

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :								
Product line	: W22 NEMA Premium Efficiency Three-Phase	Product code :	12447060					
Frame	: 254/6TC	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>	: 124 kg					
Protection degree	: IP55	Moment of inertia (J)	: 0.0530 kgm <sup>2</sup>					
Design	: B							
Output [HP]	15	10	10	10	15	15	15	
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]	34.5/17.2	14.5	14.0	13.7	21.0	19.9	19.3	
L. R. Amperes [A]	231/116	109	117	116	107	112	118	
LRC [A]	6.7x(Code G)	7.5x(Code J)	8.3x(Code K)	8.5x(Code K)	5.1x(Code E)	5.6x(Code F)	6.1x(Code G)	
No load current [A]	10.6/5.30	5.10	5.40	5.70	5.10	5.40	5.70	
Rated speed [RPM]	3532	2945	2952	2957	2900	2915	2925	
Slip [%]	1.89	1.83	1.60	1.43	3.33	2.83	2.50	
Rated torque [kgfm]	3.08	2.46	2.46	2.45	3.75	3.73	3.72	
Locked rotor torque [%]	220	200	229	250	170	190	200	
Breakdown torque [%]	270	310	350	380	200	229	240	
Service factor	1.25	1.25	1.25	1.25	1.00	1.00	1.15	
Temperature rise	80 K	80 K	80 K	80 K	105 K	105 K	105 K	
Locked rotor time	36s (cold) 20s (hot)	50s (cold) 28s (hot)	45s (cold) 25s (hot)	41s (cold) 23s (hot)	25s (cold) 14s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (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%	0.000						
	50%	89.5	90.3	90.1	89.9	89.5	90.2	
	75%	91.0	90.5	90.7	90.8	90.2	90.2	
	100%	91.0	90.5	90.7	90.8	88.5	89.5	
Power Factor	25%	0.00						
	50%	0.77	0.73	0.69	0.67	0.82	0.80	
	75%	0.85	0.83	0.80	0.78	0.88	0.87	
	100%	0.88	0.87	0.85	0.84	0.90	0.89	
Losses at normative operating points (speed;torque), in percentage of rated output power								
Losses (%)	P1 (0,9;1,0)	9.1	9.6	9.4	9.3	11.9	10.8	10.0
	P2 (0,5;1,0)	6.6	7.1	6.9	6.8	8.7	7.9	7.3
	P3 (0,25;1,0)	6.2	6.6	6.5	6.4	8.2	7.4	6.8
	P4 (0,9;0,5)	5.1	5.4	5.3	5.2	6.7	6.1	5.6
	P5 (0,5;0,5)	2.8	2.9	2.9	2.8	3.6	3.3	3.0
	P6 (0,5;0,25)	1.9	2.0	2.0	1.9	2.5	2.2	2.1
	P7 (0,25;0,25)	1.1	1.2	1.1	1.1	1.4	1.3	1.2
Bearing type	: Drive end 6309 C3	Non drive end 6209 C3	Foundation loads					
Sealing	: V'Ring	V'Ring	Max. traction	: 78 kgf				
Lubrication interval	: 19000 h	20000 h	Max. compression	: 202 kgf				
Lubricant amount	: 13 g	9 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 38.0A SF 1.15 SFA 43.7A

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# LOAD PERFORMANCE CURVE

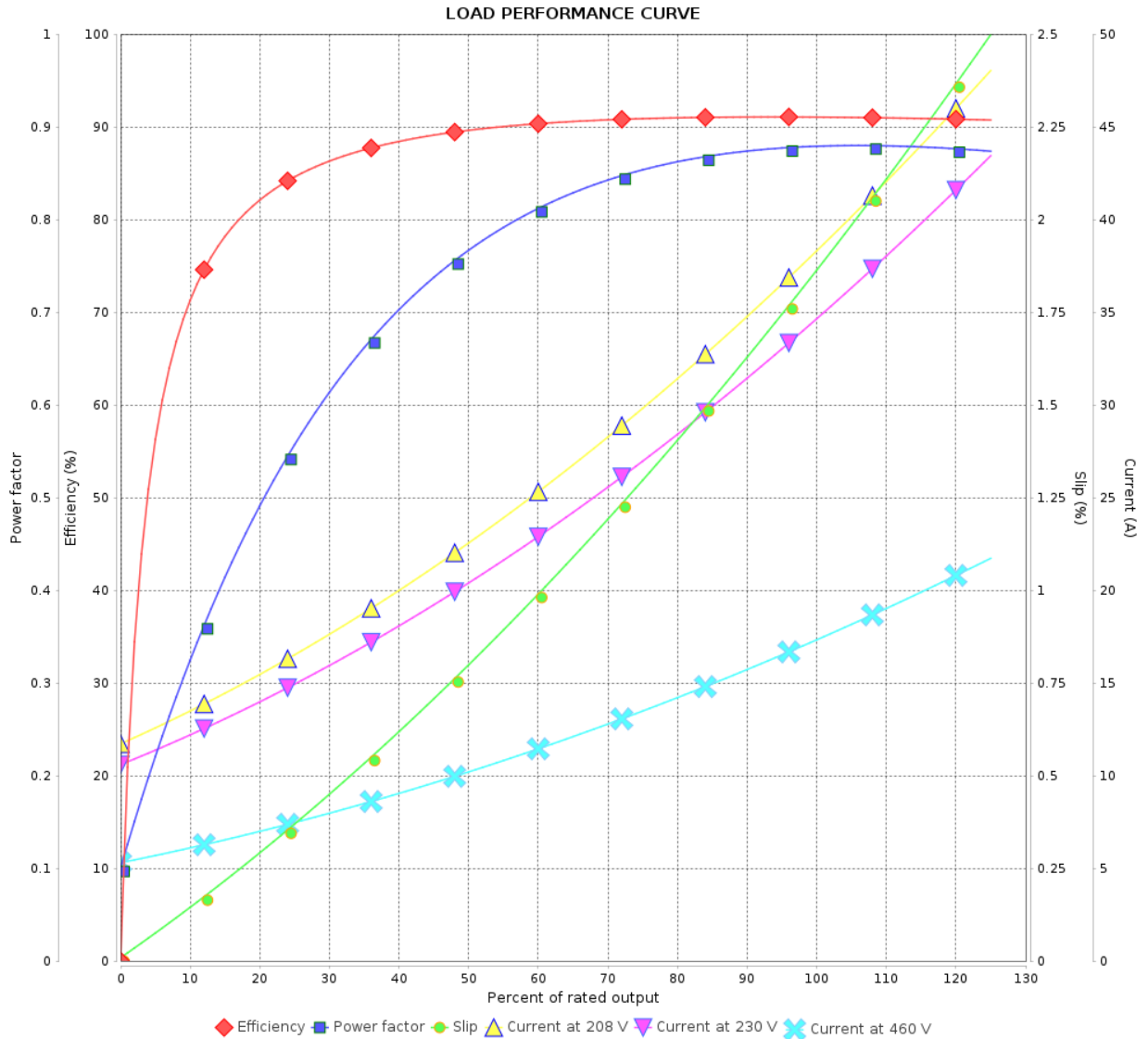
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12447060



Performance : 230/460 V 60 Hz 2P

Rated current : 34.5/17.2 A  
 LRC : 6.7  
 Rated torque : 3.08 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 270 %  
 Rated speed : 3532 rpm

Moment of inertia (J) : 0.0530 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

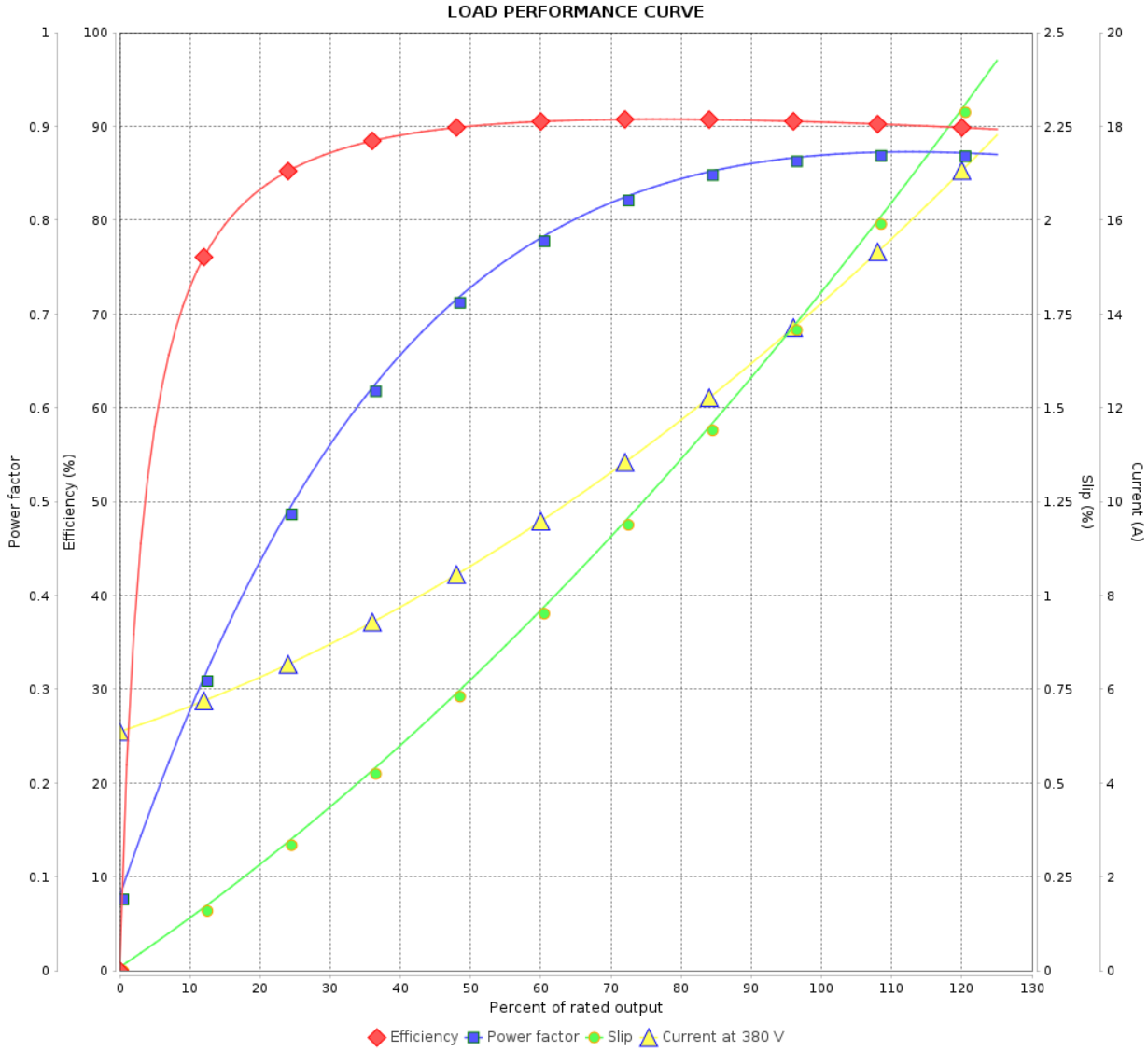
Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12447060



Performance : 380 V 50 Hz 2P IE3

Rated current : 14.5 A  
 LRC : 7.5  
 Rated torque : 2.46 kgfm  
 Locked rotor torque : 200 %  
 Breakdown torque : 310 %  
 Rated speed : 2945 rpm

Moment of inertia (J) : 0.0530 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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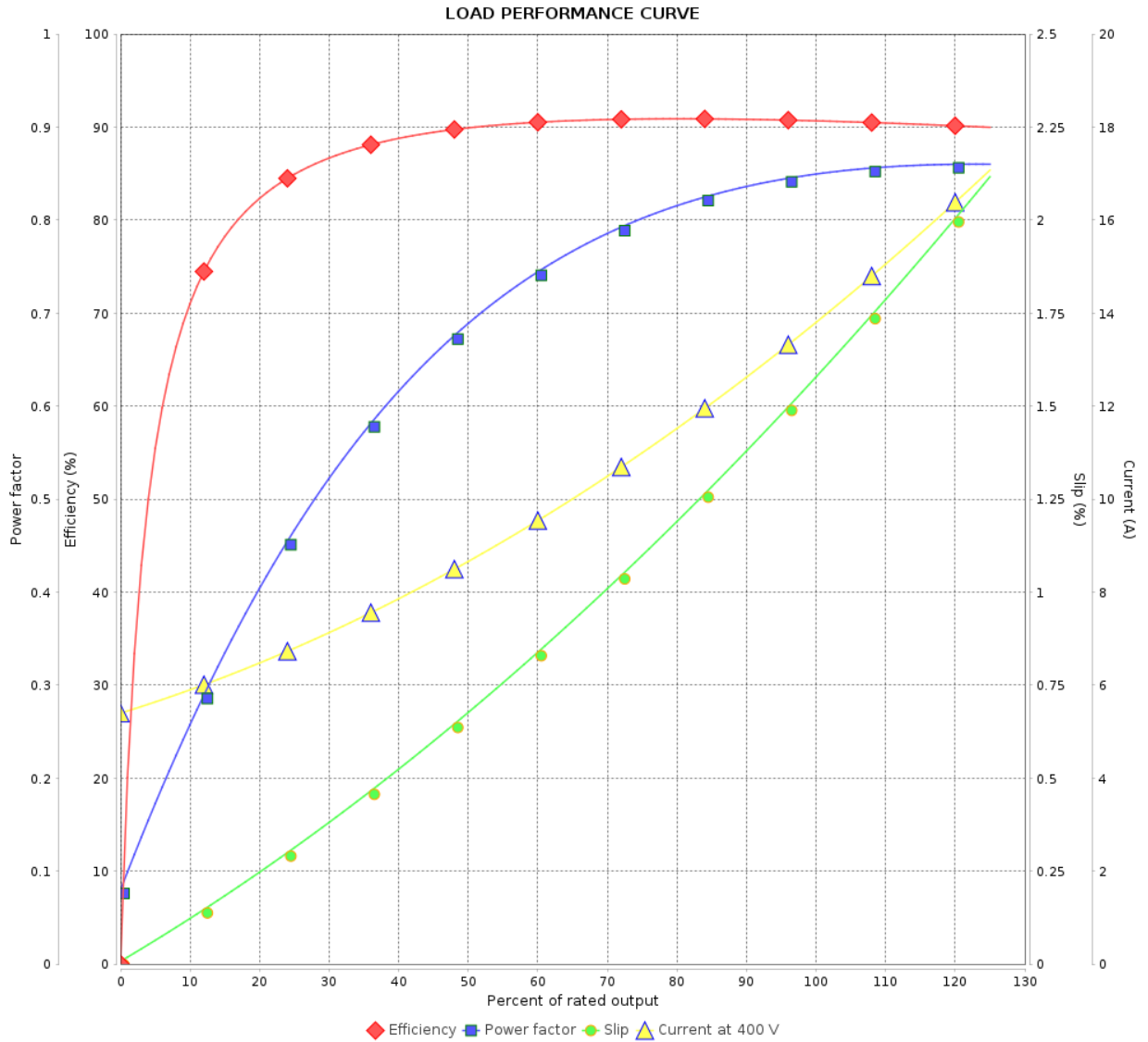
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12447060



Performance : 400 V 50 Hz 2P IE3

Rated current : 14.0 A  
 LRC : 8.3  
 Rated torque : 2.46 kgfm  
 Locked rotor torque : 229 %  
 Breakdown torque : 350 %  
 Rated speed : 2952 rpm

Moment of inertia (J) : 0.0530 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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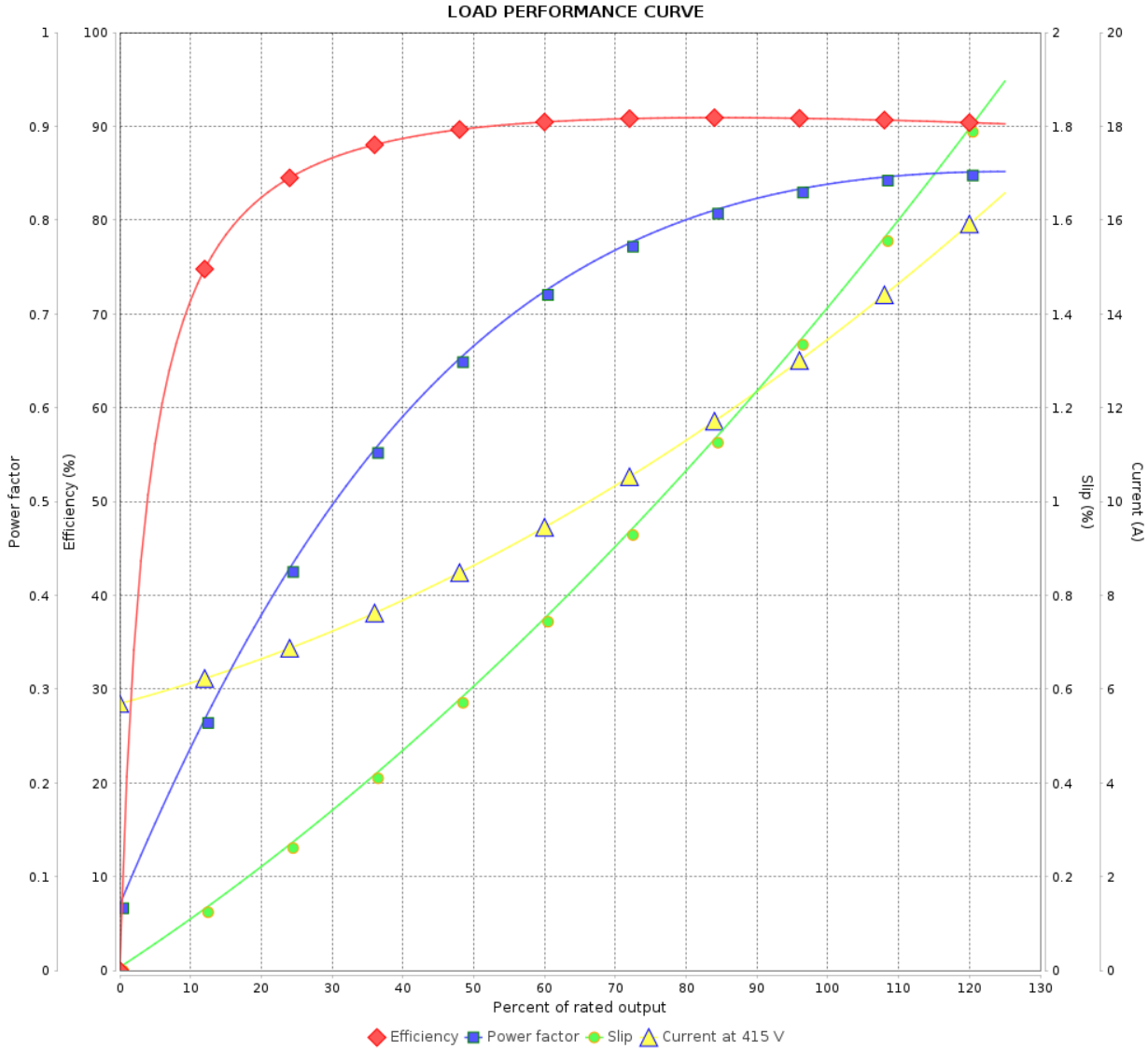
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12447060



Performance : 415 V 50 Hz 2P IE3

Rated current : 13.7 A  
 LRC : 8.5  
 Rated torque : 2.45 kgfm  
 Locked rotor torque : 250 %  
 Breakdown torque : 380 %  
 Rated speed : 2957 rpm

Moment of inertia (J) : 0.0530 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

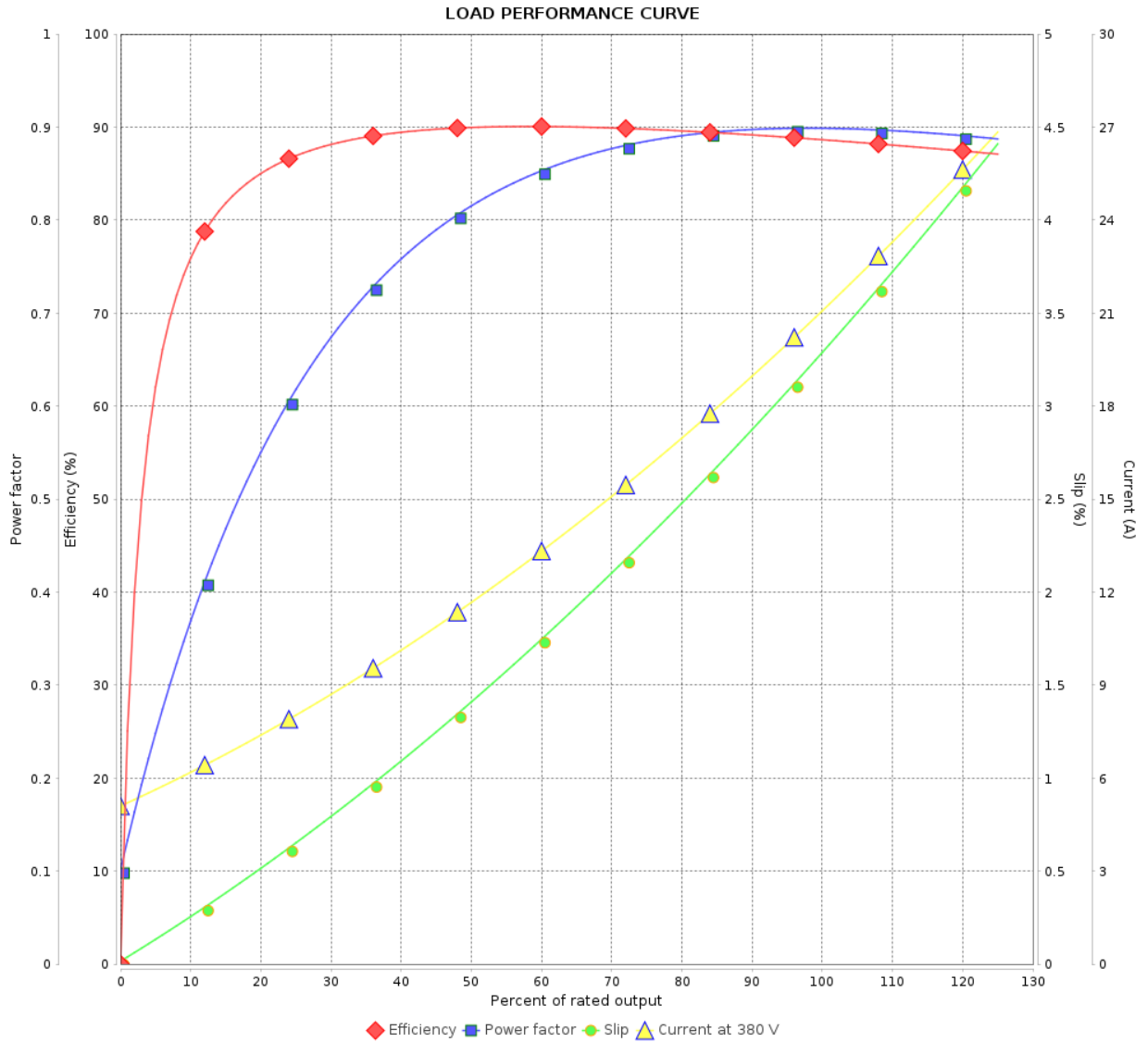
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12447060



Performance : 380 V 50 Hz 2P IE1

Rated current : 21.0 A  
 LRC : 5.1  
 Rated torque : 3.75 kgfm  
 Locked rotor torque : 170 %  
 Breakdown torque : 200 %  
 Rated speed : 2900 rpm

Moment of inertia (J) : 0.0530 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

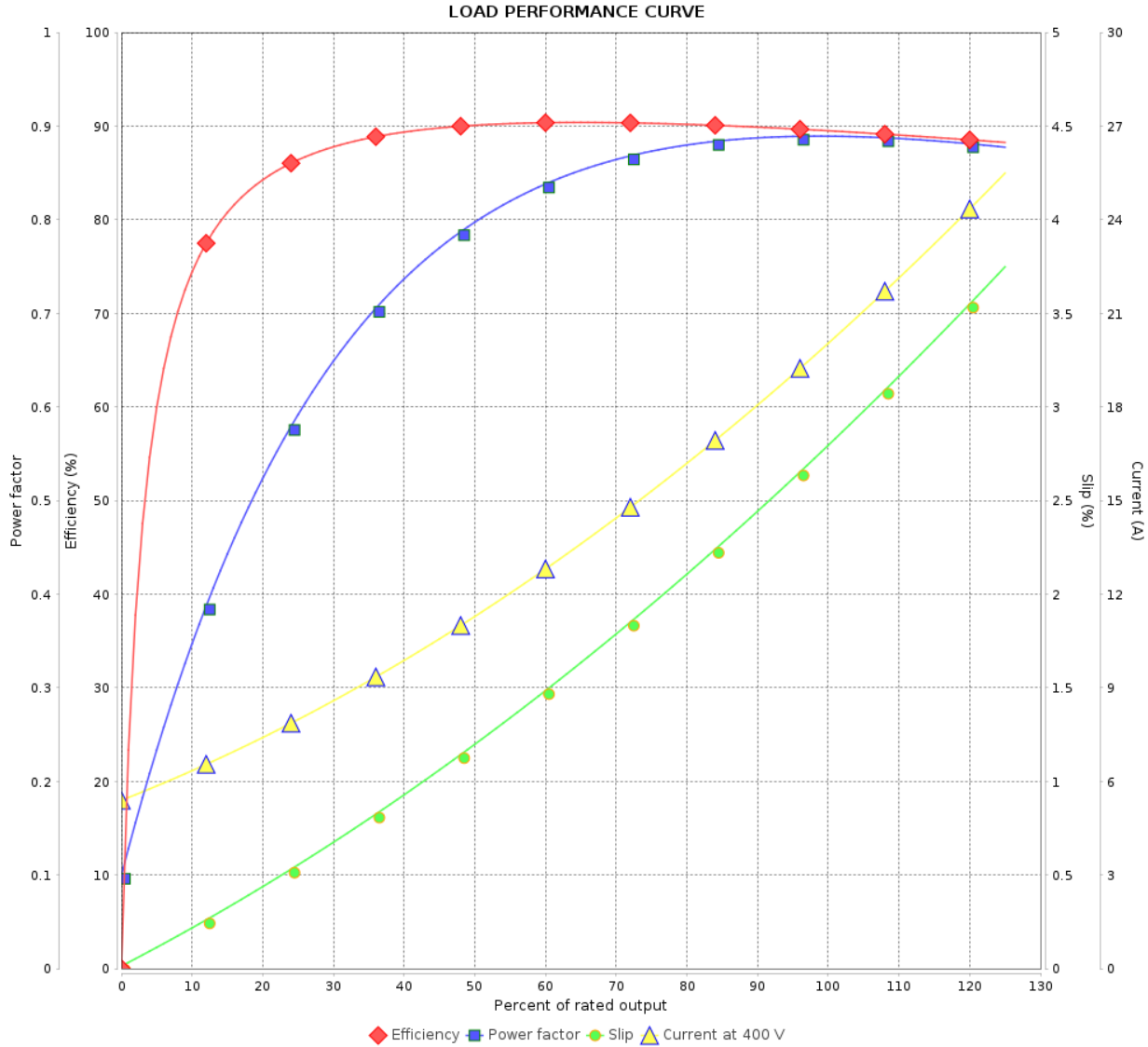
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12447060



Performance : 400 V 50 Hz 2P IE2

Rated current : 19.9 A  
 LRC : 5.6  
 Rated torque : 3.73 kgfm  
 Locked rotor torque : 190 %  
 Breakdown torque : 229 %  
 Rated speed : 2915 rpm

Moment of inertia (J) : 0.0530 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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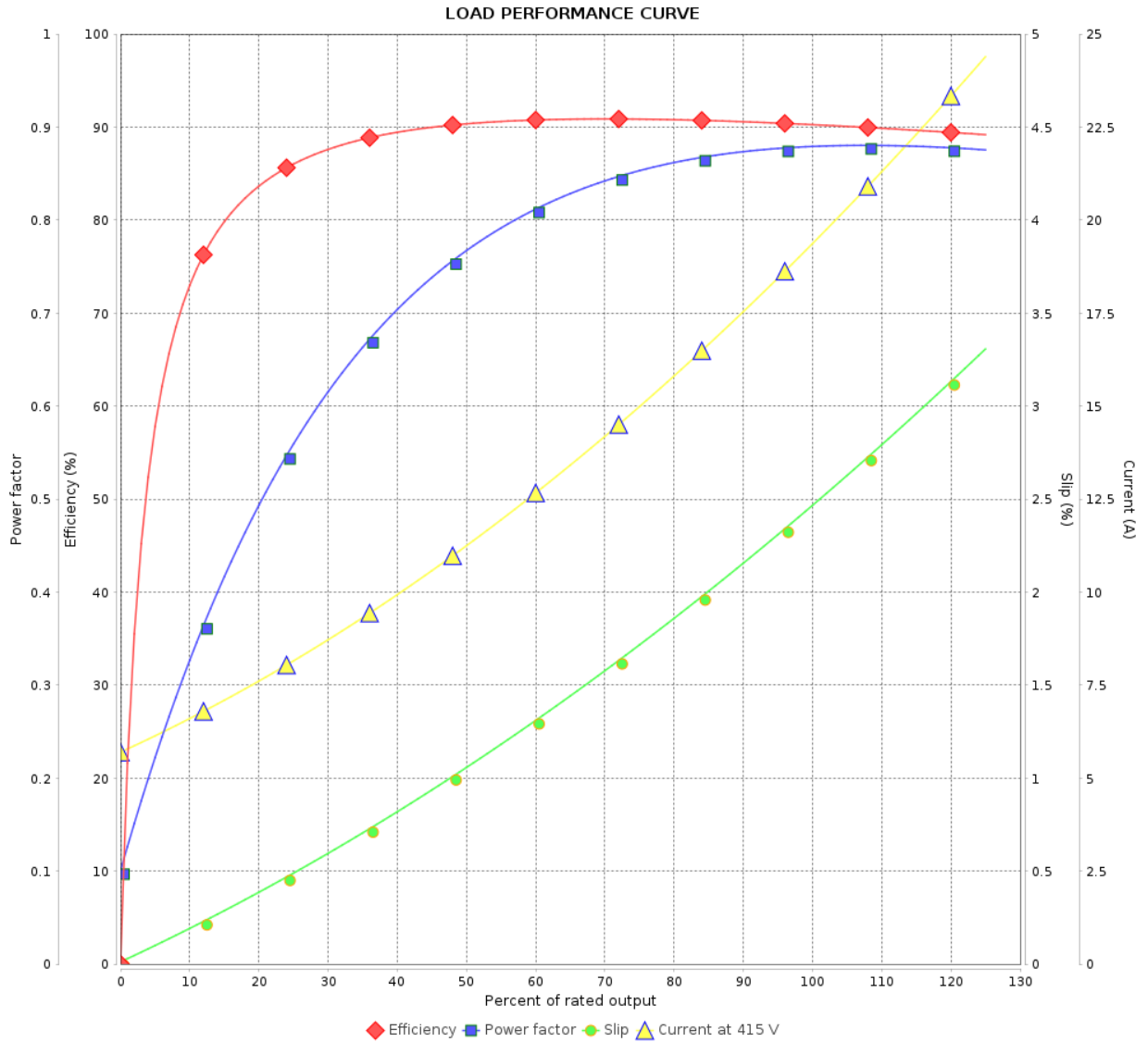
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12447060



Performance : 415 V 50 Hz 2P IE2

Rated current : 19.3 A  
 LRC : 6.1  
 Rated torque : 3.72 kgfm  
 Locked rotor torque : 200 %  
 Breakdown torque : 240 %  
 Rated speed : 2925 rpm

Moment of inertia (J) : 0.0530 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 105 K  
 Design : B

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