

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 14766380

Frame : 324/6T	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> : 231 kg
Protection degree : IP55	Moment of inertia (J) : 0.3946 kgm <sup>2</sup>
Design : B	

Output [HP]	20	15	15	15	20	20	20
Poles	8	8	8	8	8	8	8
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	230/460	380	400	415	380	400	415
Rated current [A]	56.6/28.3	26.5	26.4	27.1	33.4	32.6	32.7
L. R. Amperes [A]	283/142	133	142	152	134	143	150
LRC [A]	5.0x(Code G)	5.0x(Code G)	5.4x(Code H)	5.6x(Code J)	4.0x(Code D)	4.4x(Code E)	4.6x(Code F)
No load current [A]	32.0/16.0	15.7	17.6	19.3	15.7	17.6	19.3
Rated speed [RPM]	880	730	730	735	725	725	730
Slip [%]	2.22	2.67	2.67	2.00	3.33	3.33	2.67
Rated torque [kgfm]	16.5	14.9	14.9	14.8	20.0	20.0	19.9
Locked rotor torque [%]	190	190	210	240	140	160	180
Breakdown torque [%]	220	229	260	280	170	190	210
Service factor	1.25	1.00	1.15	1.15	1.00	1.15	1.15
Temperature rise	80 K	80 K	80 K	80 K	105 K	105 K	80 K
Locked rotor time	48s (cold) 27s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)
Noise level <sup>2</sup>	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)
Efficiency (%)	25%						
	50%	89.5	88.5	87.4	86.3	89.5	87.5
	75%	91.0	89.6	89.0	88.5	89.5	89.5
	100%	91.0	89.5	89.3	89.0	88.5	88.5
Power Factor	25%						
	50%	0.54	0.51	0.46	0.42	0.61	0.52
	75%	0.66	0.64	0.60	0.56	0.72	0.65
	100%	0.73	0.72	0.69	0.65	0.77	0.72

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

Losses (%)	P1 (0,9;1,0)	9.5	9.5	9.5	9.5	9.5	9.5
	P2 (0,5;1,0)	8.0	8.0	8.0	8.0	8.0	8.0
	P3 (0,25;1,0)	7.7	7.7	7.7	7.7	7.7	7.7
	P4 (0,9;0,5)	5.2	5.2	5.2	5.2	5.2	5.2
	P5 (0,5;0,5)	3.7	3.7	3.7	3.7	3.7	3.7
	P6 (0,5;0,25)	2.8	2.8	2.8	2.8	2.8	2.8
	P7 (0,25;0,25)	2.0	2.0	2.0	2.0	2.0	2.0

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads
Bearing type :	6312 C3	6212 C3	Max. traction : 410 kgf
Sealing :	V'Ring	V'Ring	Max. compression : 641 kgf
Lubrication interval :	20000 h	20000 h	
Lubricant amount :	21 g	13 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 62.6A SF 1.15 SFA 72.0A

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# LOAD PERFORMANCE CURVE

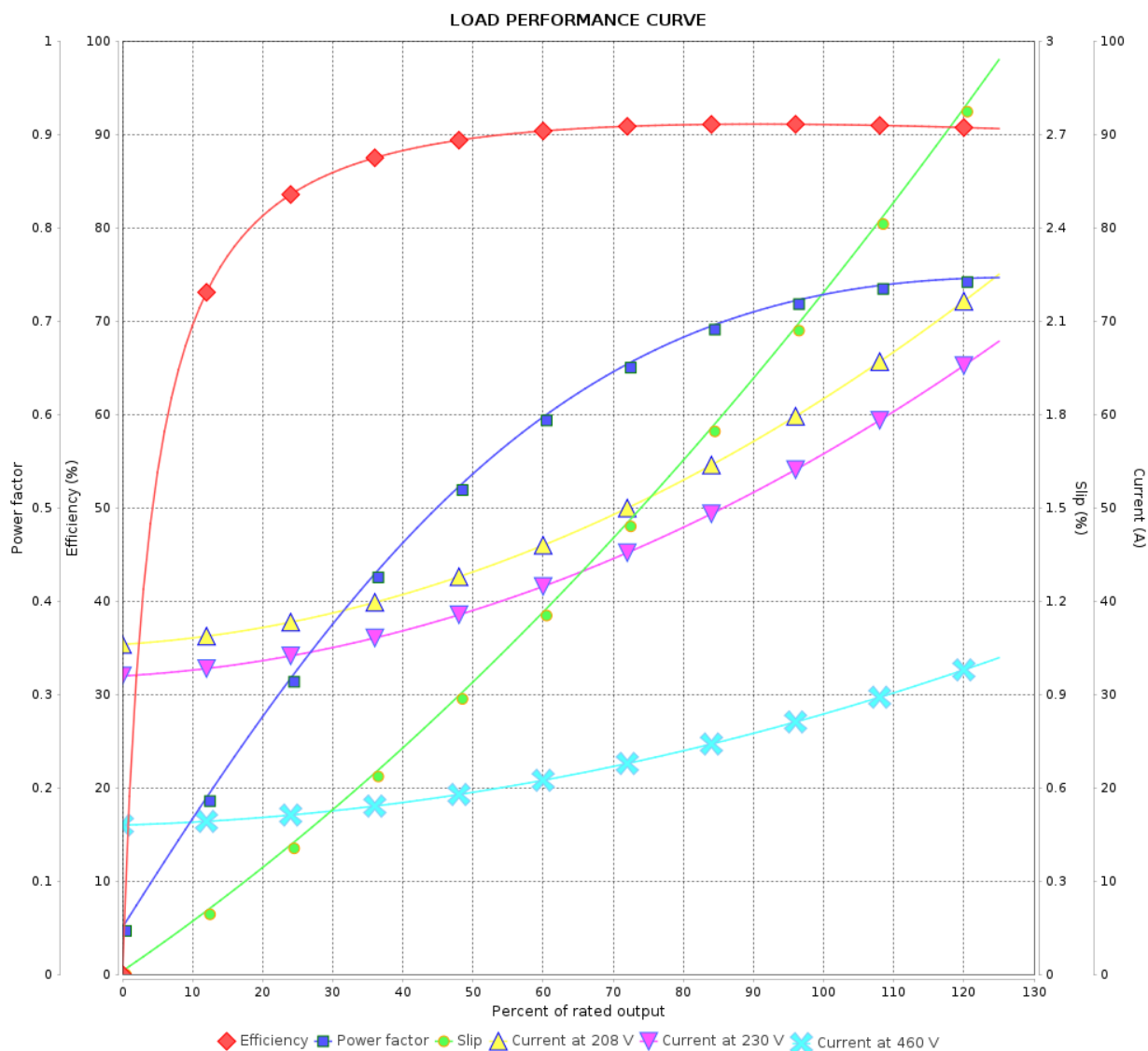
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 14766380



Performance : 230/460 V 60 Hz 8P

Rated current : 56.6/28.3 A  
LRC : 5.0  
Rated torque : 16.5 kgfm  
Locked rotor torque : 190 %  
Breakdown torque : 220 %  
Rated speed : 880 rpm

Moment of inertia (J) : 0.3946 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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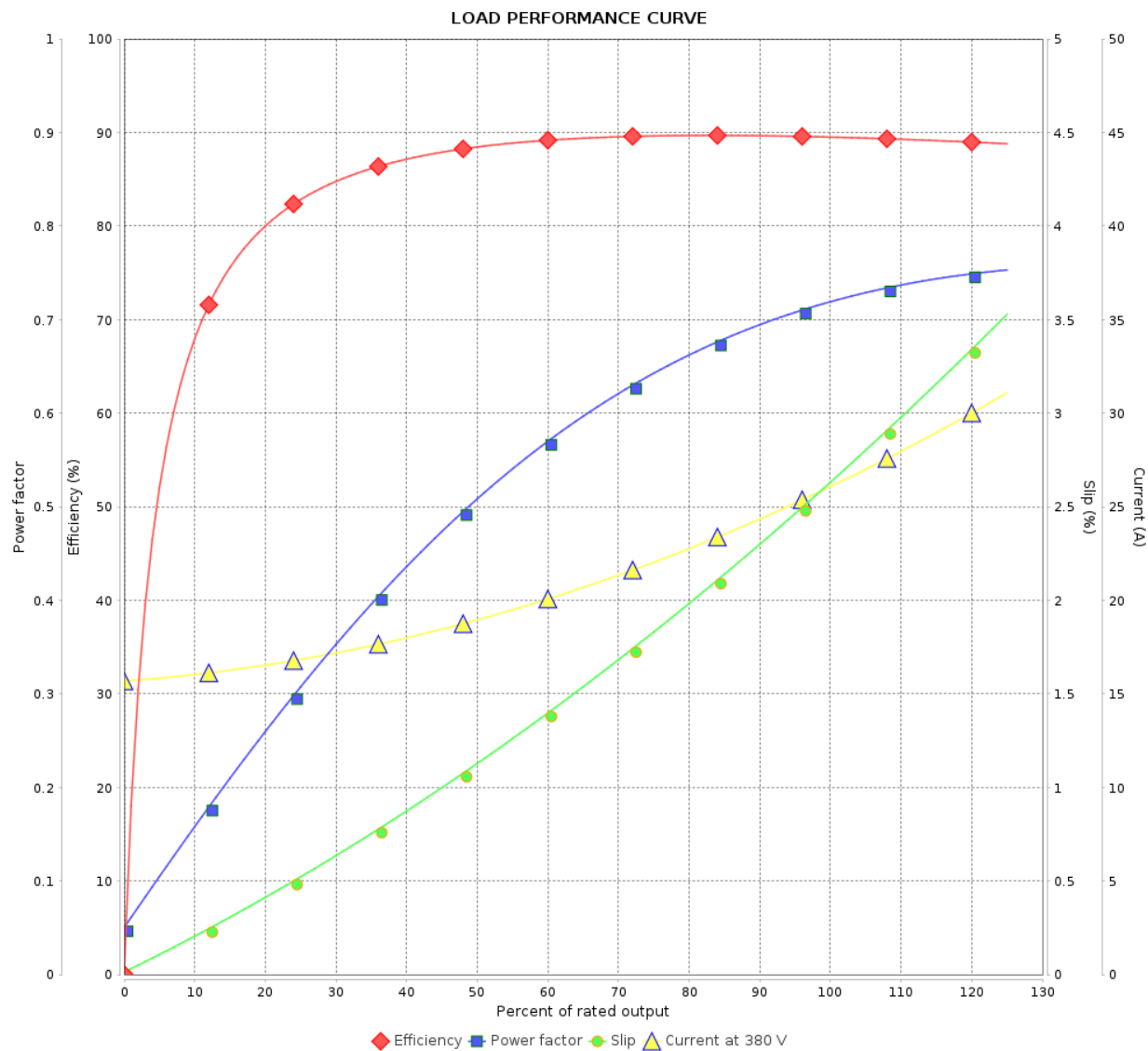
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 14766380



Performance : 380 V 50 Hz 8P IE3

Rated current : 26.5 A  
LRC : 5.0  
Rated torque : 14.9 kgfm  
Locked rotor torque : 190 %  
Breakdown torque : 229 %  
Rated speed : 730 rpm

Moment of inertia (J) : 0.3946 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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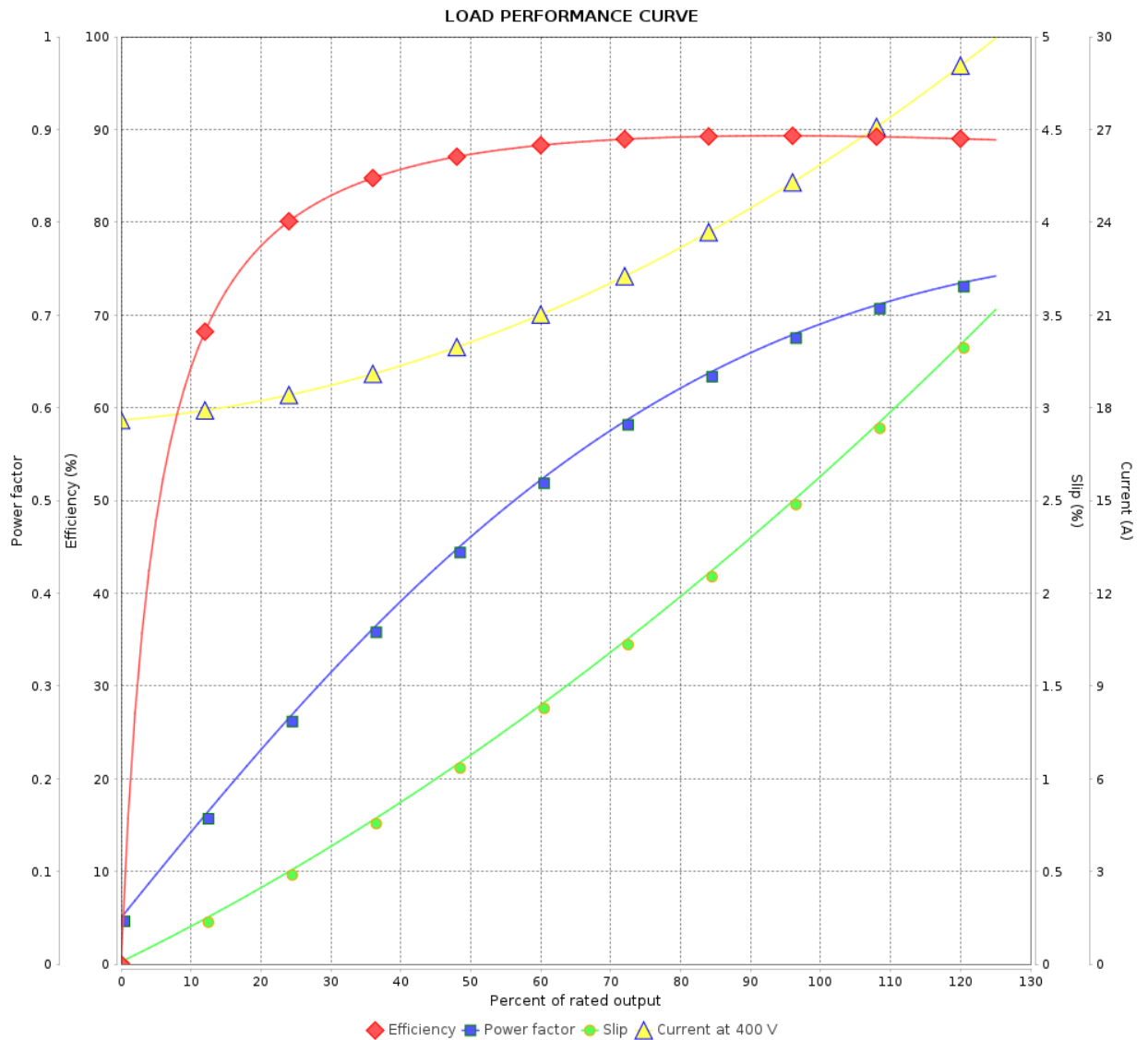
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 14766380



Performance : 400 V 50 Hz 8P IE3

Rated current	: 26.4 A	Moment of inertia (J)	: 0.3946 kgm <sup>2</sup>
LRC	: 5.4	Duty cycle	: Cont.(S1)
Rated torque	: 14.9 kgfm	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.15
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 730 rpm	Design	: B

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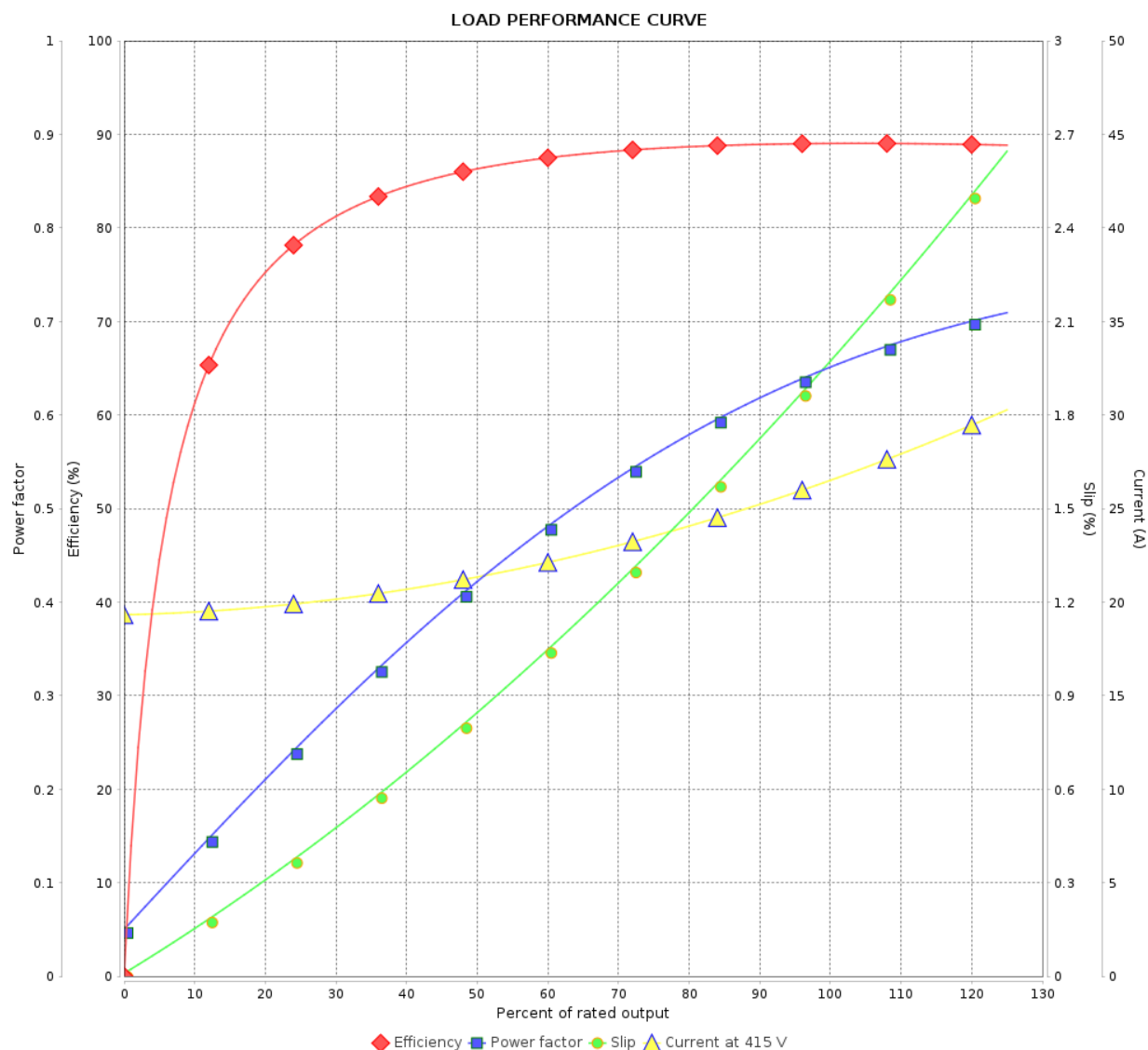
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 14766380



Performance : 415 V 50 Hz 8P IE3

Rated current : 27.1 A  
LRC : 5.6  
Rated torque : 14.8 kgfm  
Locked rotor torque : 240 %  
Breakdown torque : 280 %  
Rated speed : 735 rpm

Moment of inertia (J) : 0.3946 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

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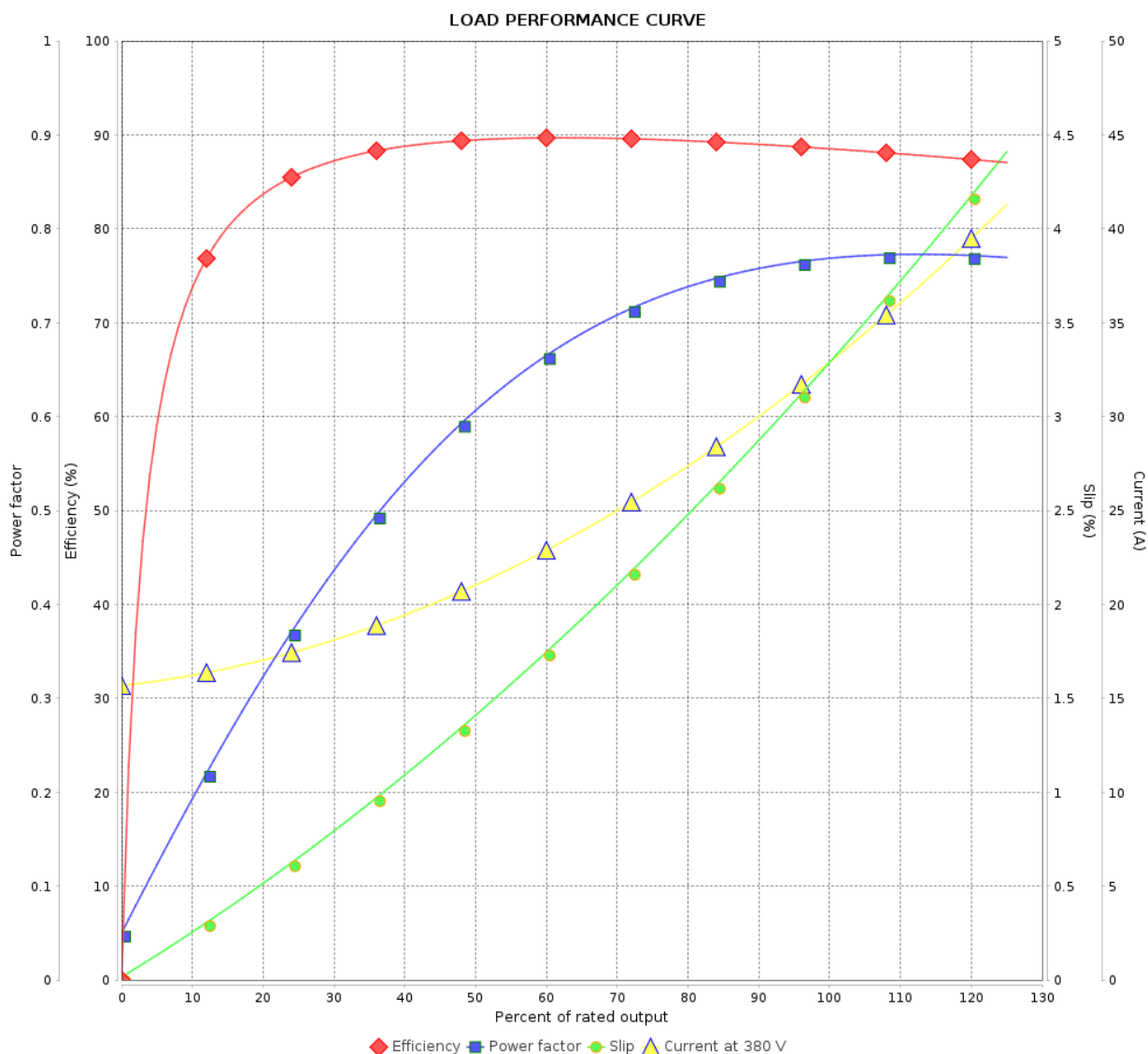
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 14766380



Performance : 380 V 50 Hz 8P IE2

Rated current : 33.4 A  
LRC : 4.0  
Rated torque : 20.0 kgfm  
Locked rotor torque : 140 %  
Breakdown torque : 170 %  
Rated speed : 725 rpm

Moment of inertia (J) : 0.3946 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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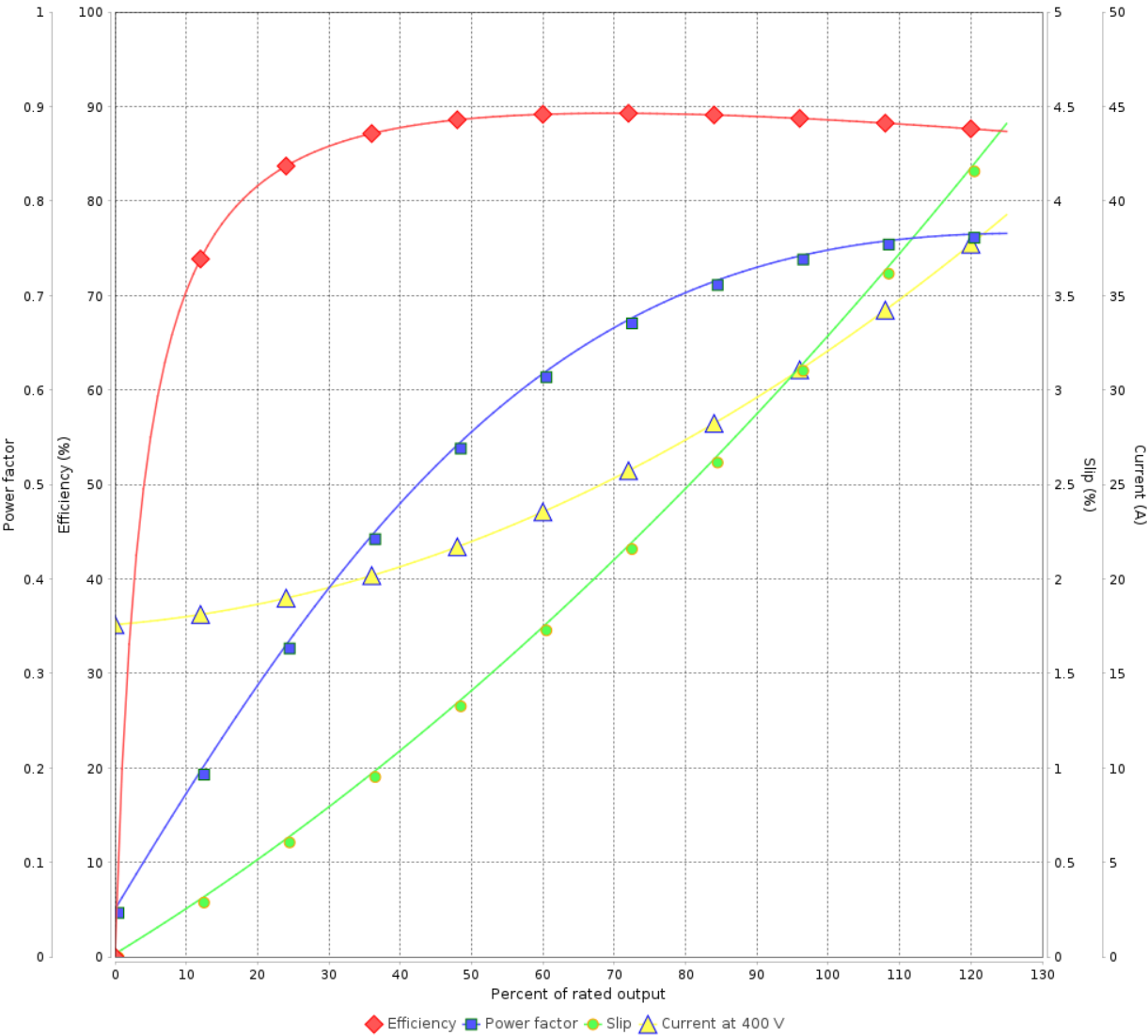
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase      Product code : 14766380

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Performance : 400 V 50 Hz 8P IE2

Rated current	: 32.6 A	Moment of inertia (J)	: 0.3946 kgm <sup>2</sup>
LRC	: 4.4	Duty cycle	: Cont.(S1)
Rated torque	: 20.0 kgfm	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.15
Breakdown torque	: 190 %	Temperature rise	: 105 K
Rated speed	: 725 rpm	Design	: B

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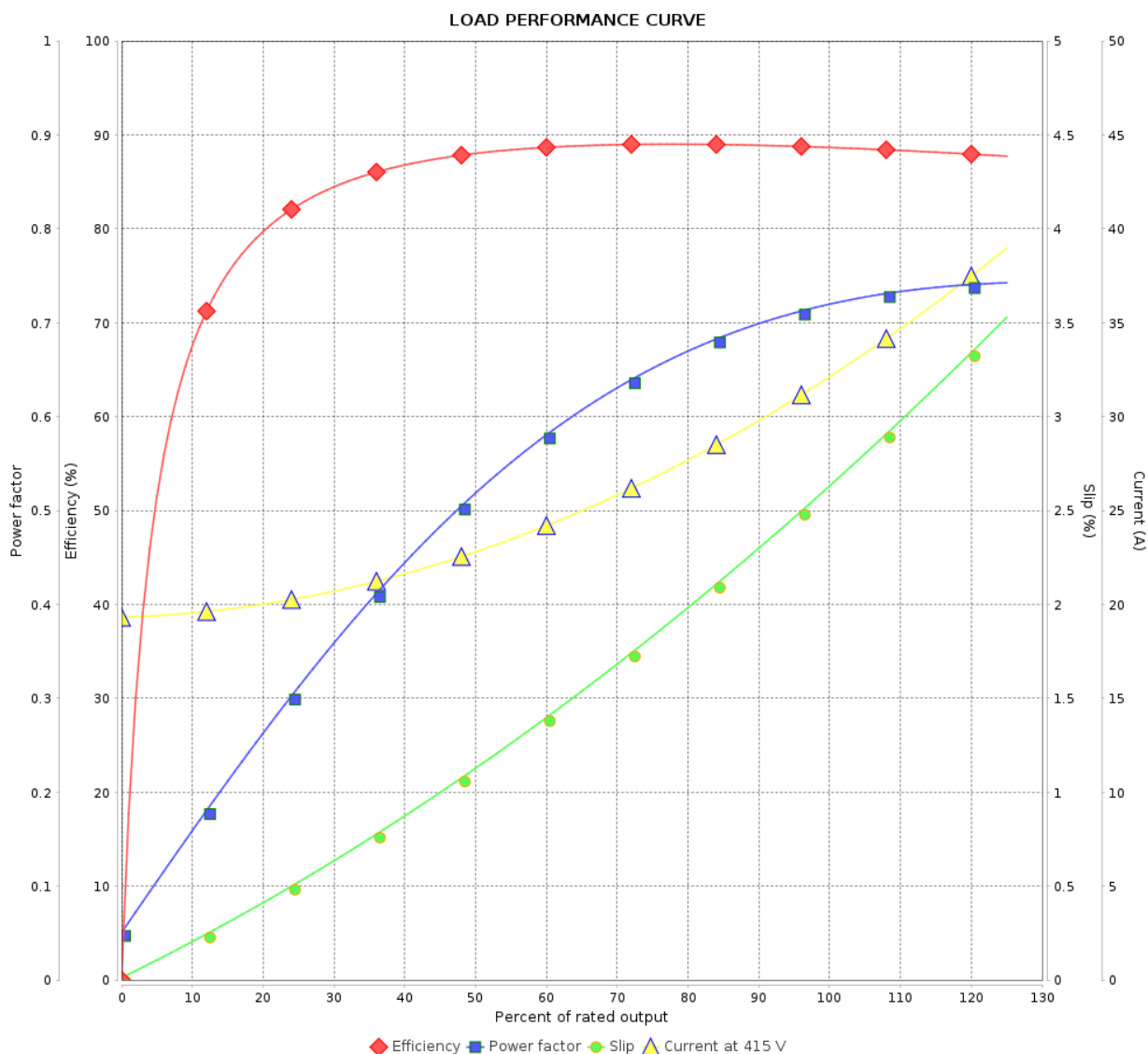
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 14766380



Performance : 415 V 50 Hz 8P IE2

Rated current : 32.7 A  
LRC : 4.6  
Rated torque : 19.9 kgfm  
Locked rotor torque : 180 %  
Breakdown torque : 210 %  
Rated speed : 730 rpm

Moment of inertia (J) : 0.3946 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

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