

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 13334675

Frame	: 254/6T	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>2</sup>	: 130 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.0647 kgm <sup>2</sup>
Design	: B		

Output [HP]	20	15	15	15	20	20	20
Poles	2	2	2	2	2	2	2
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	460	380	400	415	380	400	415
Rated current [A]	23.2	20.4	19.6	19.1	28.6	27.2	26.0
L. R. Amperes [A]	142	141	151	155	146	155	159
LRC [A]	6.1x(Code G)	6.9x(Code H)	7.7x(Code J)	8.1x(Code J)	5.1x(Code E)	5.7x(Code F)	6.1x(Code G)
No load current [A]	6.50	6.40	6.85	7.15	6.40	6.85	7.15
Rated speed [RPM]	3520	2925	2935	2940	2895	2905	2915
Slip [%]	2.22	2.50	2.17	2.00	3.50	3.17	2.83
Rated torque [kgfm]	4.12	3.72	3.71	3.70	5.06	5.00	4.98
Locked rotor torque [%]	200	220	240	270	160	180	200
Breakdown torque [%]	240	260	280	310	190	210	229
Service factor	1.25	1.15	1.15	1.15	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	37s (cold) 21s (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>	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%	91.0	90.6	90.4	89.8	91.0	91.0
	75%	91.7	90.9	91.2	91.1	90.2	91.0
	100%	91.0	91.2	91.2	91.2	88.5	89.5
Power Factor	25%						
	50%	0.82	0.78	0.75	0.73	0.86	0.84
	75%	0.87	0.87	0.85	0.84	0.89	0.88
	100%	0.89	0.90	0.89	0.88	0.90	0.89

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

Losses (%)	P1 (0,9;1,0)	9.6	9.6	9.6	9.6	9.6	9.6
	P2 (0,5;1,0)	8.1	8.1	8.1	8.1	8.1	8.1
	P3 (0,25;1,0)	7.5	7.5	7.5	7.5	7.5	7.5
	P4 (0,9;0,5)	4.4	4.4	4.4	4.4	4.4	4.4
	P5 (0,5;0,5)	2.8	2.8	2.8	2.8	2.8	2.8
	P6 (0,5;0,25)	1.6	1.6	1.6	1.6	1.6	1.6
	P7 (0,25;0,25)	1.0	1.0	1.0	1.0	1.0	1.0

Bearing type	: Drive end 6309 C3 Non drive end 6209 C3	Foundation loads Max. traction : 115 kgf Max. compression : 245 kgf
Sealing	: Taconite Labyrinth Labyrinth	
Lubrication interval	: 19000 h 20000 h	
Lubricant amount	: 13 g 9 g	
Lubricant type	: Mobil Polyrex EM	

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

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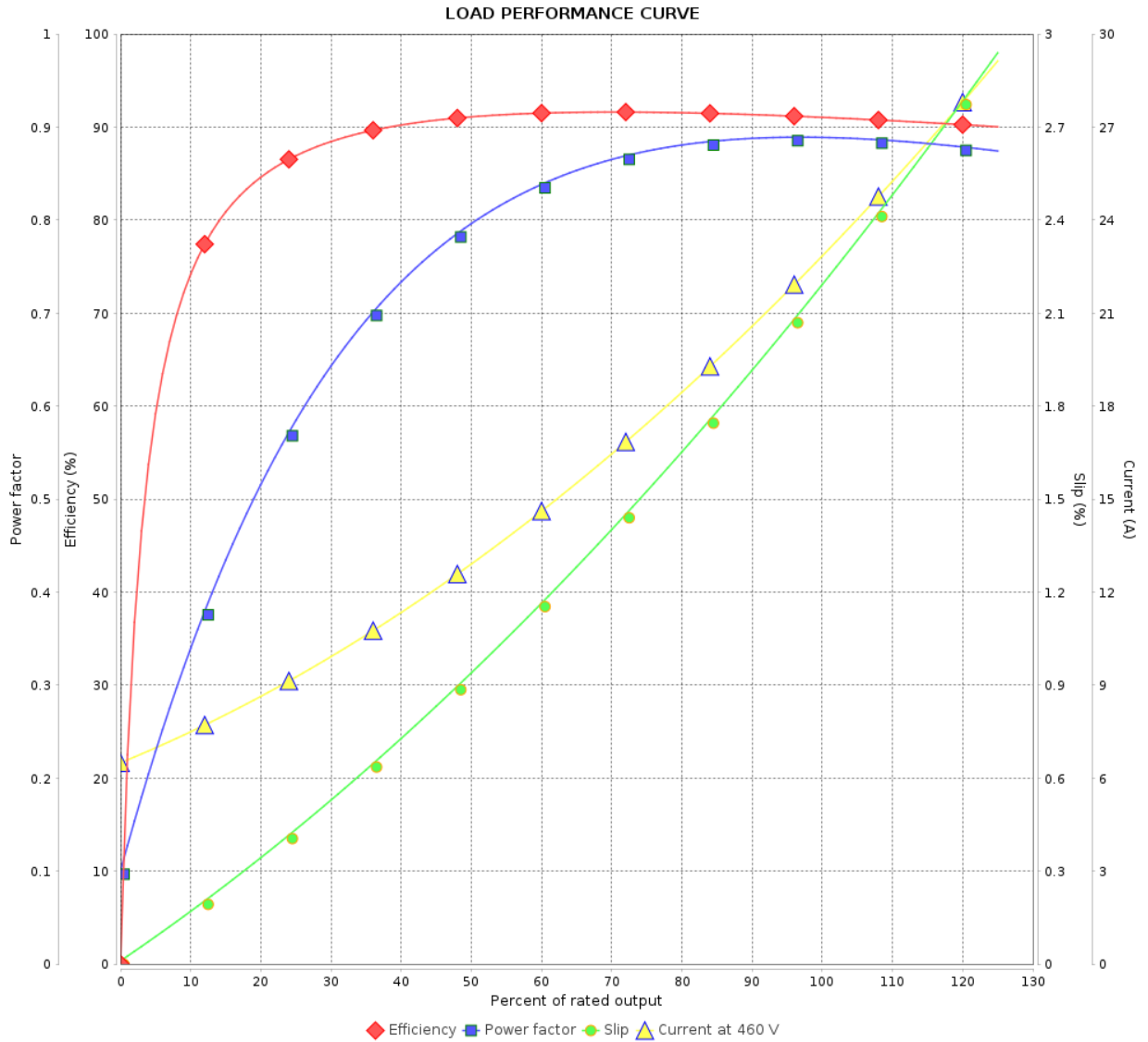
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase

Product code : 13334675



Performance : 460 V 60 Hz 2P

Rated current : 23.2 A  
 LRC : 6.1  
 Rated torque : 4.12 kgfm  
 Locked rotor torque : 200 %  
 Breakdown torque : 240 %  
 Rated speed : 3520 rpm

Moment of inertia (J) : 0.0647 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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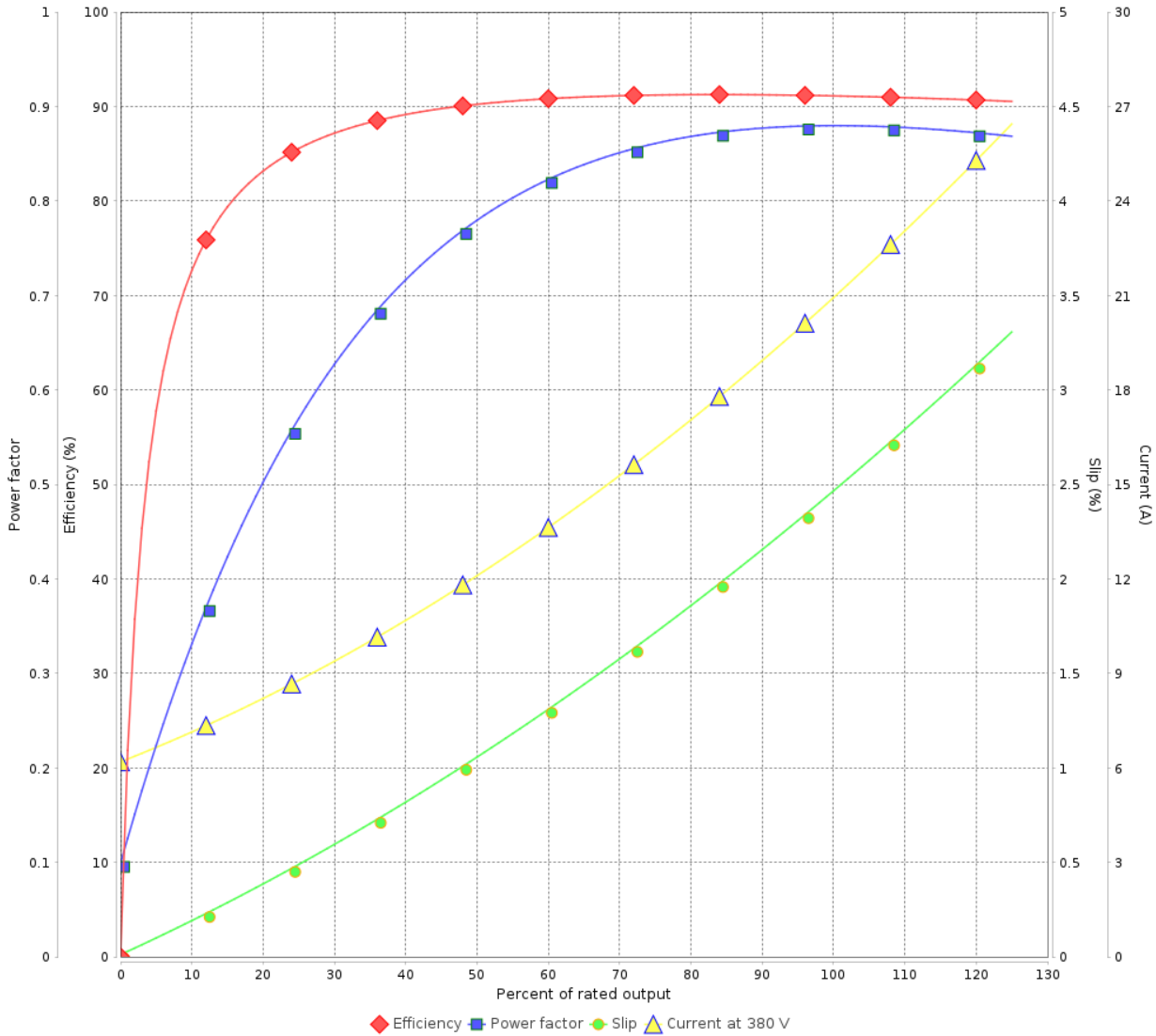
Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase      Product code : 13334675

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Performance : 380 V 50 Hz 2P IE3

Rated current	: 20.4 A	Moment of inertia (J)	: 0.0647 kgm <sup>2</sup>
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 3.72 kgfm	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.15
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 2925 rpm	Design	: B

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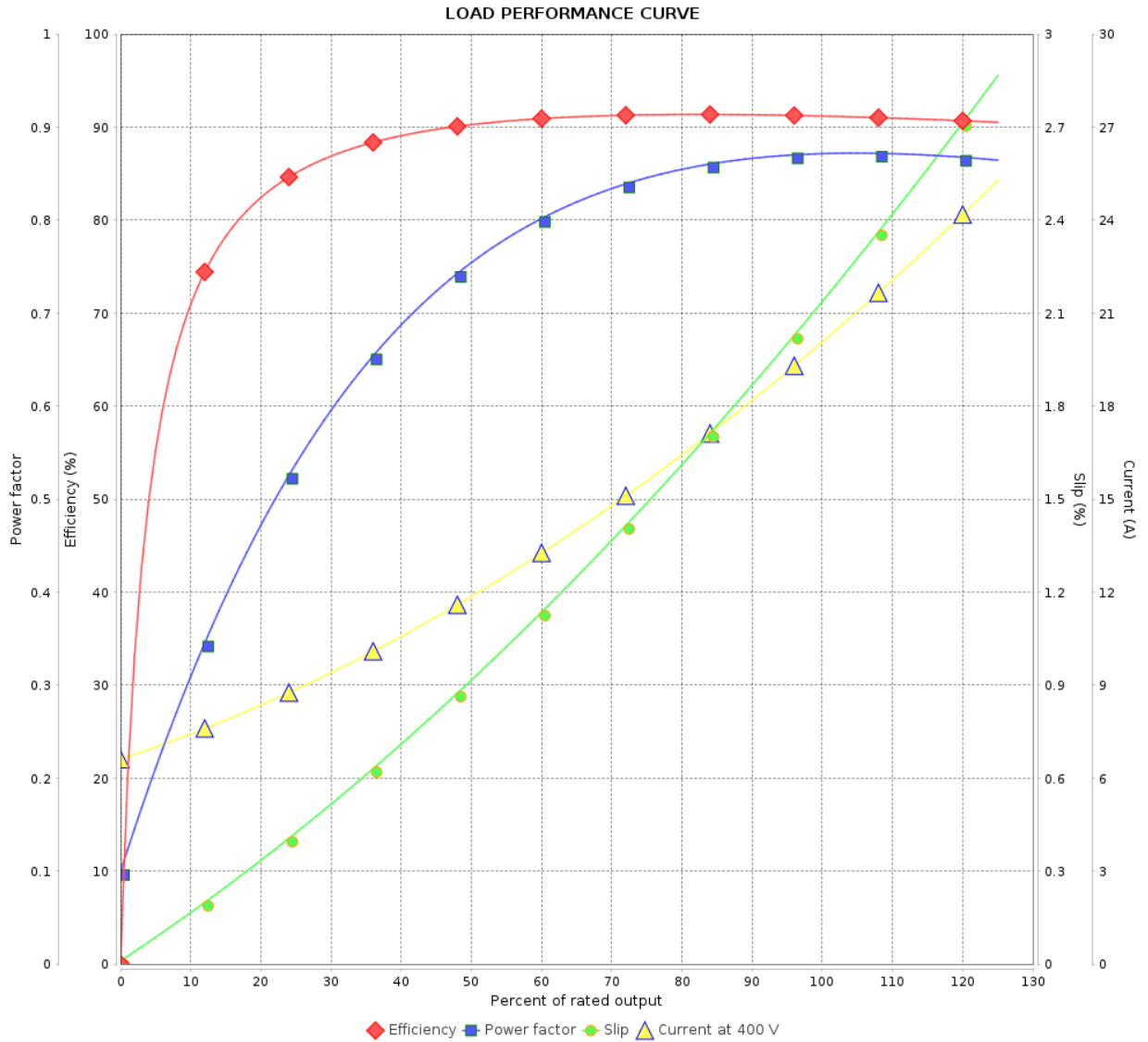
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 IEEE 841 NEMA Premium Efficiency  
Three-Phase

Product code : 13334675



Performance : 400 V 50 Hz 2P IE3

Rated current : 19.6 A  
 LRC : 7.7  
 Rated torque : 3.71 kgfm  
 Locked rotor torque : 240 %  
 Breakdown torque : 280 %  
 Rated speed : 2935 rpm

Moment of inertia (J) : 0.0647 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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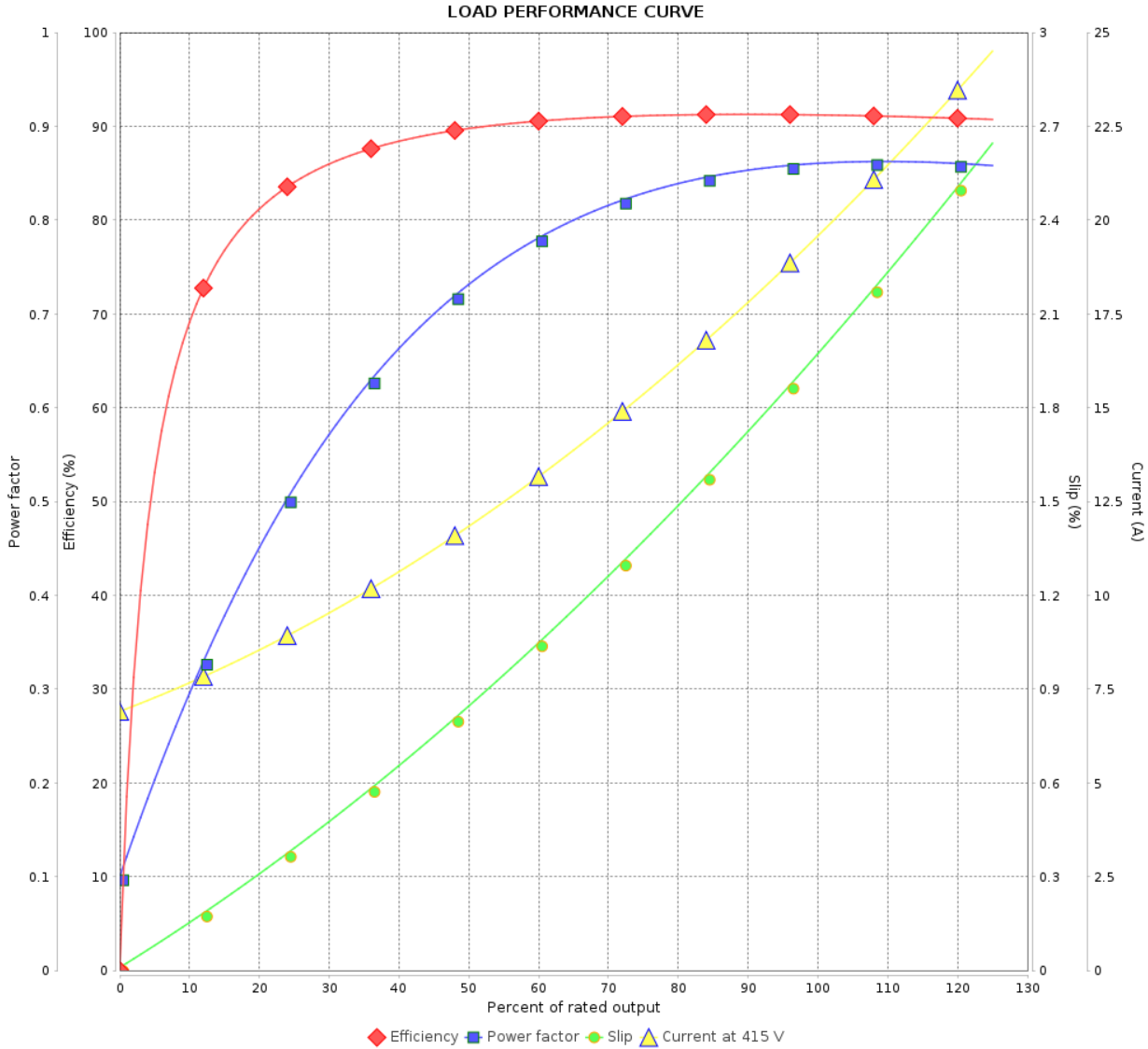
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Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase      Product code : 13334675



Performance : 415 V 50 Hz 2P IE3

Rated current	: 19.1 A	Moment of inertia (J)	: 0.0647 kgm <sup>2</sup>
LRC	: 8.1	Duty cycle	: Cont.(S1)
Rated torque	: 3.70 kgfm	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.15
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 2940 rpm	Design	: B

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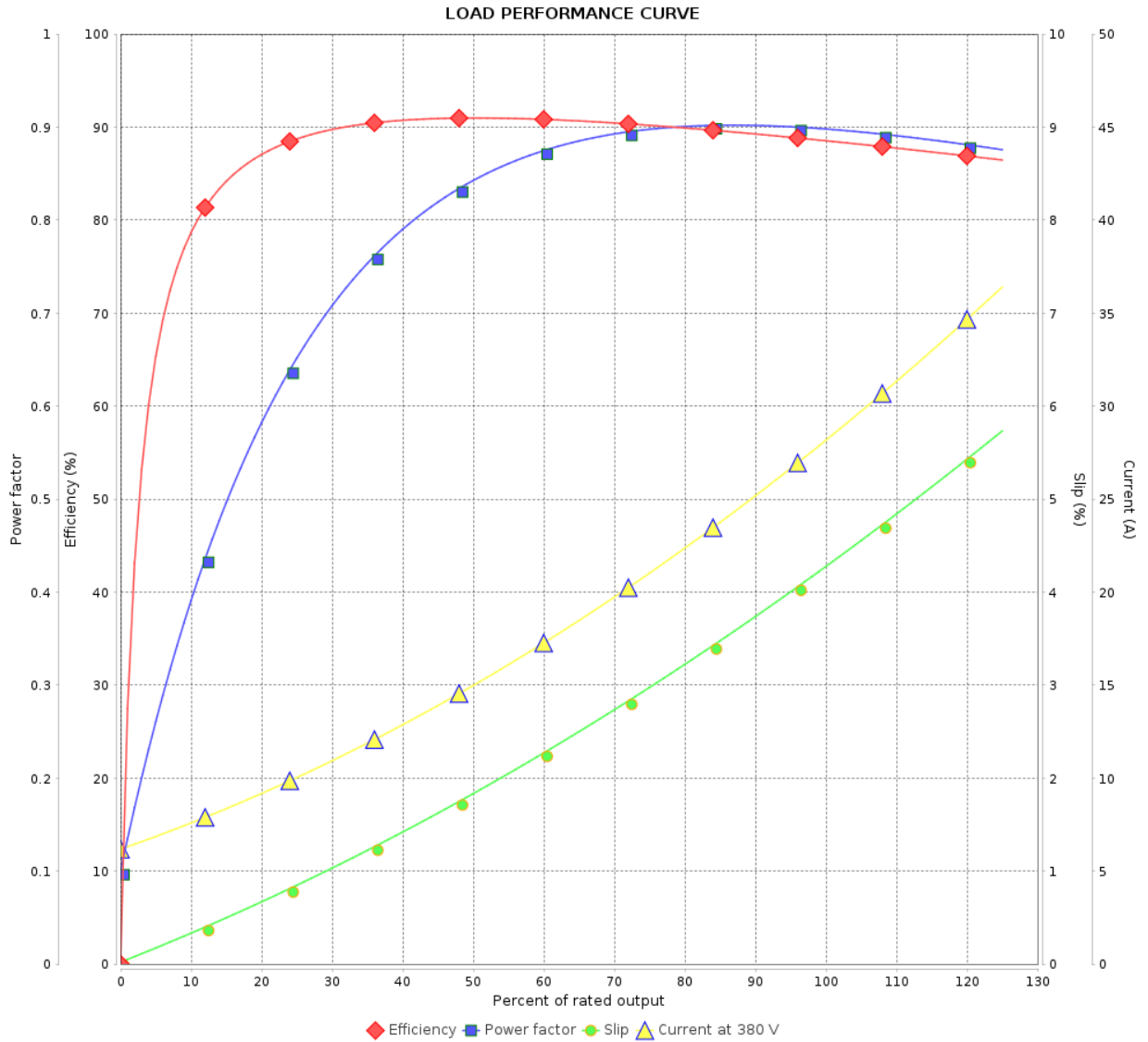
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase

Product code : 13334675



Performance : 380 V 50 Hz 2P

Rated current : 28.6 A  
 LRC : 5.1  
 Rated torque : 5.06 kgfm  
 Locked rotor torque : 160 %  
 Breakdown torque : 190 %  
 Rated speed : 2895 rpm

Moment of inertia (J) : 0.0647 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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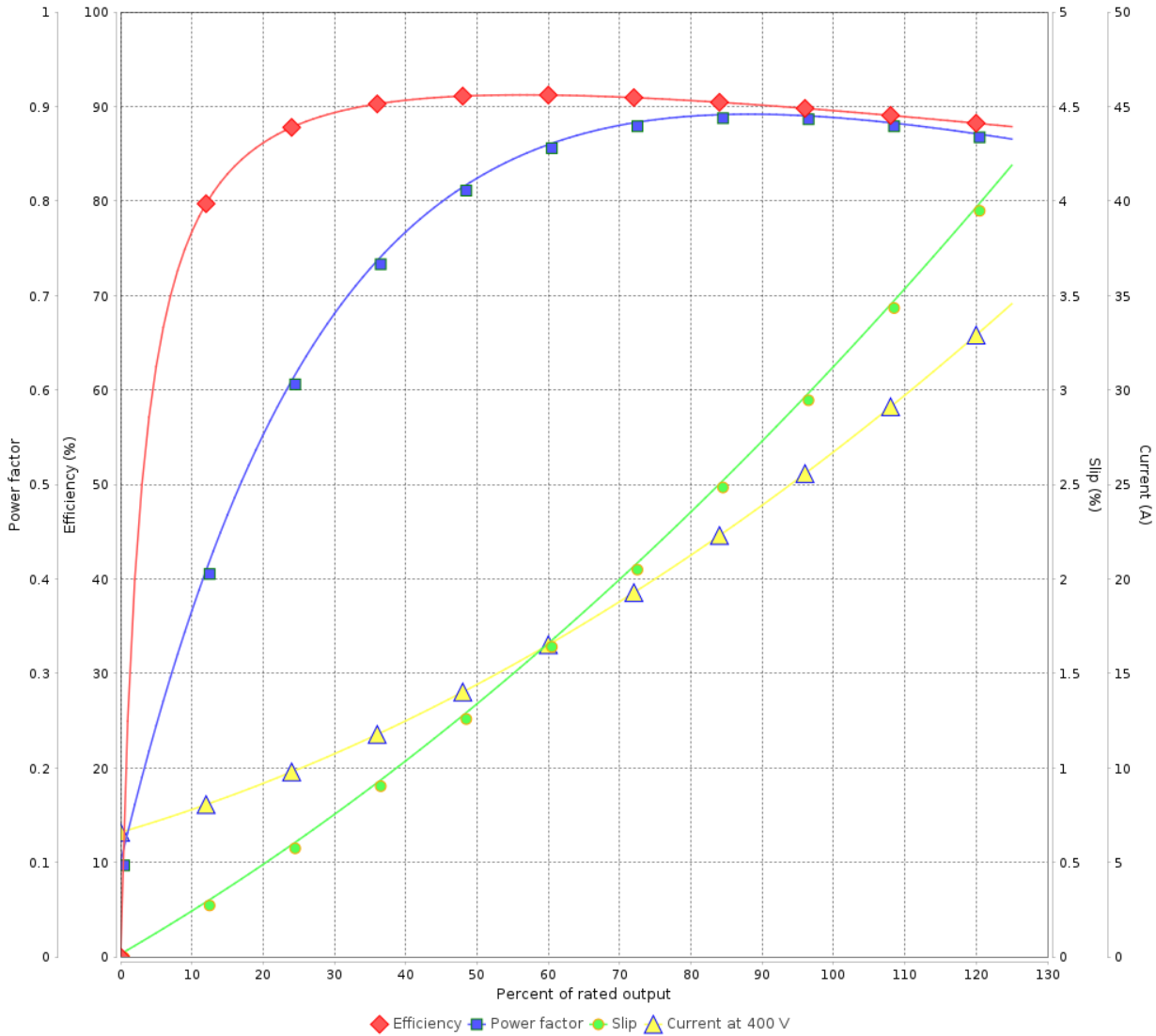
Three Phase Induction Motor - Squirrel Cage



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

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Performance : 400 V 50 Hz 2P IE1

Rated current	: 27.2 A	Moment of inertia (J)	: 0.0647 kgm <sup>2</sup>
LRC	: 5.7	Duty cycle	: Cont.(S1)
Rated torque	: 5.00 kgfm	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 2905 rpm	Design	: B

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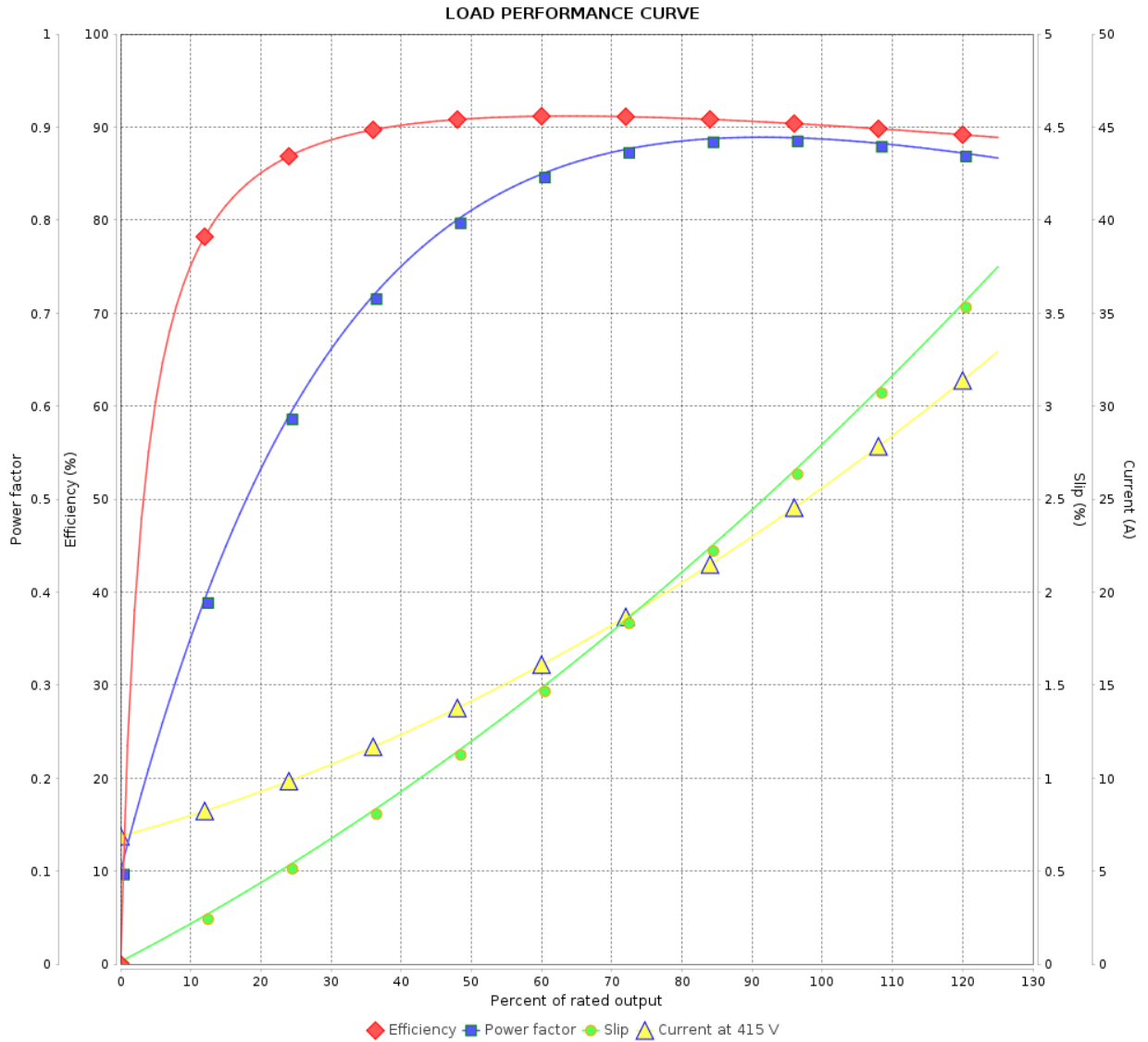
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase

Product code : 13334675



Performance : 415 V 50 Hz 2P IE1

Rated current : 26.0 A  
 LRC : 6.1  
 Rated torque : 4.98 kgfm  
 Locked rotor torque : 200 %  
 Breakdown torque : 229 %  
 Rated speed : 2915 rpm

Moment of inertia (J) : 0.0647 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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