

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 P Base NEMA Premium Efficiency Three-Phase      Product code : 14168114

Frame : 444/5HP	Cooling method : IC411 - TEFC
Insulation class : F	Mounting : W-6
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> : 860 kg
Protection degree : IP55	Moment of inertia (J) : 2.81 kgm <sup>2</sup>
Design : B	

Output [HP]	150	125	125	125	150	150	150
Poles	4	4	4	4	4	4	4
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	230/460	380	400	415	380	400	415
Rated current [A]	340/170	169	160	156	205	194	189
L. R. Amperes [A]	2244/1122	1183	1104	1170	1189	1125	1191
LRC [A]	6.6x(Code G)	7.0x(Code G)	6.9x(Code G)	7.5x(Code H)	5.8x(Code F)	5.8x(Code F)	6.3x(Code G)
No load current [A]	116/58.0	58.0	61.2	64.0	58.0	61.2	64.0
Rated speed [RPM]	1784	1484	1486	1487	1475	1480	1482
Slip [%]	0.89	1.07	0.93	0.87	1.67	1.33	1.20
Rated torque [kgfm]	61.0	61.1	61.0	61.0	73.8	73.6	73.5
Locked rotor torque [%]	200	190	220	229	160	180	190
Breakdown torque [%]	250	240	260	290	200	220	240
Service factor	1.15	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	48s (cold) 27s (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>	73.0 dB(A)	69.0 dB(A)	69.0 dB(A)	69.0 dB(A)	69.0 dB(A)	69.0 dB(A)	69.0 dB(A)
Efficiency (%)	25%						
	50%	95.4	95.1	95.1	94.8	95.4	95.4
	75%	95.8	95.5	95.5	95.5	95.4	95.4
	100%	95.8	95.3	95.3	95.5	95.0	95.4
Power Factor	25%						
	50%	0.74	0.73	0.70	0.68	0.79	0.76
	75%	0.82	0.83	0.81	0.79	0.85	0.83
	100%	0.85	0.85	0.85	0.84	0.86	0.86

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

Losses (%)	P1 (0,9;1,0)	4.5	4.5	4.5	4.5	4.5	4.5
	P2 (0,5;1,0)	3.5	3.5	3.5	3.5	3.5	3.5
	P3 (0,25;1,0)	3.1	3.1	3.1	3.1	3.1	3.1
	P4 (0,9;0,5)	2.4	2.4	2.4	2.4	2.4	2.4
	P5 (0,5;0,5)	1.5	1.5	1.5	1.5	1.5	1.5
	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 :	Drive end : 6319 C3	Non drive end : 6316 C3	Foundation loads Max. traction Max. compression
Sealing :	Viton Lip Seal	Viton Seal	
Lubrication interval :	4000 h	5000 h	
Lubricant amount :	45 g	34 g	
Lubricant type :	Mobil Polyrex EM		

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## Three Phase Induction Motor - Squirrel Cage



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

Notes  
USABLE @208V 376A SF 1.00 SFA 376A

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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# LOAD PERFORMANCE CURVE

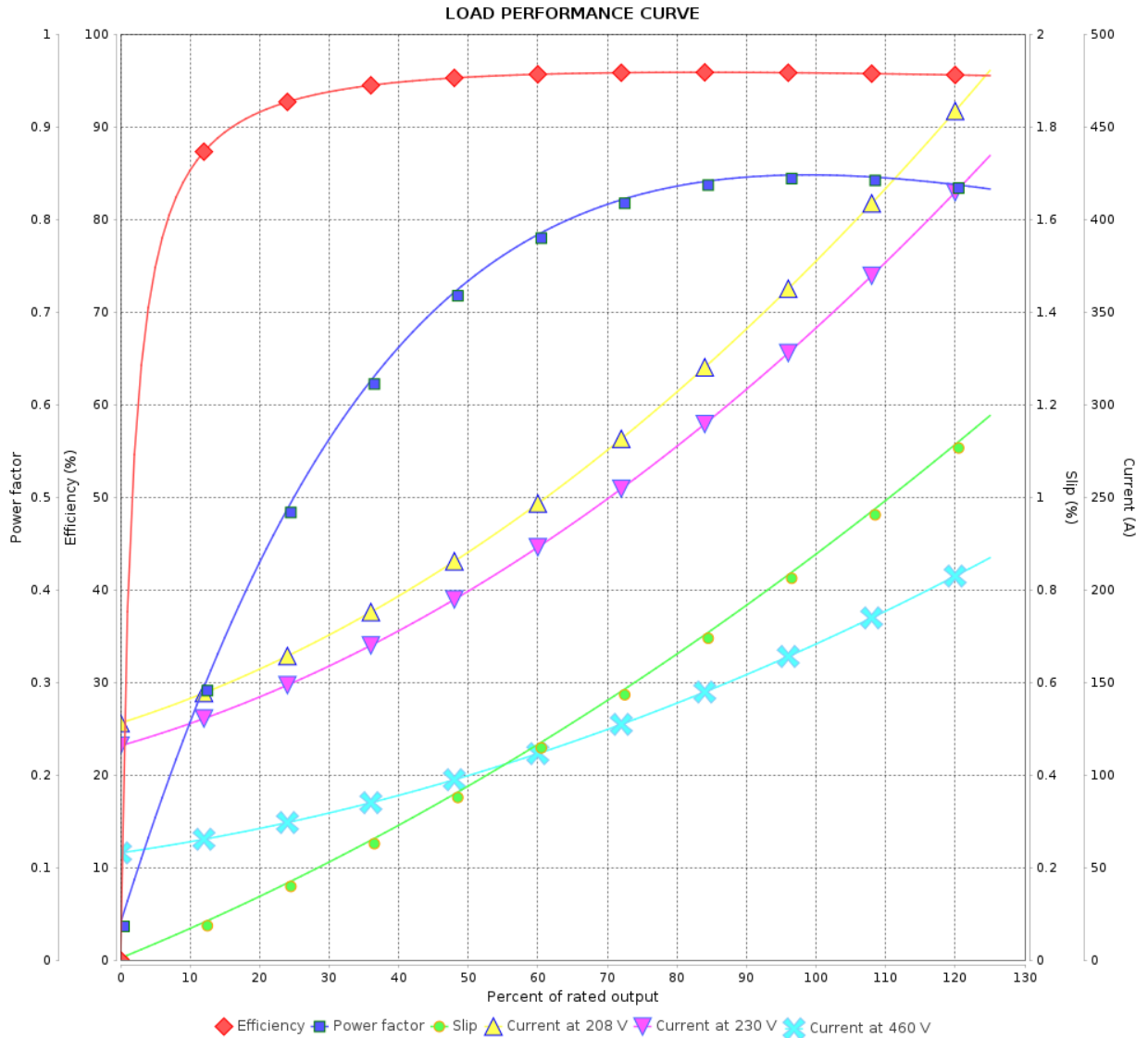
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 P Base NEMA Premium  
Efficiency Three-Phase

Product code : 14168114



Performance : 230/460 V 60 Hz 4P

Rated current : 340/170 A  
LRC : 6.6  
Rated torque : 61.0 kgfm  
Locked rotor torque : 200 %  
Breakdown torque : 250 %  
Rated speed : 1784 rpm

Moment of inertia (J) : 2.81 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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# LOAD PERFORMANCE CURVE

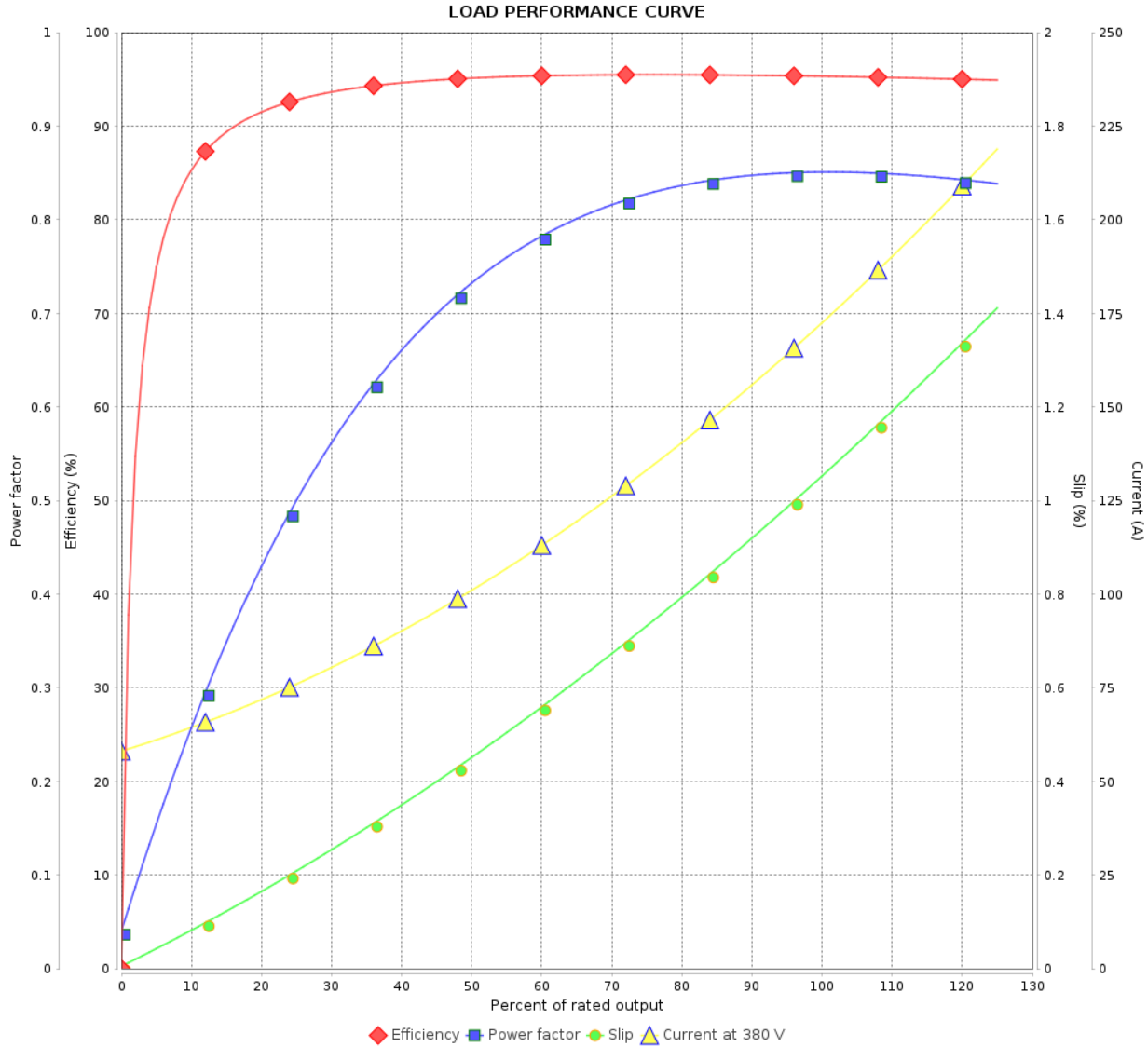
Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 P Base NEMA Premium  
Efficiency Three-Phase

Product code : 14168114



Performance : 380 V 50 Hz 4P IE3

Rated current : 169 A  
LRC : 7.0  
Rated torque : 61.1 kgfm  
Locked rotor torque : 190 %  
Breakdown torque : 240 %  
Rated speed : 1484 rpm

Moment of inertia (J) : 2.81 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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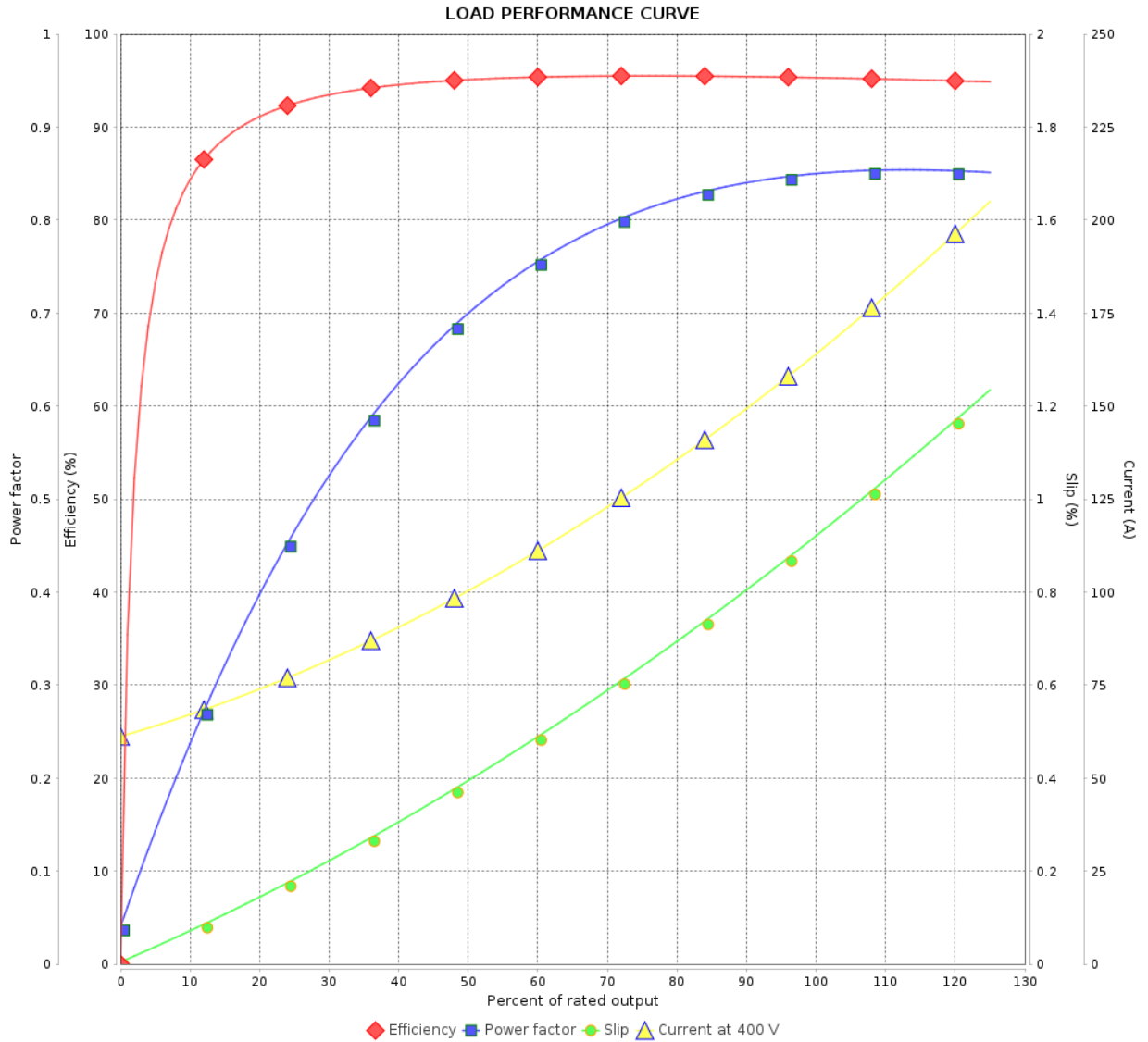
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 P Base NEMA Premium  
Efficiency Three-Phase

Product code : 14168114



Performance : 400 V 50 Hz 4P IE3

Rated current : 160 A  
 LRC : 6.9  
 Rated torque : 61.0 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 260 %  
 Rated speed : 1486 rpm

Moment of inertia (J) : 2.81 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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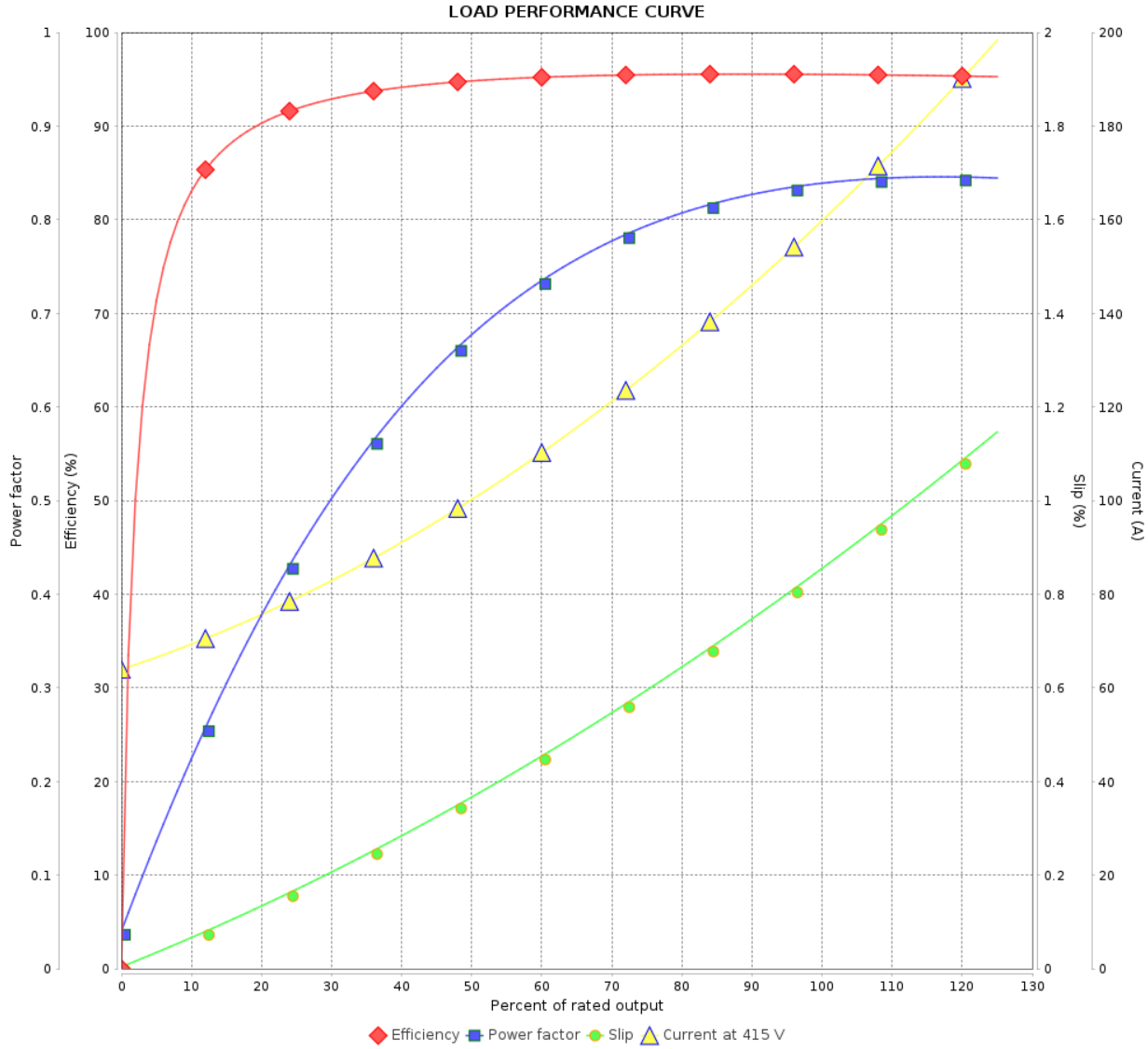
Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 P Base NEMA Premium  
Efficiency Three-Phase

Product code : 14168114



Performance : 415 V 50 Hz 4P IE3

Rated current : 156 A  
LRC : 7.5  
Rated torque : 61.0 kgfm  
Locked rotor torque : 229 %  
Breakdown torque : 290 %  
Rated speed : 1487 rpm

Moment of inertia (J) : 2.81 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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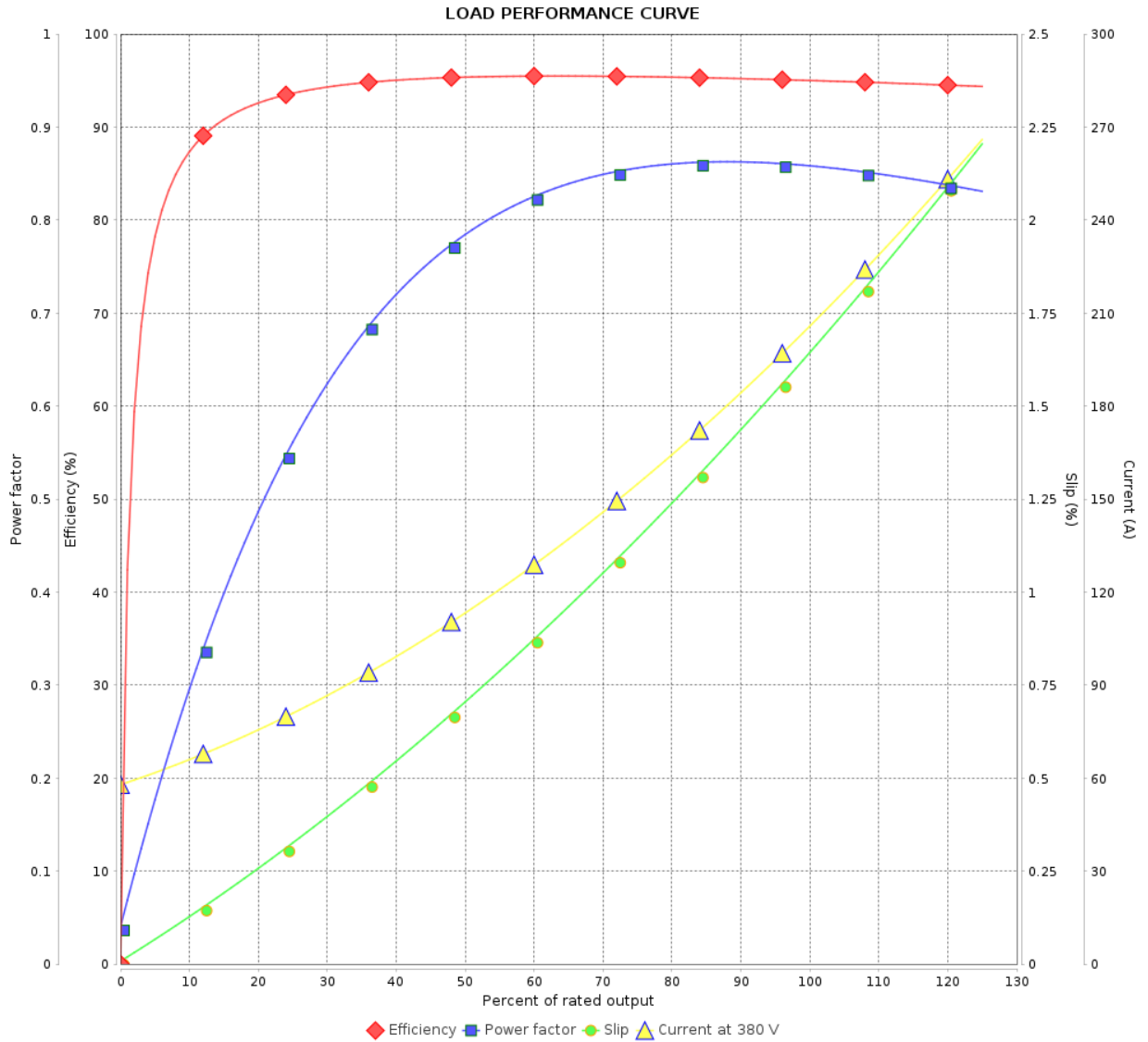
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 P Base NEMA Premium  
Efficiency Three-Phase

Product code : 14168114



Performance : 380 V 50 Hz 4P IE2

Rated current : 205 A  
 LRC : 5.8  
 Rated torque : 73.8 kgfm  
 Locked rotor torque : 160 %  
 Breakdown torque : 200 %  
 Rated speed : 1475 rpm

Moment of inertia (J) : 2.81 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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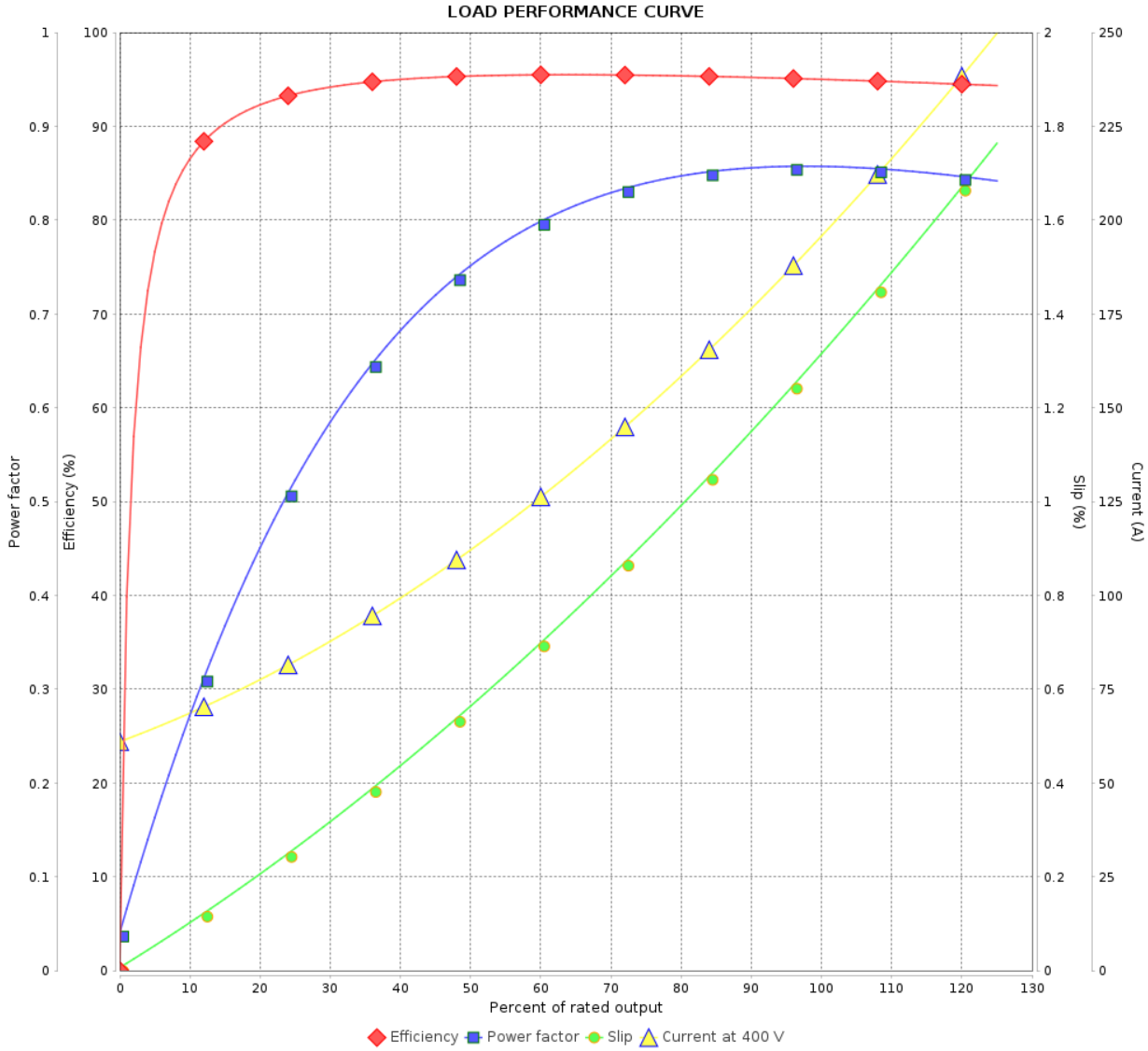
Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 P Base NEMA Premium  
Efficiency Three-Phase

Product code : 14168114



Performance : 400 V 50 Hz 4P IE2

Rated current : 194 A  
LRC : 5.8  
Rated torque : 73.6 kgfm  
Locked rotor torque : 180 %  
Breakdown torque : 220 %  
Rated speed : 1480 rpm

Moment of inertia (J) : 2.81 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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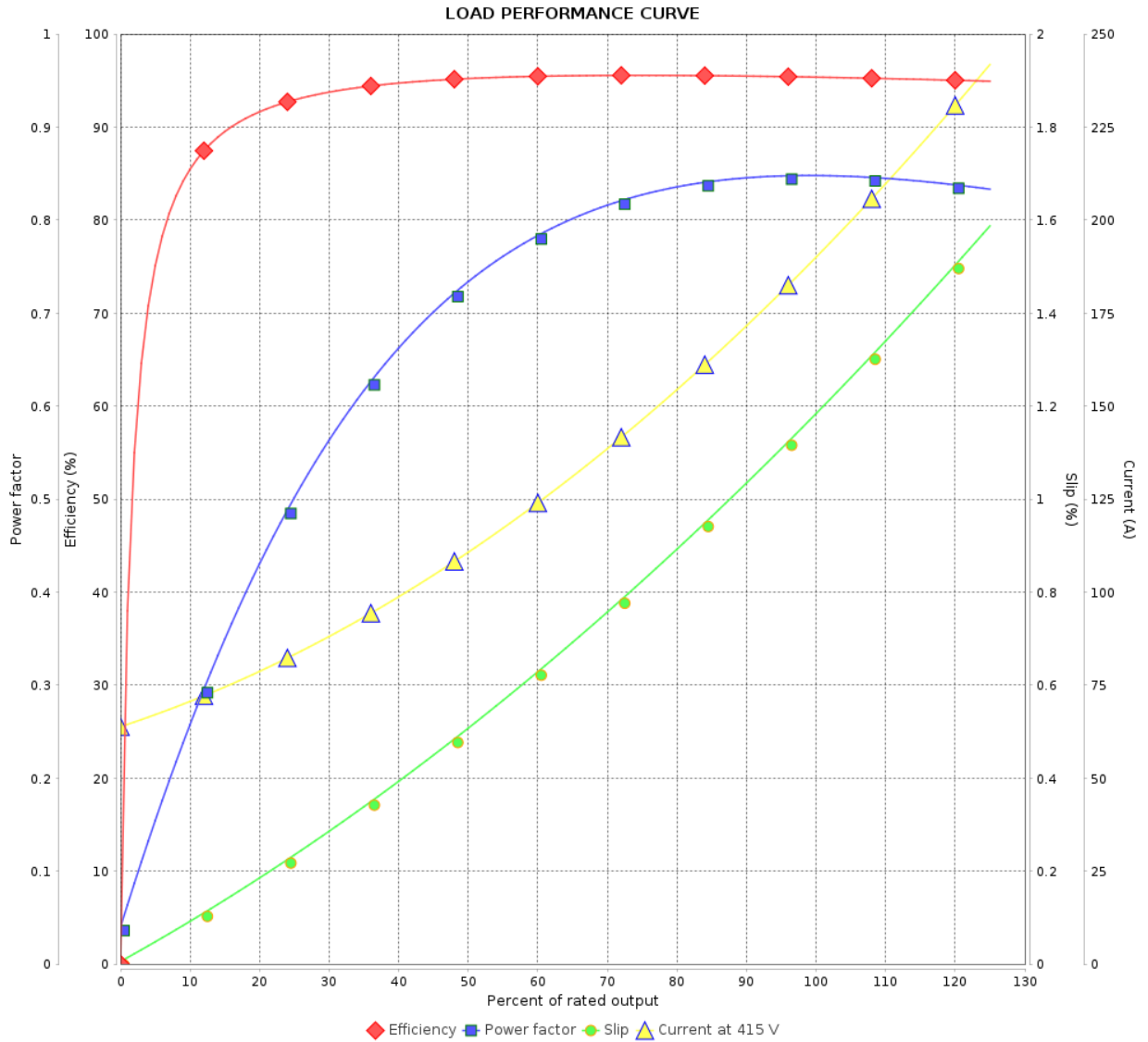
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 P Base NEMA Premium  
Efficiency Three-Phase

Product code : 14168114



Performance : 415 V 50 Hz 4P IE3

Rated current : 189 A  
 LRC : 6.3  
 Rated torque : 73.5 kgfm  
 Locked rotor torque : 190 %  
 Breakdown torque : 240 %  
 Rated speed : 1482 rpm

Moment of inertia (J) : 2.81 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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