

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :								
Product line	: W22 NEMA Premium Efficiency Three-Phase	Product code :	11413120					
Frame	: 284/6TS	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>	: 173 kg					
Protection degree	: IP55	Moment of inertia (J)	: 0.1419 kgm <sup>2</sup>					
Design	: B							
Output [HP]	30	25	25	25	30	30	30	
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]	68.4/34.2	34.2	32.8	32.0	42.0	39.6	38.2	
L. R. Amperes [A]	431/216	202	220	231	206	218	229	
LRC [A]	6.3x(Code G)	5.9x(Code F)	6.7x(Code G)	7.2x(Code H)	4.9x(Code E)	5.5x(Code F)	6.0x(Code F)	
No load current [A]	18.2/9.10	9.00	10.0	10.5	9.00	10.0	10.5	
Rated speed [RPM]	3545	2940	2950	2955	2910	2930	2935	
Slip [%]	1.53	2.00	1.67	1.50	3.00	2.33	2.17	
Rated torque [kgfm]	6.14	6.17	6.15	6.14	7.48	7.43	7.42	
Locked rotor torque [%]	200	190	220	229	160	180	190	
Breakdown torque [%]	250	229	270	290	200	220	240	
Service factor	1.25	1.00	1.00	1.00	1.00	1.00	1.00	
Temperature rise	80 K	105 K	80 K	80 K	105 K	105 K	105 K	
Locked rotor time	27s (cold) 15s (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>	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%	91.7	91.0	91.1	91.2	91.7	91.7	
	75%	91.7	91.5	91.5	91.8	90.2	91.0	
	100%	91.7	92.4	92.4	92.4	89.5	90.2	
Power Factor	25%	0.00						
	50%	0.80	0.80	0.78	0.76	0.84	0.82	
	75%	0.86	0.87	0.85	0.84	0.88	0.87	
	100%	0.88	0.89	0.88	0.87	0.89	0.89	
Losses at normative operating points (speed;torque), in percentage of rated output power								
Losses (%)	P1 (0,9;1,0)	8.6	7.8	7.8	7.8	11.2	10.3	9.4
	P2 (0,5;1,0)	6.7	6.1	6.1	6.1	8.7	8.1	7.4
	P3 (0,25;1,0)	5.9	5.3	5.3	5.3	7.6	7.0	6.4
	P4 (0,9;0,5)	4.2	3.8	3.8	3.8	5.4	5.0	4.6
	P5 (0,5;0,5)	2.5	2.3	2.3	2.3	3.2	3.0	2.7
	P6 (0,5;0,25)	1.5	1.4	1.4	1.4	2.0	1.8	1.7
	P7 (0,25;0,25)	0.9	0.8	0.8	0.8	1.2	1.1	1.0
Bearing type	: Drive end 6311 C3	Non drive end 6211 C3	Foundation loads					
Sealing	: V'Ring	V'Ring	Max. traction	: 168 kgf				
Lubrication interval	: 14000 h	17000 h	Max. compression	: 341 kgf				
Lubricant amount	: 18 g	11 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 76.7A SF 1.10 SFA 84.4A

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# LOAD PERFORMANCE CURVE

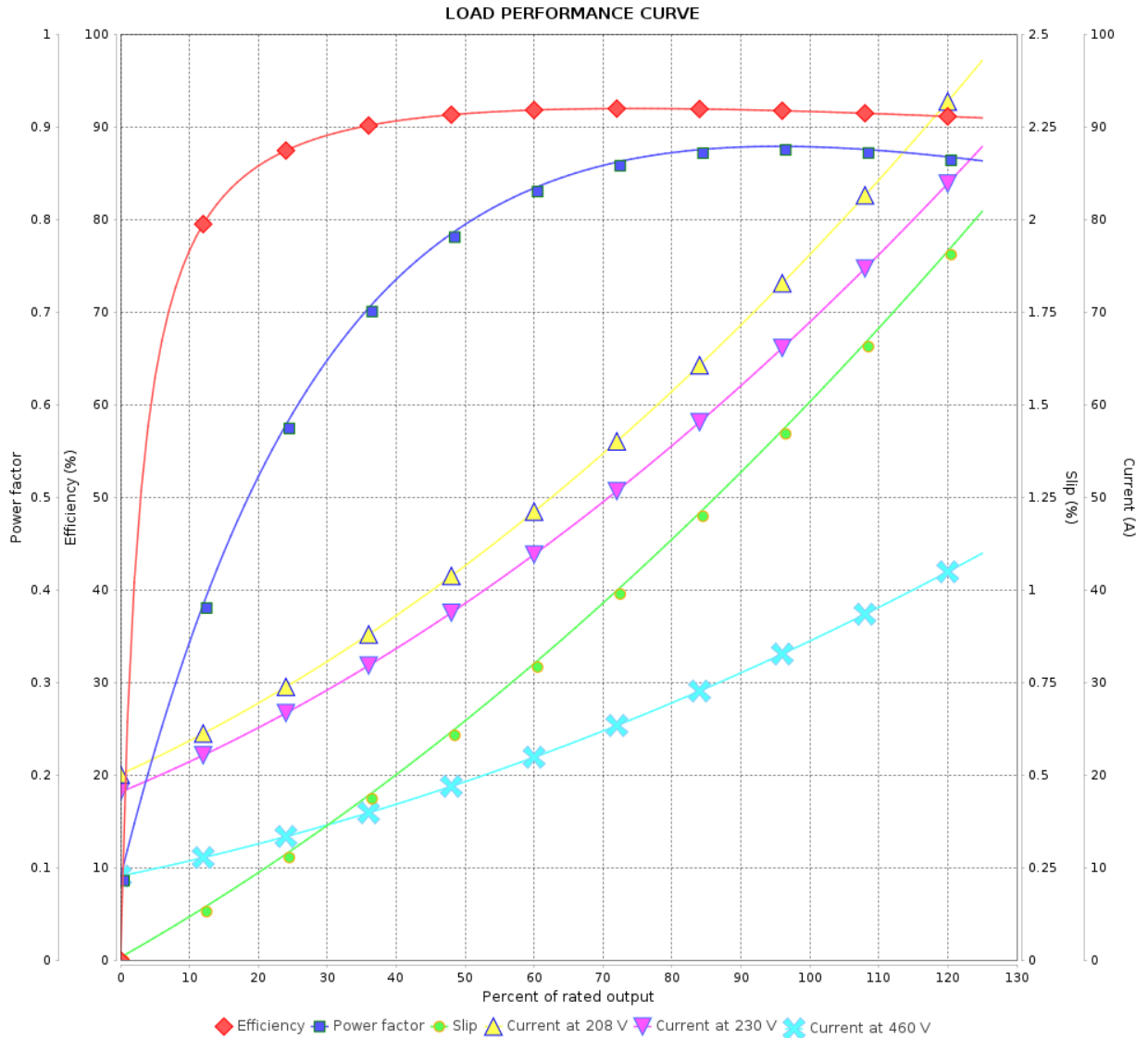
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11413120



Performance : 230/460 V 60 Hz 2P

Rated current : 68.4/34.2 A  
 LRC : 6.3  
 Rated torque : 6.14 kgfm  
 Locked rotor torque : 200 %  
 Breakdown torque : 250 %  
 Rated speed : 3545 rpm

Moment of inertia (J) : 0.1419 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

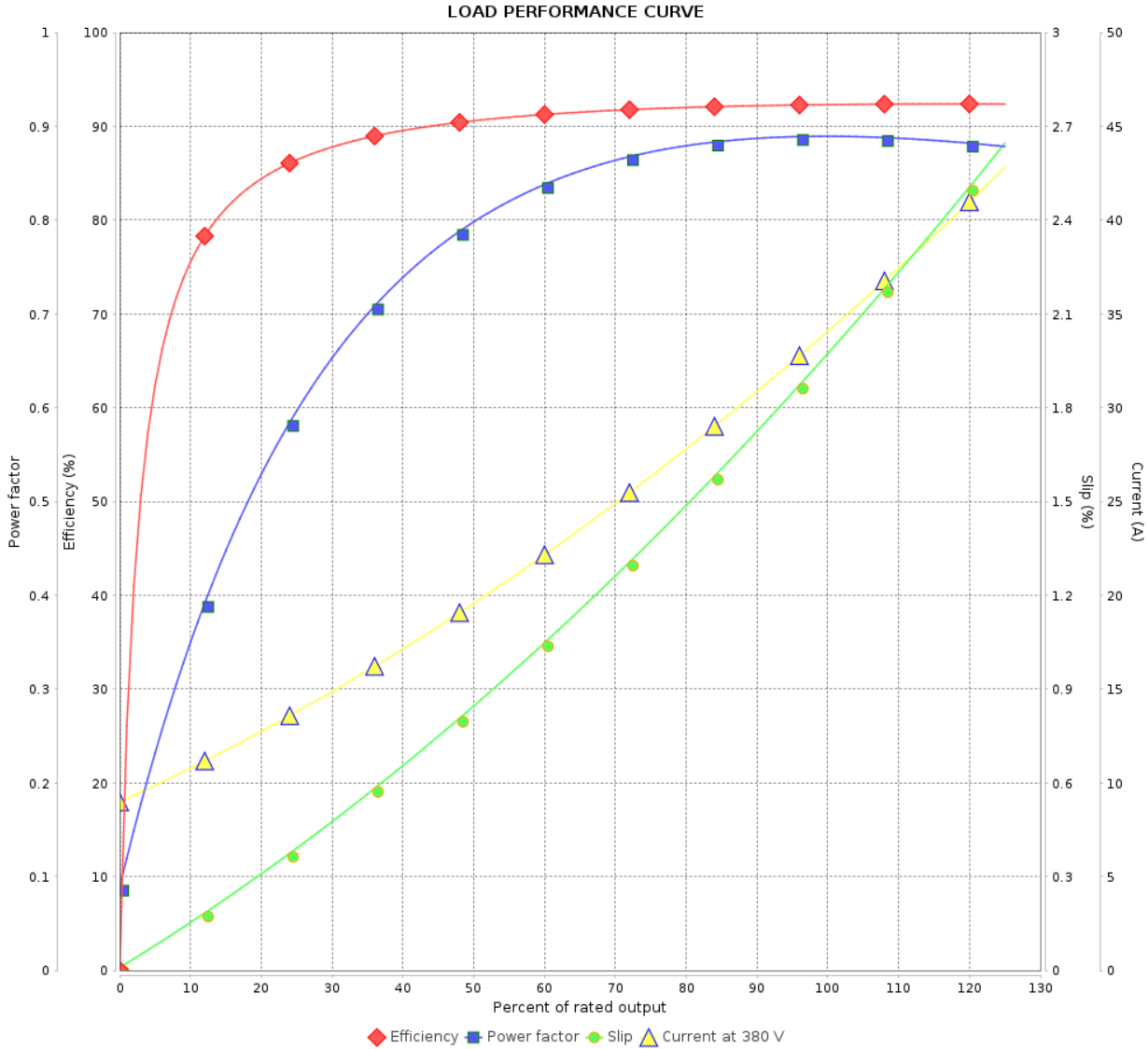
Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11413120



Performance : 380 V 50 Hz 2P IE3

Rated current : 34.2 A  
 LRC : 5.9  
 Rated torque : 6.17 kgfm  
 Locked rotor torque : 190 %  
 Breakdown torque : 229 %  
 Rated speed : 2940 rpm

Moment of inertia (J) : 0.1419 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

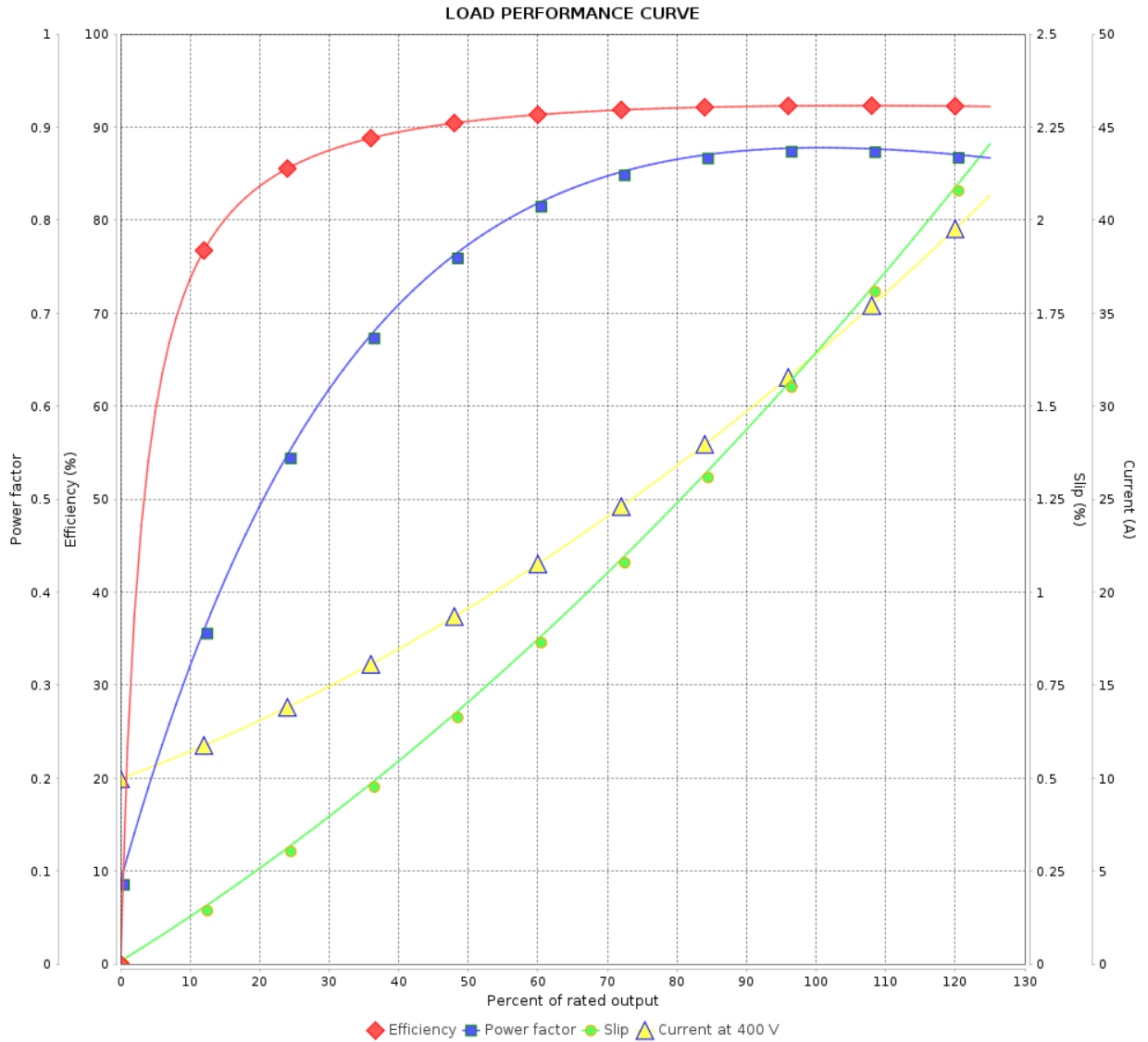
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11413120



Performance : 400 V 50 Hz 2P IE3

Rated current : 32.8 A  
 LRC : 6.7  
 Rated torque : 6.15 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 270 %  
 Rated speed : 2950 rpm

Moment of inertia (J) : 0.1419 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

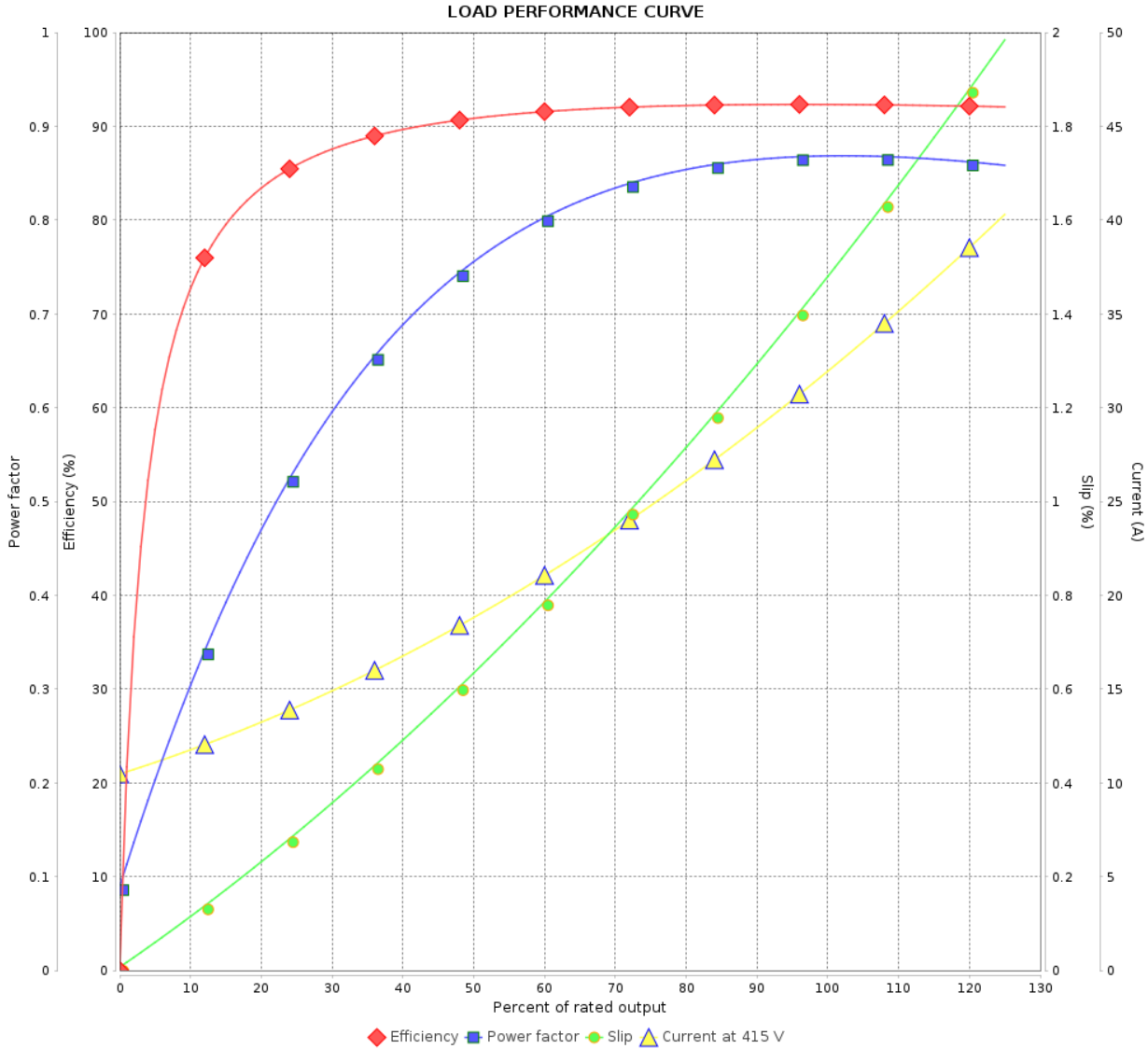
Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11413120



Performance : 415 V 50 Hz 2P IE3

Rated current : 32.0 A  
 LRC : 7.2  
 Rated torque : 6.14 kgfm  
 Locked rotor torque : 229 %  
 Breakdown torque : 290 %  
 Rated speed : 2955 rpm

Moment of inertia (J) : 0.1419 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

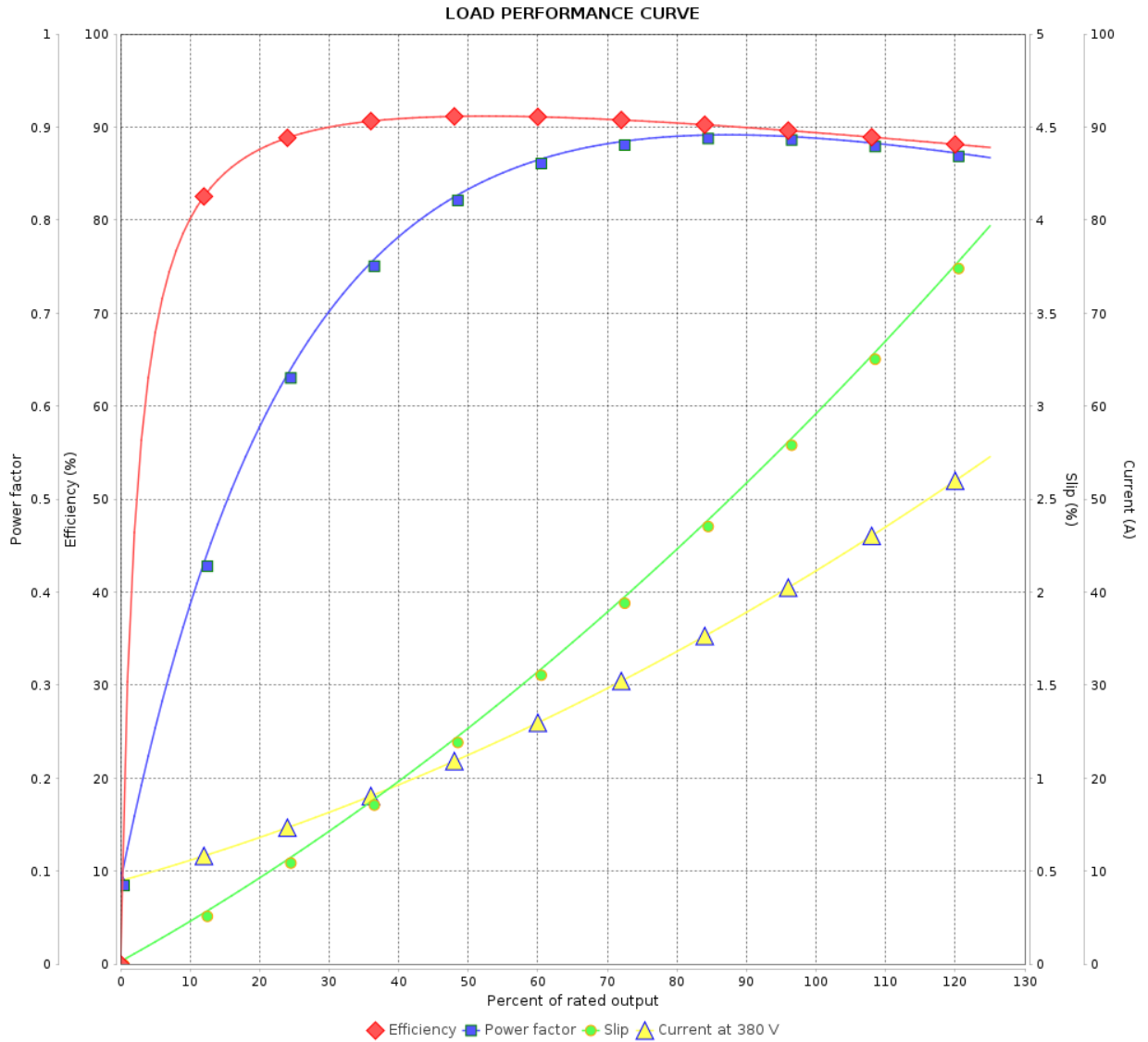
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11413120



Performance : 380 V 50 Hz 2P

Rated current : 42.0 A  
 LRC : 4.9  
 Rated torque : 7.48 kgfm  
 Locked rotor torque : 160 %  
 Breakdown torque : 200 %  
 Rated speed : 2910 rpm

Moment of inertia (J) : 0.1419 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

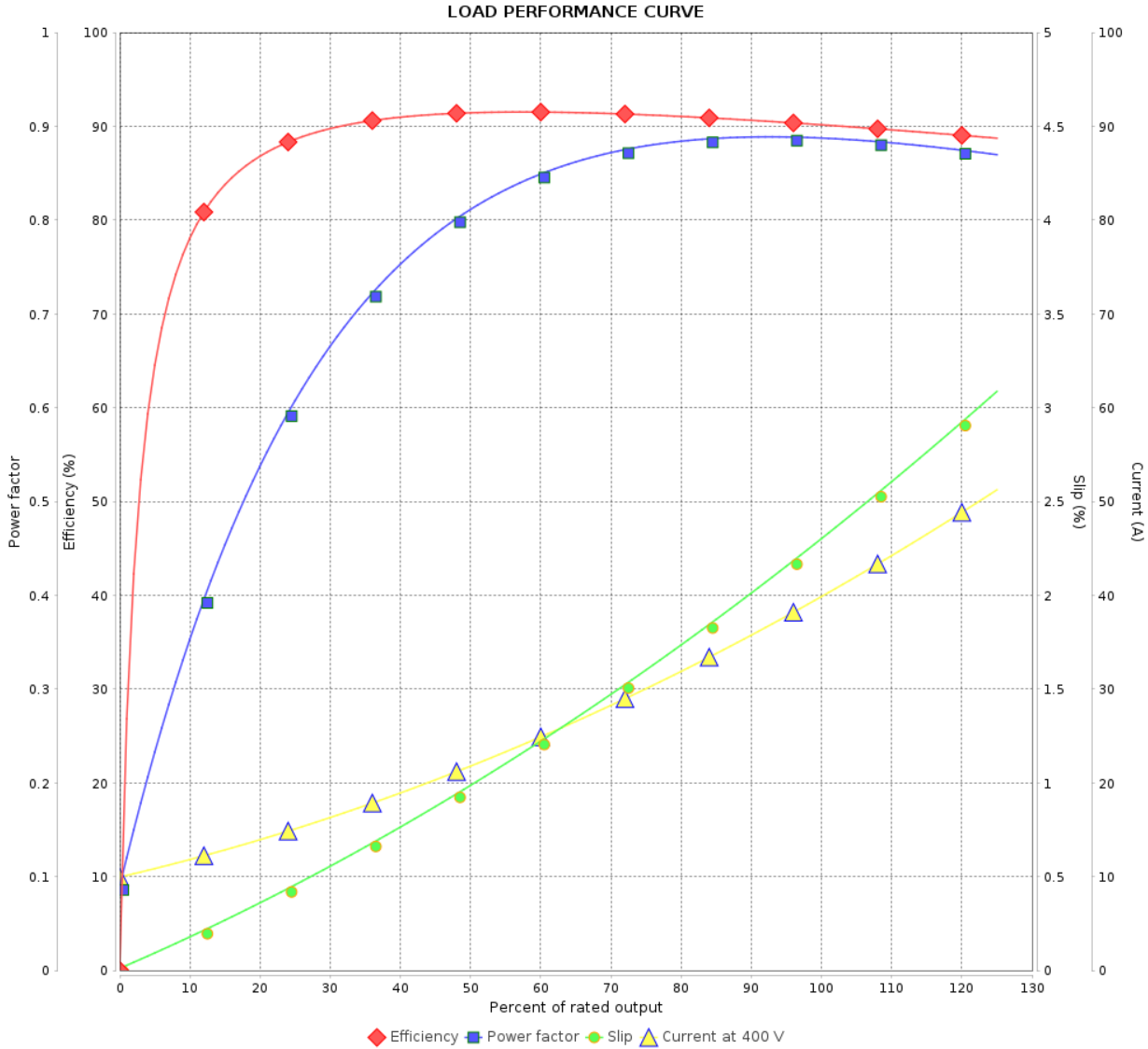
Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11413120



Performance : 400 V 50 Hz 2P IE1

Rated current : 39.6 A  
 LRC : 5.5  
 Rated torque : 7.43 kgfm  
 Locked rotor torque : 180 %  
 Breakdown torque : 220 %  
 Rated speed : 2930 rpm

Moment of inertia (J) : 0.1419 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

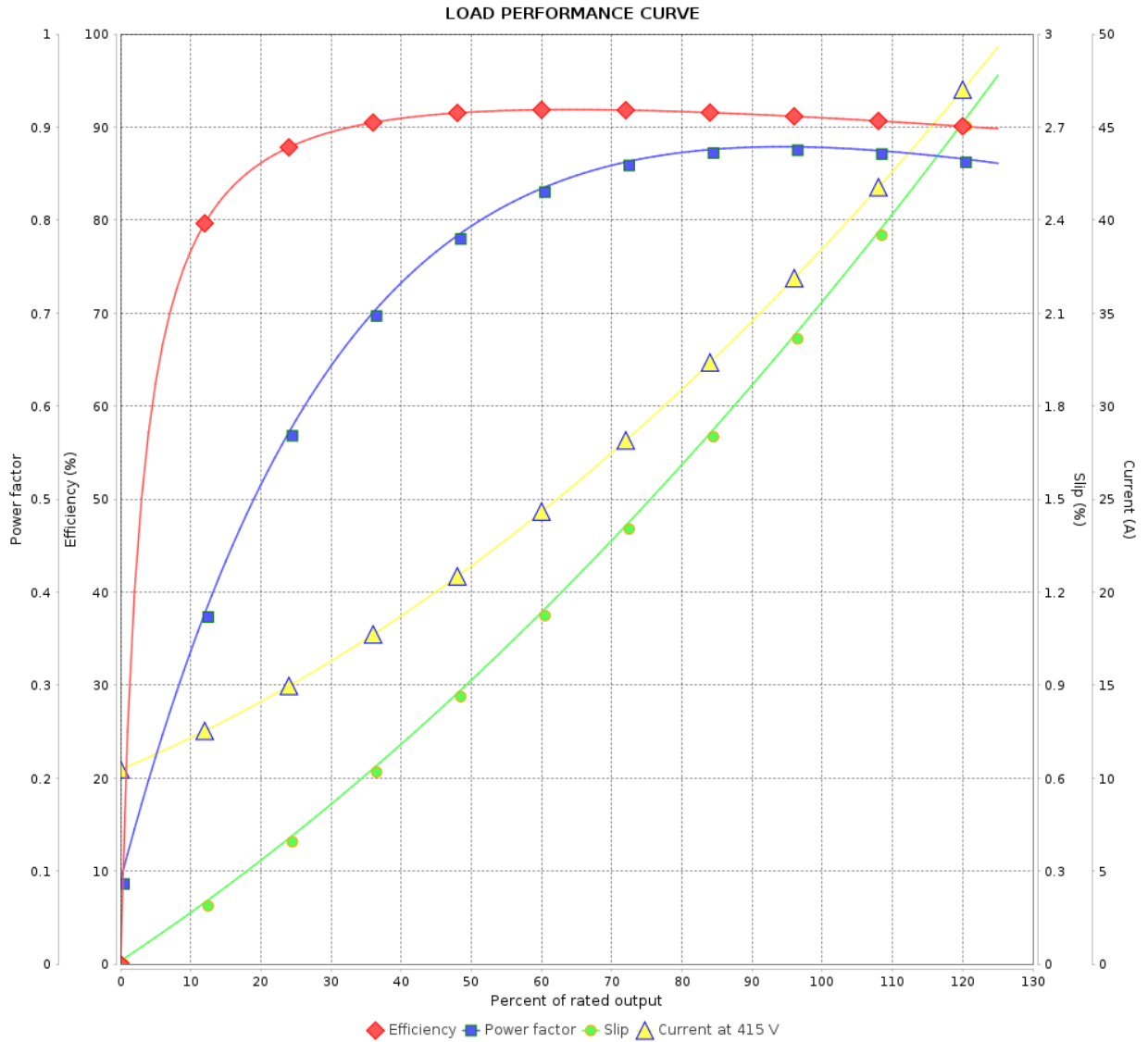
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11413120



Performance : 415 V 50 Hz 2P IE1

Rated current : 38.2 A  
 LRC : 6.0  
 Rated torque : 7.42 kgfm  
 Locked rotor torque : 190 %  
 Breakdown torque : 240 %  
 Rated speed : 2935 rpm

Moment of inertia (J) : 0.1419 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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