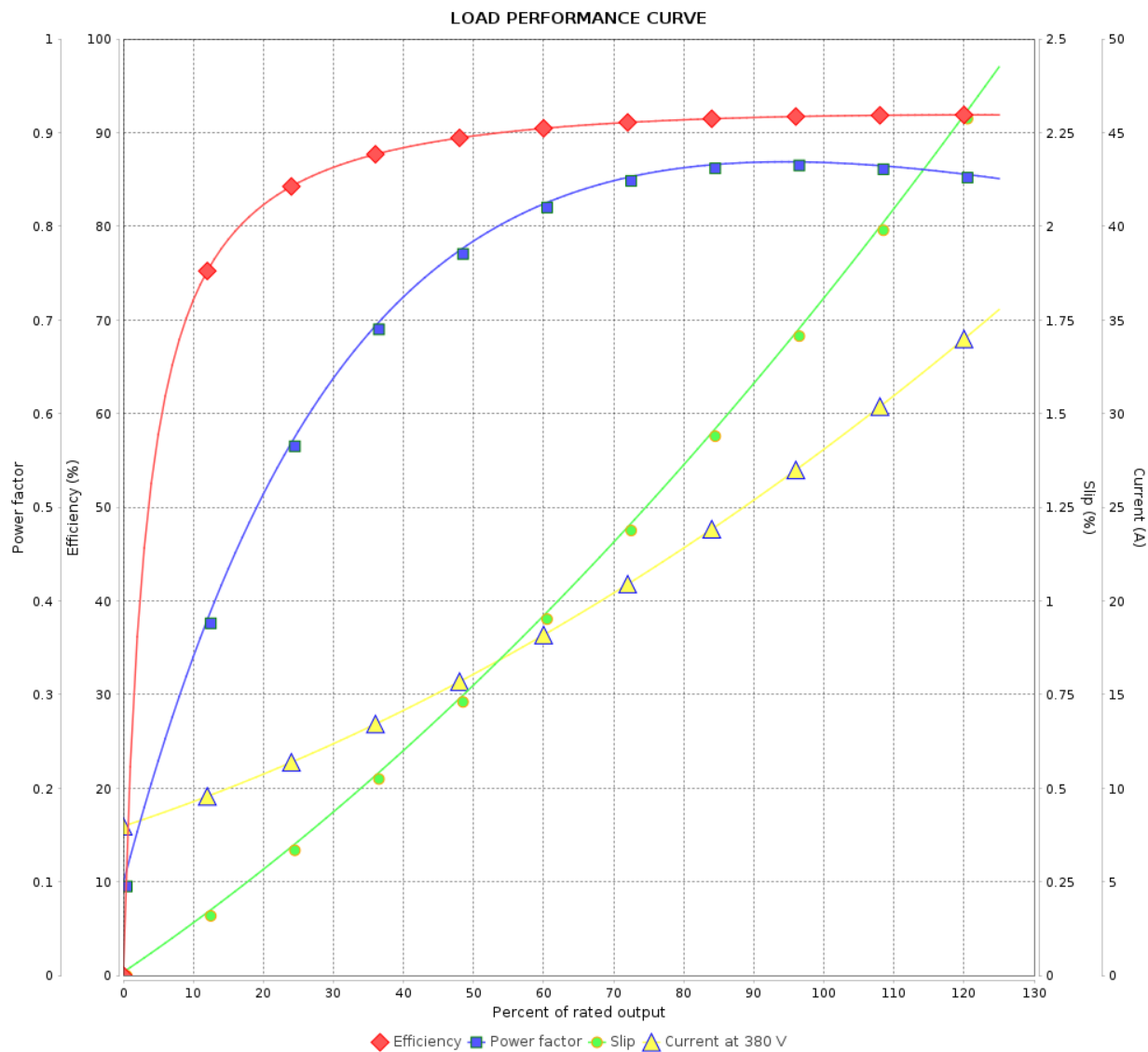
## Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

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

Product code : 12424297



Performance : 380 V 50 Hz 2P IE3

Rated current : 28.5 A  
LRC : 6.2  
Rated torque : 4.93 kgfm  
Locked rotor torque : 220 %  
Breakdown torque : 240 %  
Rated speed : 2945 rpm

Moment of inertia (J) : 0.1135 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

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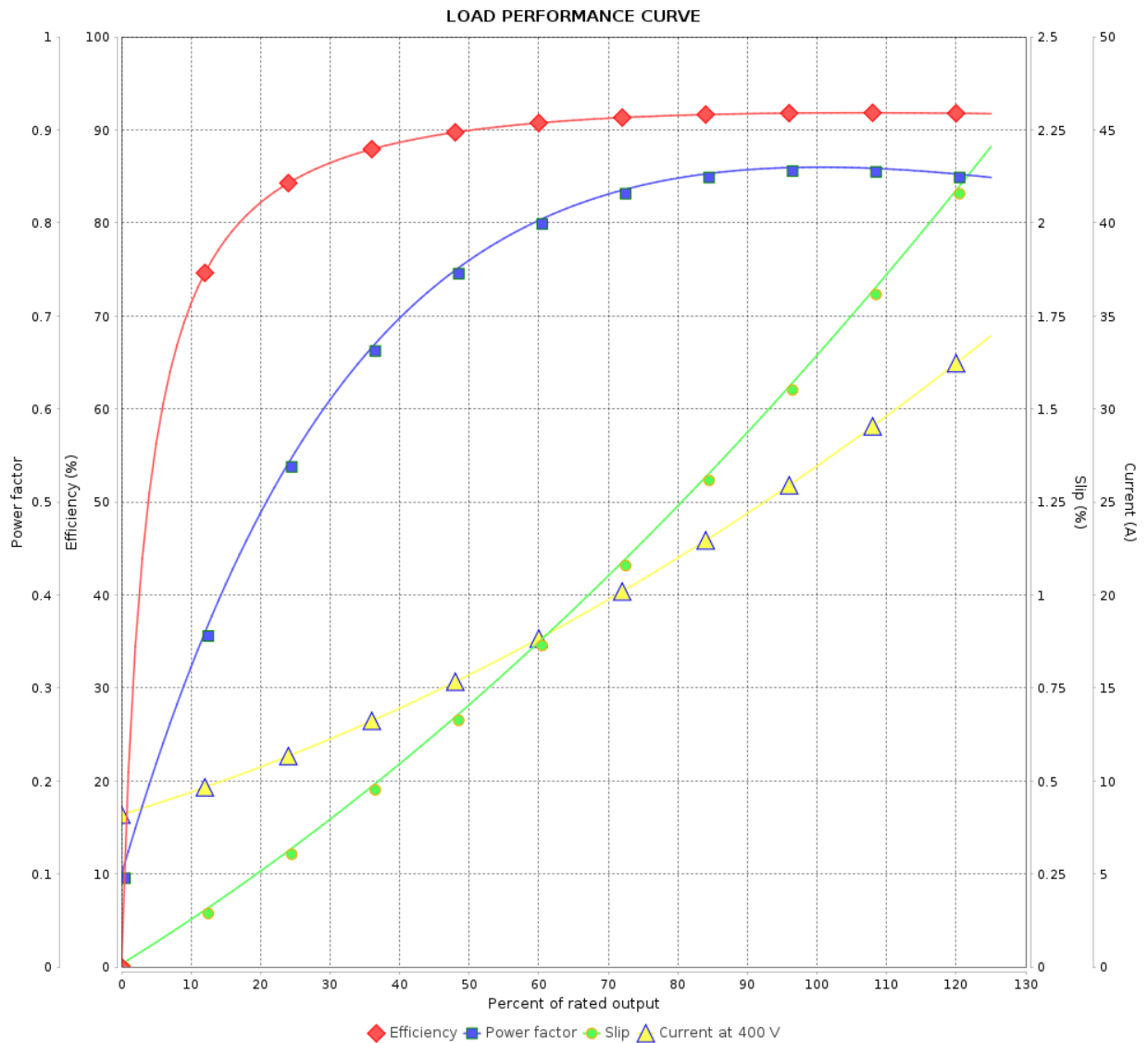
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12424297



Performance : 400 V 50 Hz 2P IE3

Rated current : 27.4 A  
LRC : 6.9  
Rated torque : 4.92 kgfm  
Locked rotor torque : 250 %  
Breakdown torque : 270 %  
Rated speed : 2950 rpm

Moment of inertia (J) : 0.1135 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

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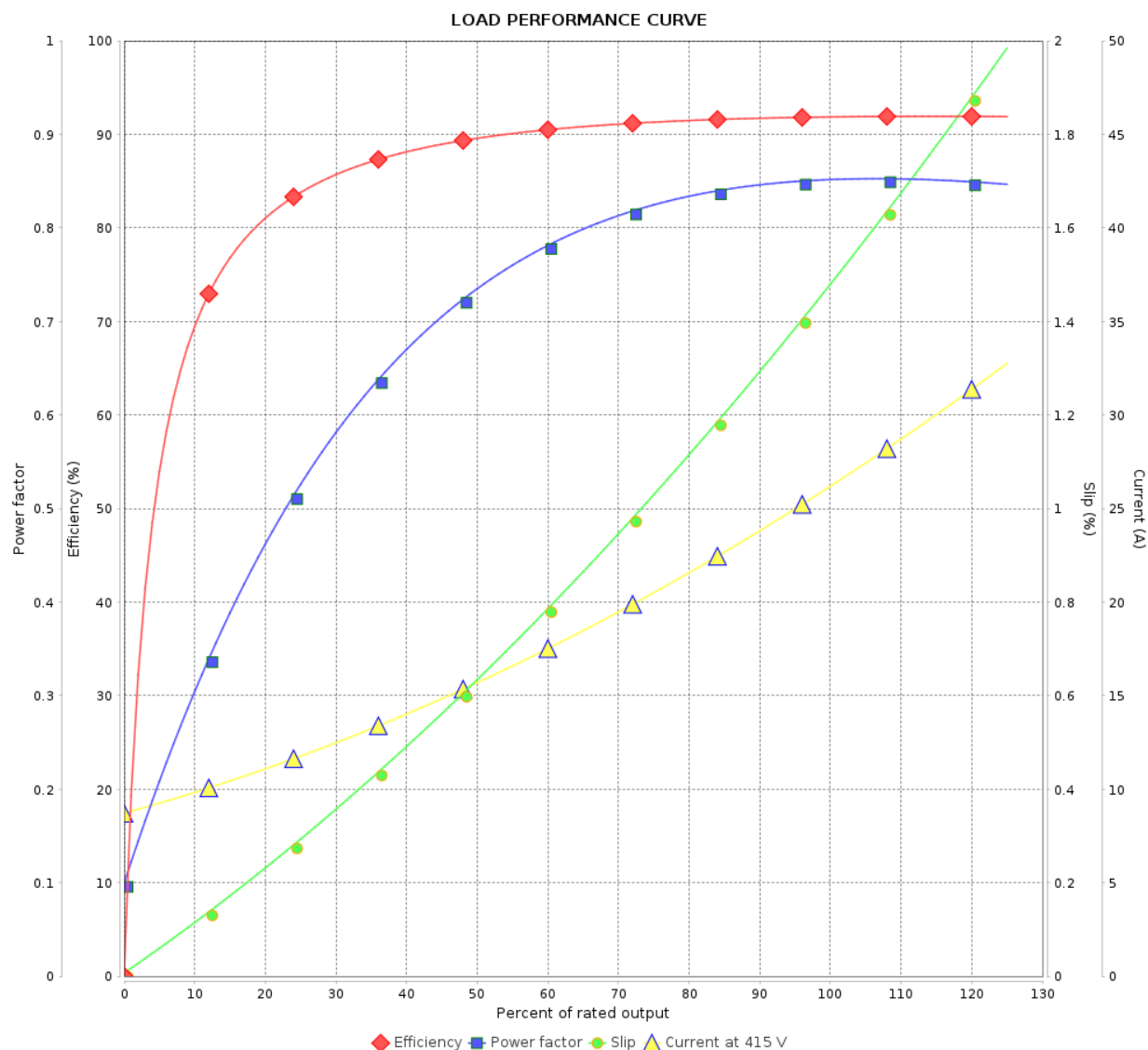
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12424297



Performance : 415 V 50 Hz 2P IE3

Rated current : 26.7 A  
LRC : 7.5  
Rated torque : 4.91 kgfm  
Locked rotor torque : 240 %  
Breakdown torque : 300 %  
Rated speed : 2955 rpm

Moment of inertia (J) : 0.1135 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

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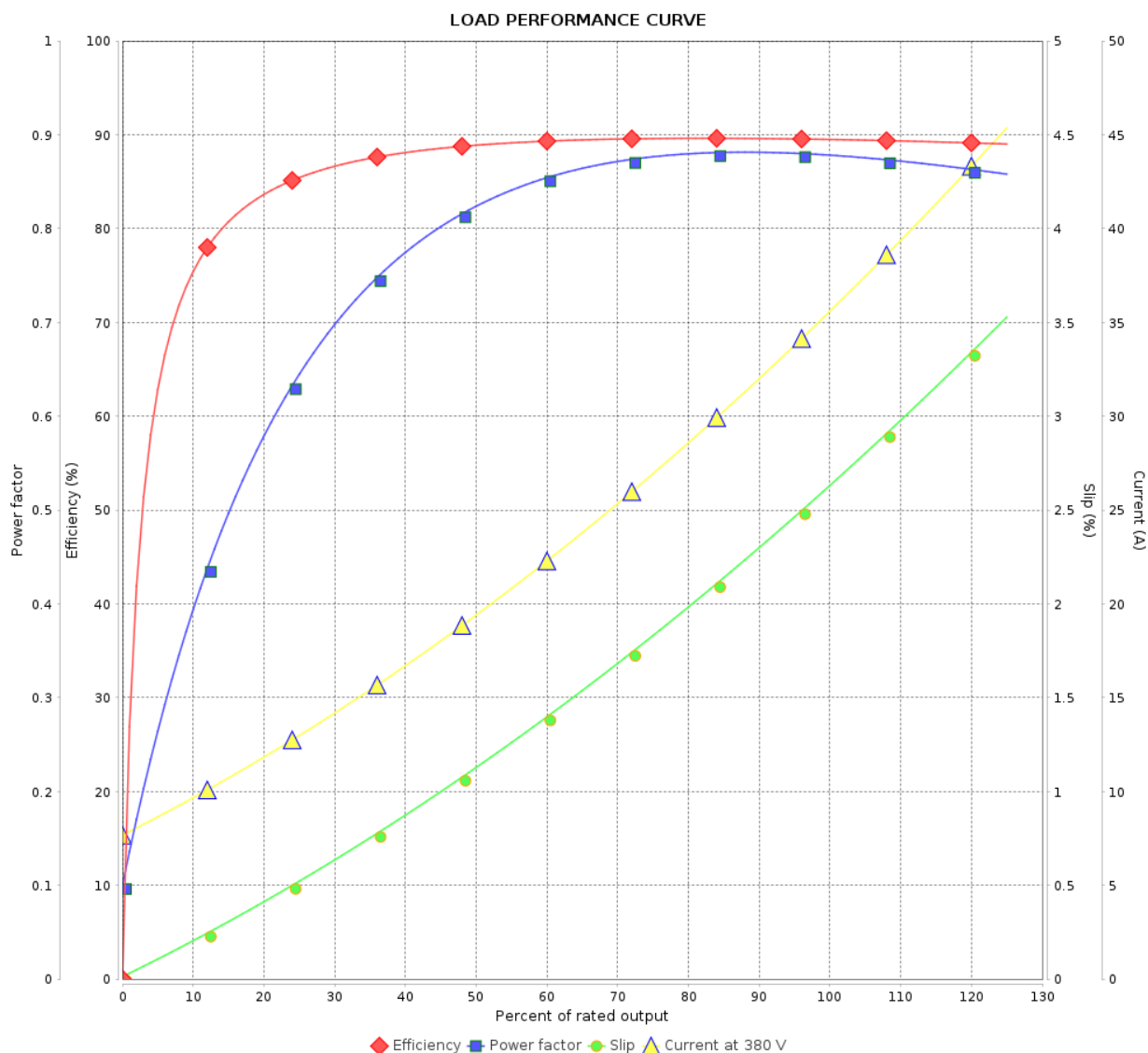
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12424297



Performance : 380 V 50 Hz 2P IE1

Rated current : 35.7 A  
LRC : 4.9  
Rated torque : 6.21 kgfm  
Locked rotor torque : 180 %  
Breakdown torque : 200 %  
Rated speed : 2920 rpm

Moment of inertia (J) : 0.1135 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 105 K  
Design : B

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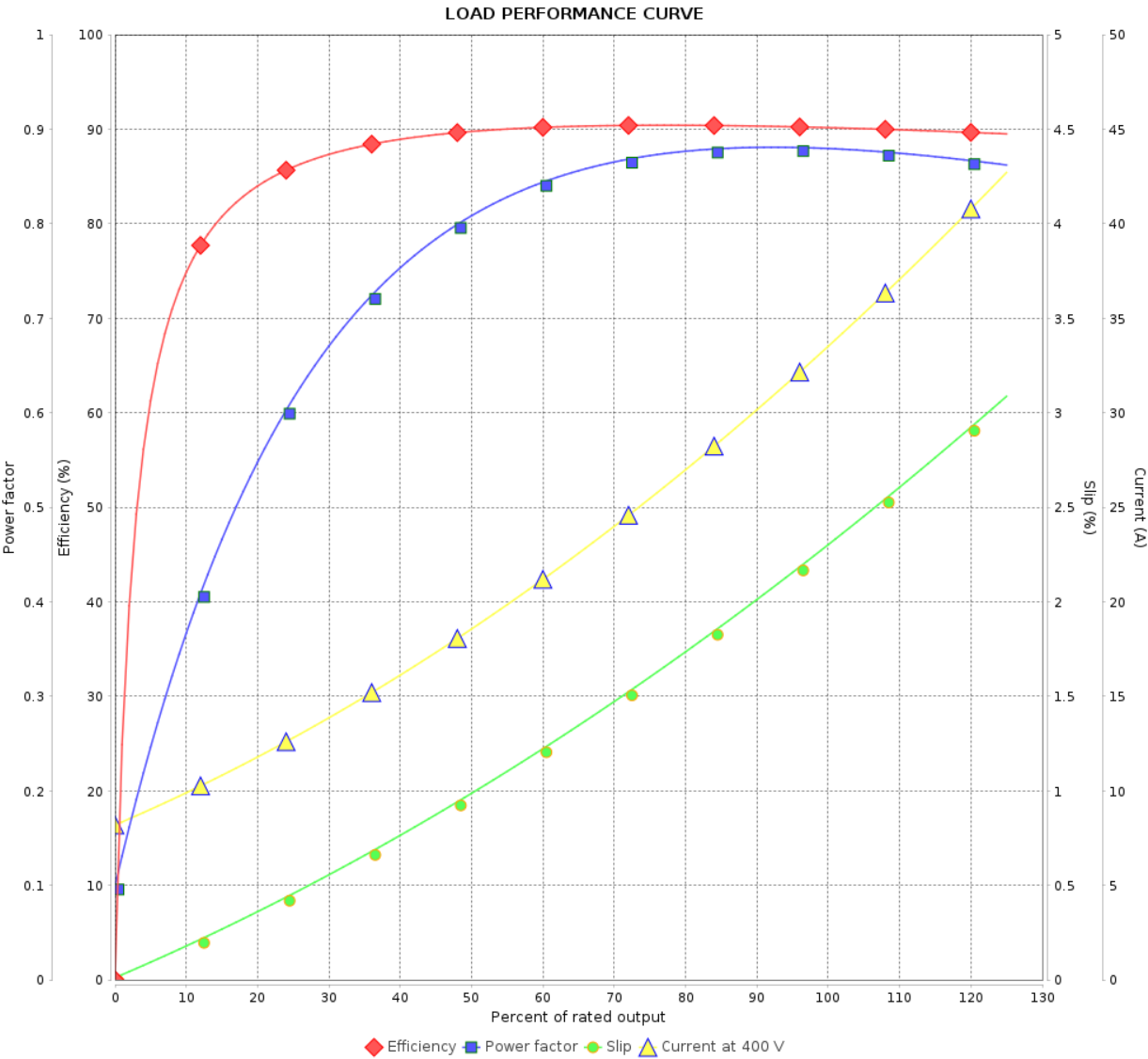
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Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase      Product code : 12424297



Performance : 400 V 50 Hz 2P IE1

Rated current	: 33.6 A	Moment of inertia (J)	: 0.1135 kgm <sup>2</sup>
LRC	: 5.5	Duty cycle	: Cont.(S1)
Rated torque	: 6.19 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 105 K
Rated speed	: 2930 rpm	Design	: B

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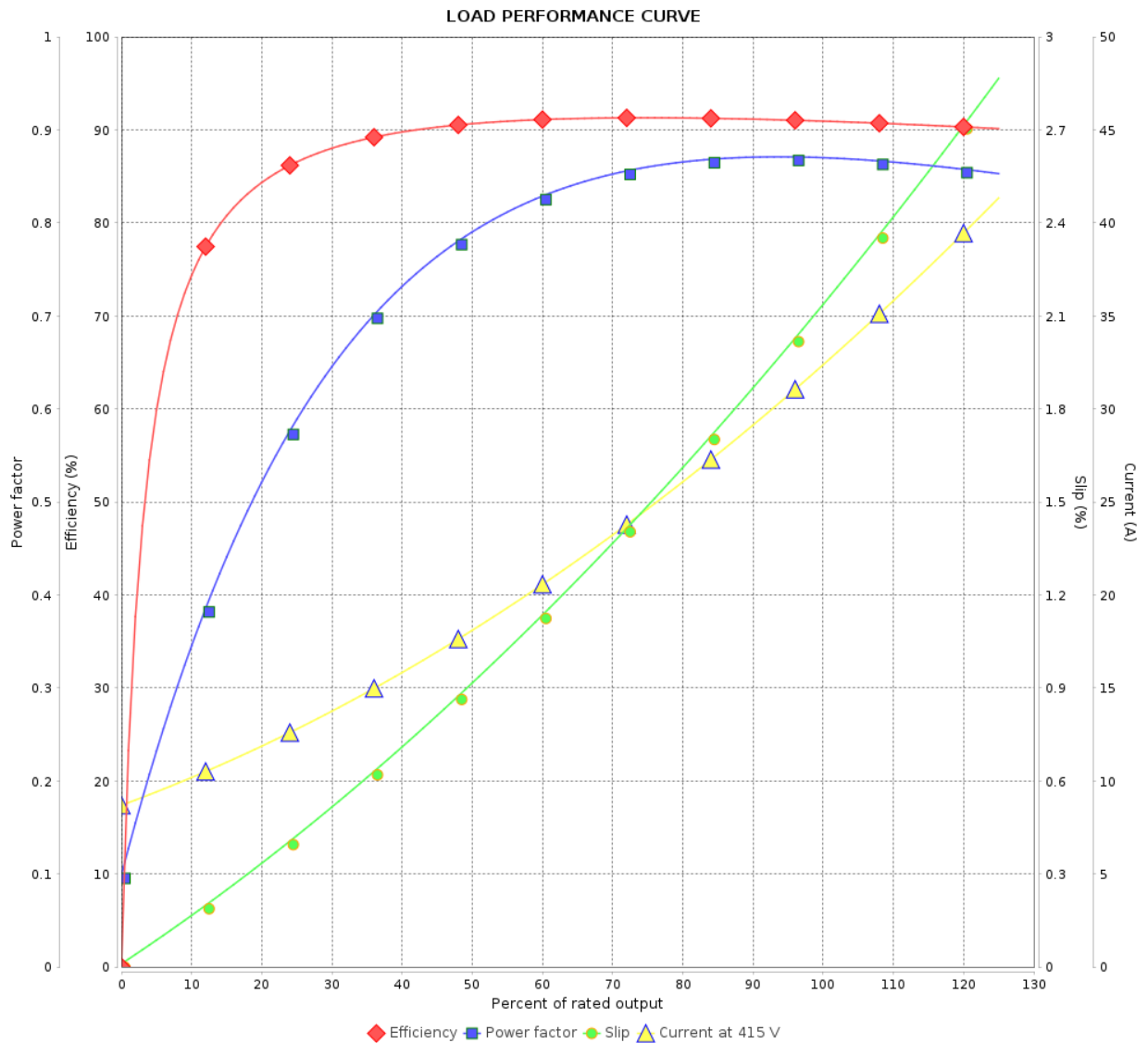
## Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

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

Product code : 12424297



Performance : 415 V 50 Hz 2P IE2

Rated current : 32.5 A  
LRC : 6.2  
Rated torque : 6.18 kgfm  
Locked rotor torque : 220 %  
Breakdown torque : 240 %  
Rated speed : 2935 rpm

Moment of inertia (J) : 0.1135 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 105 K  
Design : B

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