

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :							
Product line	: ODP NEMA Premium Efficiency Three-Phase	Product code :	11996593				
Frame	: 256TC	Cooling method	: IC01 - ODP				
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>2</sup>	: 0.0 kg				
Protection degree	: IP23	Moment of inertia (J)	: 0.1104 kgm <sup>2</sup>				
Design	: B						
Output [HP]	20	15	15	15	20	20	20
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]	49.4/24.7	23.4	23.4	24.1	29.6	29.1	29.2
L. R. Amperes [A]	311/156	166	175	188	166	175	187
LRC [A]	6.3x(Code G)	7.1x(Code J)	7.5x(Code K)	7.8x(Code K)	5.6x(Code F)	6.0x(Code G)	6.4x(Code H)
No load current [A]	24.0/12.0	11.9	13.5	15.1	11.9	13.5	15.1
Rated speed [RPM]	1770	1475	1475	1475	1465	1465	1470
Slip [%]	1.67	1.67	1.67	1.67	2.33	2.33	2.00
Rated torque [kgfm]	8.20	7.38	7.38	7.38	9.91	9.91	9.87
Locked rotor torque [%]	260	229	260	270	170	190	200
Breakdown torque [%]	280	350	390	430	260	290	320
Service factor	1.15	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	21s (cold) 12s (hot)	28s (cold) 16s (hot)	27s (cold) 15s (hot)	25s (cold) 14s (hot)	28s (cold) 16s (hot)	27s (cold) 15s (hot)	25s (cold) 14s (hot)
Noise level <sup>2</sup>	60.0 dB(A)						
Efficiency (%)	25%						
	50%	91.7	87.6	87.1	86.7	90.2	90.2
	75%	93.0	90.4	90.4	90.4	91.0	91.0
	100%	93.0	91.4	91.5	91.6	91.7	91.7
Power Factor	25%						
	50%	0.63	0.59	0.54	0.49	0.68	0.63
	75%	0.72	0.72	0.67	0.62	0.80	0.76
	100%	0.82	0.80	0.76	0.71	0.84	0.81
Bearing type	: Drive end : 6309 Z C3	Non drive end : 6209 Z C3	Foundation loads				
Sealing	: Without	Without	Max. traction : 497 kgf				
	Bearing Seal Bearing Seal		Max. compression : 497 kgf				
Lubrication interval	: 20000 h	20000 h					
Lubricant amount	: 13 g	9 g					
Lubricant type	: Mobil Polyrex EM						
Notes USABLE @208V 55.3A SF 1.15 SFA 63.6A							
This revision replaces and cancel the previous one, which must be eliminated. (1) Looking the motor from the shaft end. (2) Measured at 1m and with tolerance of +3dB(A). (3) Approximate weight subject to changes after manufacturing process. (4) At 100% of full load.				These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.			
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# LOAD PERFORMANCE CURVE

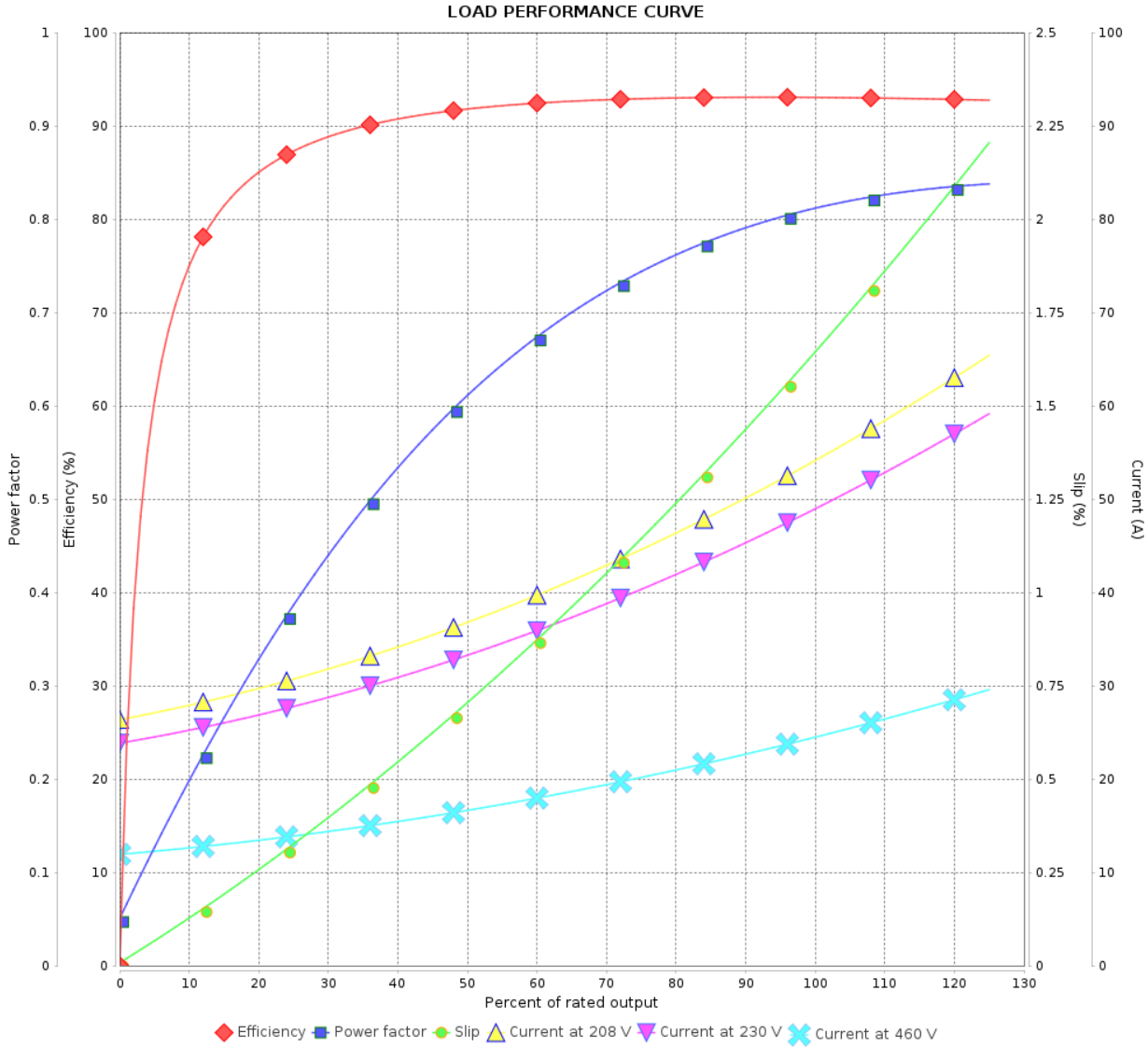
Three Phase Induction Motor - Squirrel Cage



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

Product line : ODP NEMA Premium Efficiency Three-Phase

Product code : 11996593



Performance : 230/460 V 60 Hz 4P

Rated current : 49.4/24.7 A  
 LRC : 6.3  
 Rated torque : 8.20 kgfm  
 Locked rotor torque : 260 %  
 Breakdown torque : 280 %  
 Rated speed : 1770 rpm

Moment of inertia (J) : 0.1104 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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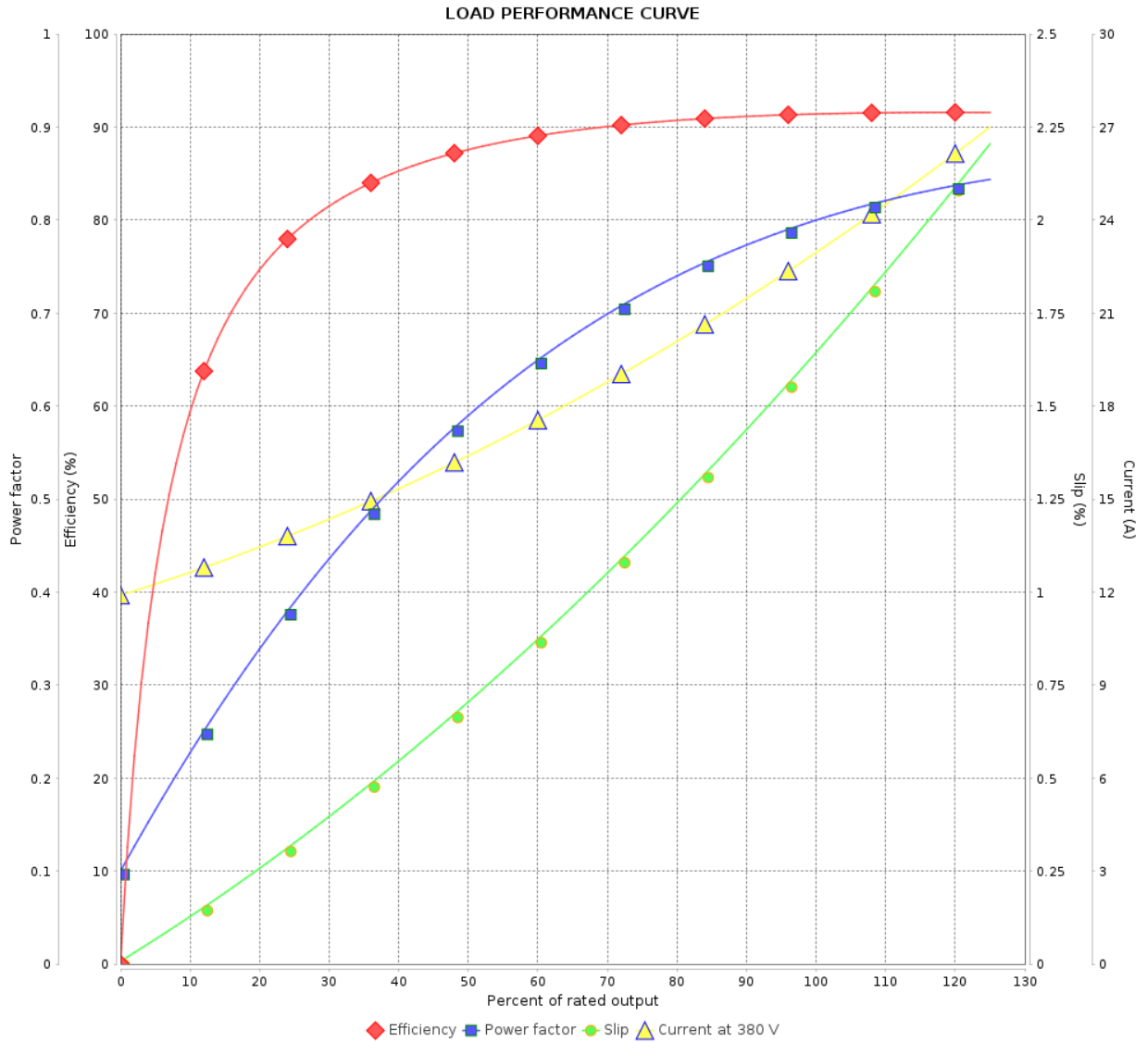
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : ODP NEMA Premium Efficiency Three-Phase

Product code : 11996593



Performance : 380 V 50 Hz 4P IE3

Rated current : 23.4 A  
 LRC : 7.1  
 Rated torque : 7.38 kgfm  
 Locked rotor torque : 229 %  
 Breakdown torque : 350 %  
 Rated speed : 1475 rpm

Moment of inertia (J) : 0.1104 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

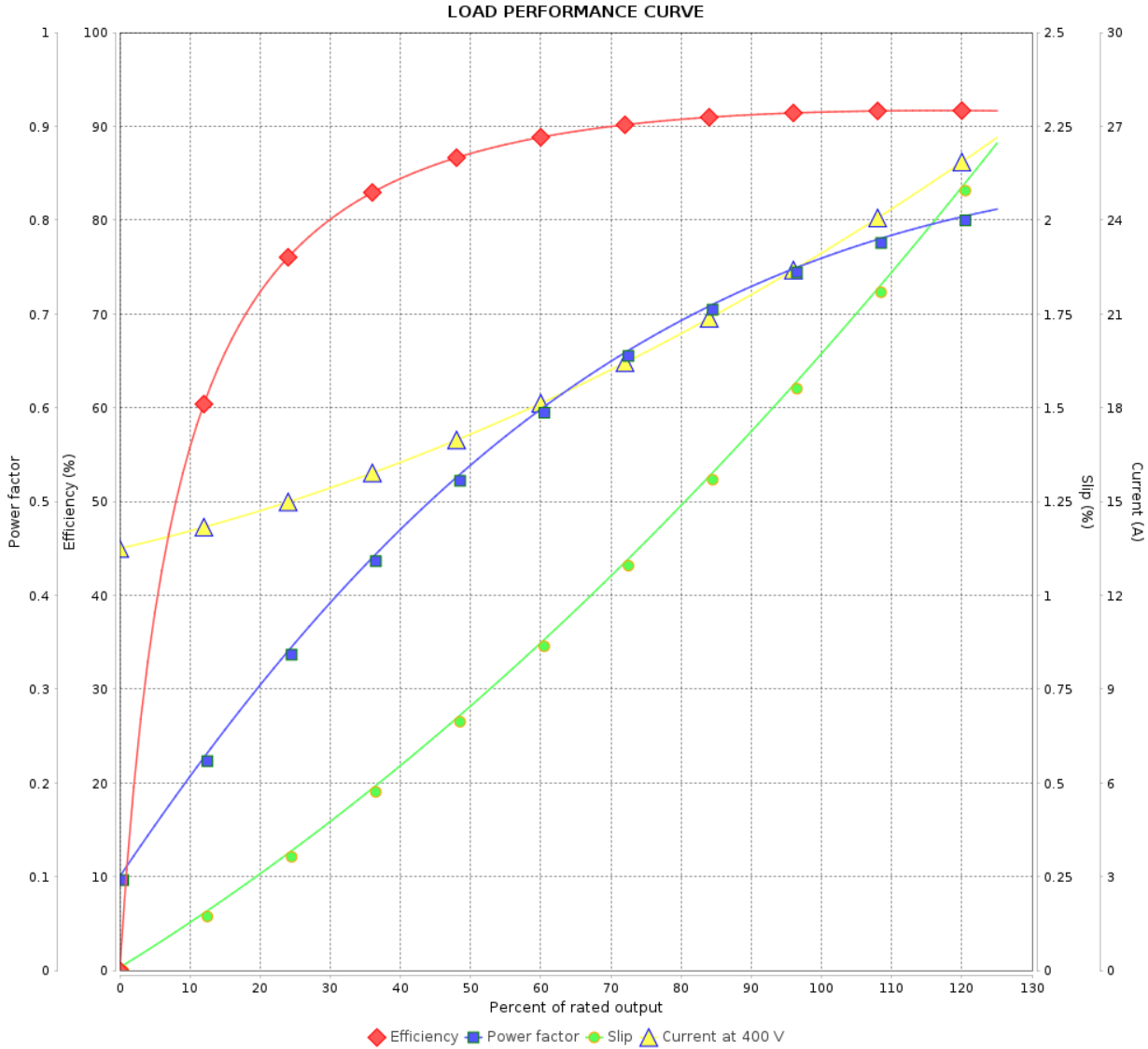
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : ODP NEMA Premium Efficiency Three-Phase

Product code : 11996593



Performance : 400 V 50 Hz 4P IE3

Rated current : 23.4 A  
 LRC : 7.5  
 Rated torque : 7.38 kgfm  
 Locked rotor torque : 260 %  
 Breakdown torque : 390 %  
 Rated speed : 1475 rpm

Moment of inertia (J) : 0.1104 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

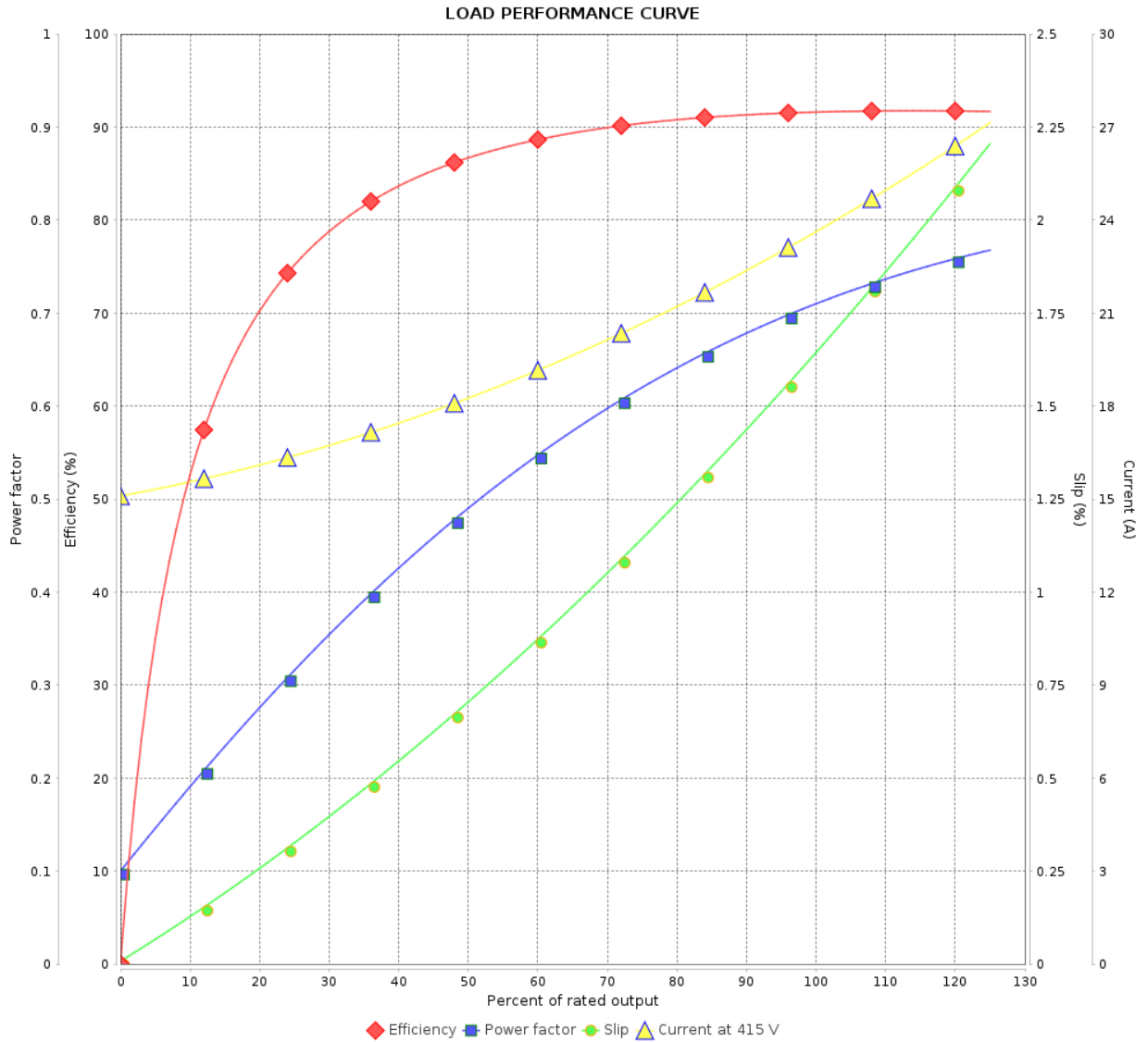
## Three Phase Induction Motor - Squirrel Cage



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

Product line : ODP NEMA Premium Efficiency Three-Phase

Product code : 11996593



Performance : 415 V 50 Hz 4P IE3

Rated current : 24.1 A  
 LRC : 7.8  
 Rated torque : 7.38 kgfm  
 Locked rotor torque : 270 %  
 Breakdown torque : 430 %  
 Rated speed : 1475 rpm

Moment of inertia (J) : 0.1104 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

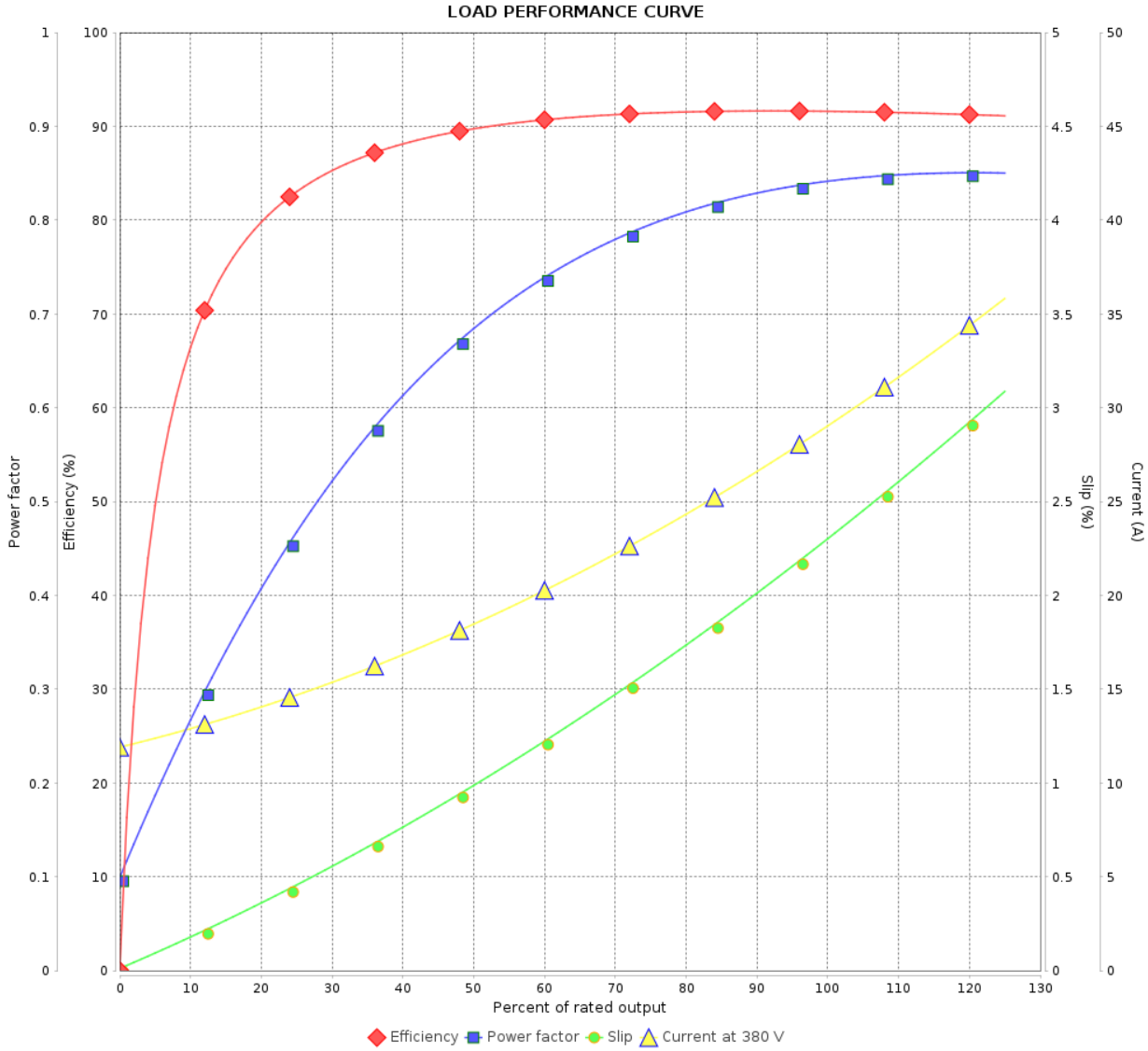
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : ODP NEMA Premium Efficiency Three-Phase

Product code : 11996593



Performance : 380 V 50 Hz 4P IE2

Rated current : 29.6 A  
 LRC : 5.6  
 Rated torque : 9.91 kgfm  
 Locked rotor torque : 170 %  
 Breakdown torque : 260 %  
 Rated speed : 1465 rpm

Moment of inertia (J) : 0.1104 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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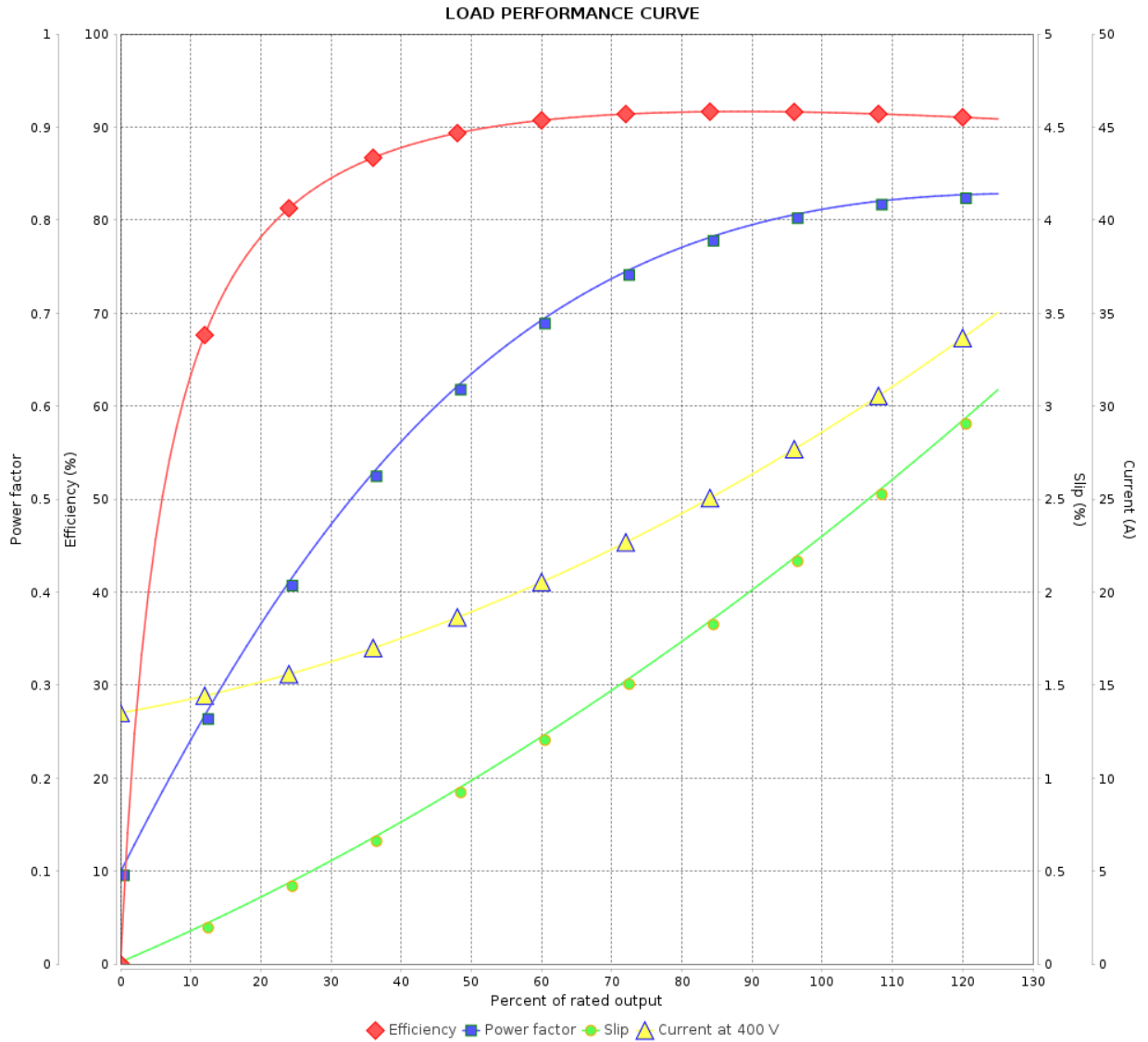
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : ODP NEMA Premium Efficiency Three-Phase

Product code : 11996593



Performance : 400 V 50 Hz 4P IE2

Rated current : 29.1 A  
 LRC : 6.0  
 Rated torque : 9.91 kgfm  
 Locked rotor torque : 190 %  
 Breakdown torque : 290 %  
 Rated speed : 1465 rpm

Moment of inertia (J) : 0.1104 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

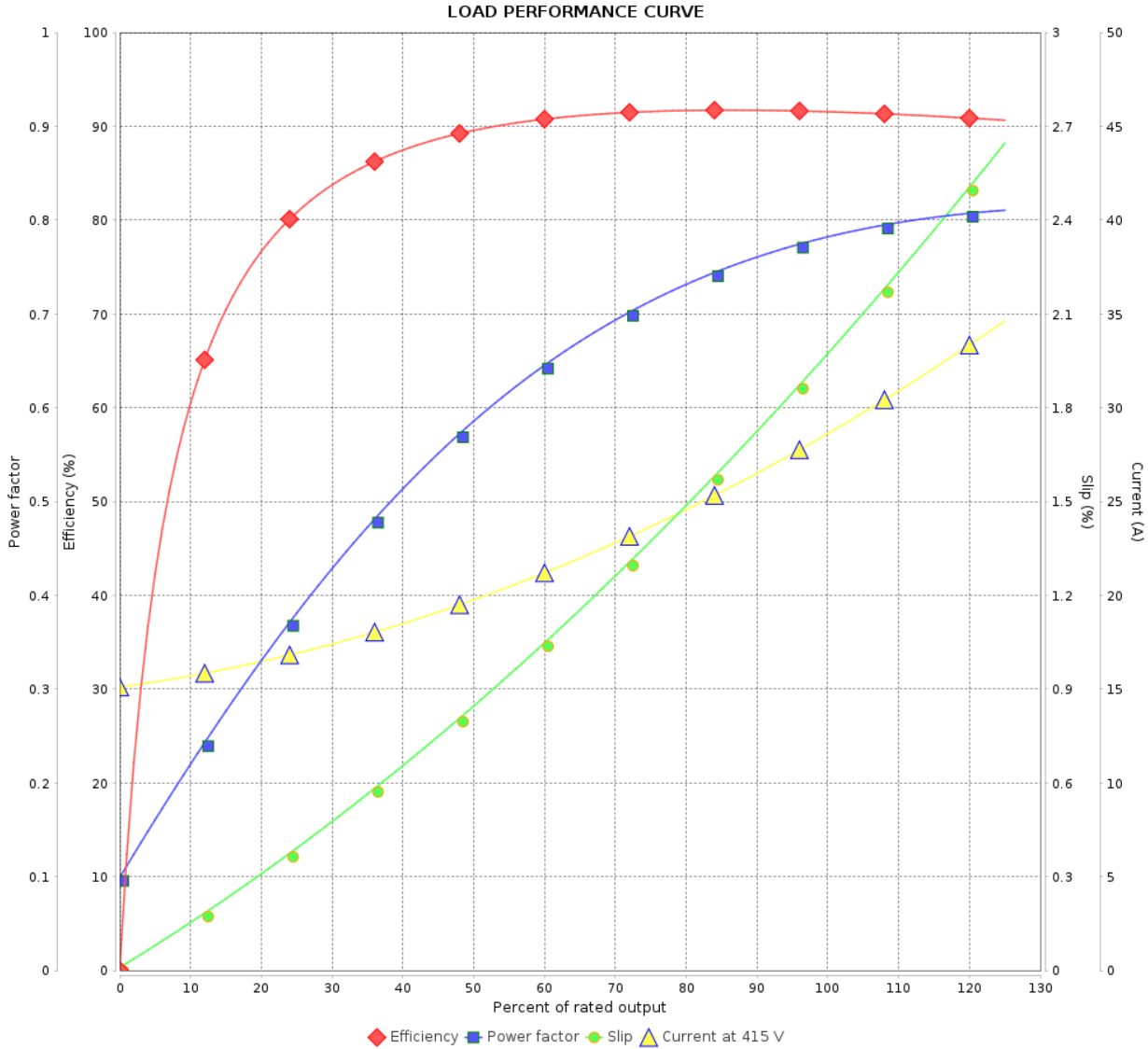
Three Phase Induction Motor - Squirrel Cage



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

Product line : ODP NEMA Premium Efficiency Three-Phase

Product code : 11996593



Performance : 415 V 50 Hz 4P IE2

Rated current : 29.2 A  
 LRC : 6.4  
 Rated torque : 9.87 kgfm  
 Locked rotor torque : 200 %  
 Breakdown torque : 320 %  
 Rated speed : 1470 rpm

Moment of inertia (J) : 0.1104 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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