

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 11402324

Frame : 364/5TSC	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>3</sup> : 396 kg
Protection degree : IP55	Moment of inertia (J) : 0.4485 kgm <sup>2</sup>
Design : B	

Output [HP]	60	50	50	50	60	60	60
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]	134/67.0	67.4	64.0	61.7	83.1	77.6	74.8
L. R. Amperes [A]	884/442	431	461	457	432	450	471
LRC [A]	6.6x(Code G)	6.4x(Code G)	7.2x(Code H)	7.4x(Code H)	5.2x(Code E)	5.8x(Code F)	6.3x(Code G)
No load current [A]	32.0/16.0	15.8	16.8	17.8	15.8	16.8	17.8
Rated speed [RPM]	3555	2955	2960	2965	2935	2945	2950
Slip [%]	1.25	1.50	1.33	1.17	2.17	1.83	1.67
Rated torque [kgfm]	12.2	12.3	12.3	12.2	14.8	14.8	14.8
Locked rotor torque [%]	200	190	220	229	160	180	190
Breakdown torque [%]	260	250	280	300	200	229	250
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	25s (cold) 14s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)
Noise level <sup>2</sup>	79.0 dB(A)	74.0 dB(A)	74.0 dB(A)	74.0 dB(A)	74.0 dB(A)	74.0 dB(A)	74.0 dB(A)
Efficiency (%)	25%						
	50%	91.7	92.1	91.7	91.6	92.4	92.4
	75%	93.0	92.8	92.8	92.9	93.0	93.0
	100%	93.6	93.7	93.7	93.7	92.4	93.0
Power Factor	25%						
	50%	0.81	0.81	0.79	0.76	0.85	0.83
	75%	0.88	0.88	0.87	0.85	0.88	0.89
	100%	0.90	0.89	0.89	0.89	0.89	0.90

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

Losses (%)	P1 (0,9;1,0)	6.3	6.3	6.3	6.3	6.3	6.3
	P2 (0,5;1,0)	4.7	4.7	4.7	4.7	4.7	4.7
	P3 (0,25;1,0)	4.4	4.4	4.4	4.4	4.4	4.4
	P4 (0,9;0,5)	3.3	3.3	3.3	3.3	3.3	3.3
	P5 (0,5;0,5)	1.7	1.7	1.7	1.7	1.7	1.7
	P6 (0,5;0,25)	1.1	1.1	1.1	1.1	1.1	1.1
	P7 (0,25;0,25)	0.6	0.6	0.6	0.6	0.6	0.6

Bearing type : Sealing : Lubrication interval : Lubricant amount : Lubricant type :	Drive end	Non drive end	Foundation loads Max. traction : 216 kgf Max. compression : 612 kgf
	6314 C3	6314 C3	
	Oil Seal	Oil Seal	
	4000 h	4000 h	
	27 g	27 g	
	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 : \_\_\_\_\_

Notes  
USABLE @208V 148A SF 1.10 SFA 163A

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# LOAD PERFORMANCE CURVE

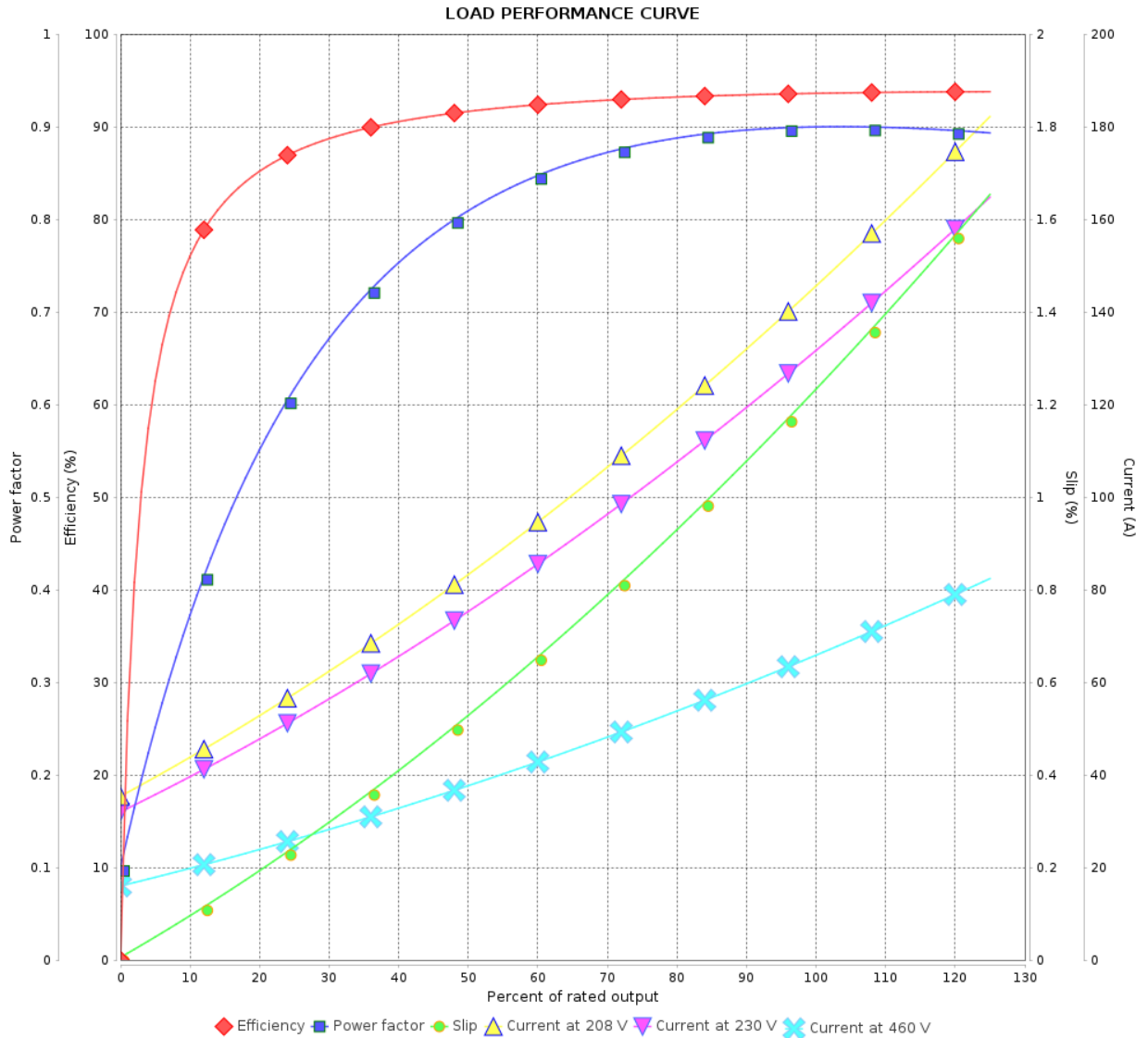
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11402324



Performance : 230/460 V 60 Hz 2P

Rated current : 134/67.0 A  
 LRC : 6.6  
 Rated torque : 12.2 kgfm  
 Locked rotor torque : 200 %  
 Breakdown torque : 260 %  
 Rated speed : 3555 rpm

Moment of inertia (J) : 0.4485 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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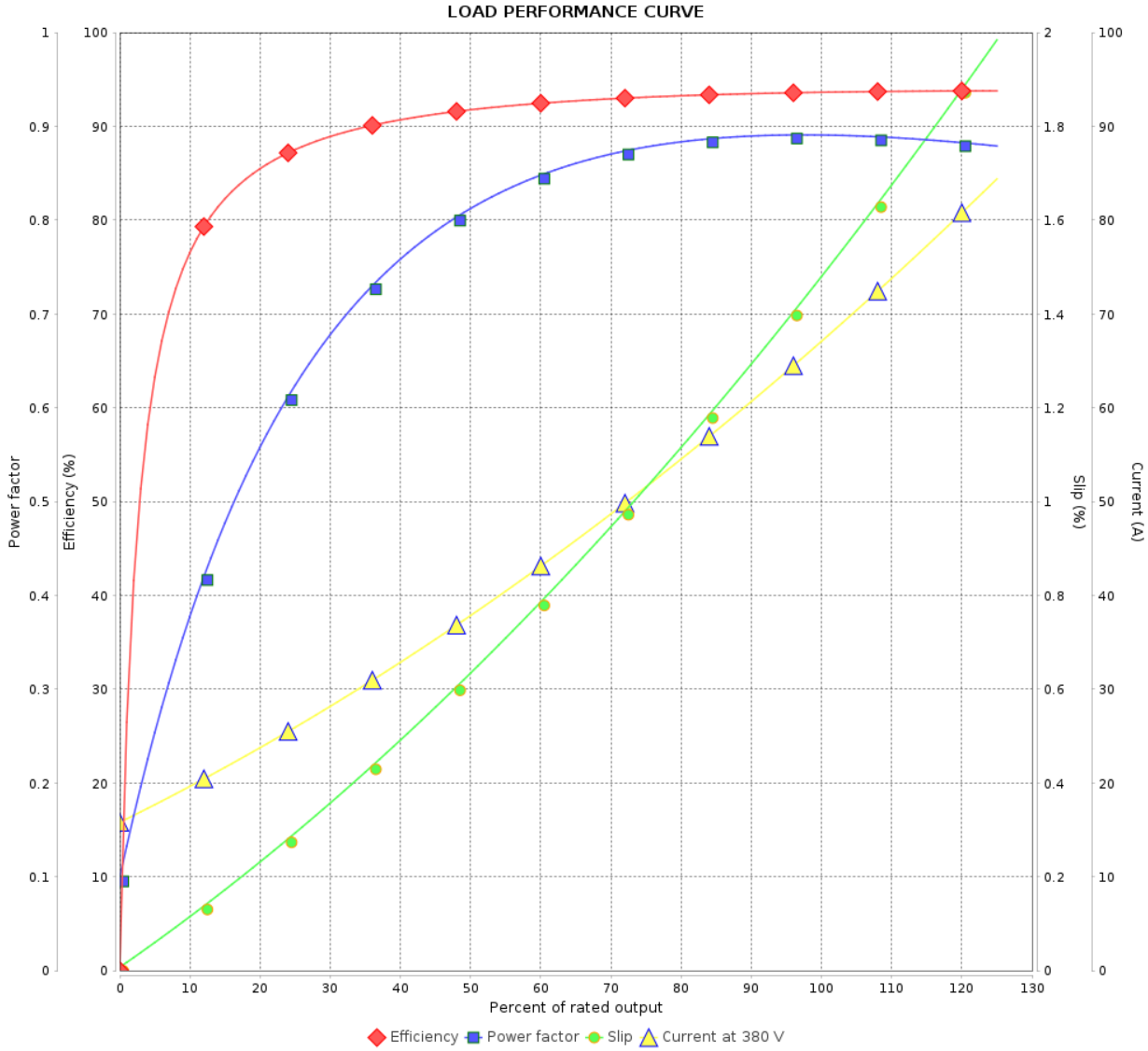
# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase      Product code : 11402324



Performance : 380 V 50 Hz 2P IE3

Rated current	: 67.4 A	Moment of inertia (J)	: 0.4485 kgm <sup>2</sup>
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 12.3 kgfm	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 2955 rpm	Design	: B

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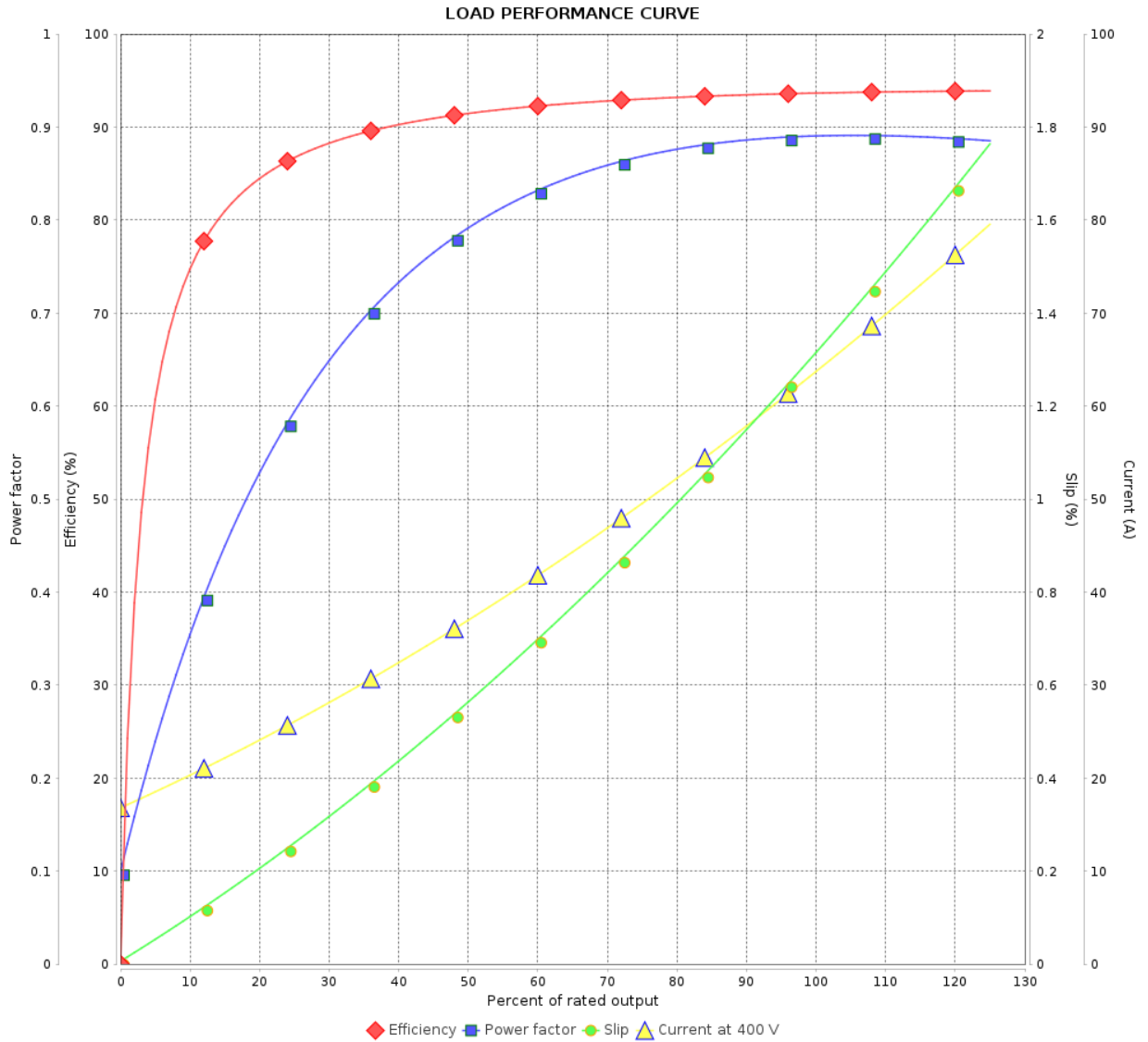
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11402324



Performance : 400 V 50 Hz 2P IE3

Rated current : 64.0 A  
 LRC : 7.2  
 Rated torque : 12.3 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 280 %  
 Rated speed : 2960 rpm

Moment of inertia (J) : 0.4485 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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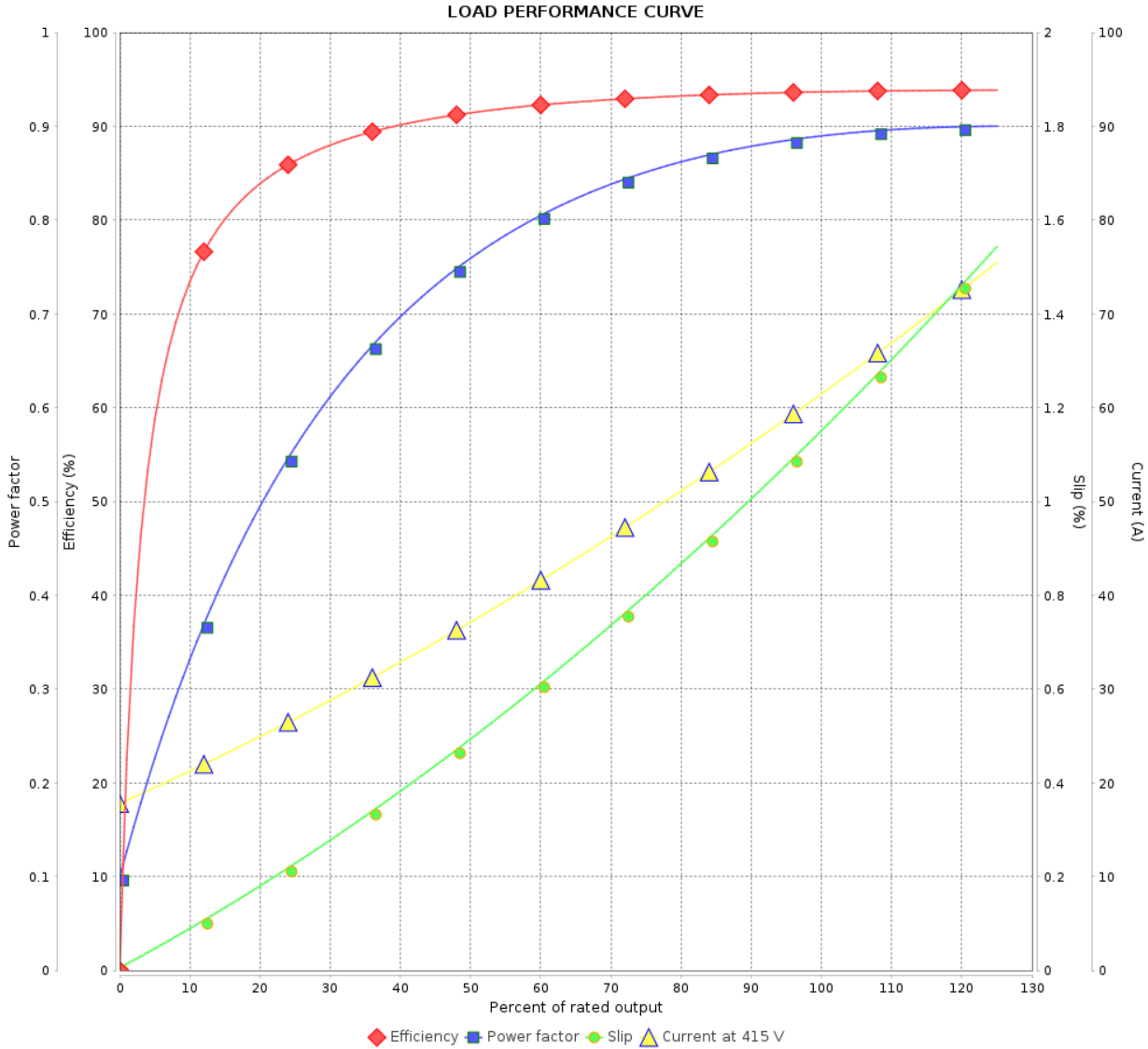
# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase      Product code : 11402324



Performance : 415 V 50 Hz 2P IE3

Rated current	: 61.7 A	Moment of inertia (J)	: 0.4485 kgm <sup>2</sup>
LRC	: 7.4	Duty cycle	: Cont.(S1)
Rated torque	: 12.2 kgfm	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 2965 rpm	Design	: B

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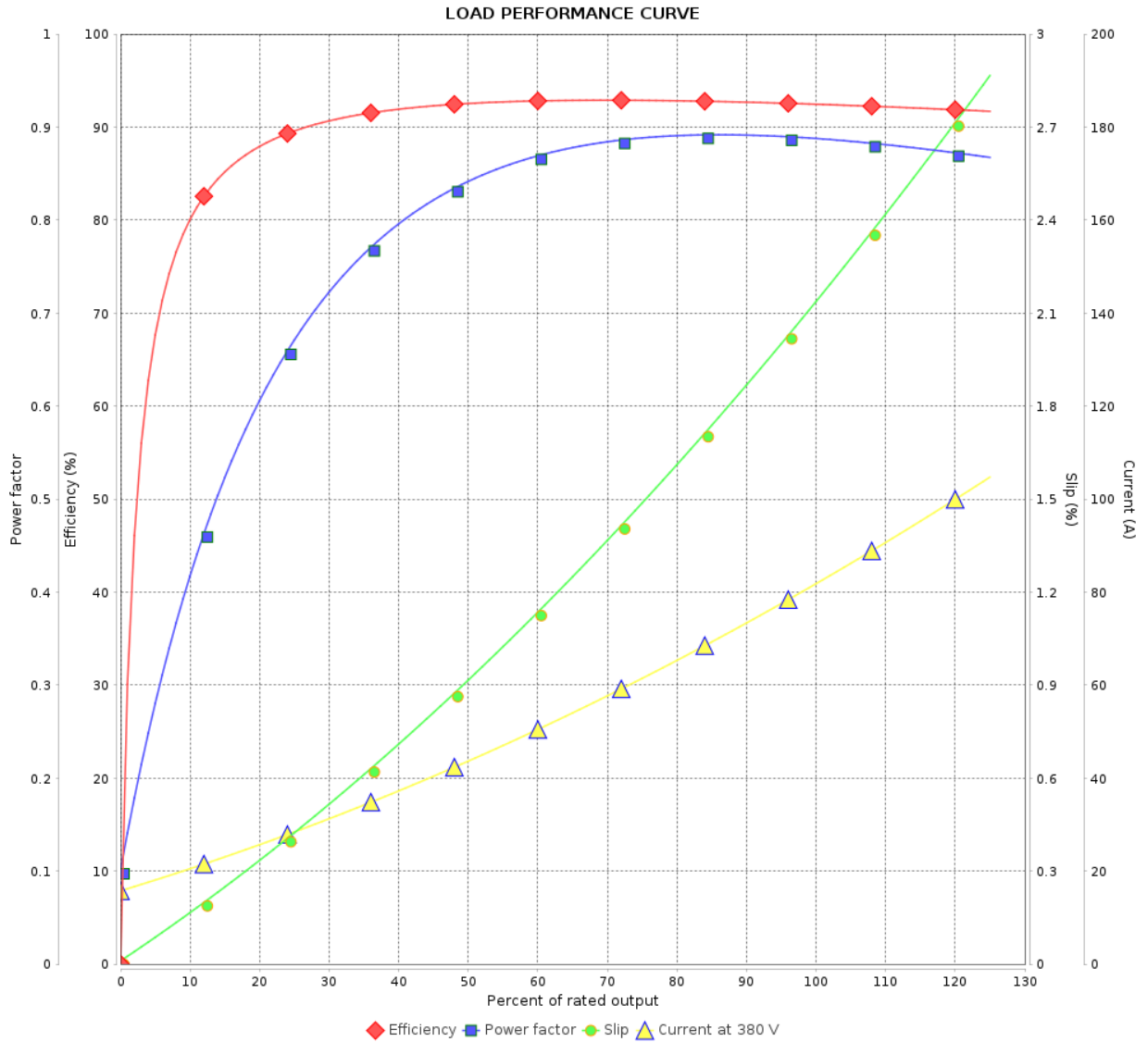
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11402324



Performance : 380 V 50 Hz 2P IE1

Rated current : 83.1 A  
 LRC : 5.2  
 Rated torque : 14.8 kgfm  
 Locked rotor torque : 160 %  
 Breakdown torque : 200 %  
 Rated speed : 2935 rpm

Moment of inertia (J) : 0.4485 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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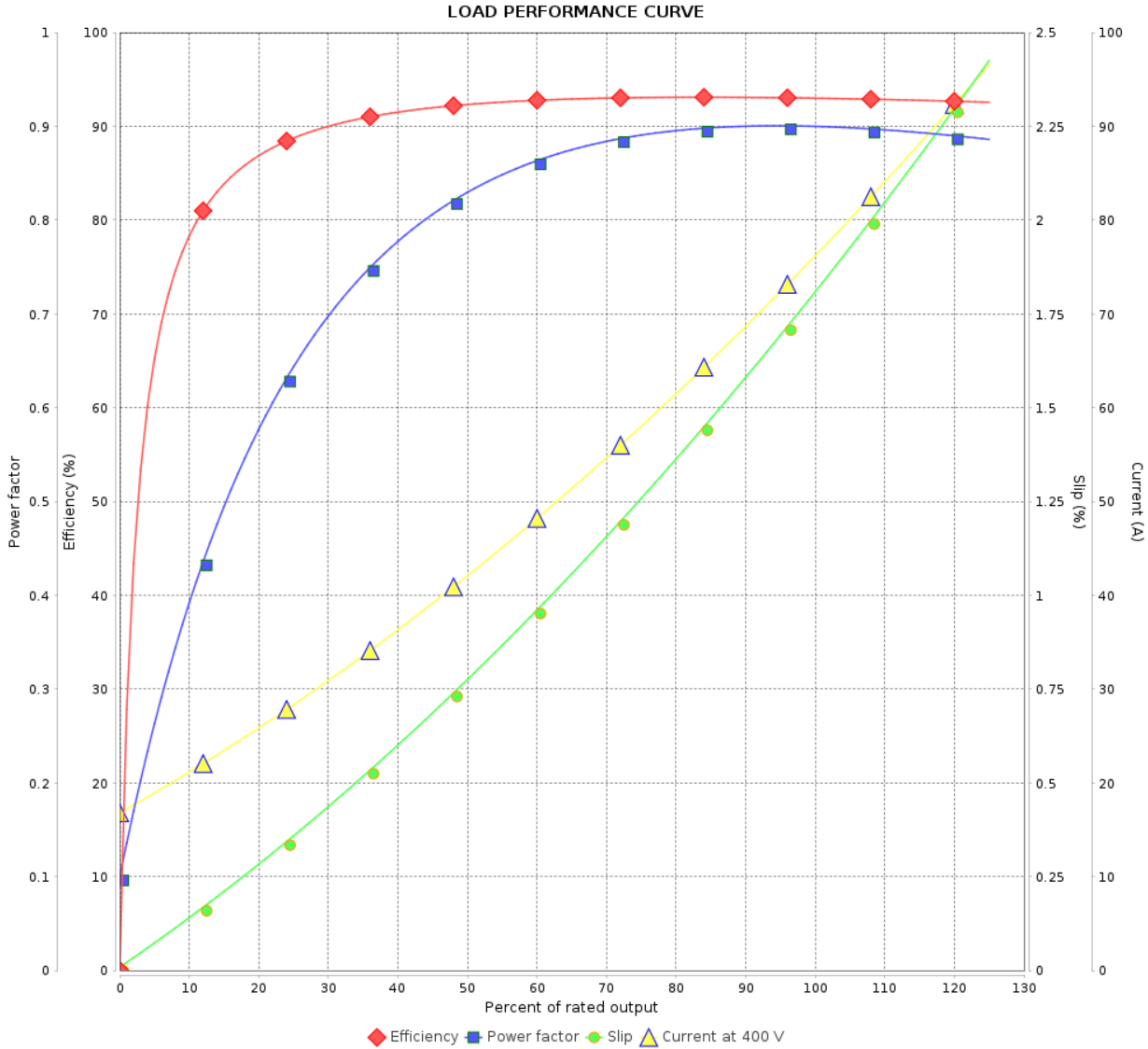
# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase      Product code : 11402324



Performance : 400 V 50 Hz 2P IE2

Rated current	: 77.6 A	Moment of inertia (J)	: 0.4485 kgm <sup>2</sup>
LRC	: 5.8	Duty cycle	: Cont.(S1)
Rated torque	: 14.8 kgfm	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 105 K
Rated speed	: 2945 rpm	Design	: B

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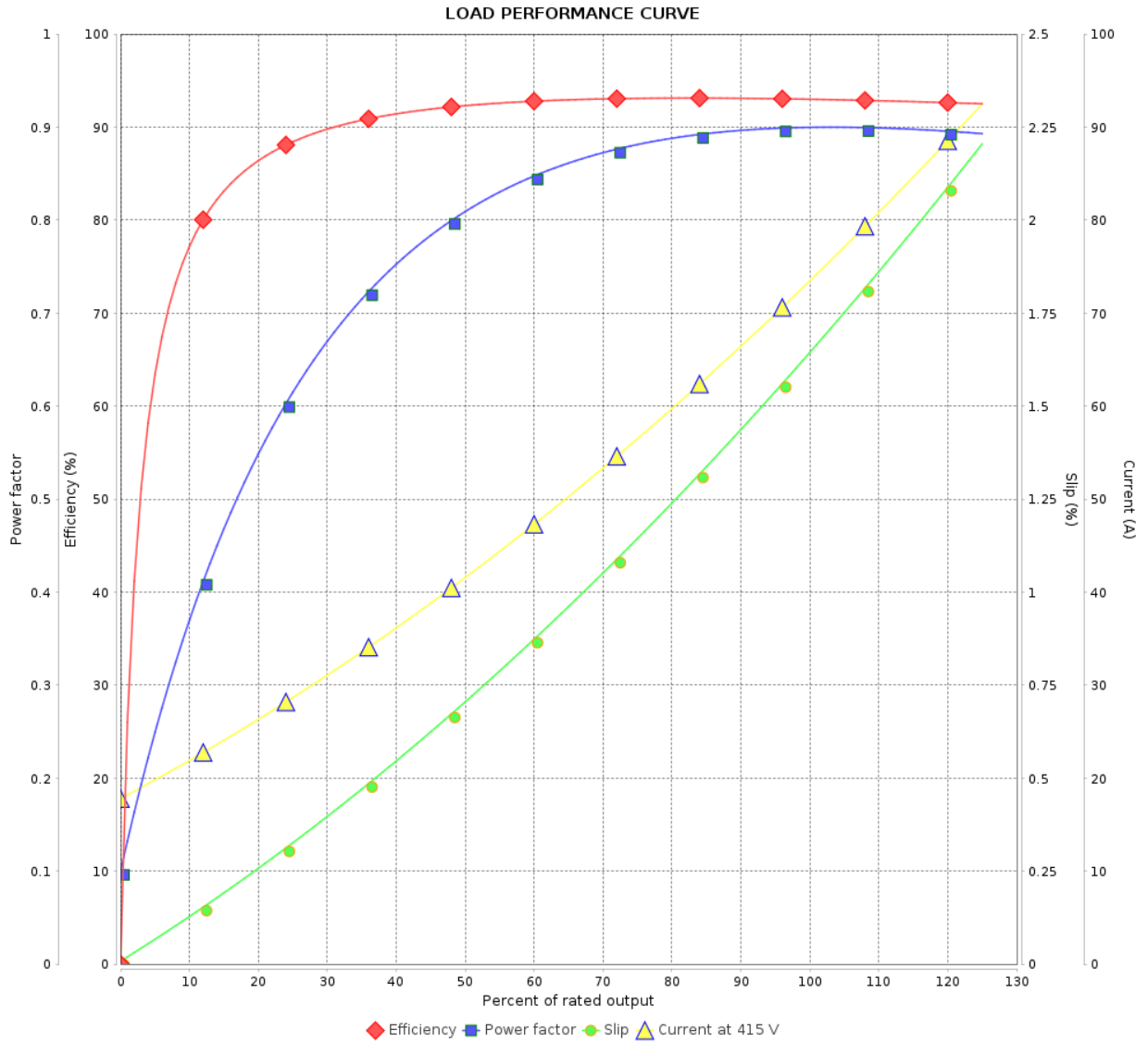
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11402324



Performance : 415 V 50 Hz 2P IE2

Rated current : 74.8 A  
 LRC : 6.3  
 Rated torque : 14.8 kgfm  
 Locked rotor torque : 190 %  
 Breakdown torque : 250 %  
 Rated speed : 2950 rpm

Moment of inertia (J) : 0.4485 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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