

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 11165470

Frame	: 364/5T	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>	: 407 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.9189 kgm <sup>2</sup>
Design	: B		

Output [HP]	40	30	30	30	40	40	40
Poles	6	6	6	6	6	6	6
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	230/460	380	400	415	380	400	415
Rated current [A]	93.0/46.5	43.0	41.1	40.0	57.8	55.1	53.4
L. R. Amperes [A]	595/298	275	296	308	283	303	320
LRC [A]	6.4x(Code G)	6.4x(Code G)	7.2x(Code H)	7.7x(Code J)	4.9x(Code E)	5.5x(Code F)	6.0x(Code G)
No load current [A]	33.0/16.5	16.0	17.0	17.8	16.0	17.0	17.8
Rated speed [RPM]	1183	985	987	988	975	980	982
Slip [%]	1.42	1.50	1.30	1.20	2.50	2.00	1.80
Rated torque [kgfm]	24.5	22.1	22.1	22.0	29.8	29.6	29.6
Locked rotor torque [%]	200	210	240	270	160	180	200
Breakdown torque [%]	240	250	280	310	190	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	80 K	80 K	80 K
Locked rotor time	37s (cold) 21s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)
Noise level <sup>2</sup>	66.0 dB(A)	63.0 dB(A)	63.0 dB(A)	63.0 dB(A)	63.0 dB(A)	63.0 dB(A)	63.0 dB(A)
Efficiency (%)	25%						
	50%	93.6	92.4	92.3	91.9	93.0	93.0
	75%	93.6	92.8	93.1	93.0	92.4	93.0
	100%	94.1	92.5	93.0	93.2	91.7	93.0
Power Factor	25%						
	50%	0.73	0.68	0.66	0.63	0.78	0.73
	75%	0.82	0.80	0.79	0.76	0.84	0.82
	100%	0.86	0.84	0.83	0.82	0.86	0.84

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

Losses (%)	P1 (0,9;1,0)	6.1	6.1	6.1	6.1	6.1	6.1
	P2 (0,5;1,0)	5.0	5.0	5.0	5.0	5.0	5.0
	P3 (0,25;1,0)	4.4	4.4	4.4	4.4	4.4	4.4
	P4 (0,9;0,5)	2.8	2.8	2.8	2.8	2.8	2.8
	P5 (0,5;0,5)	1.9	1.9	1.9	1.9	1.9	1.9
	P6 (0,5;0,25)	1.1	1.1	1.1	1.1	1.1	1.1
	P7 (0,25;0,25)	0.8	0.8	0.8	0.8	0.8	0.8

Bearing type	: 6314 C3	Non drive end	6314 C3	Foundation loads	
Sealing	: WSeal		WSeal	Max. traction	: 560 kgf
Lubrication interval	: 17000 h		17000 h	Max. compression	: 967 kgf
Lubricant amount	: 27 g		27 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 : \_\_\_\_\_

Notes  
USABLE @208V 103A SF 1.10 SFA 113A

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# LOAD PERFORMANCE CURVE

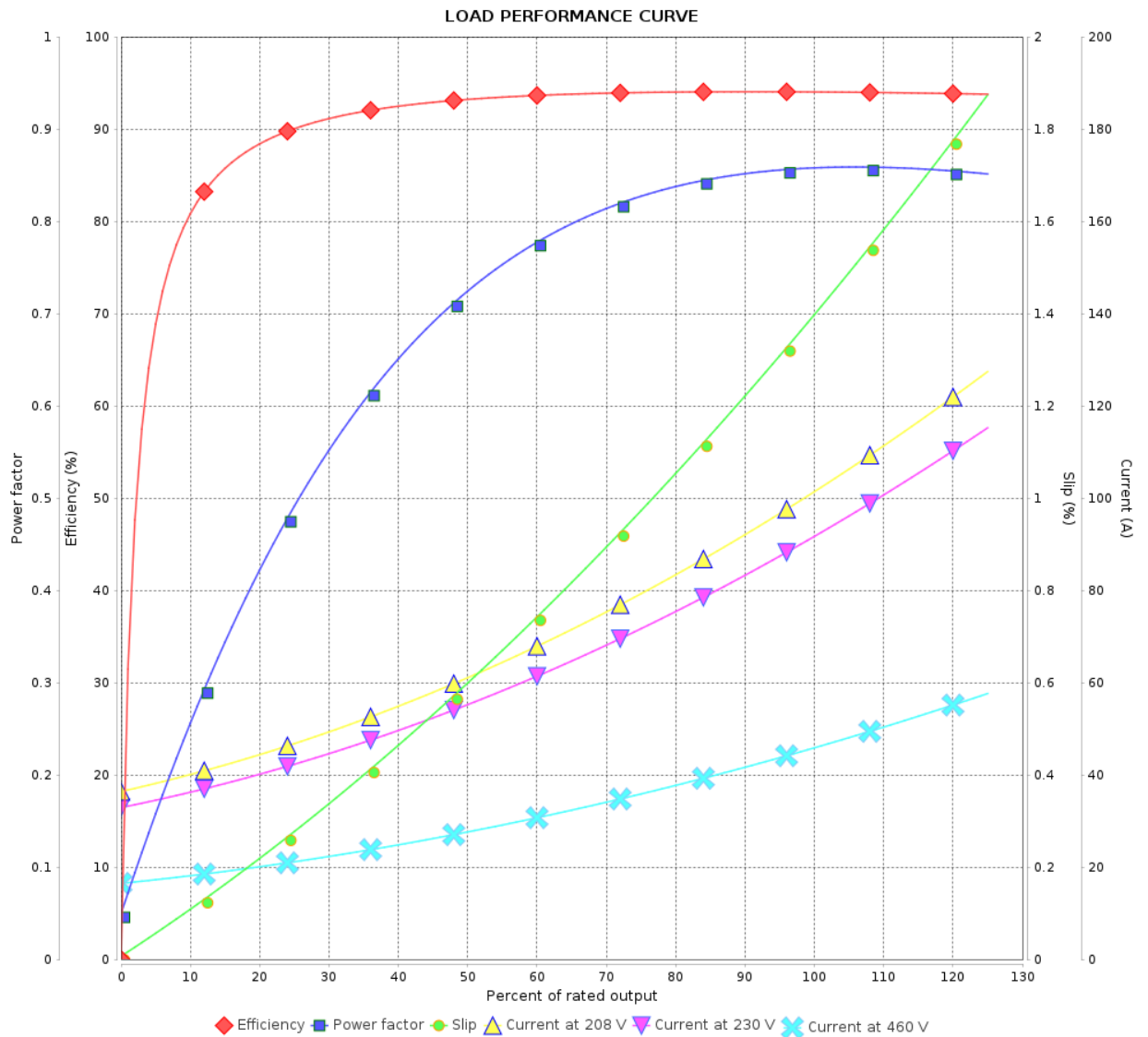
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 11165470



Performance : 230/460 V 60 Hz 6P

Rated current : 93.0/46.5 A  
LRC : 6.4  
Rated torque : 24.5 kgfm  
Locked rotor torque : 200 %  
Breakdown torque : 240 %  
Rated speed : 1183 rpm

Moment of inertia (J) : 0.9189 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

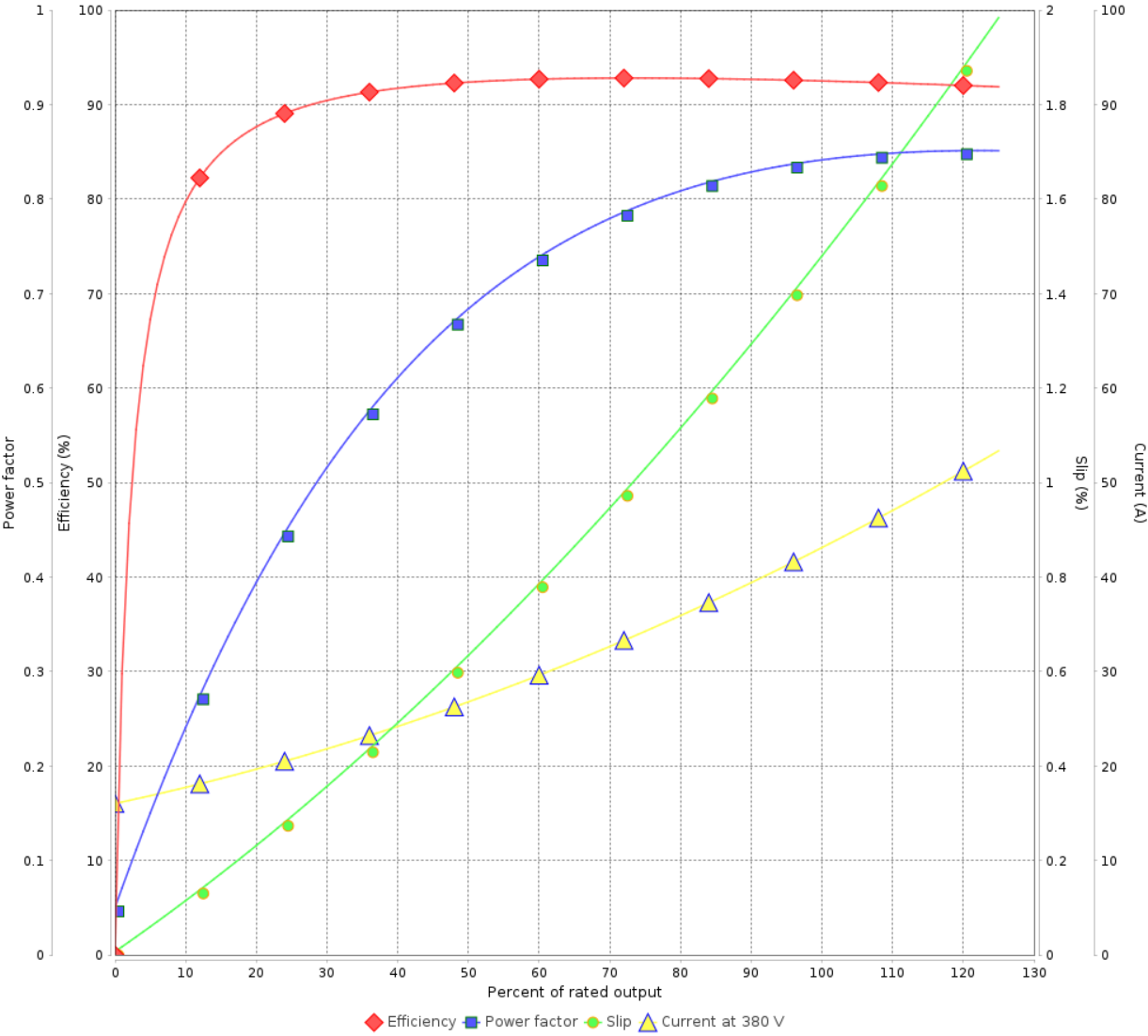
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase      Product code : 11165470

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Performance : 380 V 50 Hz 6P IE3			
Rated current	: 43.0 A	Moment of inertia (J)	: 0.9189 kgm²
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 22.1 kgfm	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

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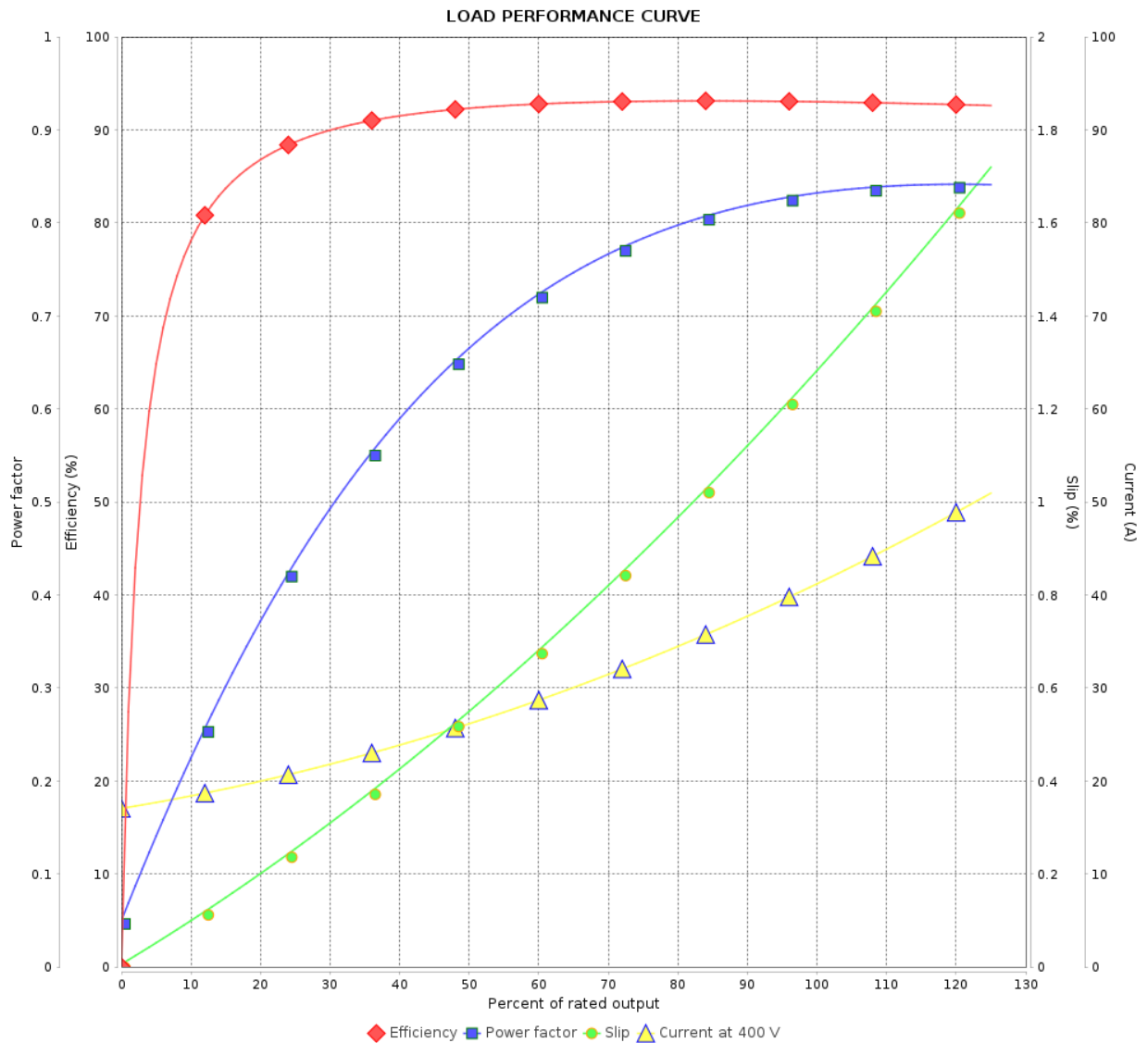
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 11165470



Performance : 400 V 50 Hz 6P IE3

Rated current	: 41.1 A	Moment of inertia (J)	: 0.9189 kgm <sup>2</sup>
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 22.1 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 987 rpm	Design	: B

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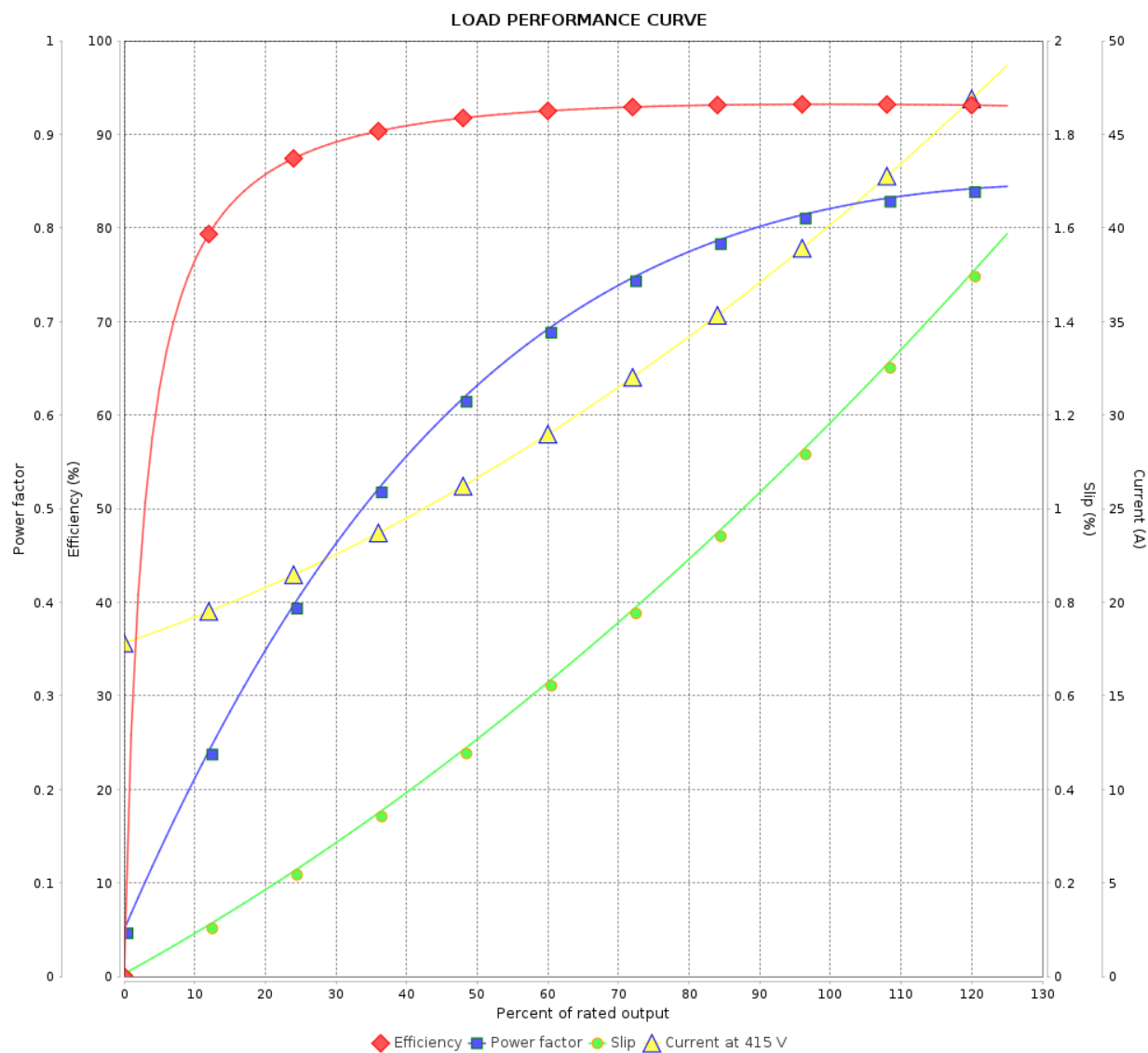
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 11165470



Performance : 415 V 50 Hz 6P IE3

Rated current : 40.0 A  
LRC : 7.7  
Rated torque : 22.0 kgfm  
Locked rotor torque : 270 %  
Breakdown torque : 310 %  
Rated speed : 988 rpm

Moment of inertia (J) : 0.9189 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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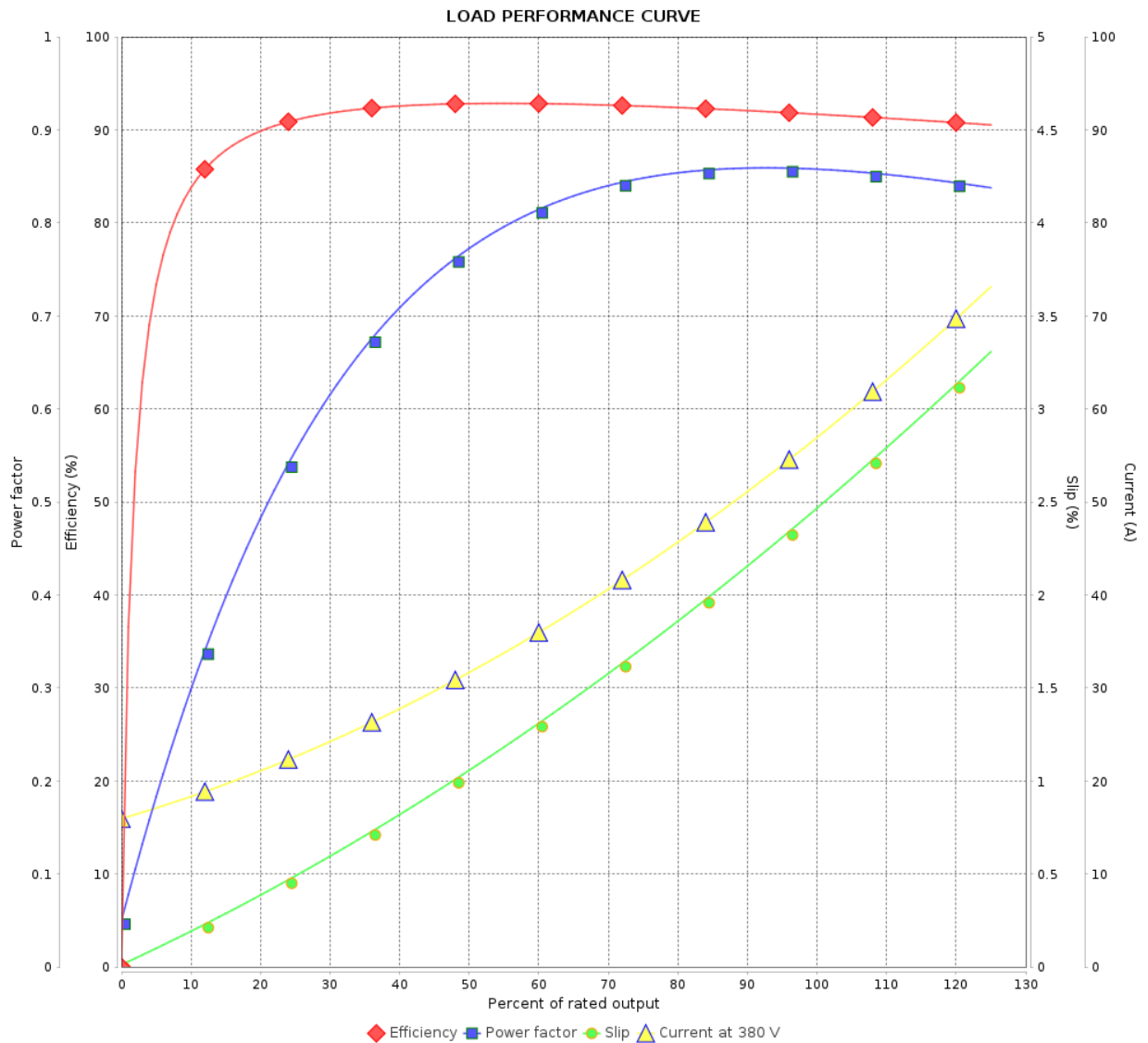
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 11165470



Performance : 380 V 50 Hz 6P IE2

Rated current	: 57.8 A	Moment of inertia (J)	: 0.9189 kgm <sup>2</sup>
LRC	: 4.9	Duty cycle	: Cont.(S1)
Rated torque	: 29.8 kgfm	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.00
Breakdown torque	: 190 %	Temperature rise	: 80 K
Rated speed	: 975 rpm	Design	: B

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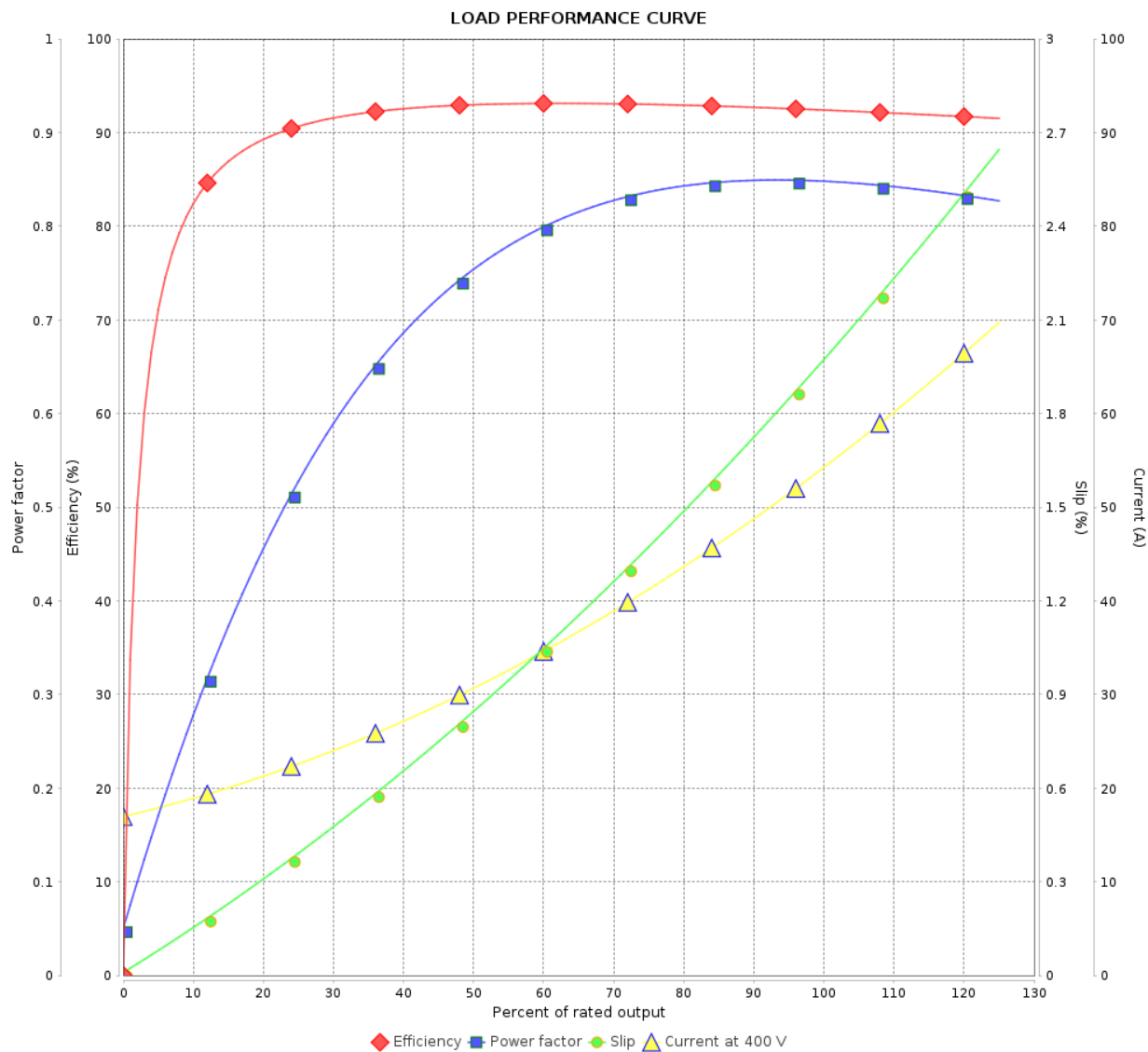
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 11165470



Performance : 400 V 50 Hz 6P IE2

Rated current : 55.1 A  
LRC : 5.5  
Rated torque : 29.6 kgfm  
Locked rotor torque : 180 %  
Breakdown torque : 210 %  
Rated speed : 980 rpm

Moment of inertia (J) : 0.9189 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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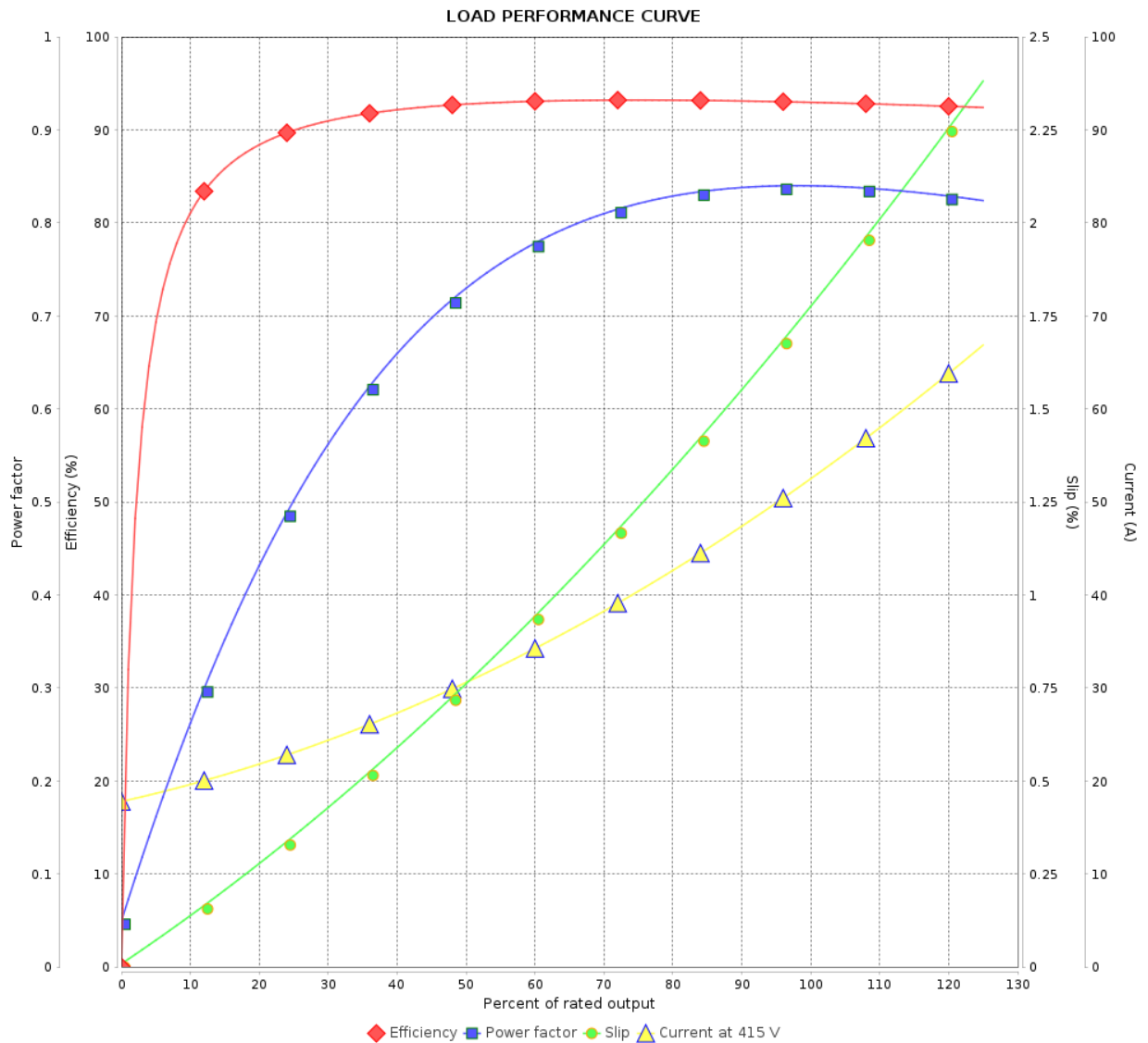
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 11165470



Performance : 415 V 50 Hz 6P IE3

Rated current : 53.4 A  
LRC : 6.0  
Rated torque : 29.6 kgfm  
Locked rotor torque : 200 %  
Breakdown torque : 229 %  
Rated speed : 982 rpm

Moment of inertia (J) : 0.9189 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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