

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :								
Product line	: W22 NEMA Premium Efficiency Three-Phase	Product code :	11165995					
Frame	: 364/5TS	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>	: 386 kg					
Protection degree	: IP55	Moment of inertia (J)	: 0.4485 kgm <sup>2</sup>					
Design	: B							
Output [HP]	60	50	50	50	60	60	60	
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]	134/67.0	67.4	64.0	61.7	83.1	77.6	74.8	
L. R. Amperes [A]	884/442	431	461	457	432	450	471	
LRC [A]	6.6x(Code G)	6.4x(Code G)	7.2x(Code H)	7.4x(Code H)	5.2x(Code E)	5.8x(Code F)	6.3x(Code G)	
No load current [A]	32.0/16.0	15.8	16.8	17.8	15.8	16.8	17.8	
Rated speed [RPM]	3555	2955	2960	2965	2935	2945	2950	
Slip [%]	1.25	1.50	1.33	1.17	2.17	1.83	1.67	
Rated torque [kgfm]	12.2	12.3	12.3	12.2	14.8	14.8	14.8	
Locked rotor torque [%]	200	190	220	229	160	180	190	
Breakdown torque [%]	260	250	280	300	200	229	250	
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	25s (cold) 14s (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>	79.0 dB(A)	74.0 dB(A)	74.0 dB(A)	74.0 dB(A)	74.0 dB(A)	74.0 dB(A)	74.0 dB(A)	
Efficiency (%)	25%	91.0	91.1	90.7	90.7	92.7	92.2	92.2
	50%	91.7	92.1	91.7	91.6	92.4	92.4	92.4
	75%	93.0	92.8	92.8	92.9	93.0	93.0	93.0
	100%	93.6	93.7	93.7	93.7	92.4	93.0	93.0
Power Factor	25%	0.59	0.60	0.57	0.53	0.65	0.62	0.59
	50%	0.81	0.81	0.79	0.76	0.85	0.83	0.81
	75%	0.88	0.88	0.87	0.85	0.88	0.89	0.88
	100%	0.90	0.89	0.89	0.89	0.89	0.90	0.90
Losses at normative operating points (speed;torque), in percentage of rated output power								
Losses (%)	P1 (0,9;1,0)	6.3	6.3	6.3	6.3	6.3	6.3	
	P2 (0,5;1,0)	4.7	4.7	4.7	4.7	4.7	4.7	
	P3 (0,25;1,0)	4.4	4.4	4.4	4.4	4.4	4.4	
	P4 (0,9;0,5)	3.3	3.3	3.3	3.3	3.3	3.3	
	P5 (0,5;0,5)	1.7	1.7	1.7	1.7	1.7	1.7	
	P6 (0,5;0,25)	1.1	1.1	1.1	1.1	1.1	1.1	
	P7 (0,25;0,25)	0.6	0.6	0.6	0.6	0.6	0.6	
Bearing type	: Drive end 6314 C3	Non drive end 6314 C3	Foundation loads					
Sealing	: WSeal	WSeal	Max. traction : 221 kgf					
Lubrication interval	: 4000 h	4000 h	Max. compression : 607 kgf					
Lubricant amount	: 27 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 148A SF 1.10 SFA 163A

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# LOAD PERFORMANCE CURVE

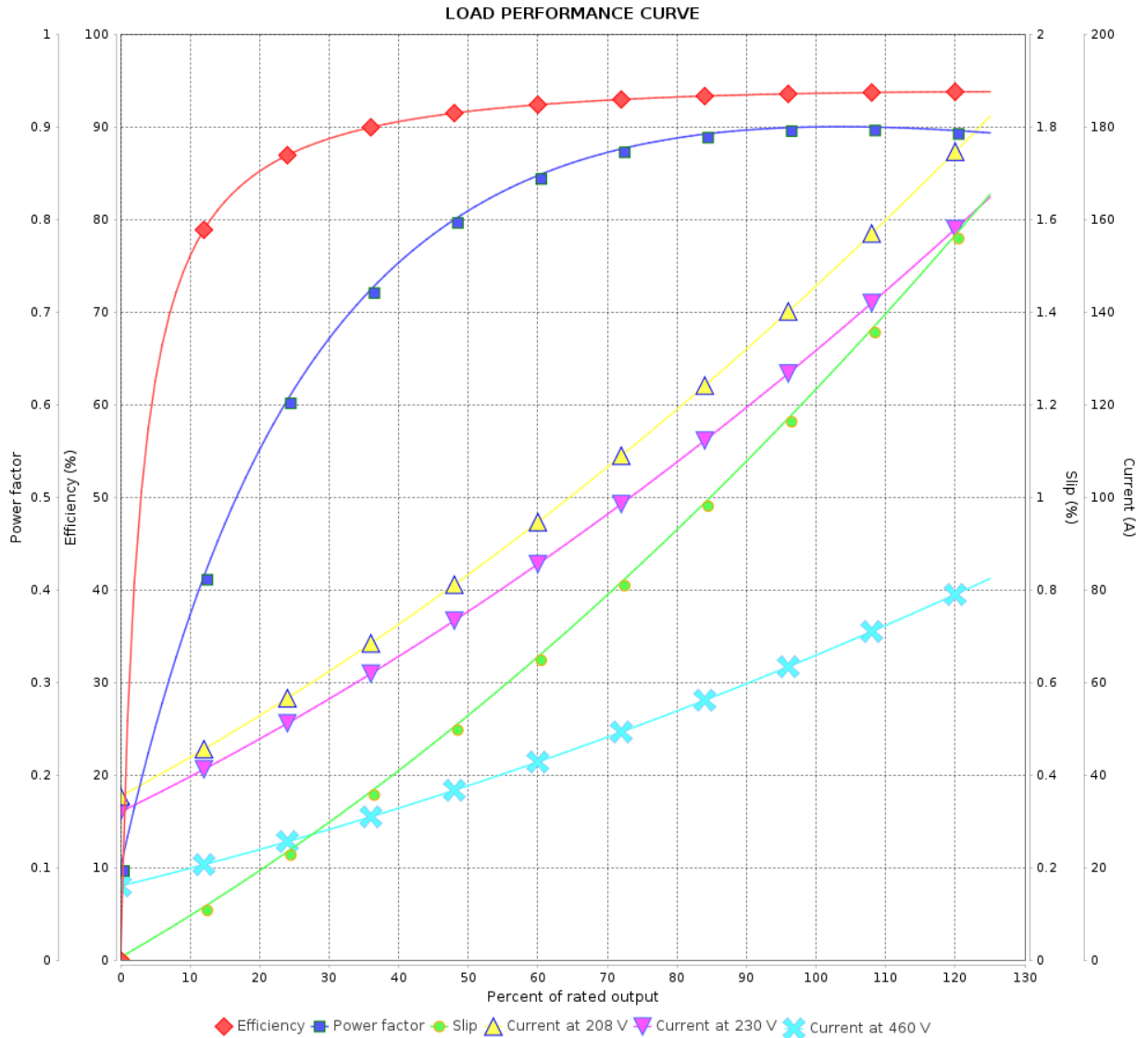
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11165995



Performance : 230/460 V 60 Hz 2P

Rated current : 134/67.0 A  
 LRC : 6.6  
 Rated torque : 12.2 kgfm  
 Locked rotor torque : 200 %  
 Breakdown torque : 260 %  
 Rated speed : 3555 rpm

Moment of inertia (J) : 0.4485 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

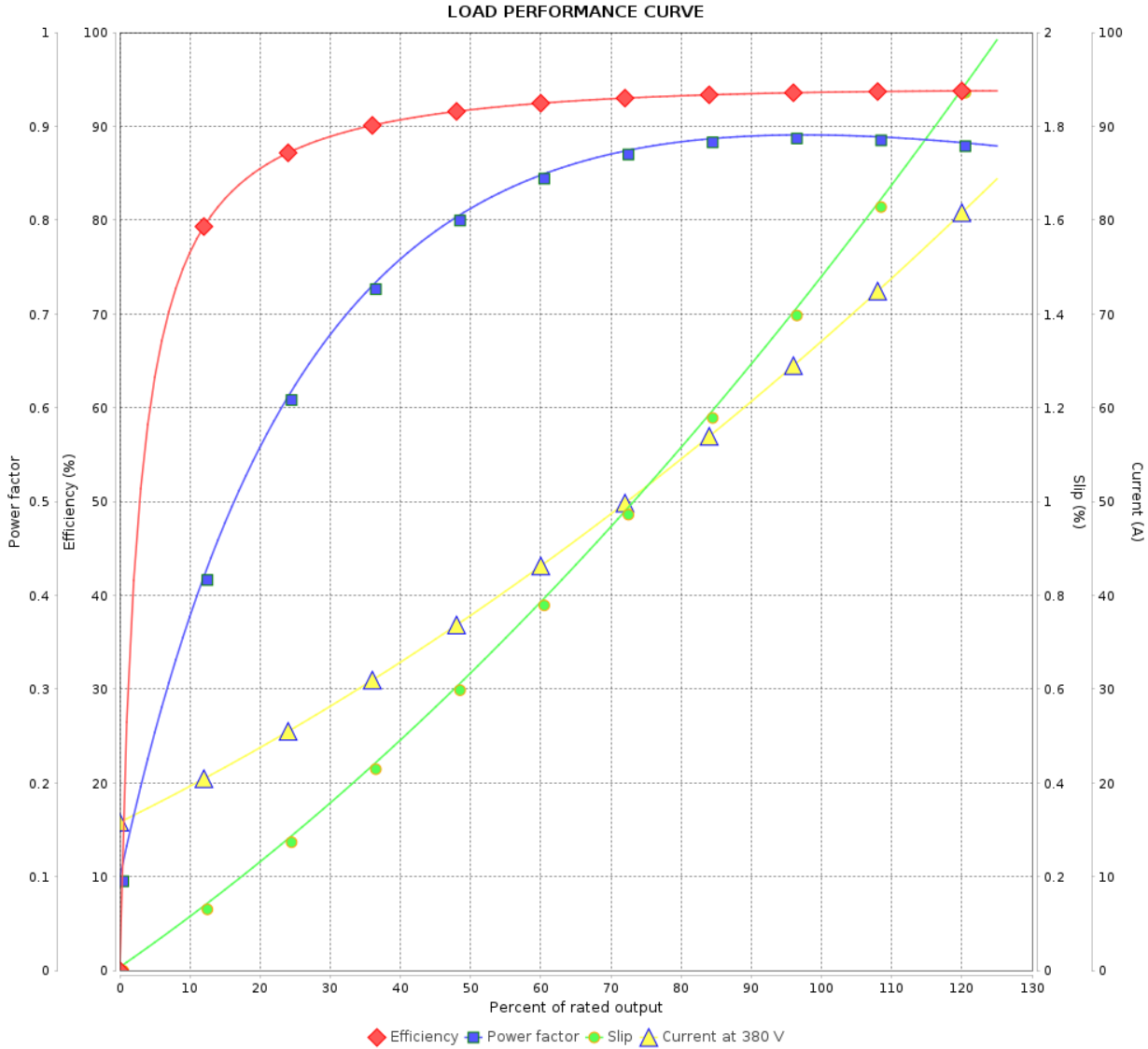
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11165995



Performance : 380 V 50 Hz 2P IE3

Rated current : 67.4 A  
 LRC : 6.4  
 Rated torque : 12.3 kgfm  
 Locked rotor torque : 190 %  
 Breakdown torque : 250 %  
 Rated speed : 2955 rpm

Moment of inertia (J) : 0.4485 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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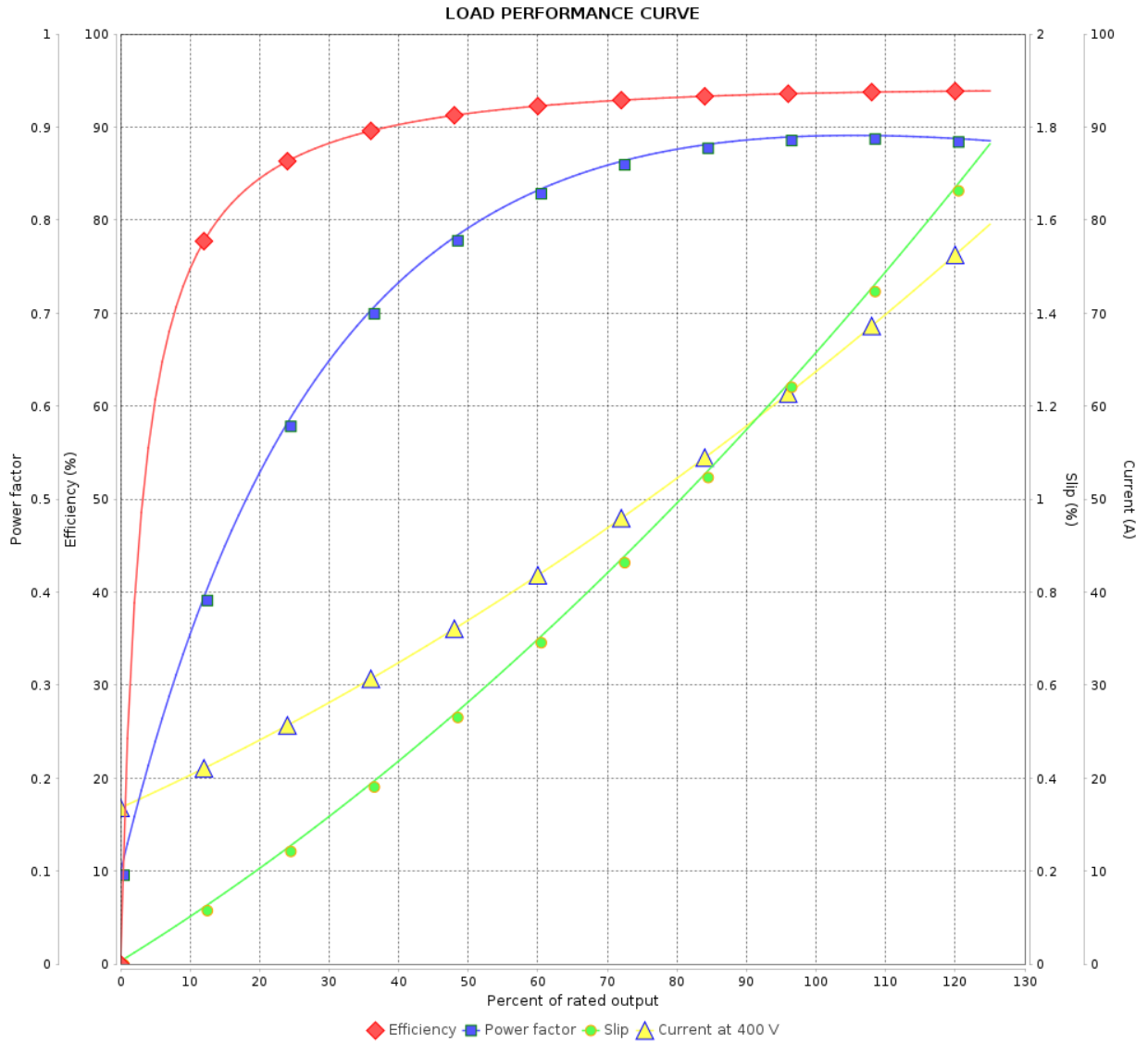
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11165995



Performance : 400 V 50 Hz 2P IE3

Rated current : 64.0 A  
 LRC : 7.2  
 Rated torque : 12.3 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 280 %  
 Rated speed : 2960 rpm

Moment of inertia (J) : 0.4485 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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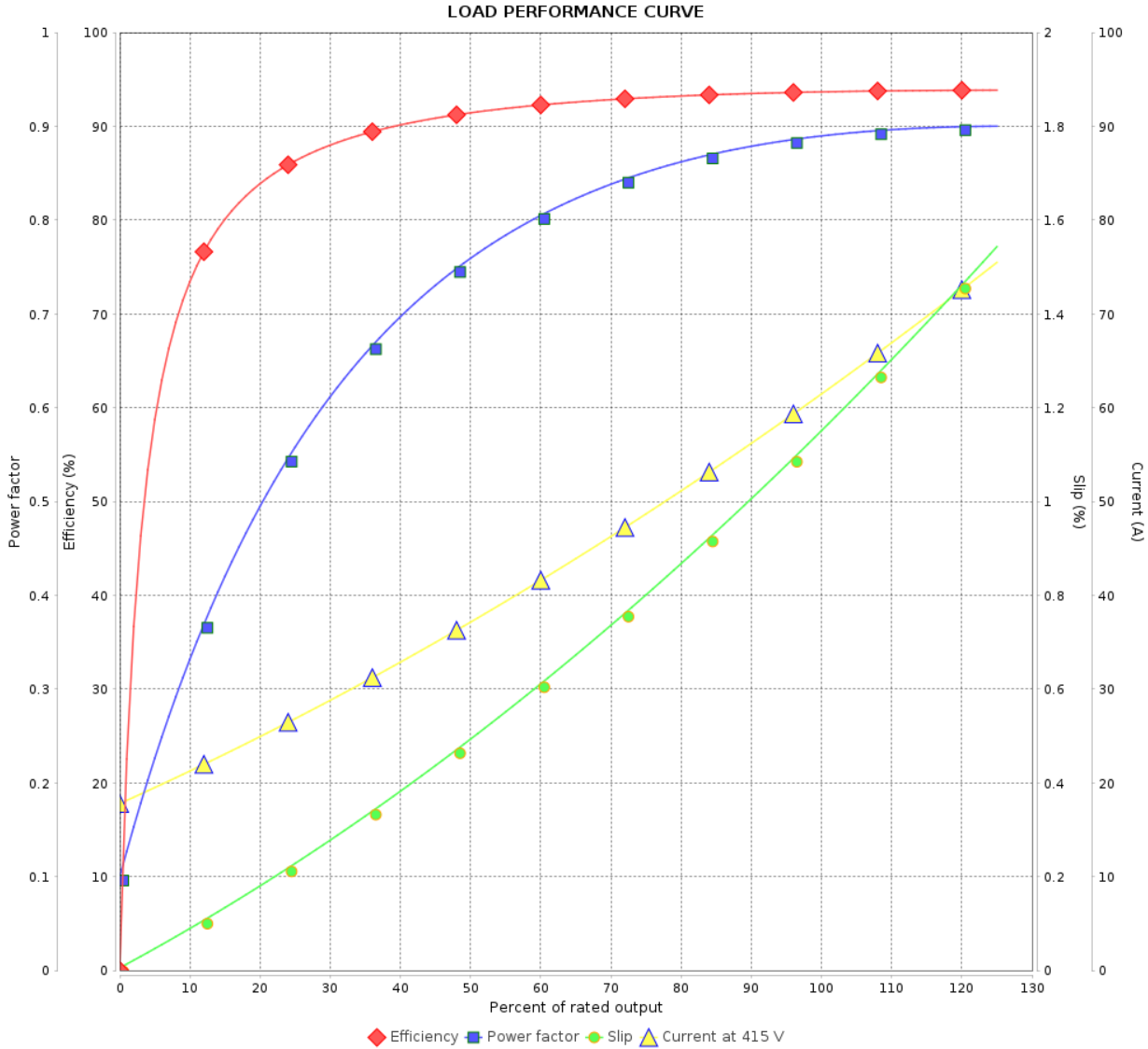
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11165995



Performance : 415 V 50 Hz 2P IE3

Rated current : 61.7 A  
 LRC : 7.4  
 Rated torque : 12.2 kgfm  
 Locked rotor torque : 229 %  
 Breakdown torque : 300 %  
 Rated speed : 2965 rpm

Moment of inertia (J) : 0.4485 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

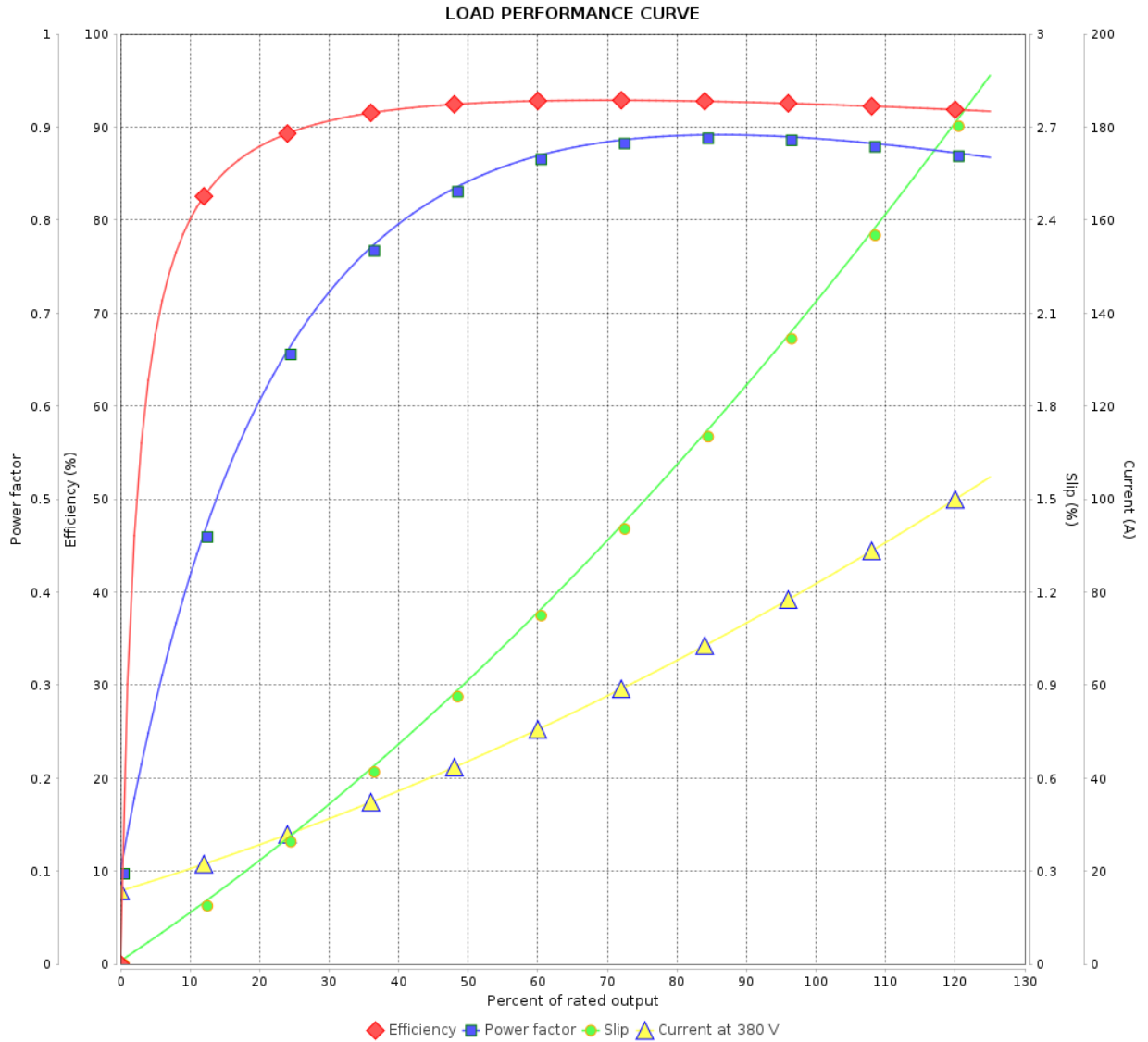
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11165995



Performance : 380 V 50 Hz 2P IE1

Rated current : 83.1 A  
 LRC : 5.2  
 Rated torque : 14.8 kgfm  
 Locked rotor torque : 160 %  
 Breakdown torque : 200 %  
 Rated speed : 2935 rpm

Moment of inertia (J) : 0.4485 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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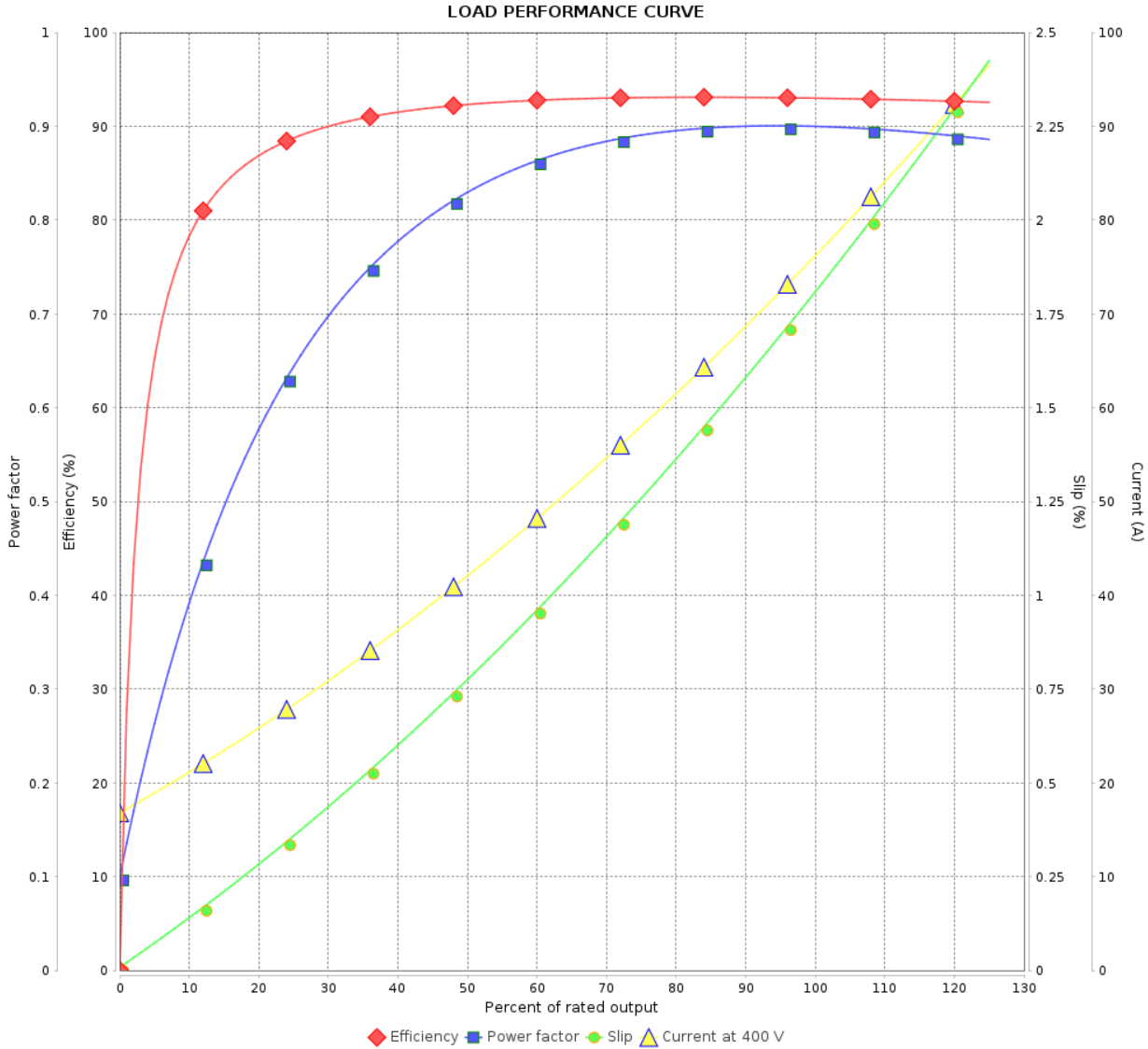
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11165995



Performance : 400 V 50 Hz 2P IE2

Rated current : 77.6 A  
 LRC : 5.8  
 Rated torque : 14.8 kgfm  
 Locked rotor torque : 180 %  
 Breakdown torque : 229 %  
 Rated speed : 2945 rpm

Moment of inertia (J) : 0.4485 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

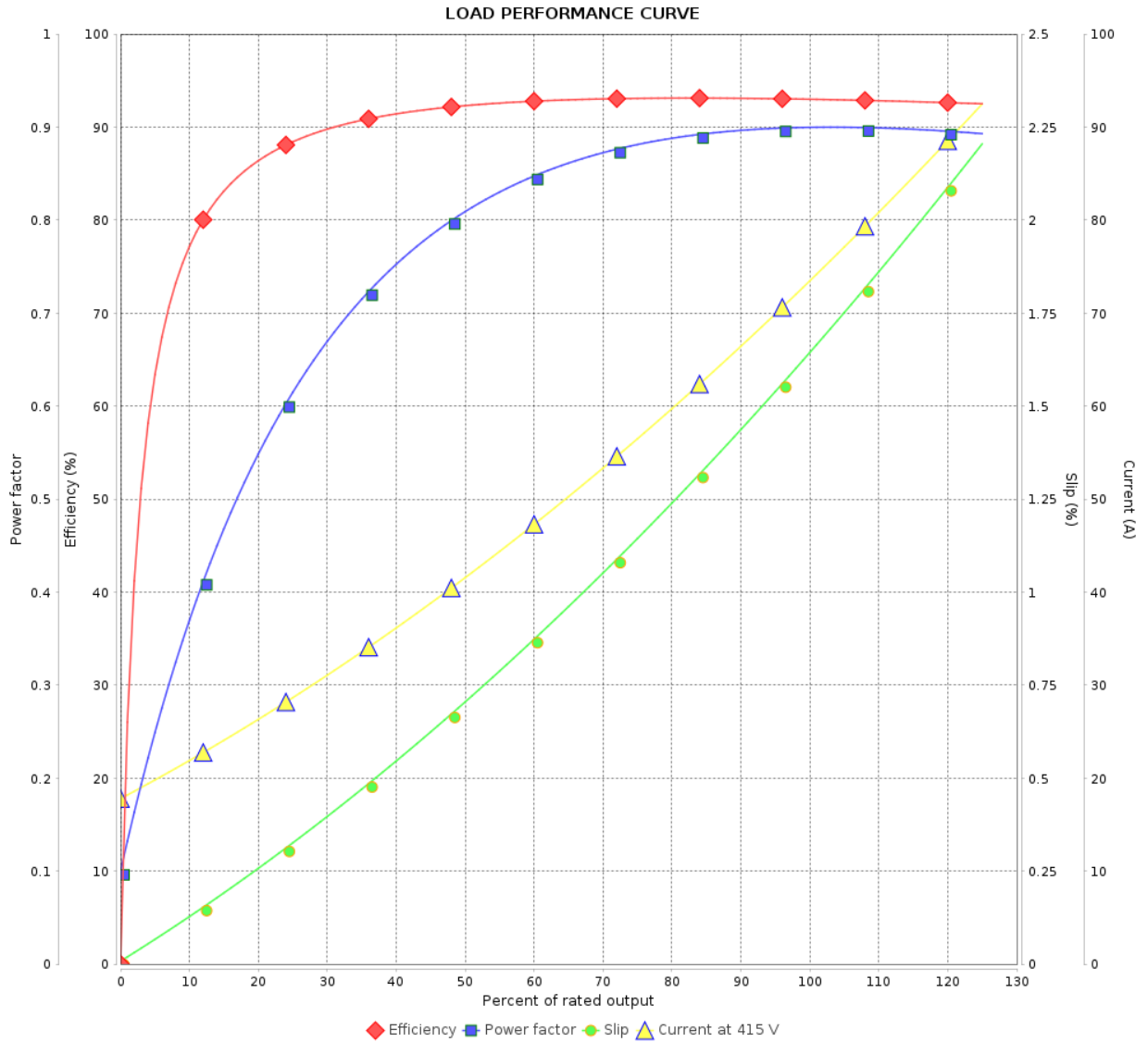
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11165995



Performance : 415 V 50 Hz 2P IE2

Rated current : 74.8 A  
 LRC : 6.3  
 Rated torque : 14.8 kgfm  
 Locked rotor torque : 190 %  
 Breakdown torque : 250 %  
 Rated speed : 2950 rpm

Moment of inertia (J) : 0.4485 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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