

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 Close Coupled Pump JM NEMA Premium Efficiency Three-Phase  
Product code : 12598478

Frame	: 143/5JM	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>	: 22.1 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.0020 kgm <sup>2</sup>
Design	: B		

Output [HP]	1.5	1	1	1	1.5	1.5	1.5	
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]	3.92/1.96	1.69	1.66	1.65	2.36	2.24	2.21	
L. R. Amperes [A]	34.9/17.4	15.5	16.1	16.8	15.8	16.6	17.5	
LRC [A]	8.9x(Code L)	9.2x(Code M)	9.7x(Code M)	10.2x(Code N)	6.7x(Code H)	7.4x(Code J)	7.9x(Code K)	
No load current [A]	1.66/0.830	0.780	0.840	0.900	0.780	0.840	0.900	
Rated speed [RPM]	3480	2905	2915	2920	2835	2860	2870	
Slip [%]	3.33	3.17	2.83	2.67	5.50	4.67	4.33	
Rated torque [kgfm]	0.313	0.250	0.249	0.249	0.384	0.381	0.379	
Locked rotor torque [%]	310	340	380	420	220	260	280	
Breakdown torque [%]	370	390	440	480	260	290	310	
Service factor	1.25	1.25	1.25	1.25	1.25	1.25	1.25	
Temperature rise	80 K	80 K	80 K	80 K	80 K	80 K	80 K	
Locked rotor time	37s (cold) 21s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	
Noise level <sup>2</sup>	68.0 dB(A)							
Efficiency (%)	25%	81.1	79.9	78.4	77.9	80.6	81.6	81.7
	50%	81.5	80.5	79.3	78.9	81.0	82.0	82.0
	75%	84.0	83.2	82.8	82.7	81.5	82.5	82.5
	100%	84.0	83.4	83.4	83.4	81.5	82.5	82.5
Power Factor	25%	0.43	0.39	0.35	0.33	0.51	0.46	0.43
	50%	0.68	0.63	0.58	0.55	0.75	0.70	0.67
	75%	0.78	0.74	0.71	0.68	0.84	0.80	0.78
	100%	0.84	0.81	0.78	0.76	0.87	0.86	0.84

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

Losses (%)	P1 (0,9;1,0)	17.7	17.7	17.7	17.7	17.7	17.7	17.7
	P2 (0,5;1,0)	13.3	13.3	13.3	13.3	13.3	13.3	13.3
	P3 (0,25;1,0)	12.1	12.1	12.1	12.1	12.1	12.1	12.1
	P4 (0,9;0,5)	9.8	9.8	9.8	9.8	9.8	9.8	9.8
	P5 (0,5;0,5)	5.6	5.6	5.6	5.6	5.6	5.6	5.6
	P6 (0,5;0,25)	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	P7 (0,25;0,25)	2.4	2.4	2.4	2.4	2.4	2.4	2.4

Bearing type	: Drive end	6206 ZZ	Non drive end	6204 ZZ	Foundation loads	Max. traction	: 22 kgf
	: Sealing	V'Ring	V'Ring	Max. compression		: 44 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 4.20A SF 1.15 SFA 4.83A

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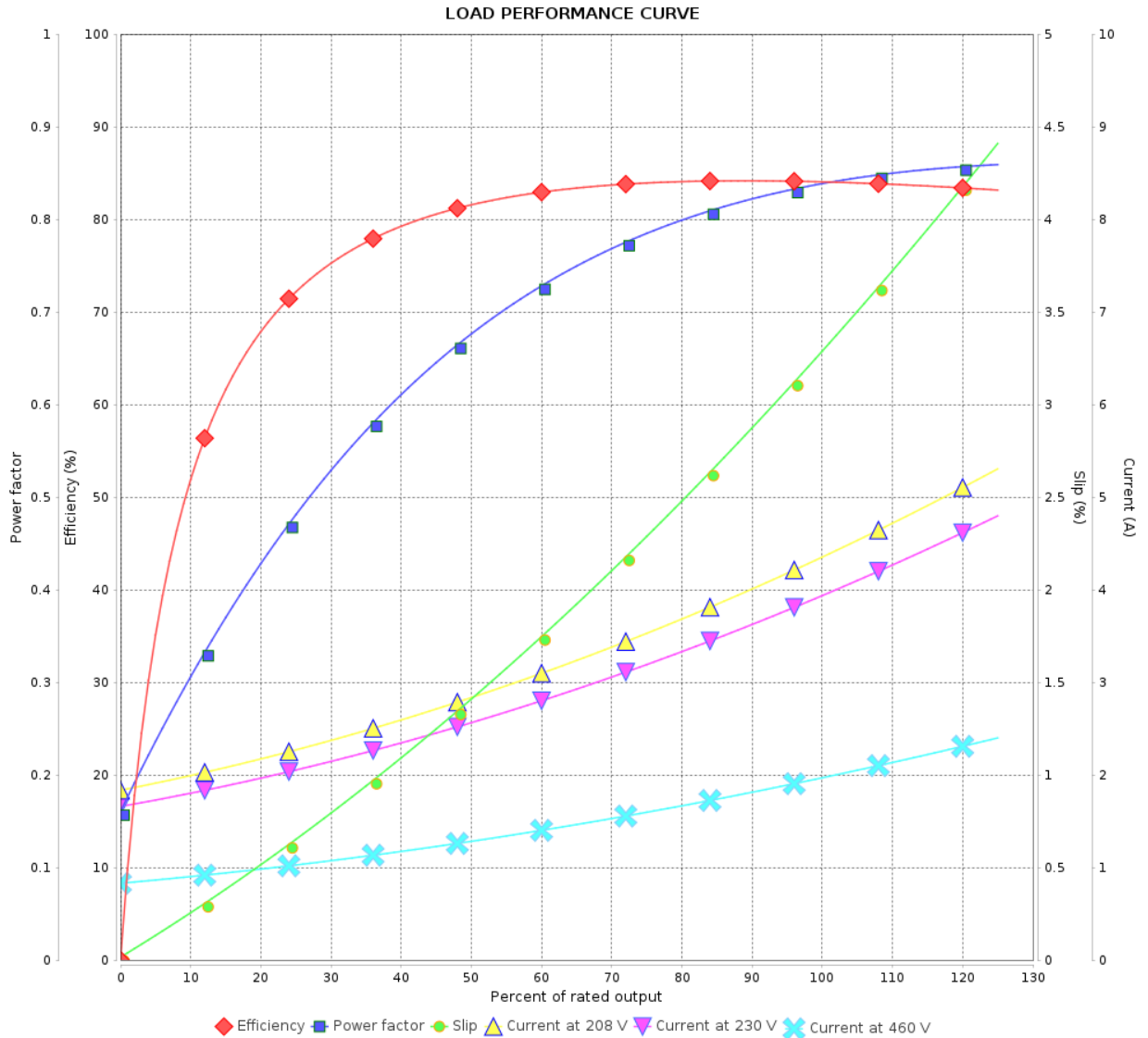
## Three Phase Induction Motor - Squirrel Cage



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

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

Product code : 12598478



Performance : 230/460 V 60 Hz 2P

Rated current : 3.92/1.96 A  
 LRC : 8.9  
 Rated torque : 0.313 kgfm  
 Locked rotor torque : 310 %  
 Breakdown torque : 370 %  
 Rated speed : 3480 rpm

Moment of inertia (J) : 0.0020 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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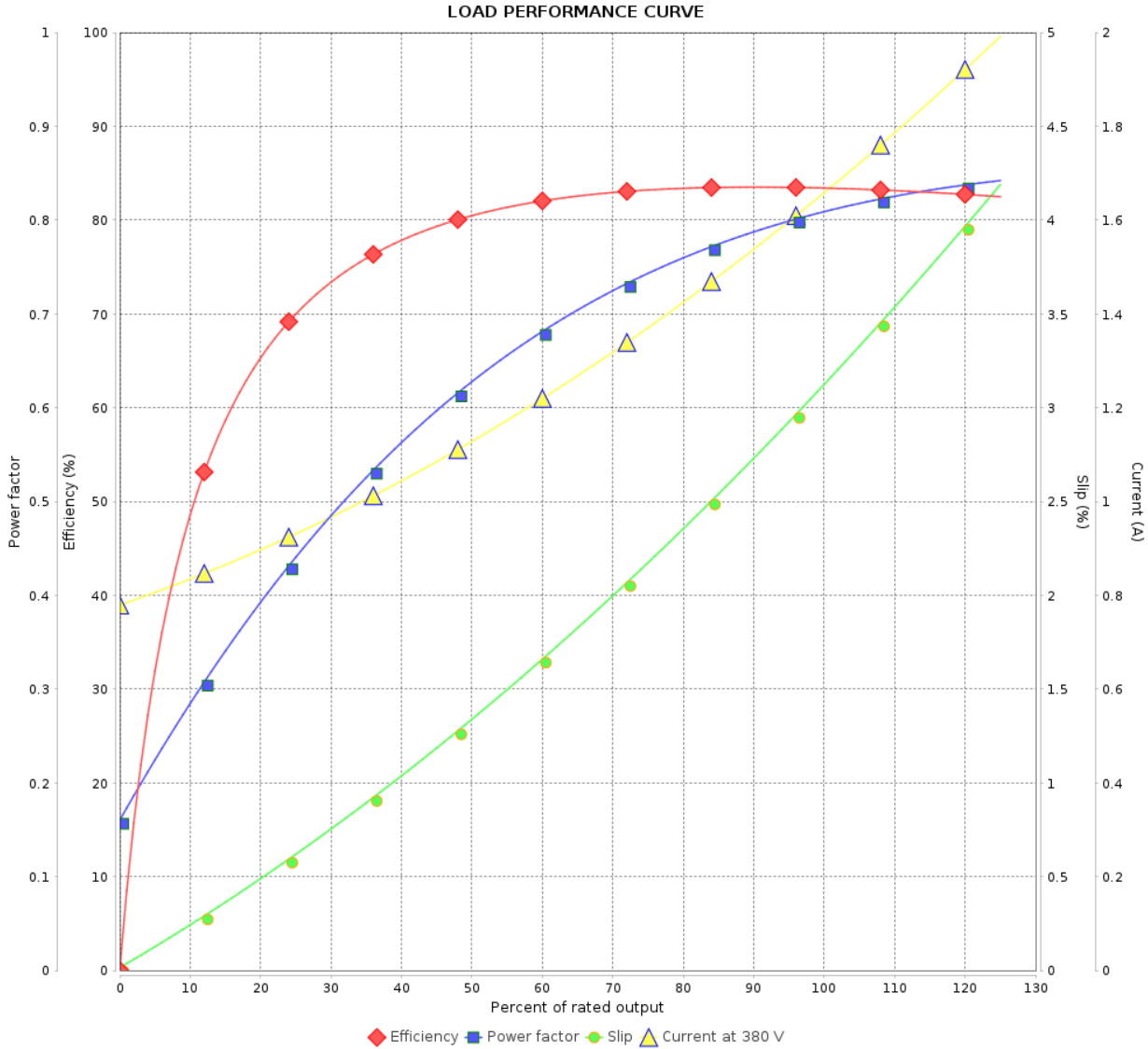
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12598478



Performance : 380 V 50 Hz 2P IE3

Rated current	: 1.69 A	Moment of inertia (J)	: 0.0020 kgm <sup>2</sup>
LRC	: 9.2	Duty cycle	: Cont.(S1)
Rated torque	: 0.250 kgfm	Insulation class	: F
Locked rotor torque	: 340 %	Service factor	: 1.25
Breakdown torque	: 390 %	Temperature rise	: 80 K
Rated speed	: 2905 rpm	Design	: B

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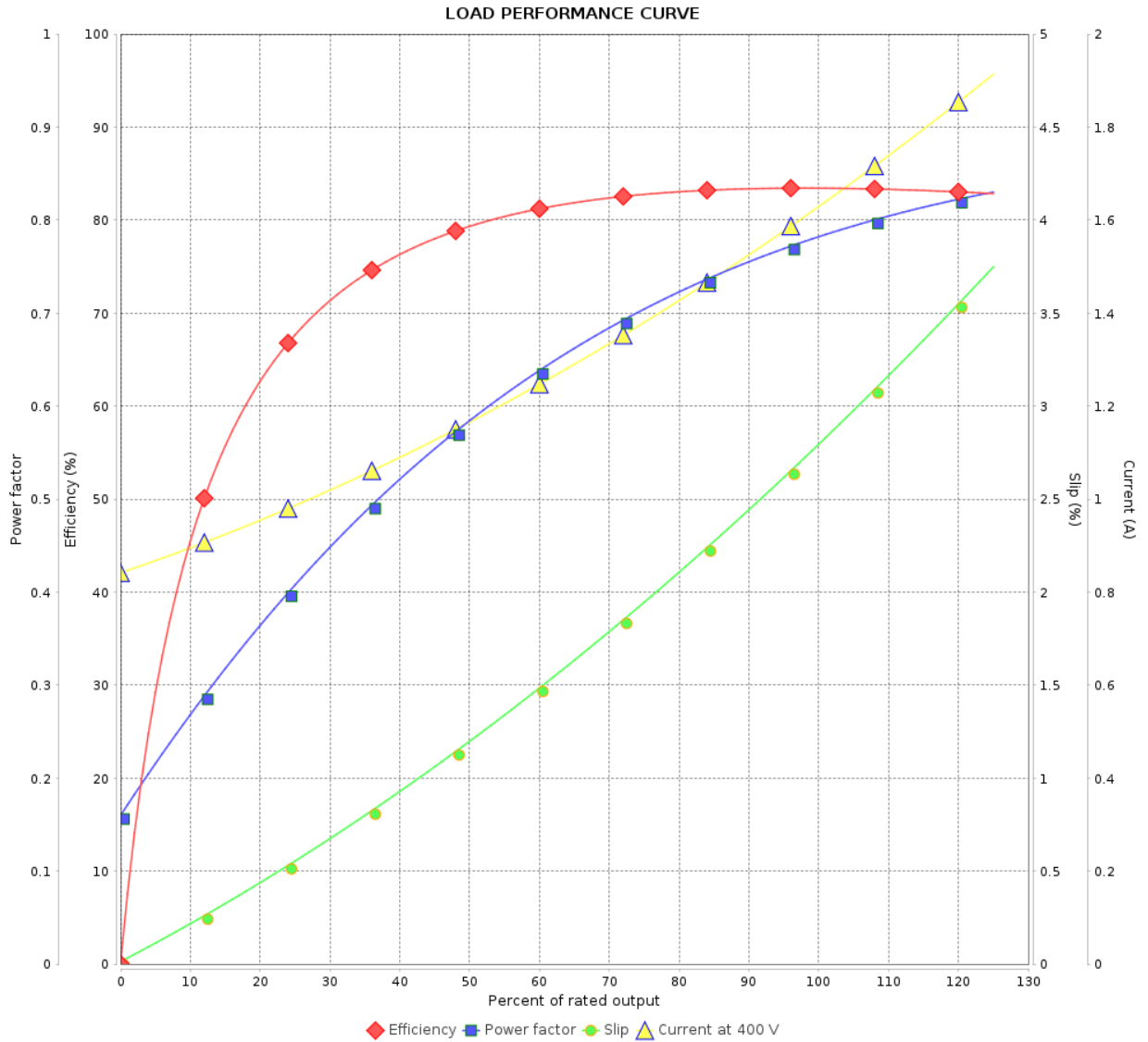
Three Phase Induction Motor - Squirrel Cage



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

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

Product code : 12598478



Performance : 400 V 50 Hz 2P IE3

Rated current : 1.66 A  
 LRC : 9.7  
 Rated torque : 0.249 kgfm  
 Locked rotor torque : 380 %  
 Breakdown torque : 440 %  
 Rated speed : 2915 rpm

Moment of inertia (J) : 0.0020 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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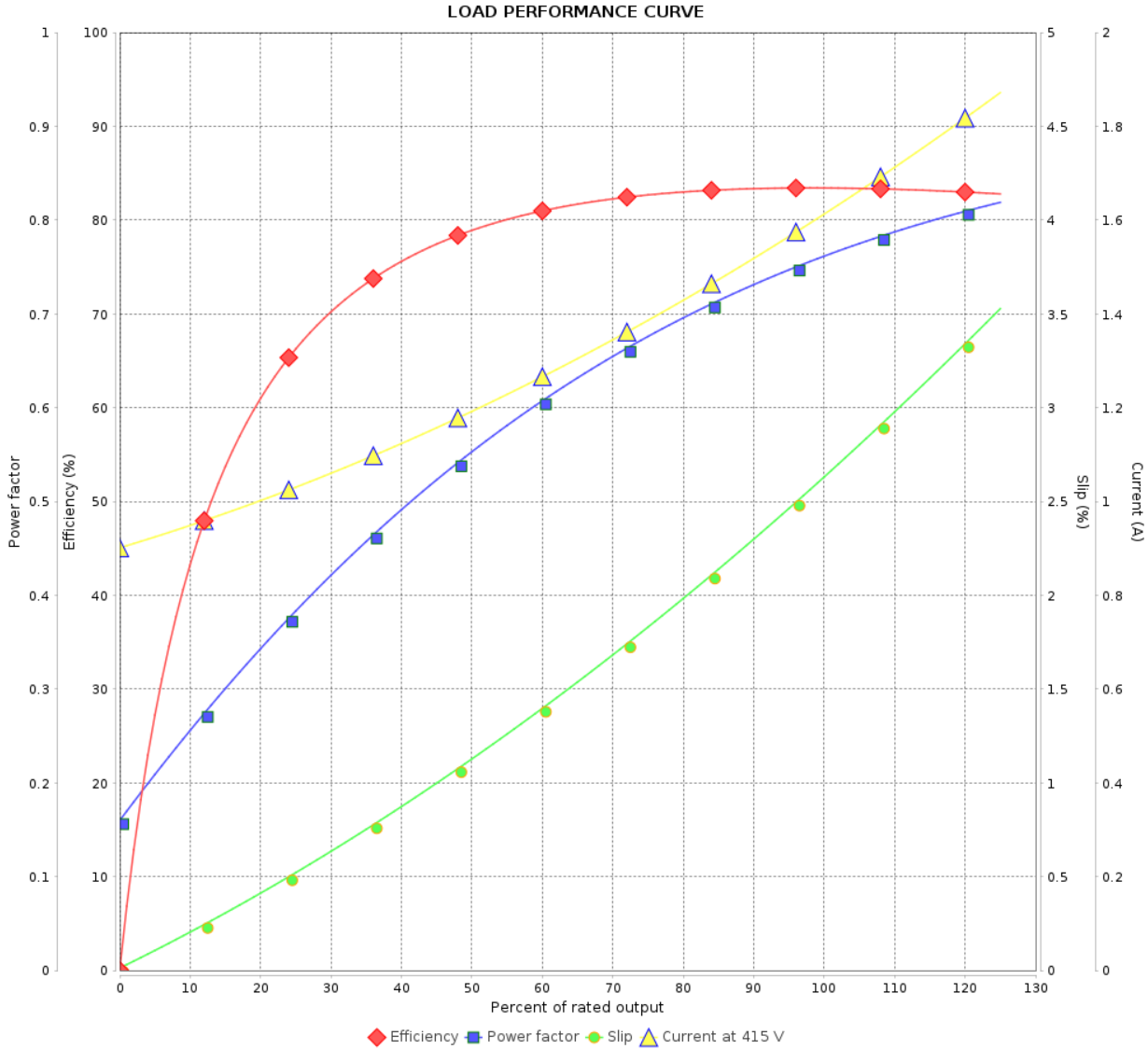
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12598478



Performance : 415 V 50 Hz 2P IE3

Rated current : 1.65 A  
LRC : 10.2  
Rated torque : 0.249 kgfm  
Locked rotor torque : 420 %  
Breakdown torque : 480 %  
Rated speed : 2920 rpm

Moment of inertia (J) : 0.0020 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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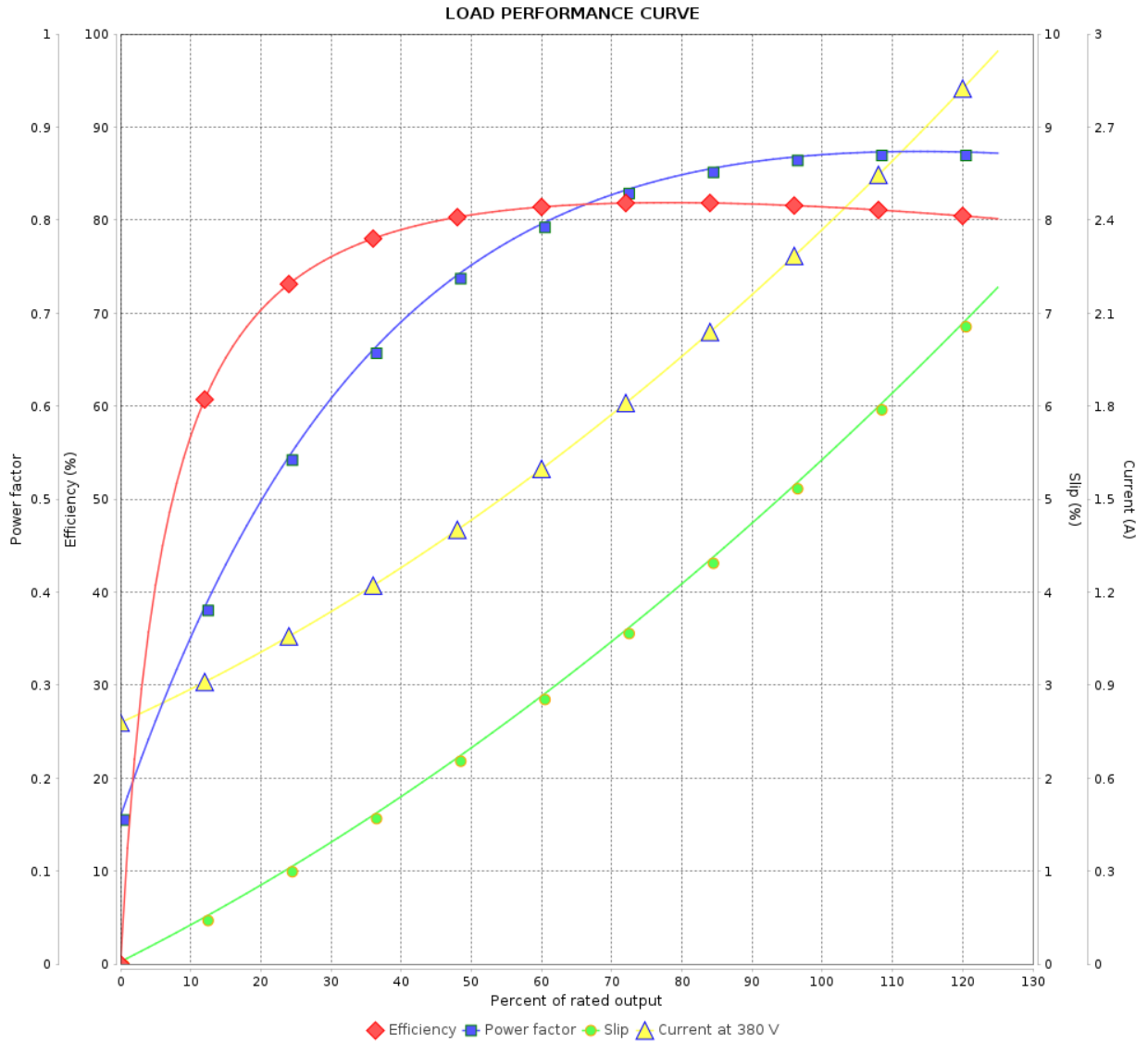
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 Close Coupled Pump JM NEMA  
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Product code : 12598478



Performance : 380 V 50 Hz 2P IE2

Rated current : 2.36 A  
LRC : 6.7  
Rated torque : 0.384 kgfm  
Locked rotor torque : 220 %  
Breakdown torque : 260 %  
Rated speed : 2835 rpm

Moment of inertia (J) : 0.0020 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

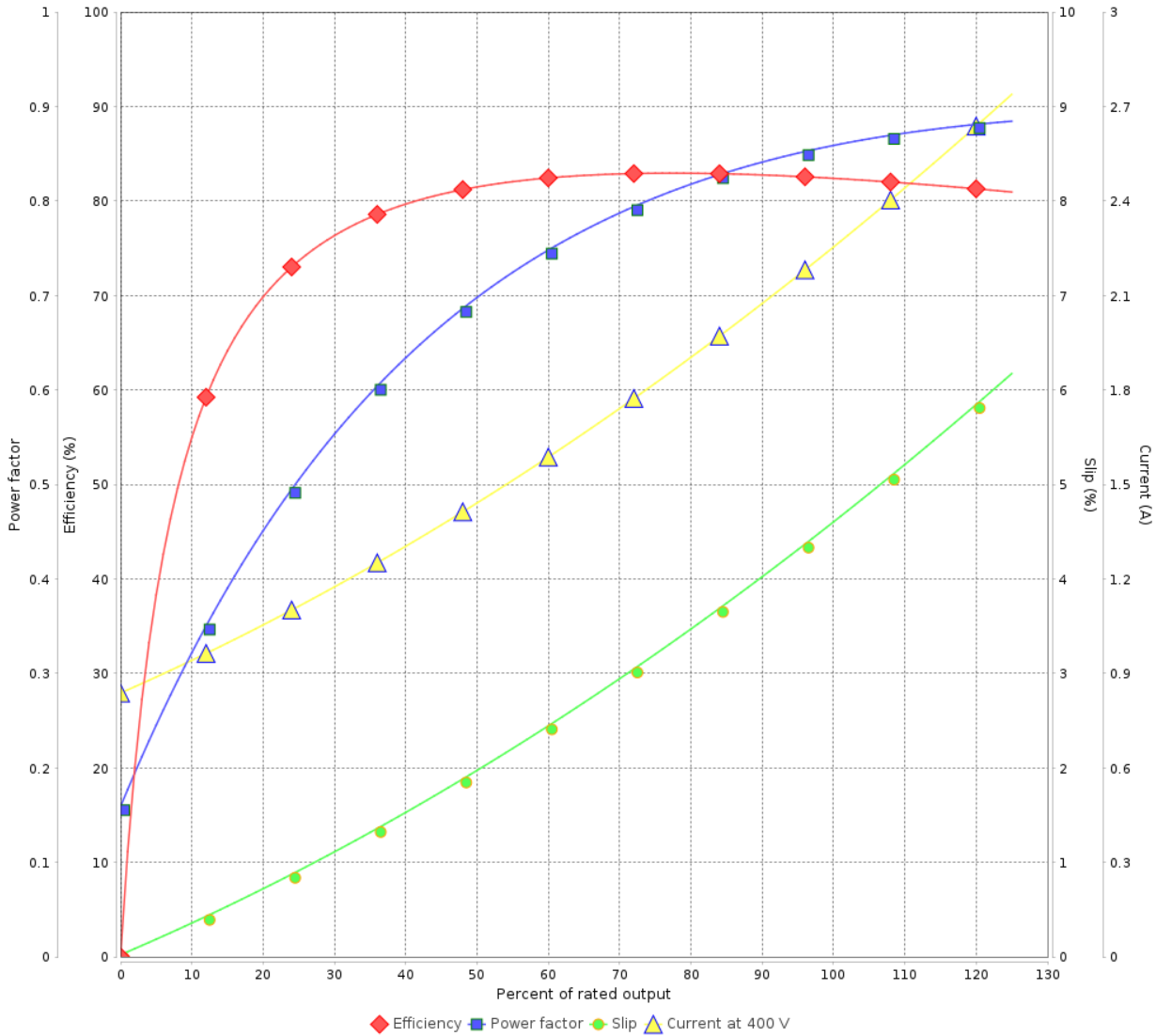


Customer :

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

Product code : 12598478

LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 2P IE2

Rated current : 2.24 A  
LRC : 7.4  
Rated torque : 0.381 kgfm  
Locked rotor torque : 260 %  
Breakdown torque : 290 %  
Rated speed : 2860 rpm

Moment of inertia (J) : 0.0020 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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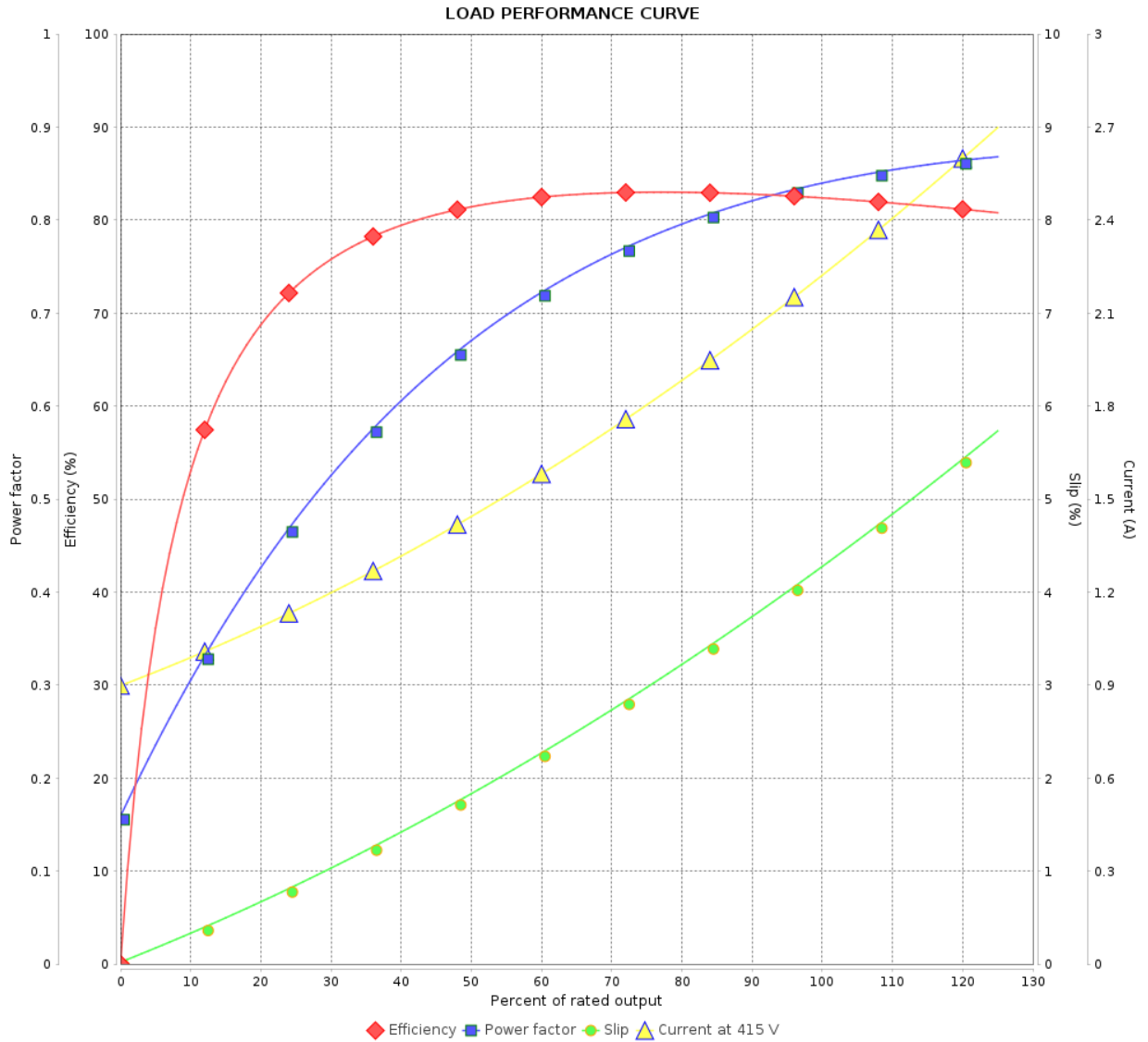
## Three Phase Induction Motor - Squirrel Cage



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

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

Product code : 12598478



Performance : 415 V 50 Hz 2P IE2

Rated current : 2.21 A  
LRC : 7.9  
Rated torque : 0.379 kgfm  
Locked rotor torque : 280 %  
Breakdown torque : 310 %  
Rated speed : 2870 rpm

Moment of inertia (J) : 0.0020 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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