

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 Close Coupled Pump JM NEMA Premium Efficiency Three-Phase      Product code : 11583024

Frame	: 182/4JM	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>	: 44.0 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.0169 kgm <sup>2</sup>
Design	: B		

Output [HP]	5	4	4	4	5	5	5	
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]	13.0/6.49	6.42	6.21	6.23	7.74	7.44	7.35	
L. R. Amperes [A]	97.4/48.7	44.9	47.8	51.1	44.9	47.6	50.7	
LRC [A]	7.5x(Code J)	7.0x(Code J)	7.7x(Code K)	8.2x(Code L)	5.8x(Code G)	6.4x(Code H)	6.9x(Code J)	
No load current [A]	5.80/2.90	2.80	3.10	3.30	2.80	3.10	3.30	
Rated speed [RPM]	1750	1455	1455	1460	1430	1440	1445	
Slip [%]	2.78	3.00	3.00	2.67	4.67	4.00	3.67	
Rated torque [kgfm]	2.07	2.00	2.00	1.99	2.54	2.52	2.51	
Locked rotor torque [%]	229	229	260	290	185	210	229	
Breakdown torque [%]	290	300	320	350	225	250	270	
Service factor	1.25	1.15	1.15	1.15	1.15	1.15	1.15	
Temperature rise	80 K	80 K	80 K	80 K	80 K	80 K	80 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>	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%	88.2	87.7	86.4	86.2	89.1	88.0	88.0
	50%	88.5	87.5	86.7	86.5	88.5	87.5	87.5
	75%	89.5	88.2	88.2	88.2	87.5	88.5	88.5
	100%	89.5	87.7	88.2	88.2	86.5	87.5	87.5
Power Factor	25%	0.38	0.38	0.34	0.31	0.45	0.41	0.38
	50%	0.62	0.61	0.57	0.53	0.69	0.65	0.61
	75%	0.74	0.75	0.71	0.67	0.80	0.77	0.74
	100%	0.80	0.81	0.79	0.76	0.84	0.82	0.80

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

Losses (%)	P1 (0,9;1,0)	11.2	13.4	12.8	12.8	14.9	13.6	13.6
	P2 (0,5;1,0)	9.4	11.2	10.7	10.7	12.5	11.4	11.4
	P3 (0,25;1,0)	8.7	10.3	9.9	9.9	11.5	10.5	10.5
	P4 (0,9;0,5)	5.3	6.4	6.1	6.1	7.1	6.5	6.5
	P5 (0,5;0,5)	3.7	4.4	4.2	4.2	4.9	4.4	4.4
	P6 (0,5;0,25)	2.4	2.9	2.7	2.7	3.2	2.9	2.9
	P7 (0,25;0,25)	1.7	2.1	2.0	2.0	2.3	2.1	2.1

Bearing type	: Drive end	6307 ZZ	Non drive end	6206 ZZ	Foundation loads	Max. traction	: 120 kgf
	: Sealing	V'Ring	V'Ring	Max. compression		: 164 kgf	
	: Lubrication interval	-	-				
	: Lubricant amount	-	-				
	: 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 14.3A SF 1.15 SFA 16.4A

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# LOAD PERFORMANCE CURVE

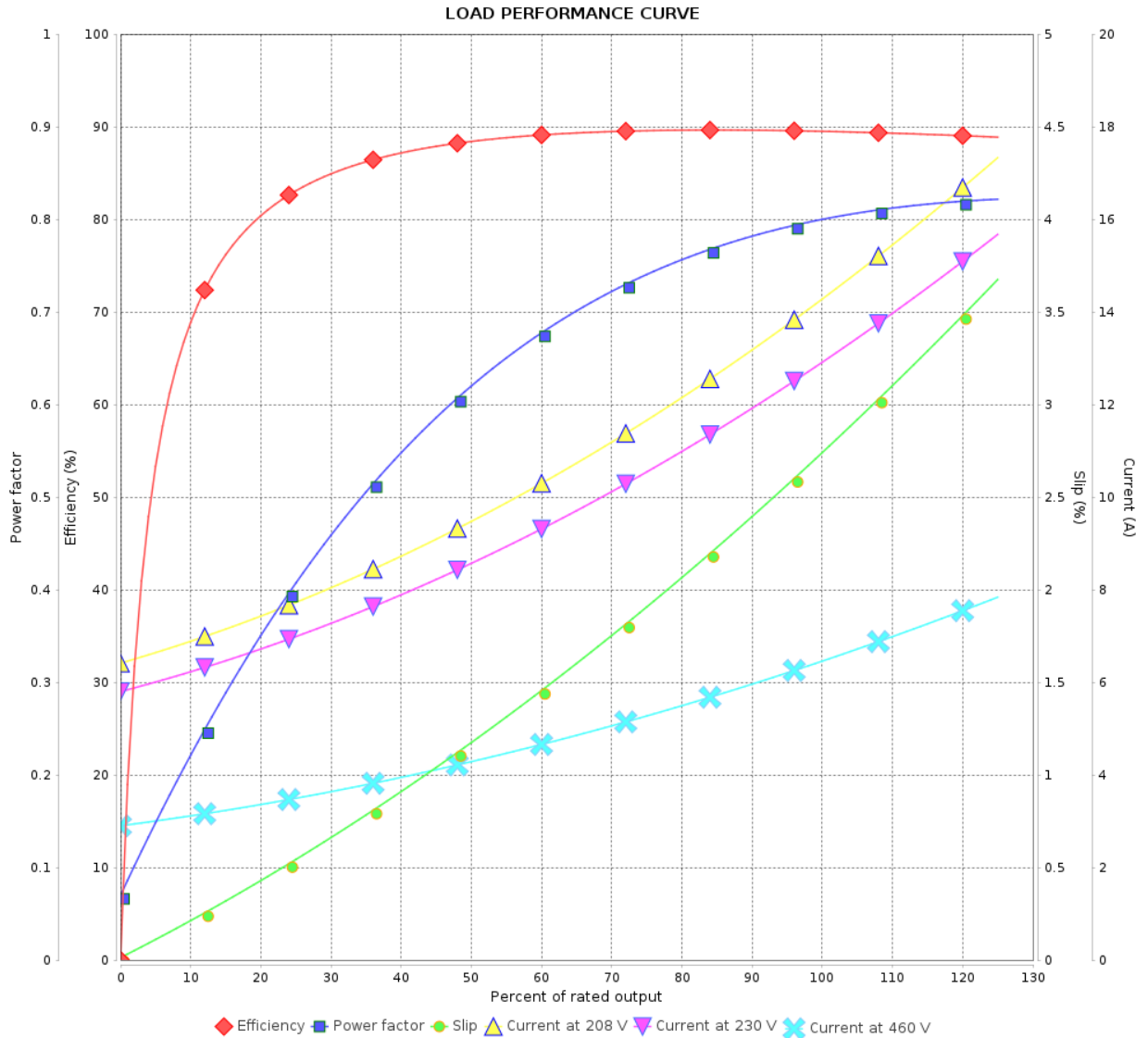
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 Close Coupled Pump JM NEMA  
Premium Efficiency Three-Phase

Product code : 11583024



Performance : 230/460 V 60 Hz 4P

Rated current : 13.0/6.49 A  
LRC : 7.5  
Rated torque : 2.07 kgfm  
Locked rotor torque : 229 %  
Breakdown torque : 290 %  
Rated speed : 1750 rpm

Moment of inertia (J) : 0.0169 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

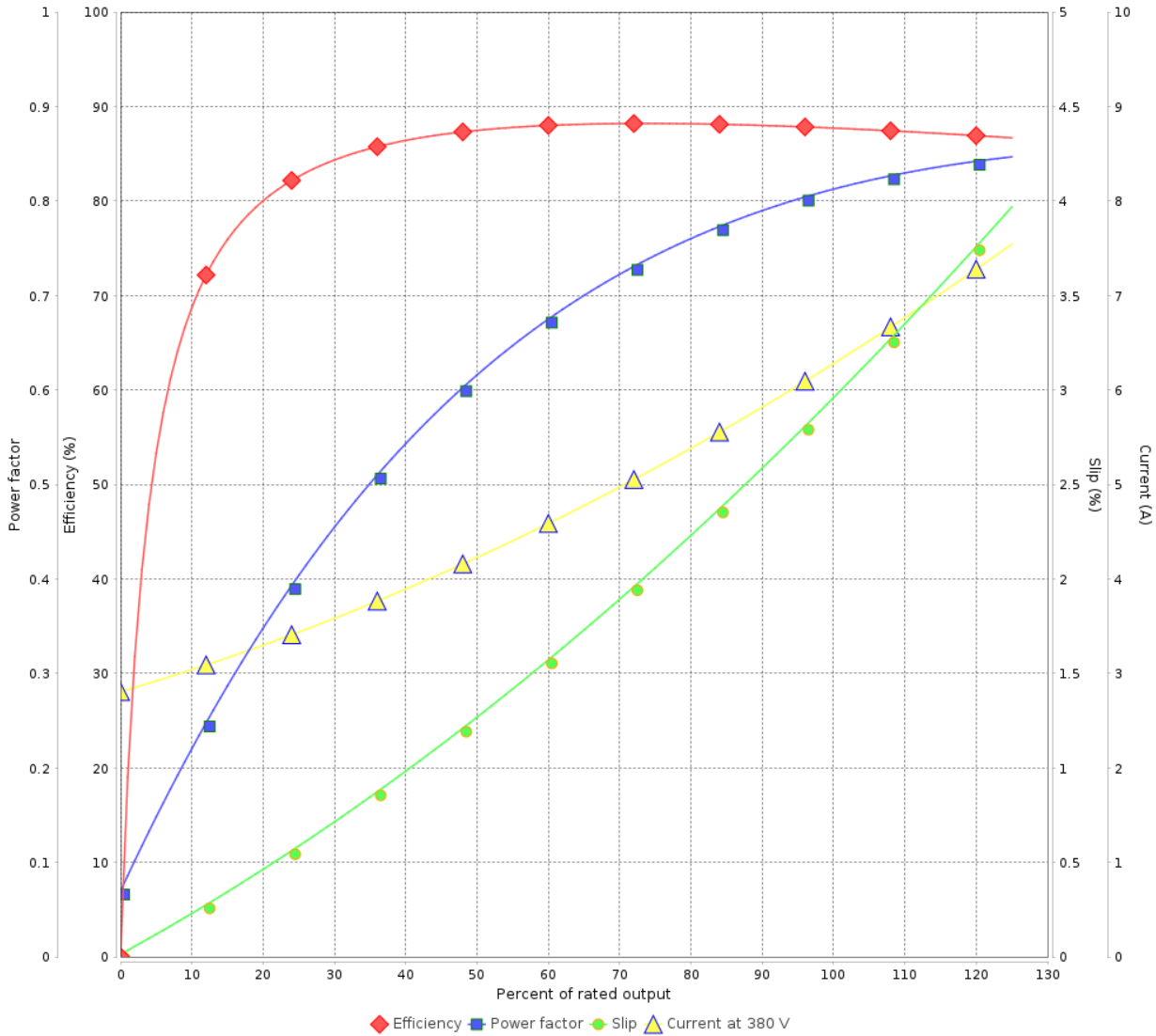


Customer : \_\_\_\_\_

Product line : W22 Close Coupled Pump JM NEMA  
Premium Efficiency Three-Phase

Product code : 11583024

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Performance : 380 V 50 Hz 4P IE3

Rated current : 6.42 A  
LRC : 7.0  
Rated torque : 2.00 kgfm  
Locked rotor torque : 229 %  
Breakdown torque : 300 %  
Rated speed : 1455 rpm

Moment of inertia (J) : 0.0169 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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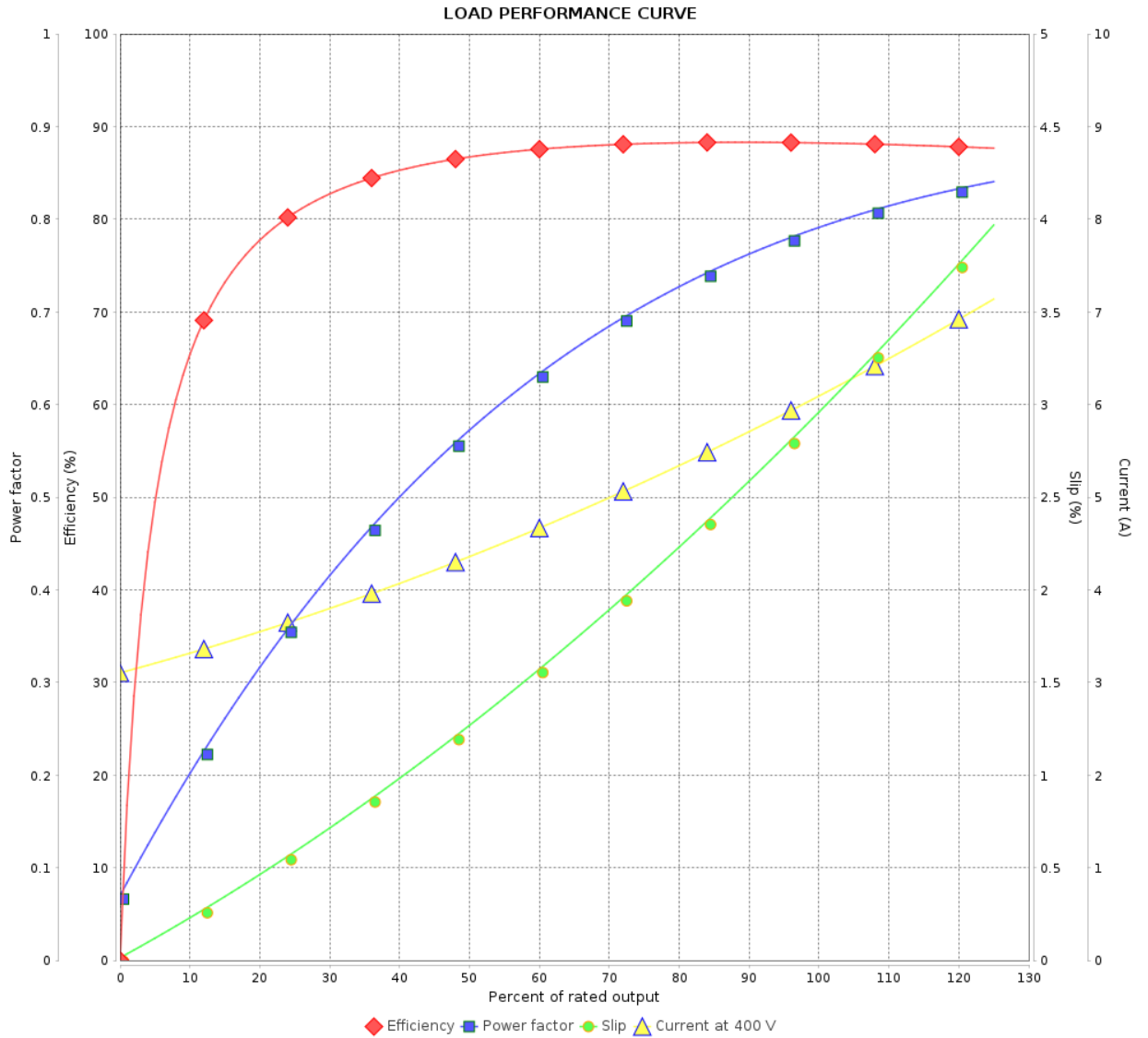
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 Close Coupled Pump JM NEMA  
Premium Efficiency Three-Phase

Product code : 11583024



Performance : 400 V 50 Hz 4P IE3

Rated current : 6.21 A  
 LRC : 7.7  
 Rated torque : 2.00 kgfm  
 Locked rotor torque : 260 %  
 Breakdown torque : 320 %  
 Rated speed : 1455 rpm

Moment of inertia (J) : 0.0169 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

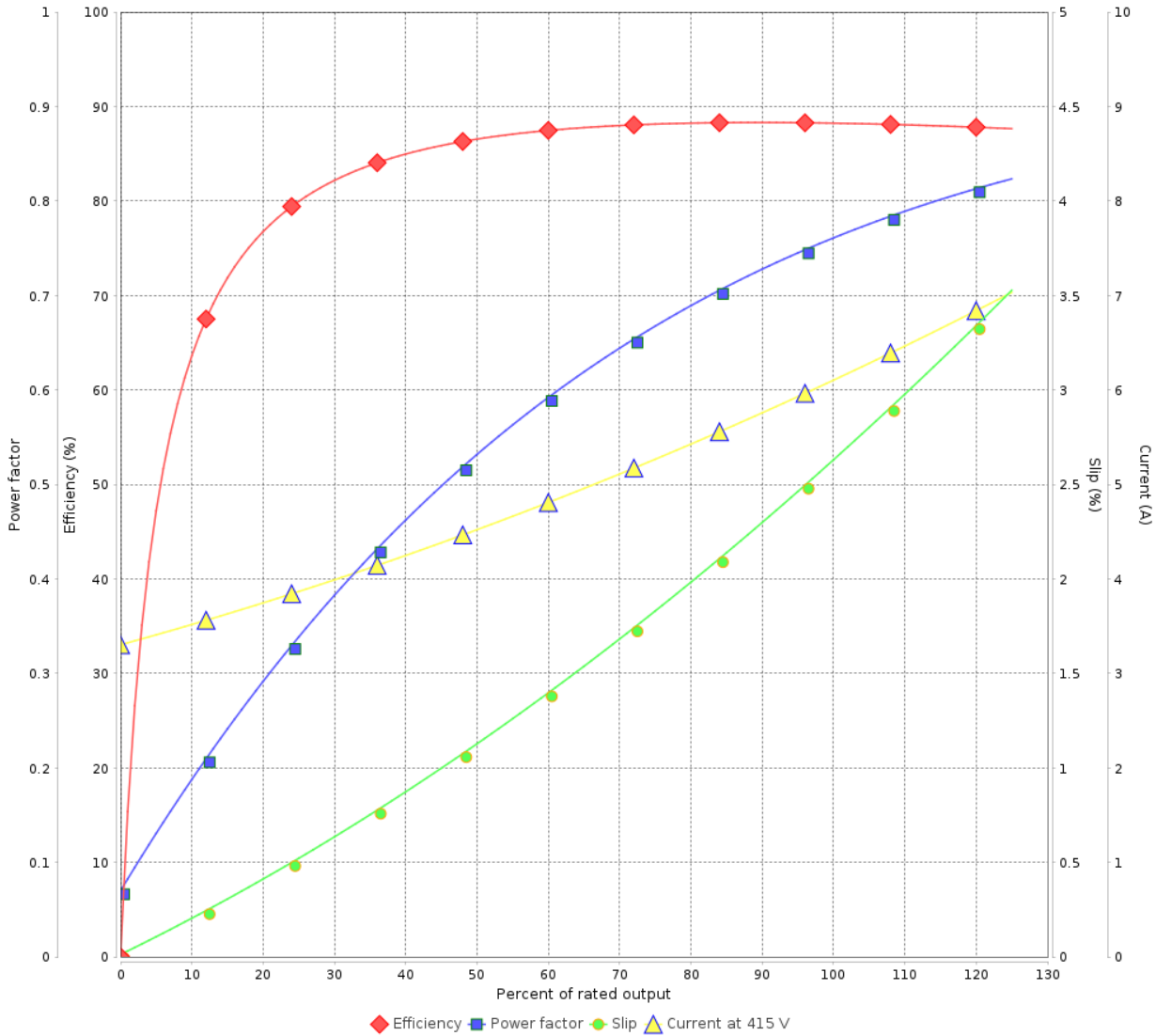


Customer :

Product line : W22 Close Coupled Pump JM NEMA  
Premium Efficiency Three-Phase

Product code : 11583024

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Performance : 415 V 50 Hz 4P IE3

Rated current : 6.23 A  
LRC : 8.2  
Rated torque : 1.99 kgfm  
Locked rotor torque : 290 %  
Breakdown torque : 350 %  
Rated speed : 1460 rpm

Moment of inertia (J) : 0.0169 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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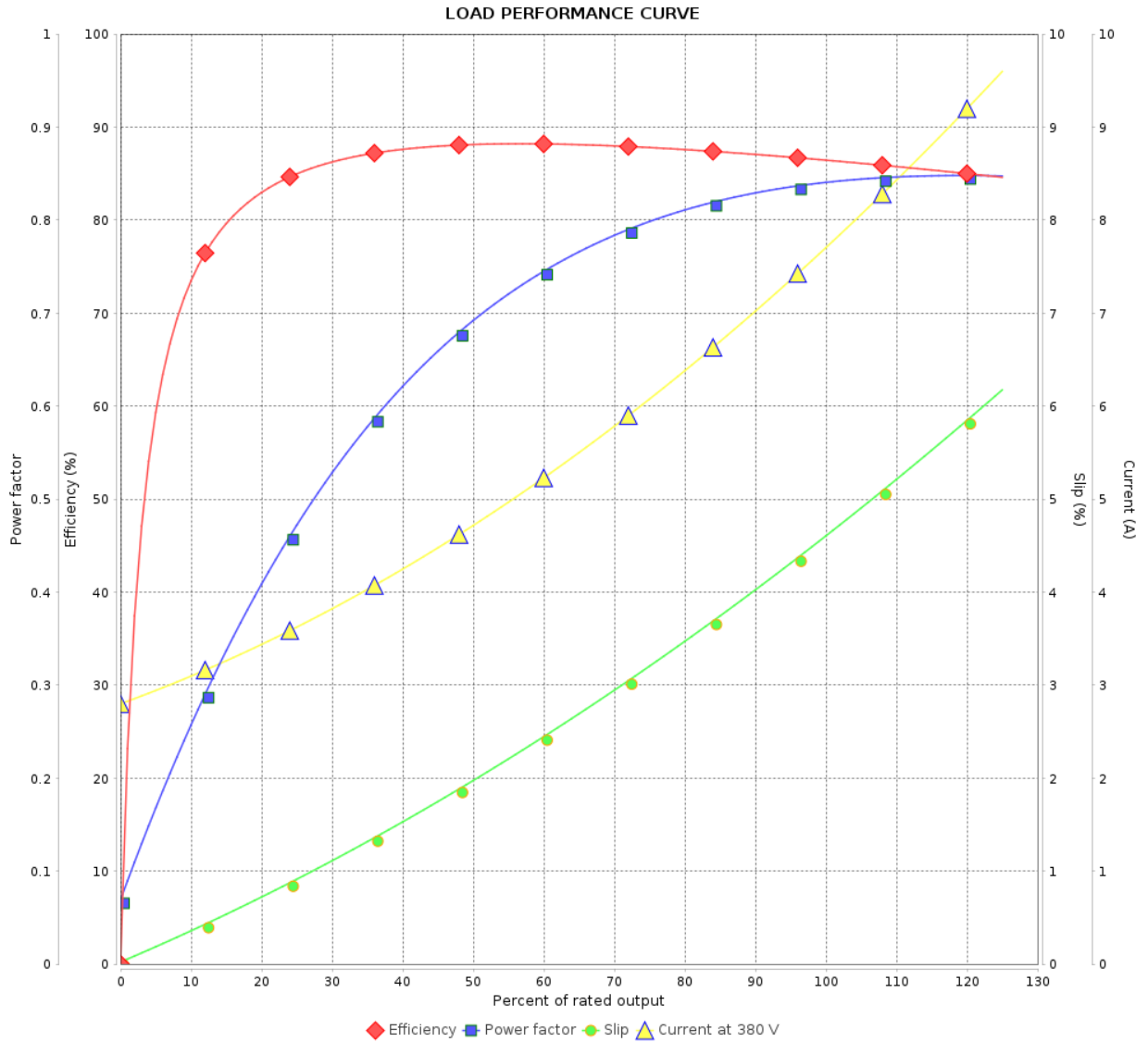
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 Close Coupled Pump JM NEMA  
Premium Efficiency Three-Phase

Product code : 11583024



Performance : 380 V 50 Hz 4P IE2

Rated current : 7.74 A  
 LRC : 5.8  
 Rated torque : 2.54 kgfm  
 Locked rotor torque : 185 %  
 Breakdown torque : 225 %  
 Rated speed : 1430 rpm

Moment of inertia (J) : 0.0169 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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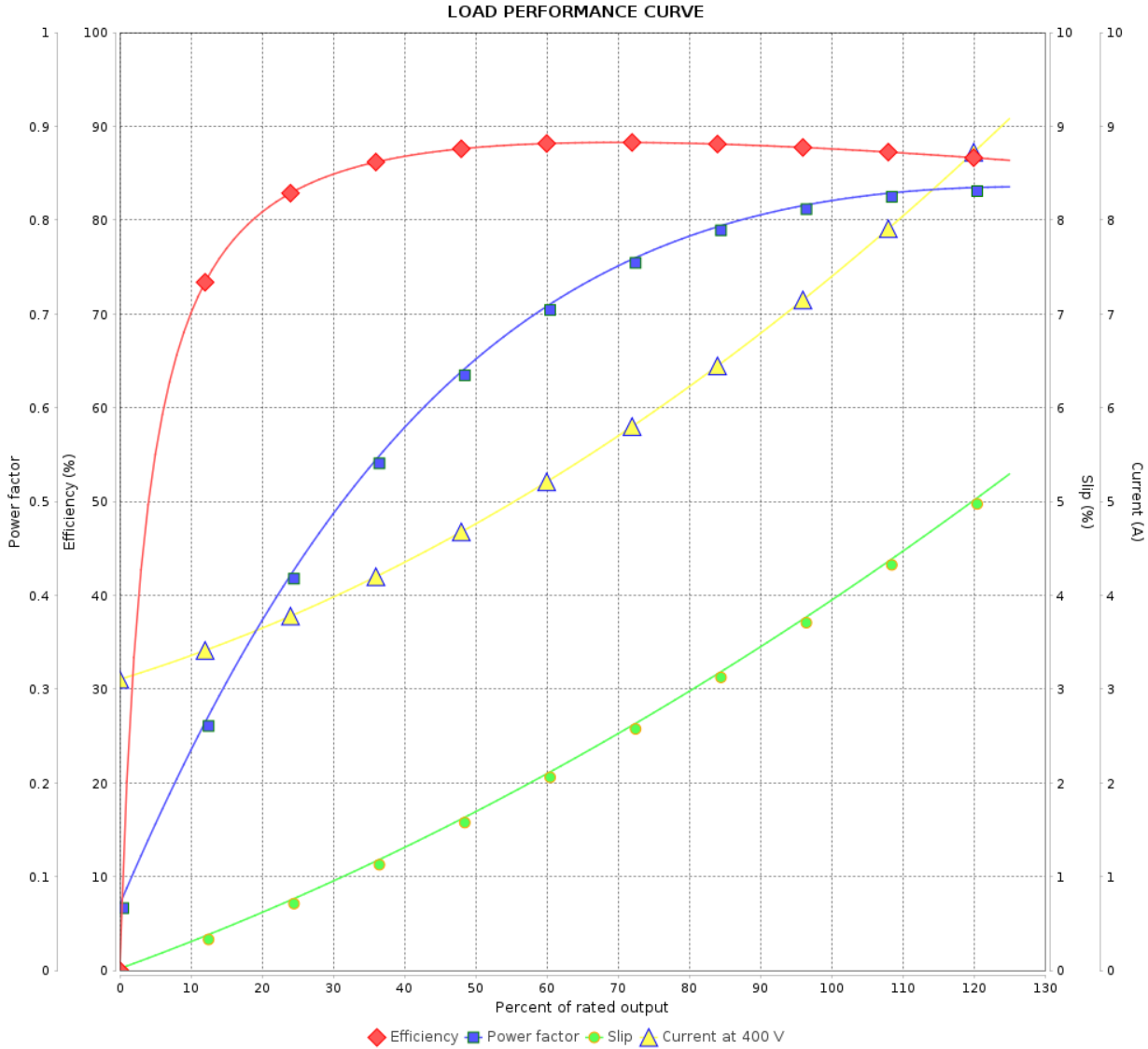
Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 Close Coupled Pump JM NEMA  
Premium Efficiency Three-Phase

Product code : 11583024



Performance : 400 V 50 Hz 4P IE2

Rated current : 7.44 A  
 LRC : 6.4  
 Rated torque : 2.52 kgfm  
 Locked rotor torque : 210 %  
 Breakdown torque : 250 %  
 Rated speed : 1440 rpm

Moment of inertia (J) : 0.0169 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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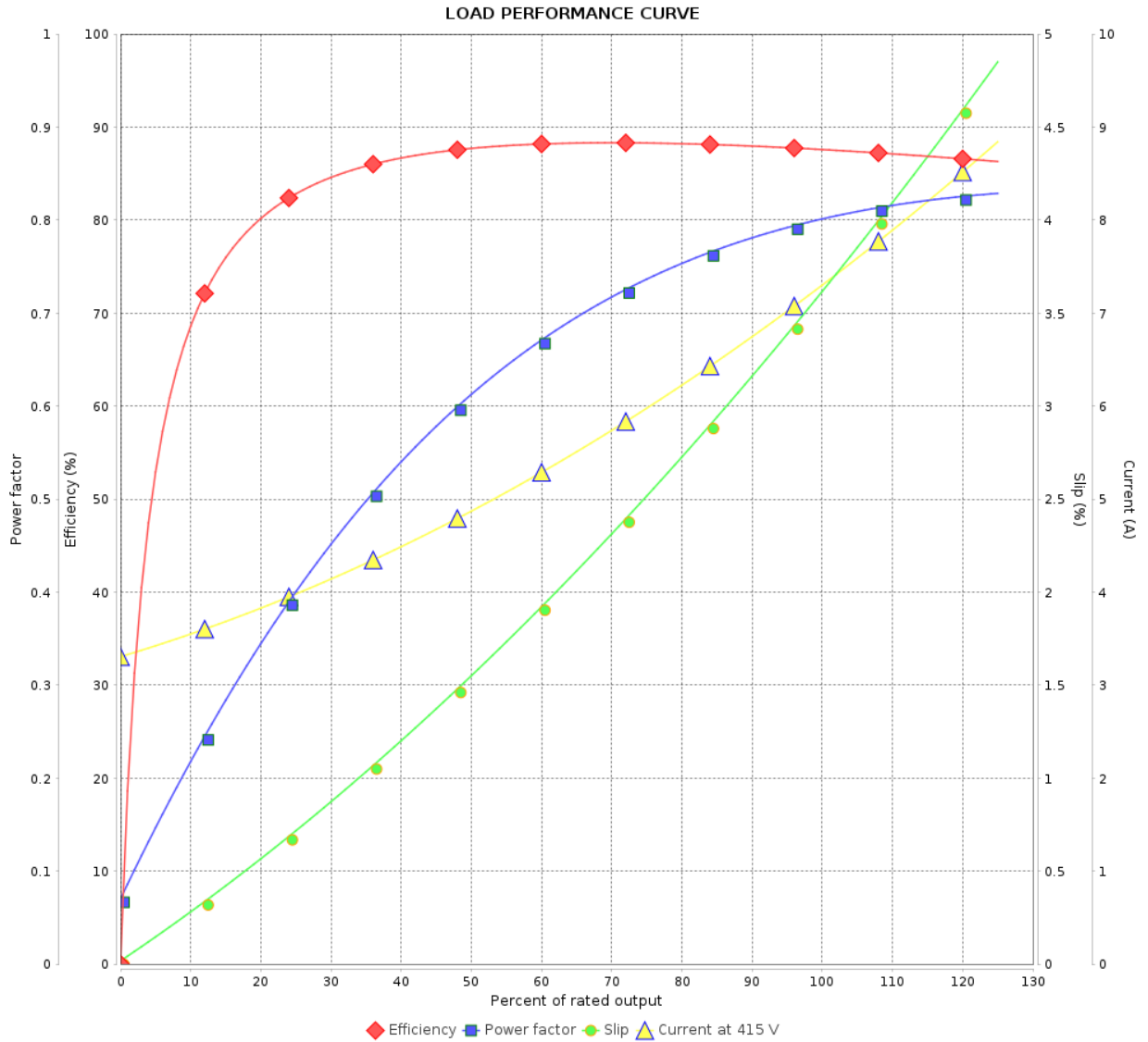
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 Close Coupled Pump JM NEMA  
Premium Efficiency Three-Phase

Product code : 11583024



Performance : 415 V 50 Hz 4P IE2

Rated current : 7.35 A  
LRC : 6.9  
Rated torque : 2.51 kgfm  
Locked rotor torque : 229 %  
Breakdown torque : 270 %  
Rated speed : 1445 rpm

Moment of inertia (J) : 0.0169 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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