

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W22 Close Coupled Pump JM NEMA Premium Efficiency Three-Phase      Product code : 15876362

Frame	: 254JM	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>	: 123 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]	34.4/17.2	14.5	14.0	13.7	20.7	19.6	19.1
L. R. Amperes [A]	230/115	98.6	105	108	101	108	113
LRC [A]	6.7x(Code G)	6.8x(Code H)	7.5x(Code J)	7.9x(Code J)	4.9x(Code D)	5.5x(Code E)	5.9x(Code F)
No load current [A]	10.6/5.30	5.10	5.40	5.70	5.10	5.40	5.70
Rated speed [RPM]	3530	2945	2950	2955	2910	2920	2925
Slip [%]	1.94	1.83	1.67	1.50	3.00	2.67	2.50
Rated torque [kgfm]	3.08	2.46	2.46	2.46	3.74	3.73	3.72
Locked rotor torque [%]	220	200	229	250	170	190	210
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	80 K	80 K	80 K
Locked rotor time	45s (cold) 25s (hot)	55s (cold) 31s (hot)	50s (cold) 28s (hot)	46s (cold) 26s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (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%						
	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	89.5	90.2
Power Factor	25%						
	50%	0.77	0.73	0.69	0.67	0.83	0.81
	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)	9.4	9.4	9.4	9.4	9.4	9.4	9.4
	P2 (0,5;1,0)	7.5	7.5	7.5	7.5	7.5	7.5	7.5
	P3 (0,25;1,0)	6.8	6.8	6.8	6.8	6.8	6.8	6.8
	P4 (0,9;0,5)	4.8	4.8	4.8	4.8	4.8	4.8	4.8
	P5 (0,5;0,5)	2.8	2.8	2.8	2.8	2.8	2.8	2.8
	P6 (0,5;0,25)	1.8	1.8	1.8	1.8	1.8	1.8	1.8
	P7 (0,25;0,25)	1.1	1.1	1.1	1.1	1.1	1.1	1.1

Bearing type	: 6309 C3	Drive end	Non drive end	Foundation loads	Max. traction : 79 kgf Max. compression : 201 kgf
	: V'Ring	V'Ring			
	: 19000 h	20000 h			
	: 13 g	9 g			
	: 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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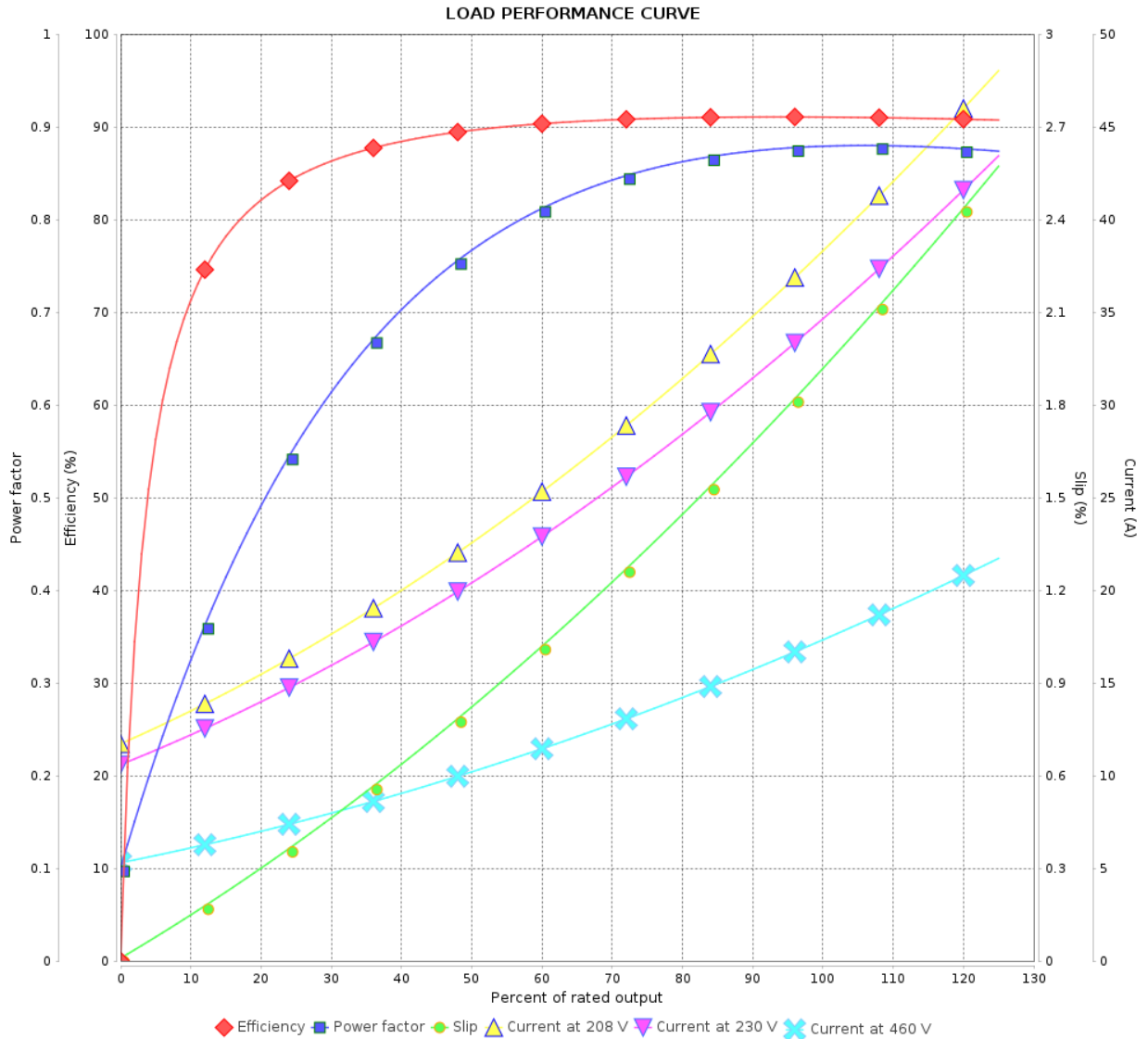
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 15876362



Performance : 230/460 V 60 Hz 2P

Rated current : 34.4/17.2 A  
 LRC : 6.7  
 Rated torque : 3.08 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 270 %  
 Rated speed : 3530 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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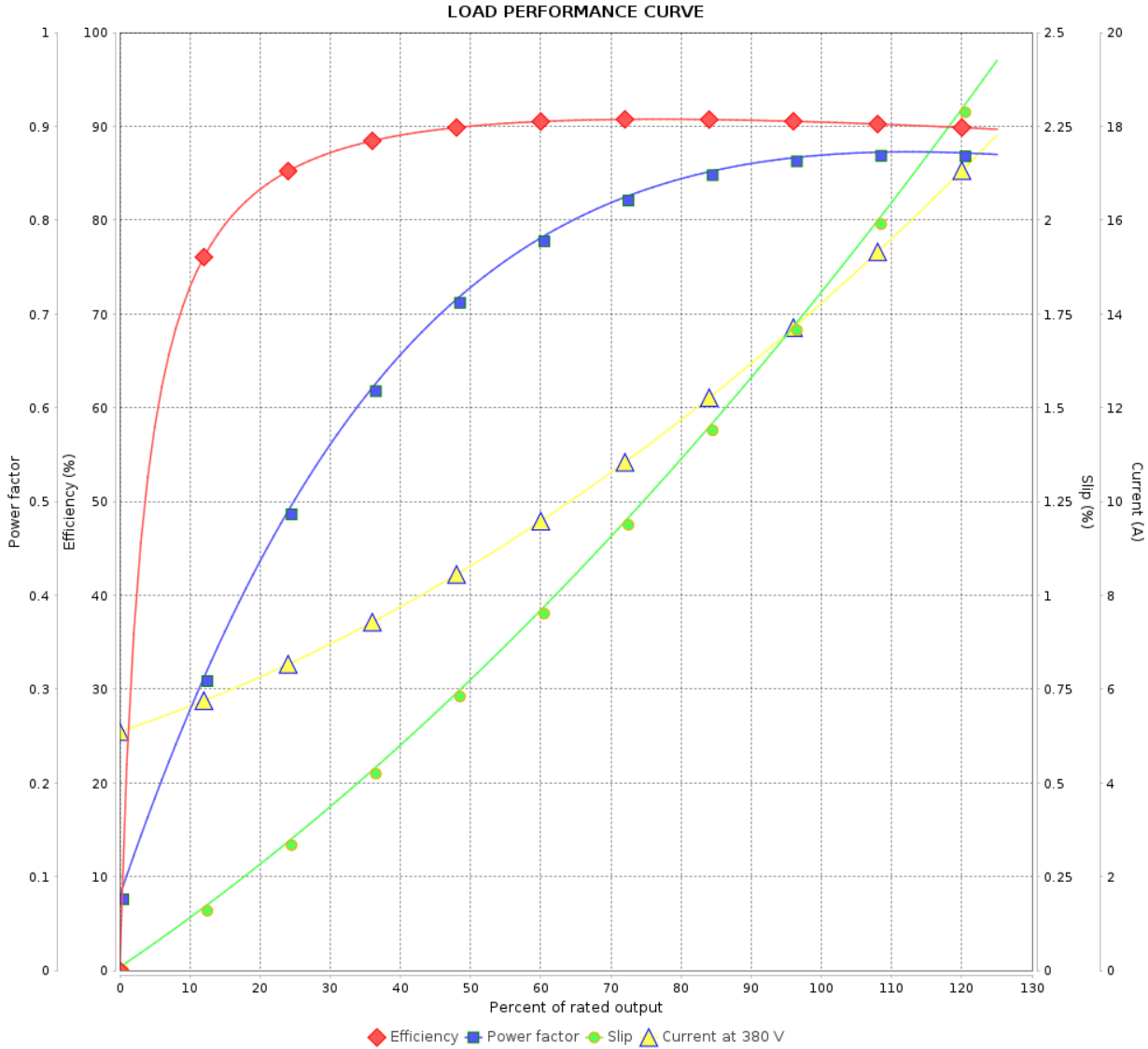
Three Phase Induction Motor - Squirrel Cage



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

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

Product code : 15876362



Performance : 380 V 50 Hz 2P IE3

Rated current : 14.5 A  
 LRC : 6.8  
 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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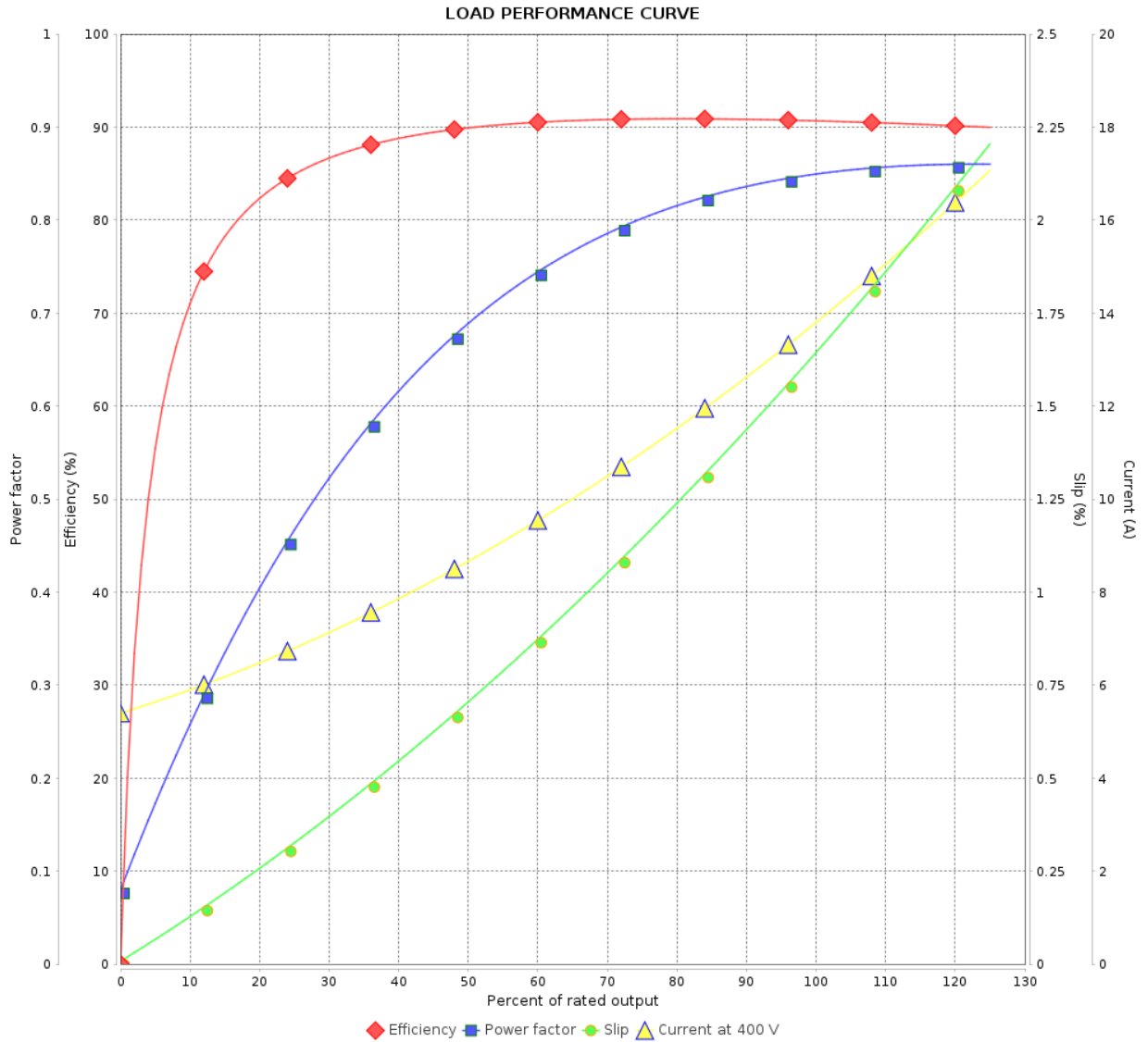
## Three Phase Induction Motor - Squirrel Cage



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

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

Product code : 15876362



Performance : 400 V 50 Hz 2P IE3

Rated current : 14.0 A  
LRC : 7.5  
Rated torque : 2.46 kgfm  
Locked rotor torque : 229 %  
Breakdown torque : 350 %  
Rated speed : 2950 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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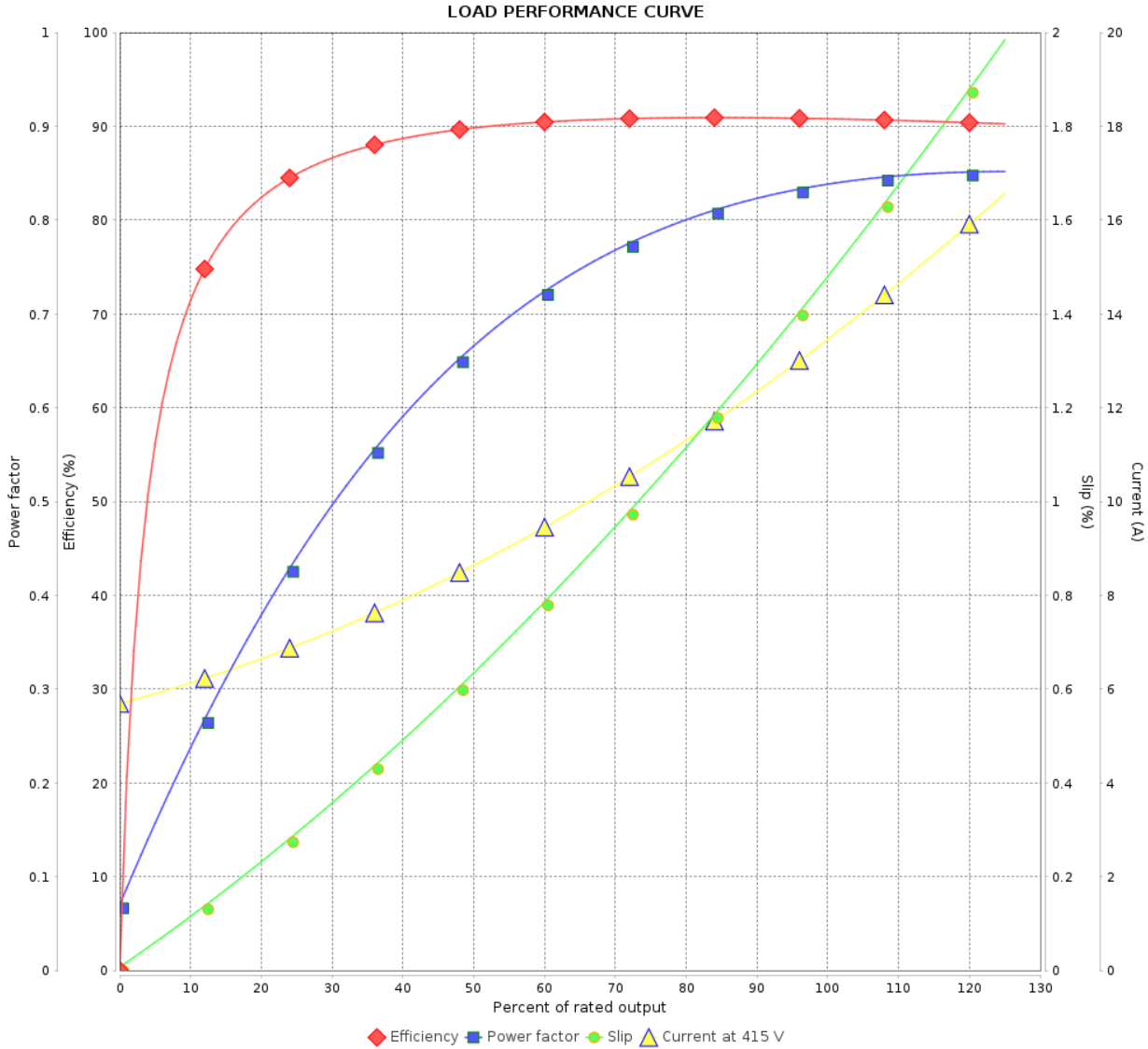
Three Phase Induction Motor - Squirrel Cage



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

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

Product code : 15876362



Performance : 415 V 50 Hz 2P IE3

Rated current : 13.7 A  
 LRC : 7.9  
 Rated torque : 2.46 kgfm  
 Locked rotor torque : 250 %  
 Breakdown torque : 380 %  
 Rated speed : 2955 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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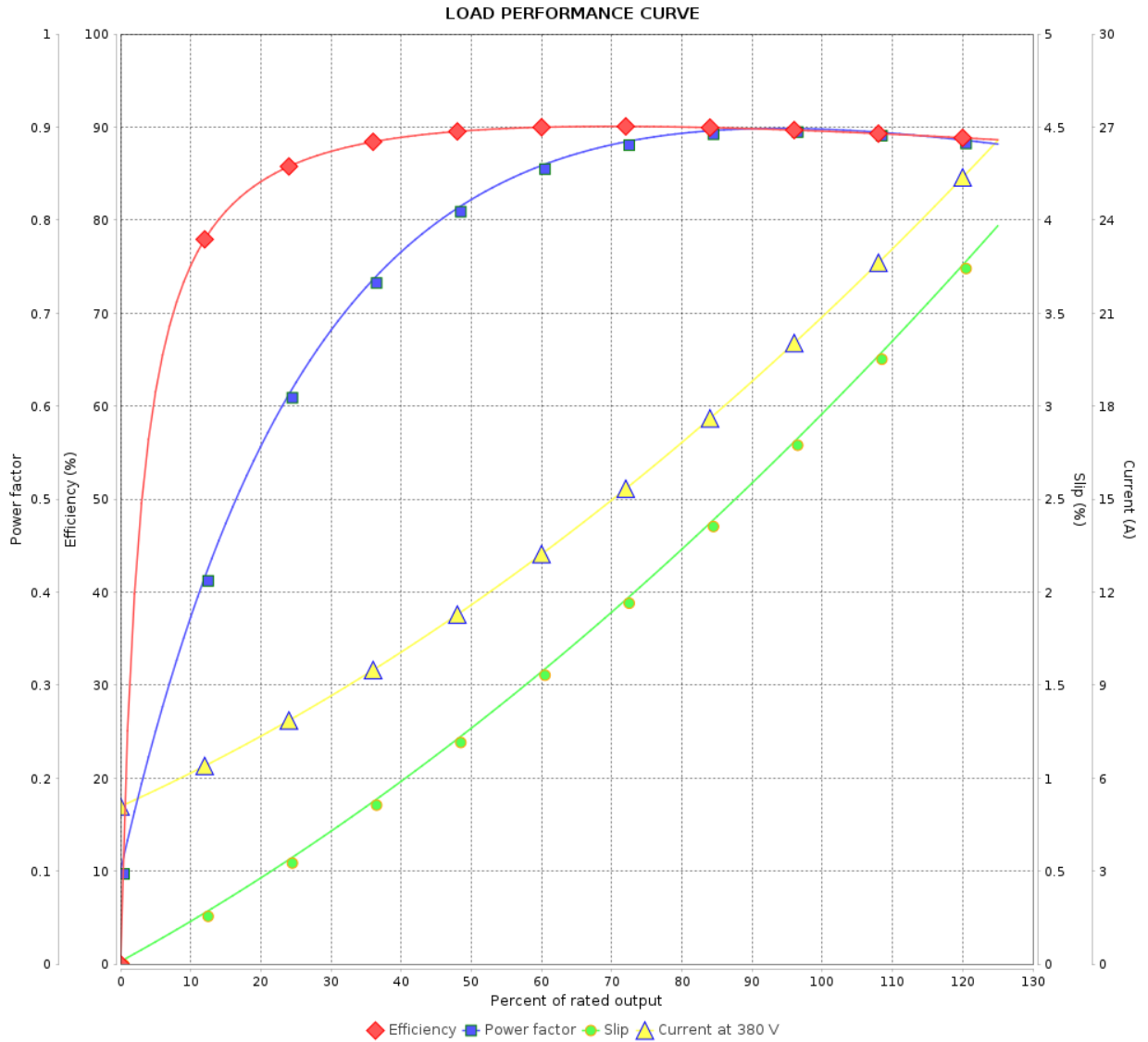
## Three Phase Induction Motor - Squirrel Cage



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

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Performance : 380 V 50 Hz 2P IE2

Rated current : 20.7 A  
 LRC : 4.9  
 Rated torque : 3.74 kgfm  
 Locked rotor torque : 170 %  
 Breakdown torque : 200 %  
 Rated speed : 2910 rpm

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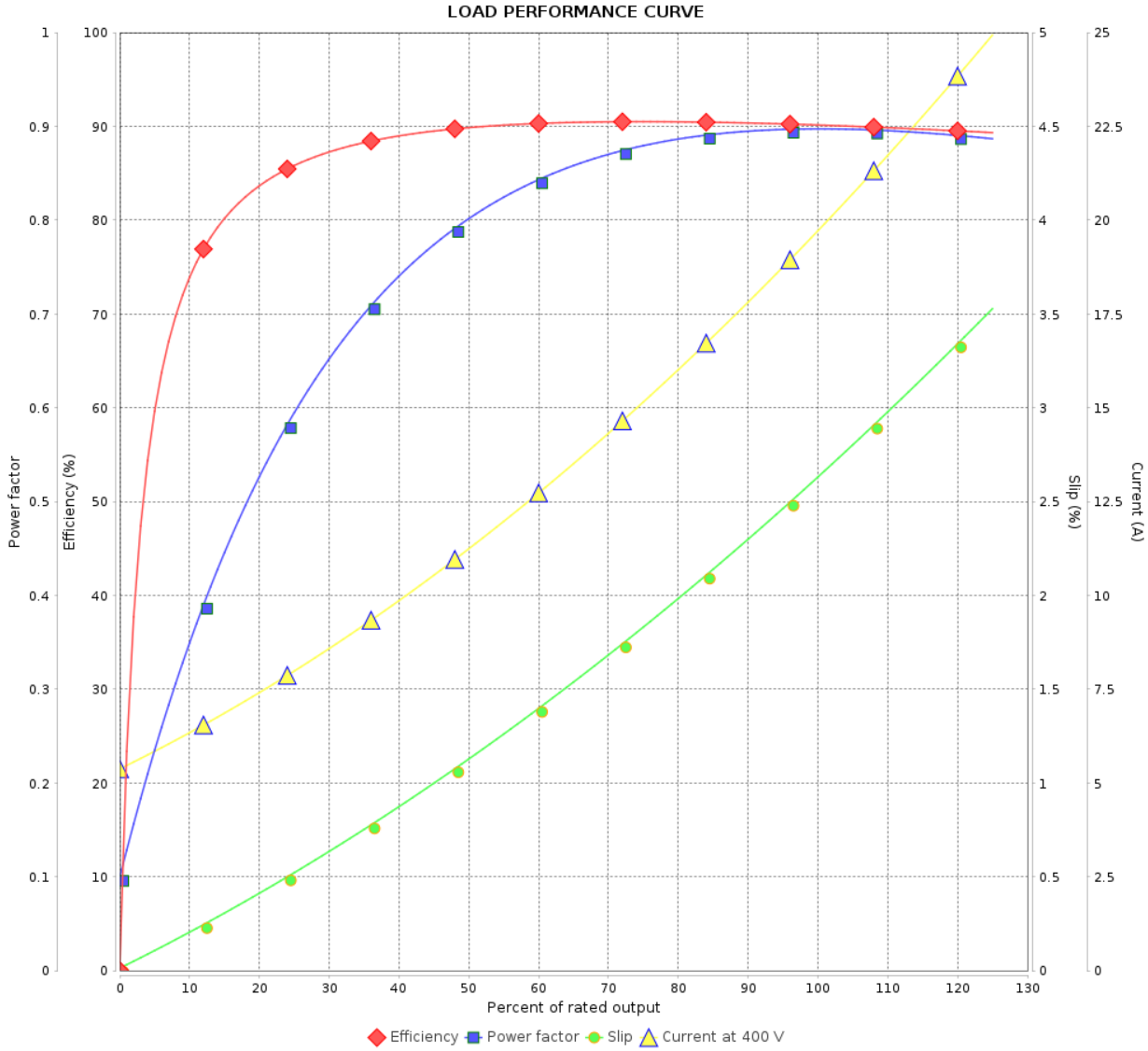
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 Close Coupled Pump JM NEMA  
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Product code : 15876362



Performance : 400 V 50 Hz 2P IE2

Rated current : 19.6 A  
 LRC : 5.5  
 Rated torque : 3.73 kgfm  
 Locked rotor torque : 190 %  
 Breakdown torque : 229 %  
 Rated speed : 2920 rpm

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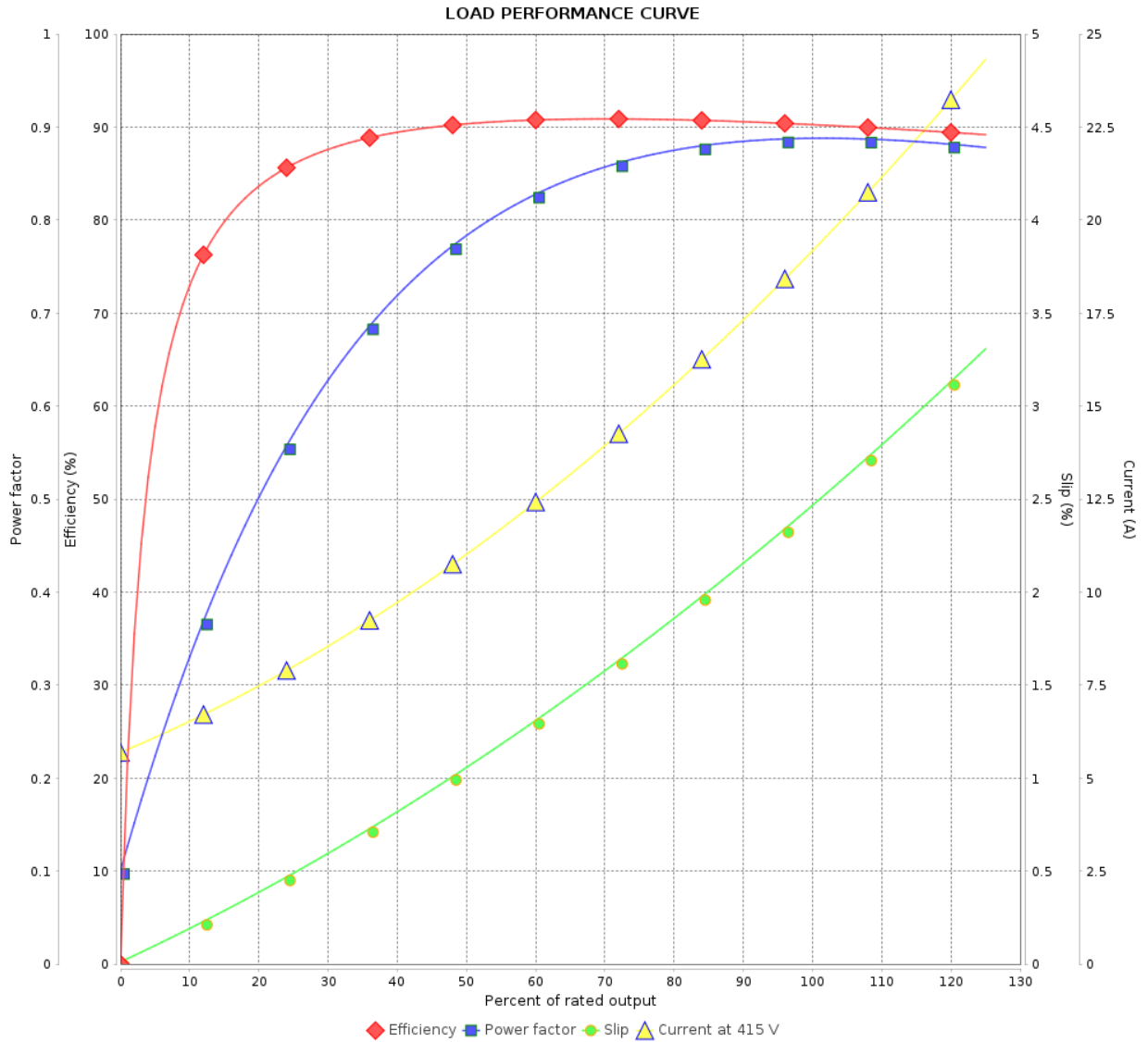
## Three Phase Induction Motor - Squirrel Cage



Customer :

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Premium Efficiency Three-Phase

Product code : 15876362



Performance : 415 V 50 Hz 2P IE2

Rated current : 19.1 A  
 LRC : 5.9  
 Rated torque : 3.72 kgfm  
 Locked rotor torque : 210 %  
 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 : 80 K  
 Design : B

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