

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :							
Product line	: W22 NEMA Premium Efficiency Three-Phase	Product code :	12140630				
Frame	: 404/5T	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>	: 588 kg				
Protection degree	: IP55	Moment of inertia (J)	: 1.55 kgm <sup>2</sup>				
Design	: B						
Output [HP]	60	50	50	50	60	60	60
Poles	6	6	6	6	6	6	6
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	230/460	380	400	415	380	400	415
Rated current [A]	139/69.5	69.3	66.5	64.8	85.1	80.3	78.3
L. R. Amperes [A]	987/493	457	485	505	477	498	525
LRC [A]	7.1x(Code H)	6.6x(Code G)	7.3x(Code H)	7.8x(Code J)	5.6x(Code F)	6.2x(Code G)	6.7x(Code G)
No load current [A]	50.0/25.0	24.7	26.4	27.7	24.7	26.4	27.7
Rated speed [RPM]	1185	985	985	985	980	980	985
Slip [%]	1.25	1.50	1.50	1.50	2.00	2.00	1.50
Rated torque [kgfm]	36.7	36.8	36.8	36.8	44.4	44.4	44.2
Locked rotor torque [%]	200	180	220	229	150	180	190
Breakdown torque [%]	229	220	240	260	180	200	220
Service factor	1.25	1.00	1.00	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	105 K	105 K	105 K
Locked rotor time	36s (cold) 20s (hot)	28s (cold) 16s (hot)	28s (cold) 16s (hot)	28s (cold) 16s (hot)	28s (cold) 16s (hot)	28s (cold) 16s (hot)	28s (cold) 16s (hot)
Noise level <sup>2</sup>	68.0 dB(A)	64.0 dB(A)	64.0 dB(A)	64.0 dB(A)	64.0 dB(A)	64.0 dB(A)	64.0 dB(A)
Efficiency (%)	25%	94.0	93.3	93.4	93.4	94.0	94.0
	50%	94.1	93.3	93.3	93.3	93.6	93.6
	75%	94.5	93.4	93.7	93.7	93.0	93.6
	100%	94.5	93.3	93.4	93.4	92.4	93.0
Power Factor	25%	0.48	0.48	0.44	0.41	0.54	0.51
	50%	0.74	0.73	0.70	0.67	0.79	0.77
	75%	0.82	0.83	0.82	0.79	0.85	0.84
	100%	0.86	0.87	0.86	0.85	0.87	0.87
Losses at normative operating points (speed;torque), in percentage of rated output power							
Losses (%)	P1 (0,9;1,0)	5.6	5.6	5.6	5.6	5.6	5.6
	P2 (0,5;1,0)	4.6	4.6	4.6	4.6	4.6	4.6
	P3 (0,25;1,0)	4.3	4.3	4.3	4.3	4.3	4.3
	P4 (0,9;0,5)	2.6	2.6	2.6	2.6	2.6	2.6
	P5 (0,5;0,5)	1.8	1.8	1.8	1.8	1.8	1.8
	P6 (0,5;0,25)	1.1	1.1	1.1	1.1	1.1	1.1
	P7 (0,25;0,25)	0.7	0.7	0.7	0.7	0.7	0.7
Bearing type	: Drive end : NU-316 C3	Non drive end : 6314 C3	Foundation loads				
Sealing	: WSeal	WSeal	Max. traction : 664 kgf				
Lubrication interval	: 12000 h	17000 h	Max. compression : 1252 kgf				
Lubricant amount	: 34 g	27 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 154A SF 1.10 SFA 169A

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# LOAD PERFORMANCE CURVE

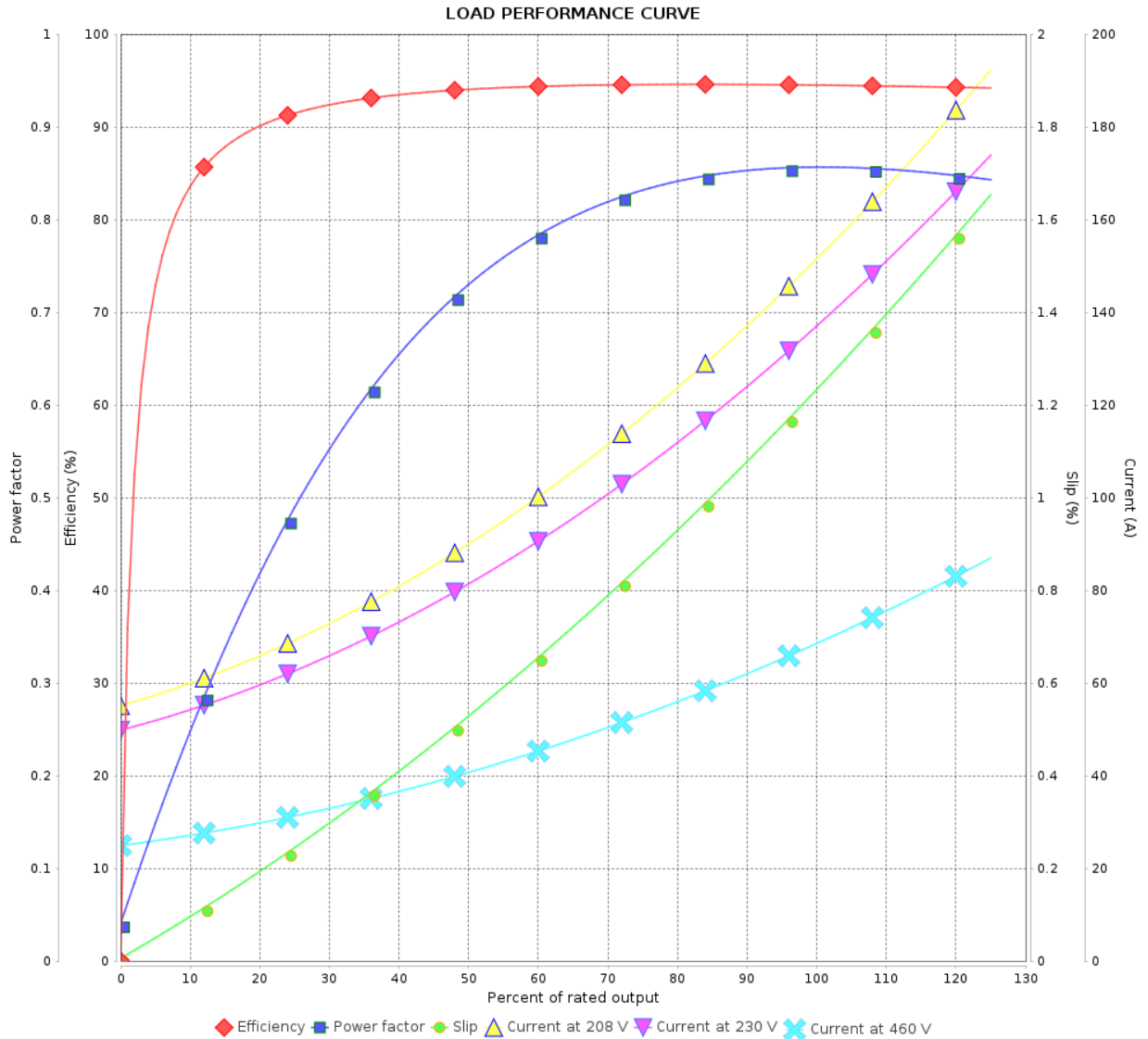
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12140630



Performance : 230/460 V 60 Hz 6P

Rated current : 139/69.5 A  
 LRC : 7.1  
 Rated torque : 36.7 kgfm  
 Locked rotor torque : 200 %  
 Breakdown torque : 229 %  
 Rated speed : 1185 rpm

Moment of inertia (J) : 1.55 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

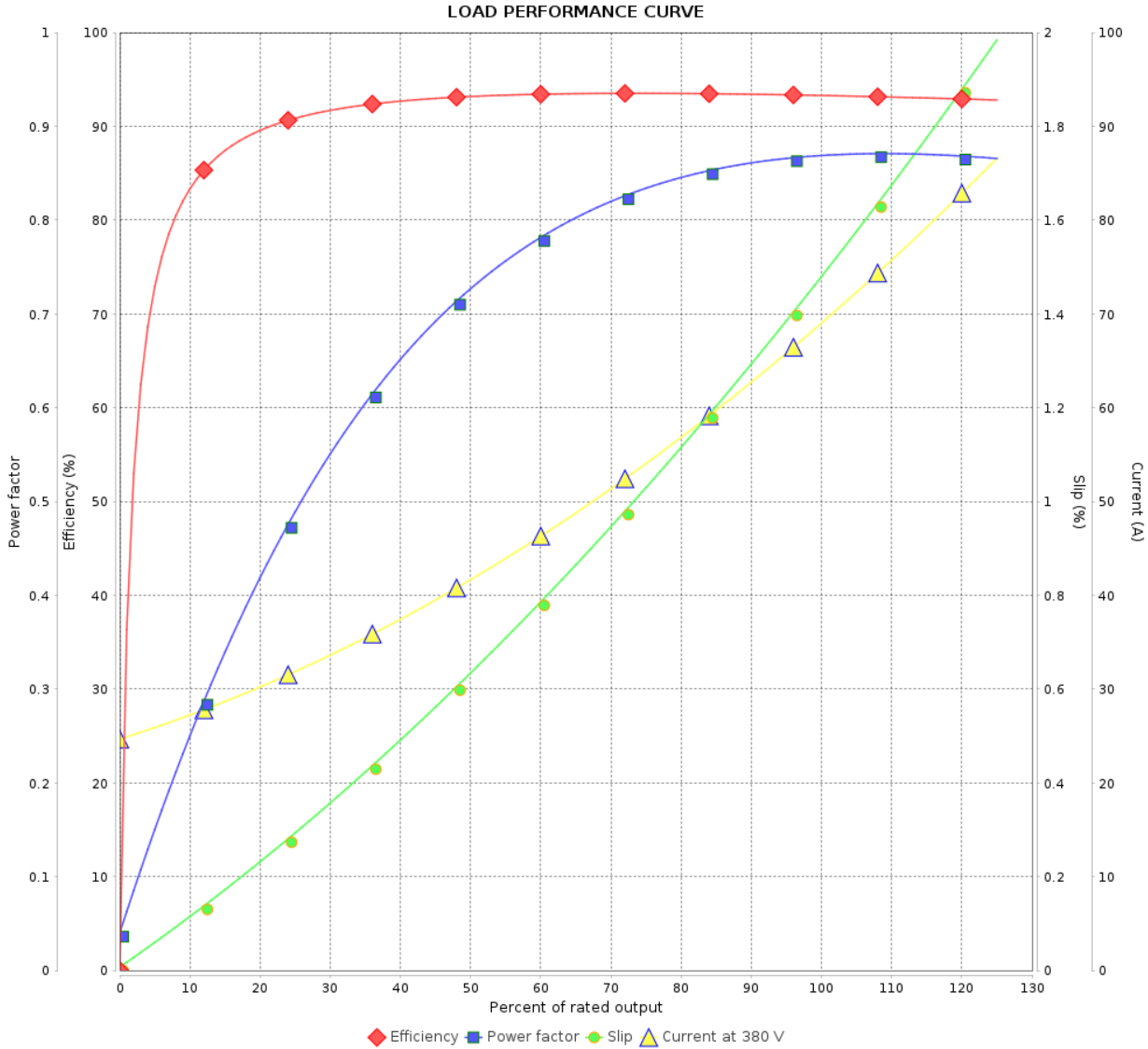
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12140630



Performance : 380 V 50 Hz 6P IE3

Rated current : 69.3 A  
 LRC : 6.6  
 Rated torque : 36.8 kgfm  
 Locked rotor torque : 180 %  
 Breakdown torque : 220 %  
 Rated speed : 985 rpm

Moment of inertia (J) : 1.55 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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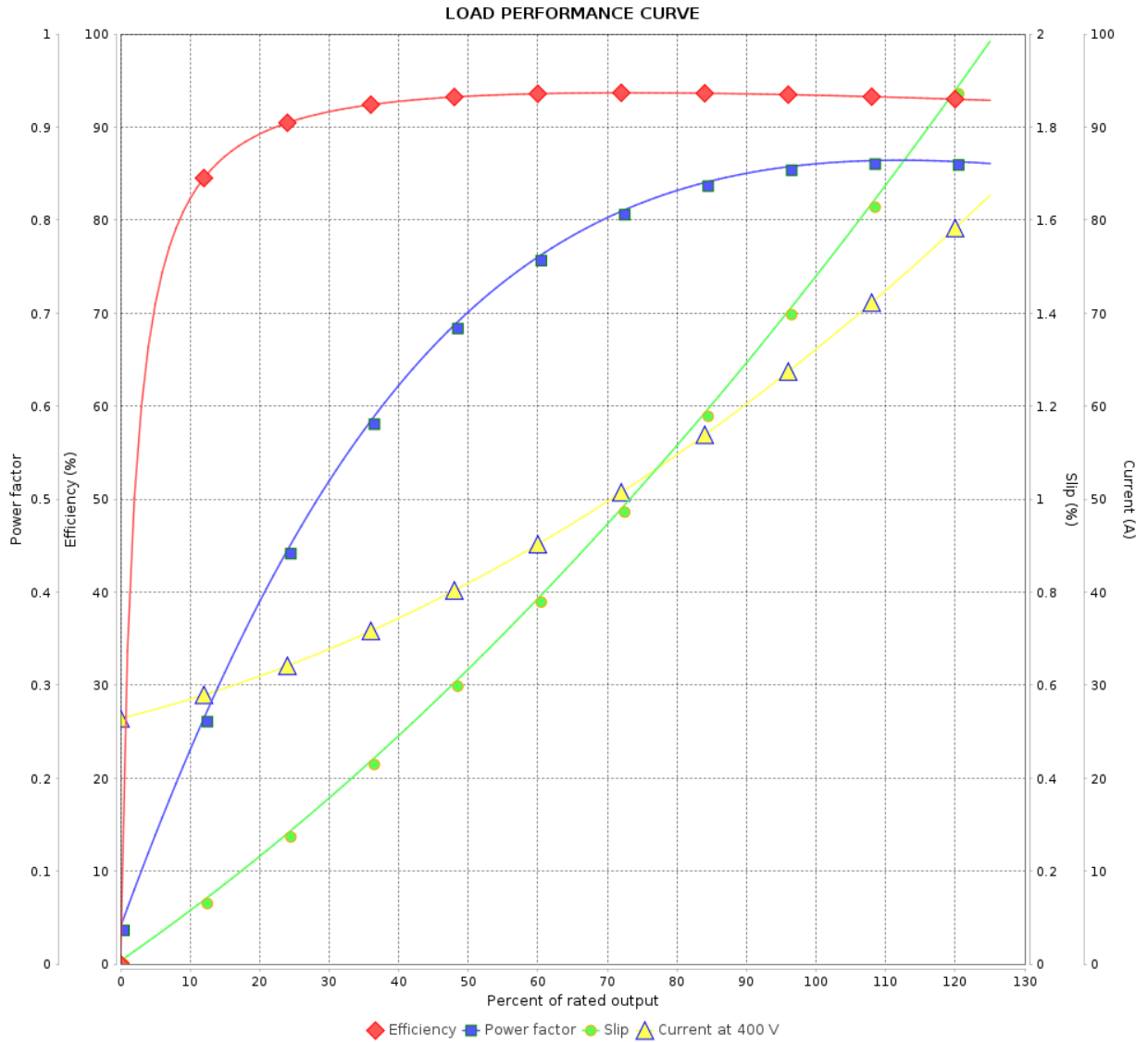
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12140630



Performance : 400 V 50 Hz 6P IE3

Rated current : 66.5 A  
 LRC : 7.3  
 Rated torque : 36.8 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 240 %  
 Rated speed : 985 rpm

Moment of inertia (J) : 1.55 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

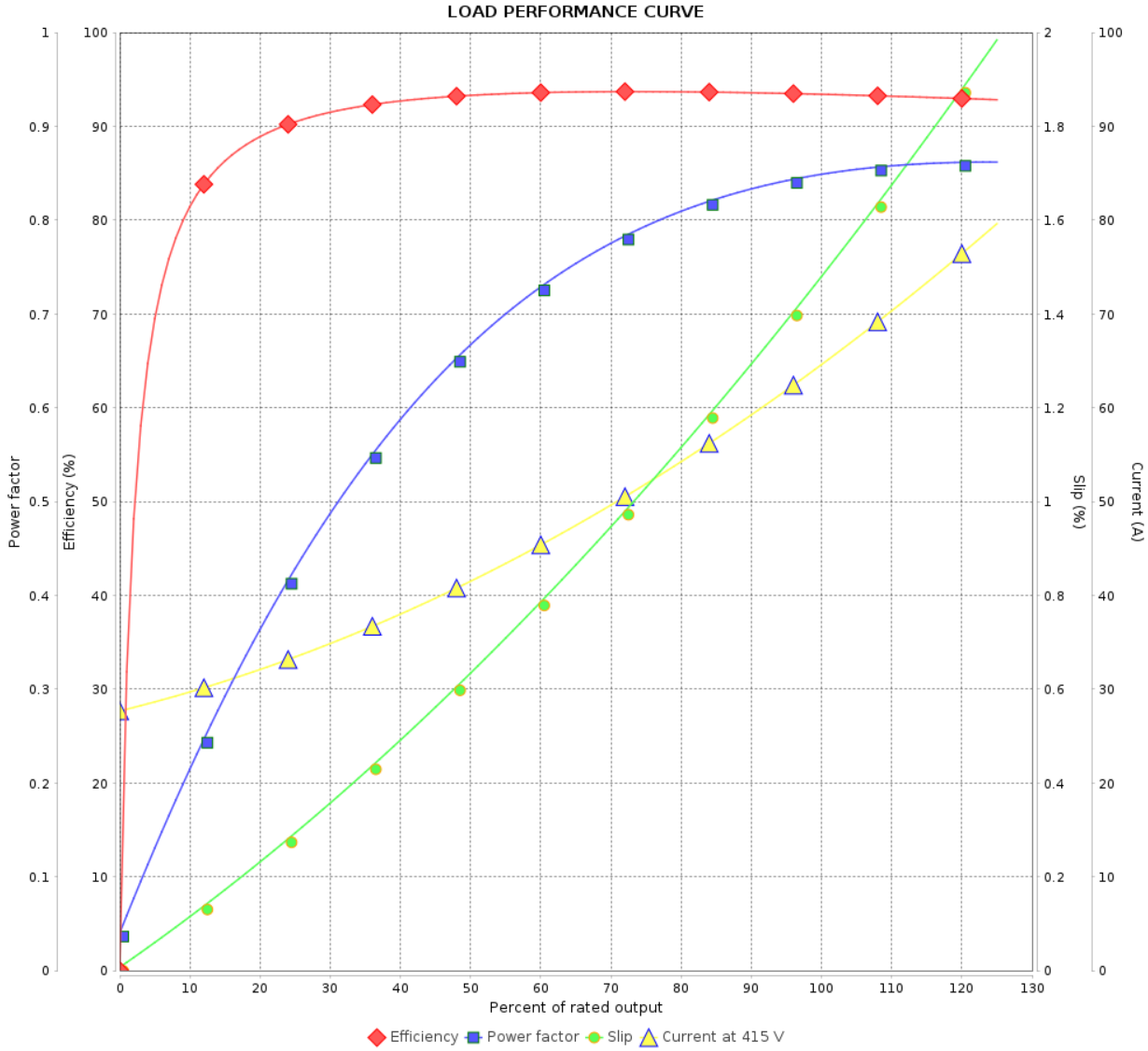
Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12140630



Performance : 415 V 50 Hz 6P IE3

Rated current : 64.8 A  
 LRC : 7.8  
 Rated torque : 36.8 kgfm  
 Locked rotor torque : 229 %  
 Breakdown torque : 260 %  
 Rated speed : 985 rpm

Moment of inertia (J) : 1.55 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

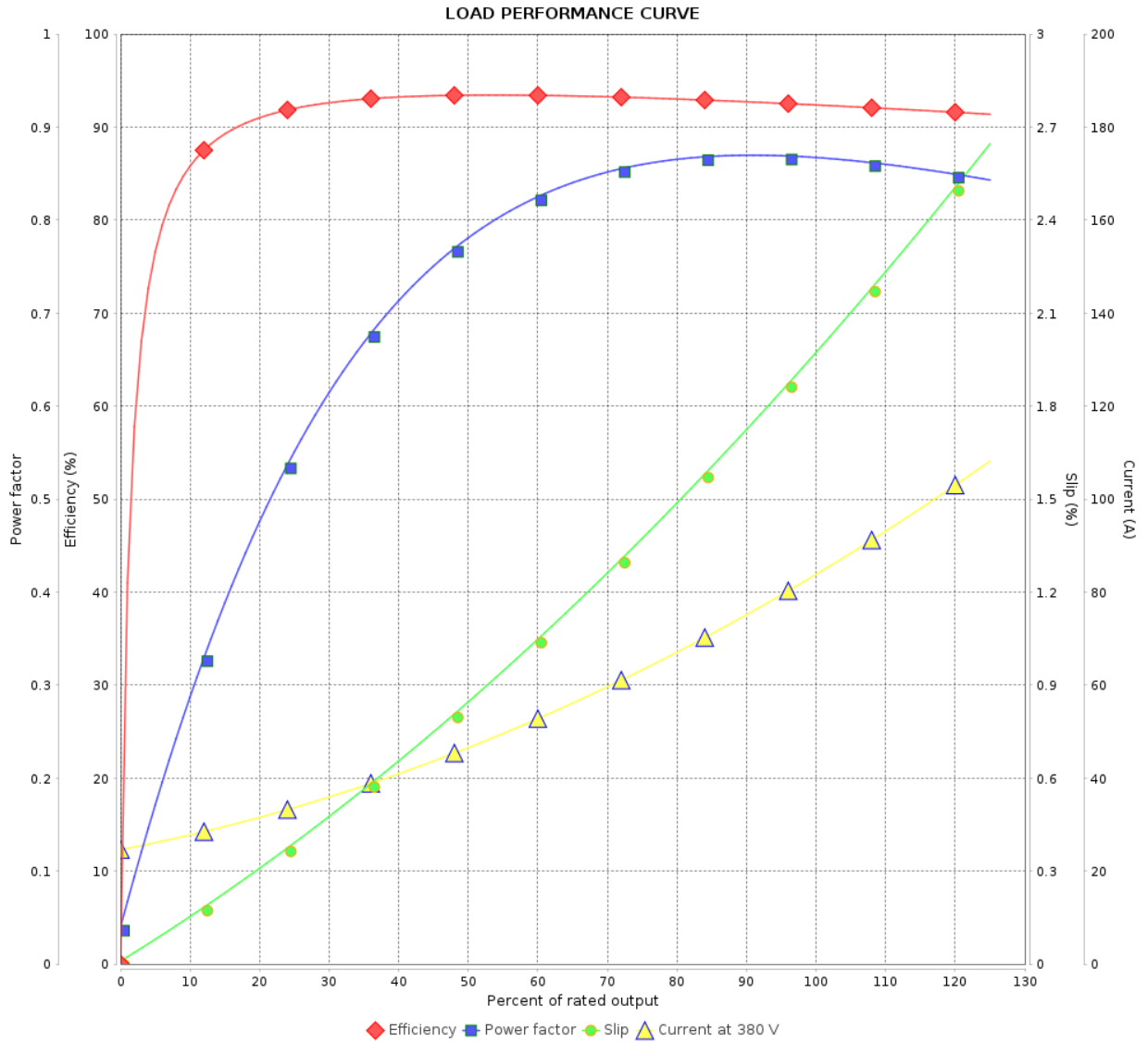
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12140630



Performance : 380 V 50 Hz 6P IE1

Rated current : 85.1 A  
 LRC : 5.6  
 Rated torque : 44.4 kgfm  
 Locked rotor torque : 150 %  
 Breakdown torque : 180 %  
 Rated speed : 980 rpm

Moment of inertia (J) : 1.55 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

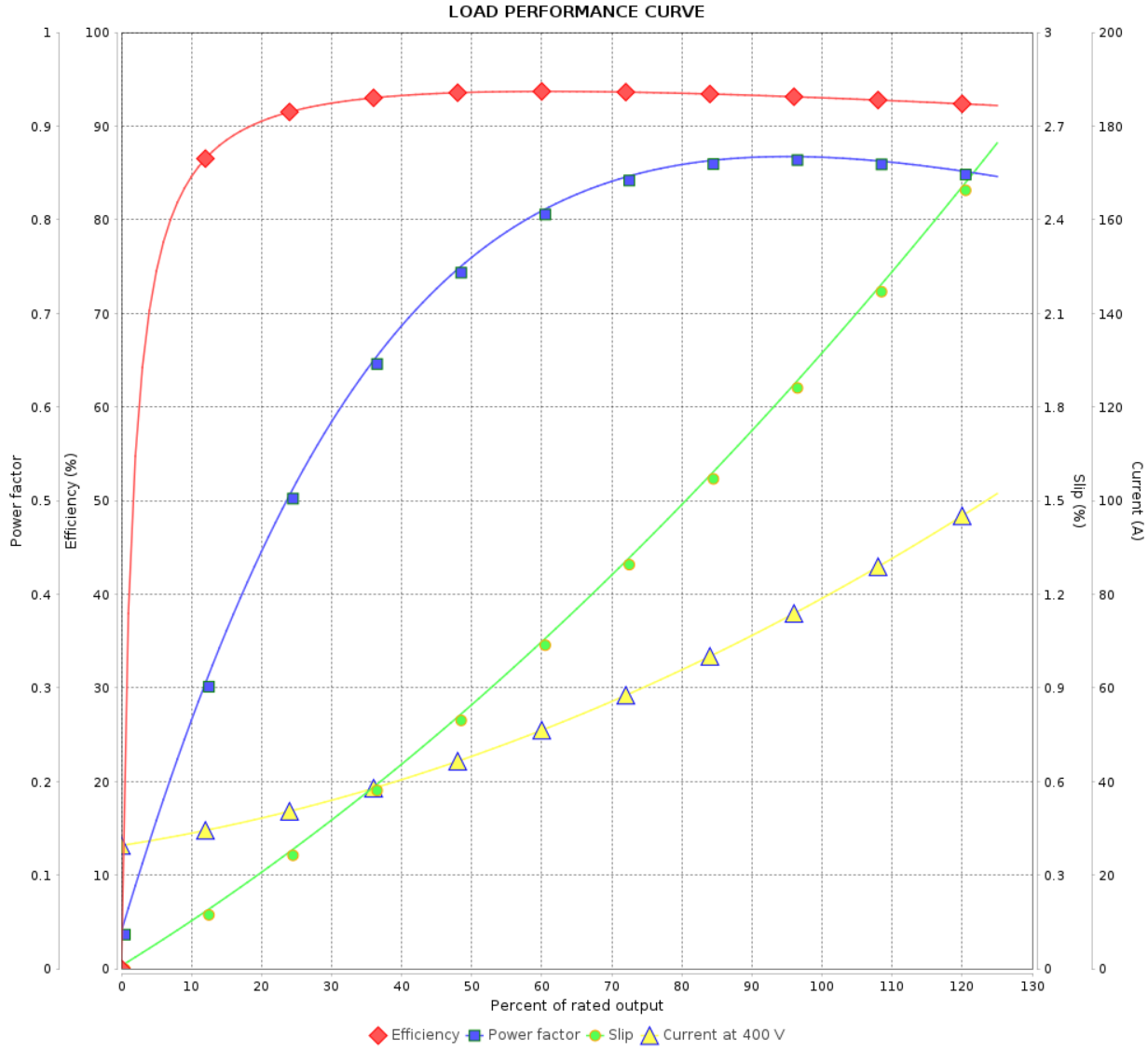
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12140630



Performance : 400 V 50 Hz 6P IE2

Rated current	: 80.3 A	Moment of inertia (J)	: 1.55 kgm <sup>2</sup>
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 44.4 kgfm	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 105 K
Rated speed	: 980 rpm	Design	: B

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# LOAD PERFORMANCE CURVE

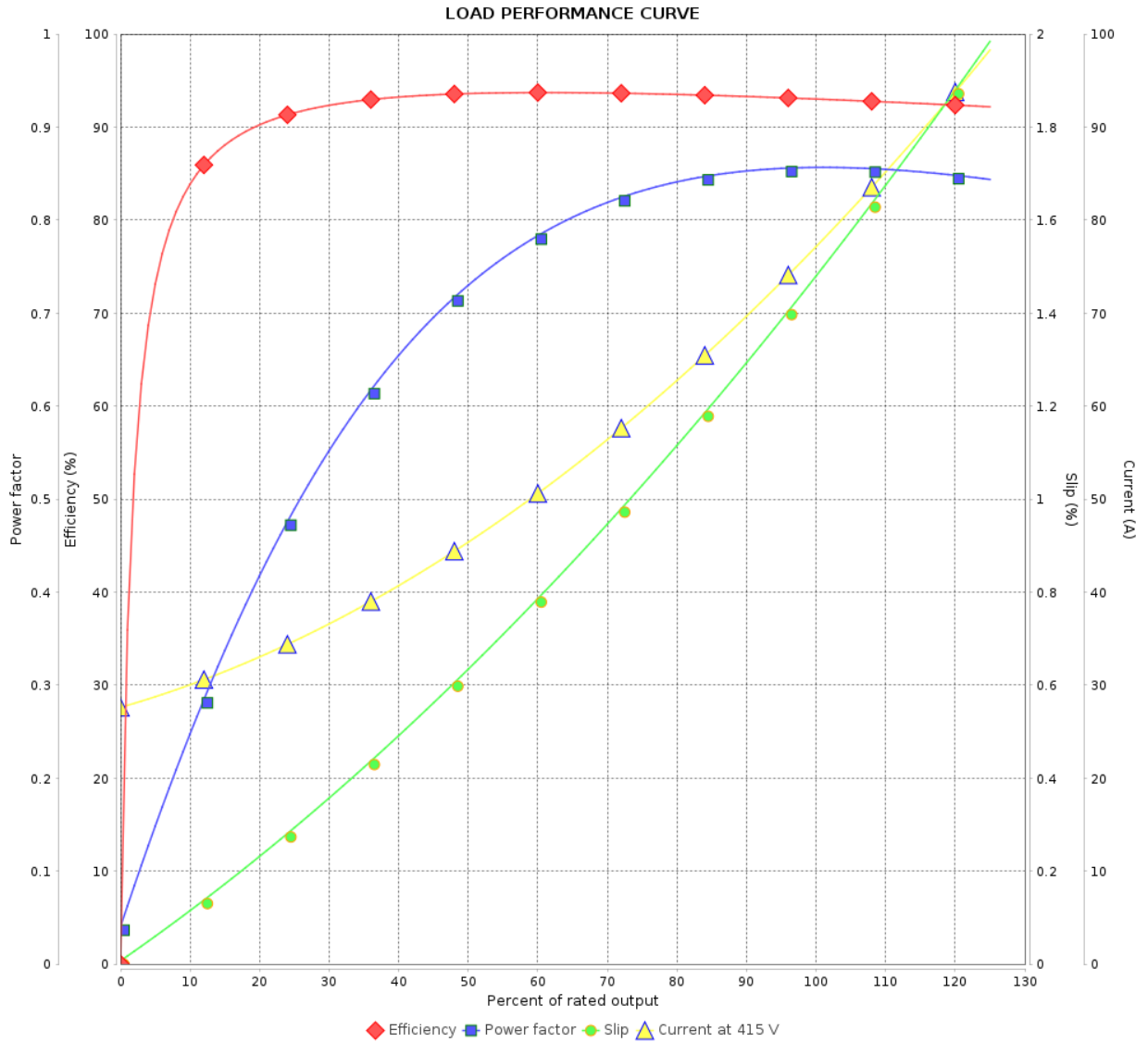
Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12140630



Performance : 415 V 50 Hz 6P IE2

Rated current : 78.3 A  
 LRC : 6.7  
 Rated torque : 44.2 kgfm  
 Locked rotor torque : 190 %  
 Breakdown torque : 220 %  
 Rated speed : 985 rpm

Moment of inertia (J) : 1.55 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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