

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 11580967

Frame : 284/6TC	Cooling method : IC411 - TEFC
Insulation class : F	Mounting : F-1
Duty cycle : Cont.(S1)	Rotation ¹ : Both (CW and CCW)
Ambient temperature : -20°C to +40°C	Starting method : Direct On Line
Altitude : 1000 m.a.s.l.	Approx. weight ³ : 203 kg
Protection degree : IP55	Moment of inertia (J) : 0.3861 kgm ²
Design : B	

Output [HP]	20	15	15	15	20	20	20
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]	48.4/24.2	22.0	21.2	20.8	29.9	28.1	27.2
L. R. Amperes [A]	300/150	147	155	156	141	149	158
LRC [A]	6.2x(Code G)	6.7x(Code H)	7.3x(Code J)	7.5x(Code J)	4.7x(Code E)	5.3x(Code F)	5.8x(Code G)
No load current [A]	19.0/9.50	9.40	10.0	10.6	9.40	10.0	10.6
Rated speed [RPM]	1175	980	982	983	965	970	975
Slip [%]	2.08	2.00	1.80	1.70	3.50	3.00	2.50
Rated torque [kgfm]	12.4	11.1	11.1	11.1	15.0	15.0	14.9
Locked rotor torque [%]	229	229	270	280	170	200	210
Breakdown torque [%]	260	270	290	320	200	220	240
Service factor	1.25	1.00	1.15	1.15	1.00	1.15	1.15
Temperature rise	80 K	80 K	80 K	80 K	105 K	105 K	80 K
Locked rotor time	28s (cold) 16s (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 ²	59.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)
Efficiency (%)	25%						
	50%	91.0	90.0	89.3	89.3	90.2	90.2
	75%	91.7	90.3	90.3	90.6	90.2	90.2
	100%	91.7	90.3	90.3	90.8	88.5	89.5
Power Factor	25%						
	50%	0.70	0.66	0.63	0.60	0.76	0.73
	75%	0.80	0.79	0.76	0.73	0.83	0.82
	100%	0.85	0.84	0.83	0.81	0.86	0.86

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

Losses (%)	P1 (0,9;1,0)	8.7	8.7	8.7	8.7	8.7	8.7	8.7
	P2 (0,5;1,0)	7.1	7.1	7.1	7.1	7.1	7.1	7.1
	P3 (0,25;1,0)	6.9	6.9	6.9	6.9	6.9	6.9	6.9
	P4 (0,9;0,5)	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	P5 (0,5;0,5)	2.8	2.8	2.8	2.8	2.8	2.8	2.8
	P6 (0,5;0,25)	1.9	1.9	1.9	1.9	1.9	1.9	1.9
	P7 (0,25;0,25)	1.2	1.2	1.2	1.2	1.2	1.2	1.2

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads
Bearing type :	6311 C3	6211 C3	Max. traction : 410 kgf
Sealing :	V'Ring	V'Ring	Max. compression : 612 kgf
Lubrication interval :	20000 h	20000 h	
Lubricant amount :	18 g	11 g	
Lubricant type :	Mobil Polyrex EM		

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Customer :

Notes
USABLE @208V 53.5A SF 1.15 SFA 61.5A

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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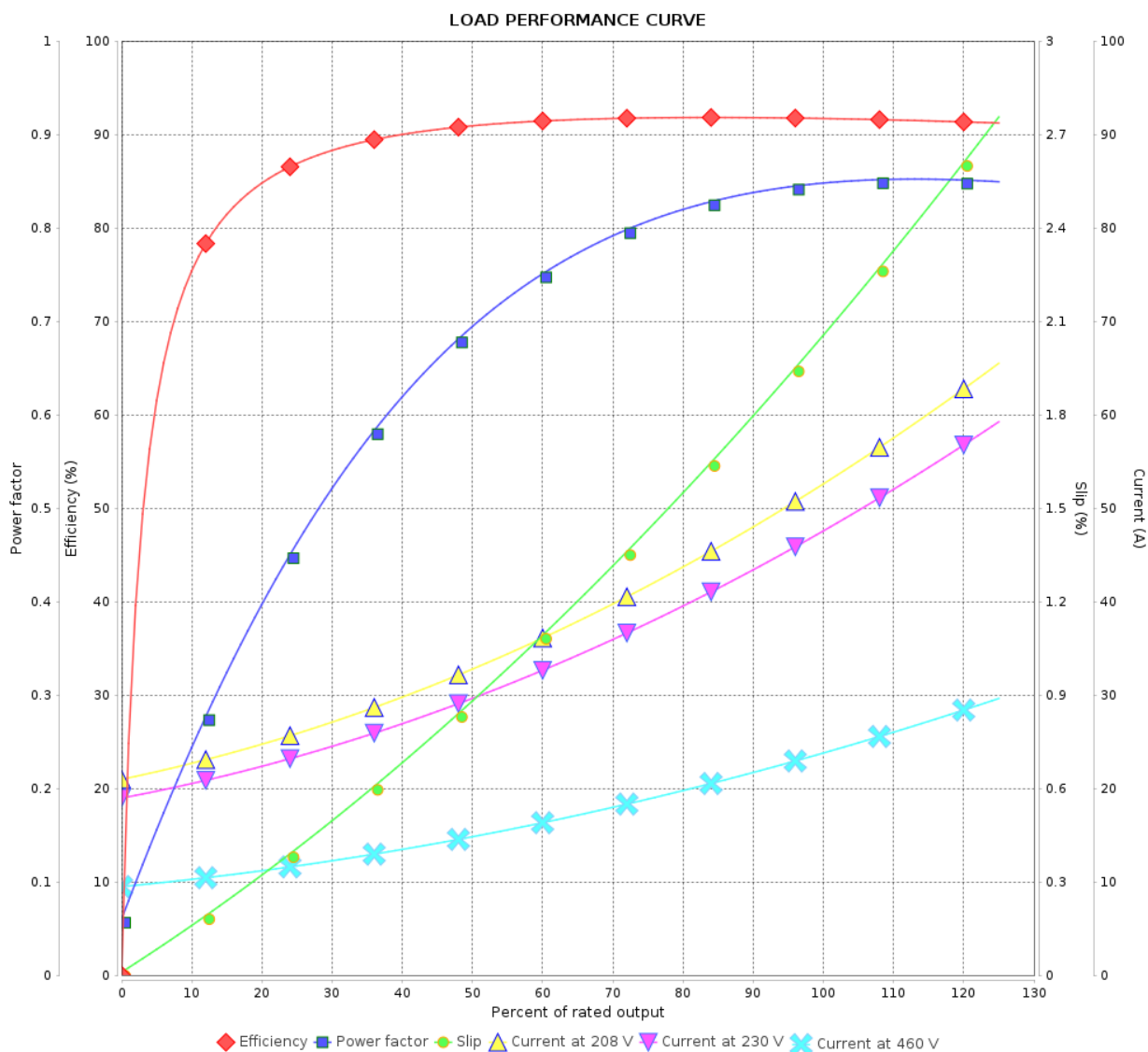
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 11580967



Performance : 230/460 V 60 Hz 6P

Rated current : 48.4/24.2 A
LRC : 6.2
Rated torque : 12.4 kgfm
Locked rotor torque : 229 %
Breakdown torque : 260 %
Rated speed : 1175 rpm

Moment of inertia (J) : 0.3861 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

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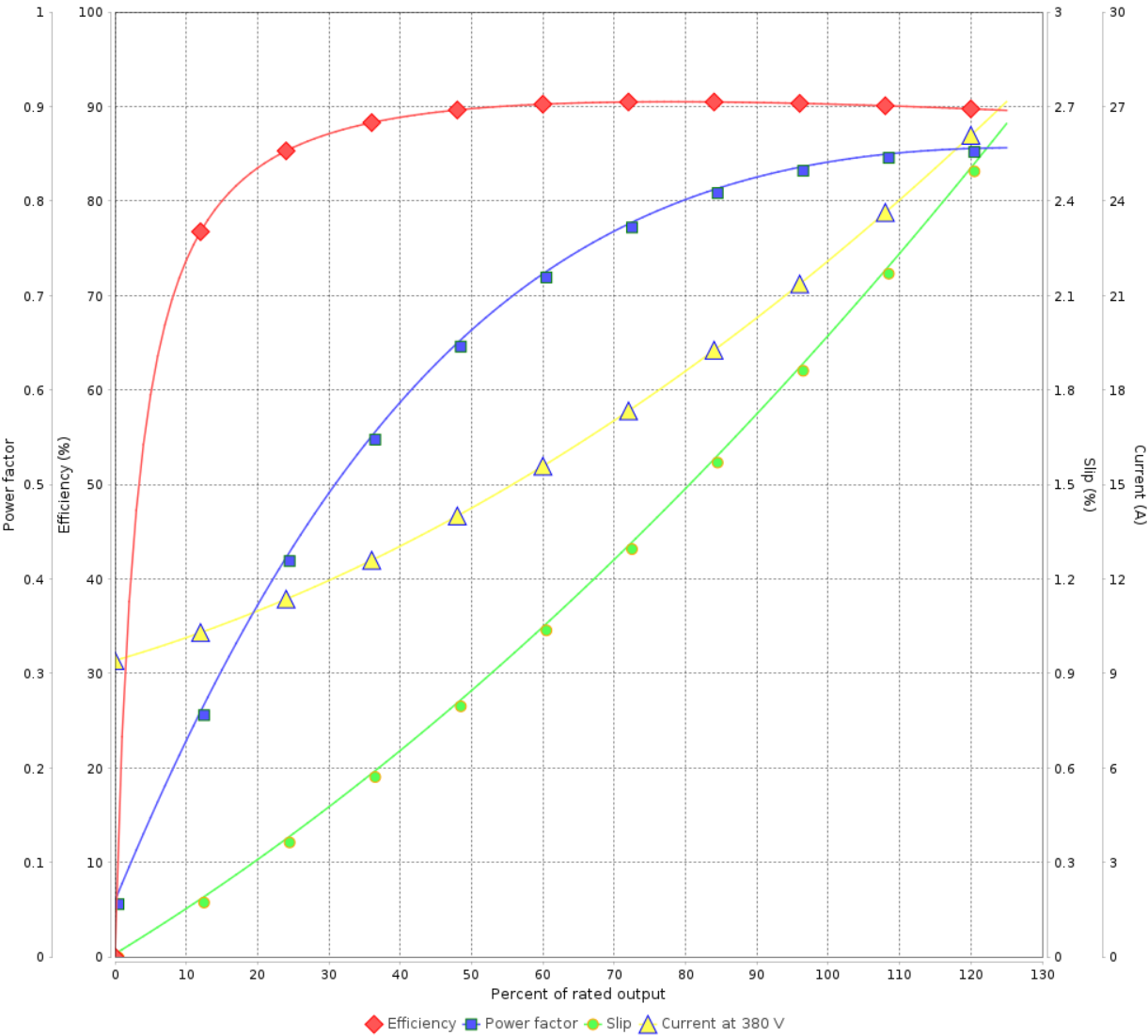
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 11580967

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Performance : 380 V 50 Hz 6P IE3			
Rated current	: 22.0 A	Moment of inertia (J)	: 0.3861 kgm²
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 11.1 kgfm	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: B

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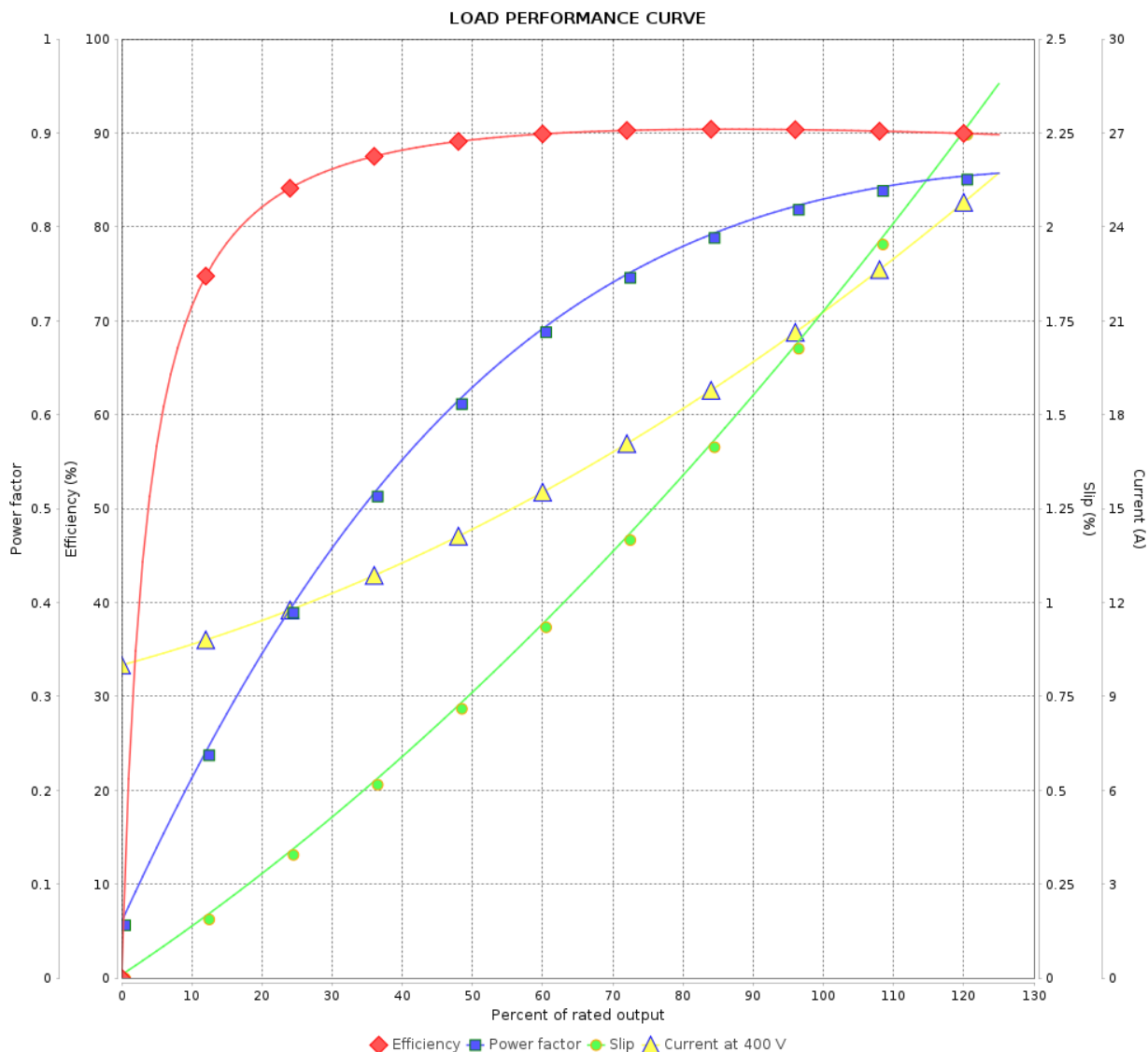
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 11580967



Performance : 400 V 50 Hz 6P IE3

Rated current : 21.2 A
LRC : 7.3
Rated torque : 11.1 kgfm
Locked rotor torque : 270 %
Breakdown torque : 290 %
Rated speed : 982 rpm

Moment of inertia (J) : 0.3861 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

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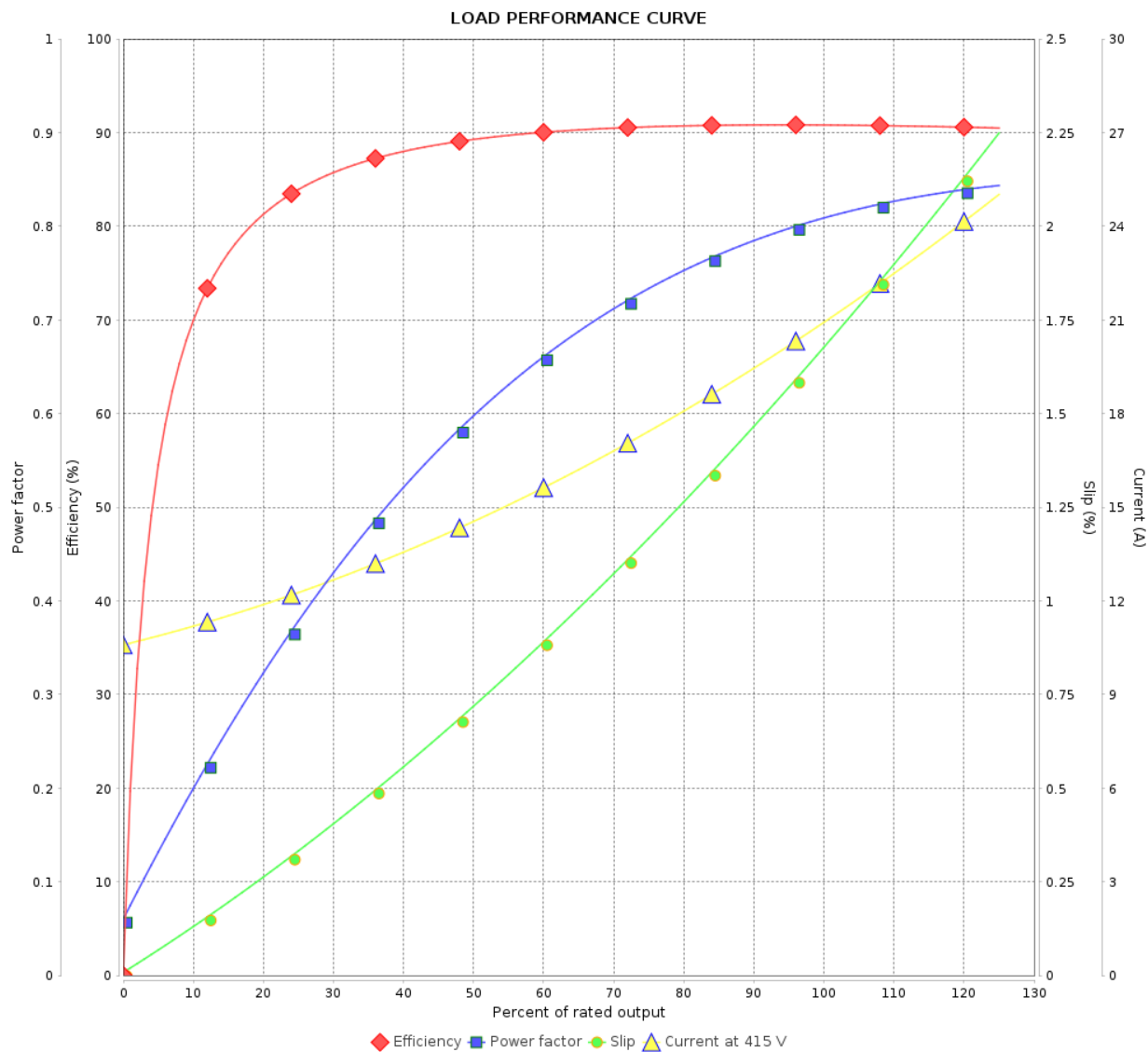
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 11580967



Performance : 415 V 50 Hz 6P IE3

Rated current : 20.8 A
LRC : 7.5
Rated torque : 11.1 kgfm
Locked rotor torque : 280 %
Breakdown torque : 320 %
Rated speed : 983 rpm

Moment of inertia (J) : 0.3861 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

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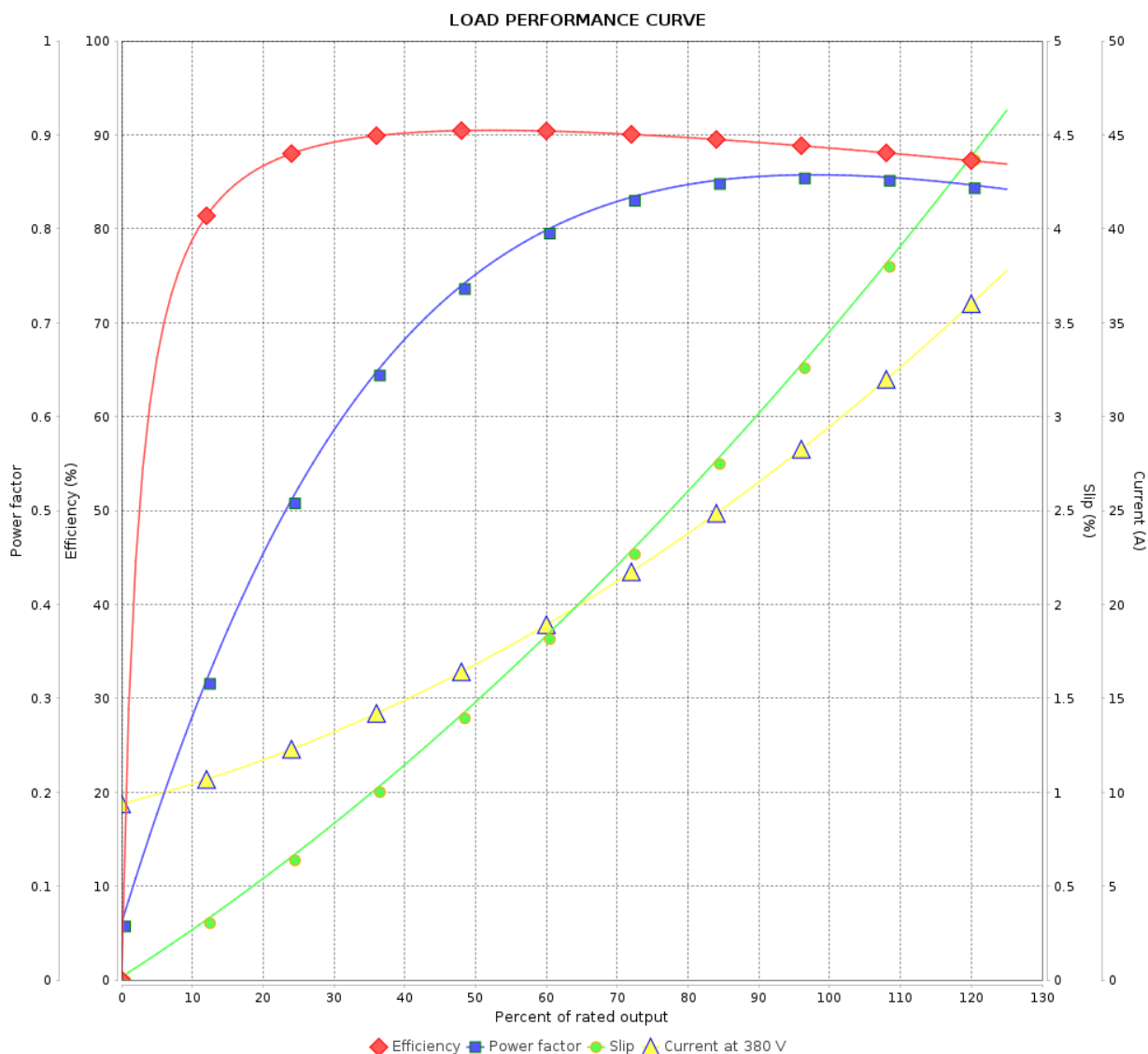
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 11580967



Performance : 380 V 50 Hz 6P IE1

Rated current : 29.9 A
LRC : 4.7
Rated torque : 15.0 kgfm
Locked rotor torque : 170 %
Breakdown torque : 200 %
Rated speed : 965 rpm

Moment of inertia (J) : 0.3861 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 105 K
Design : B

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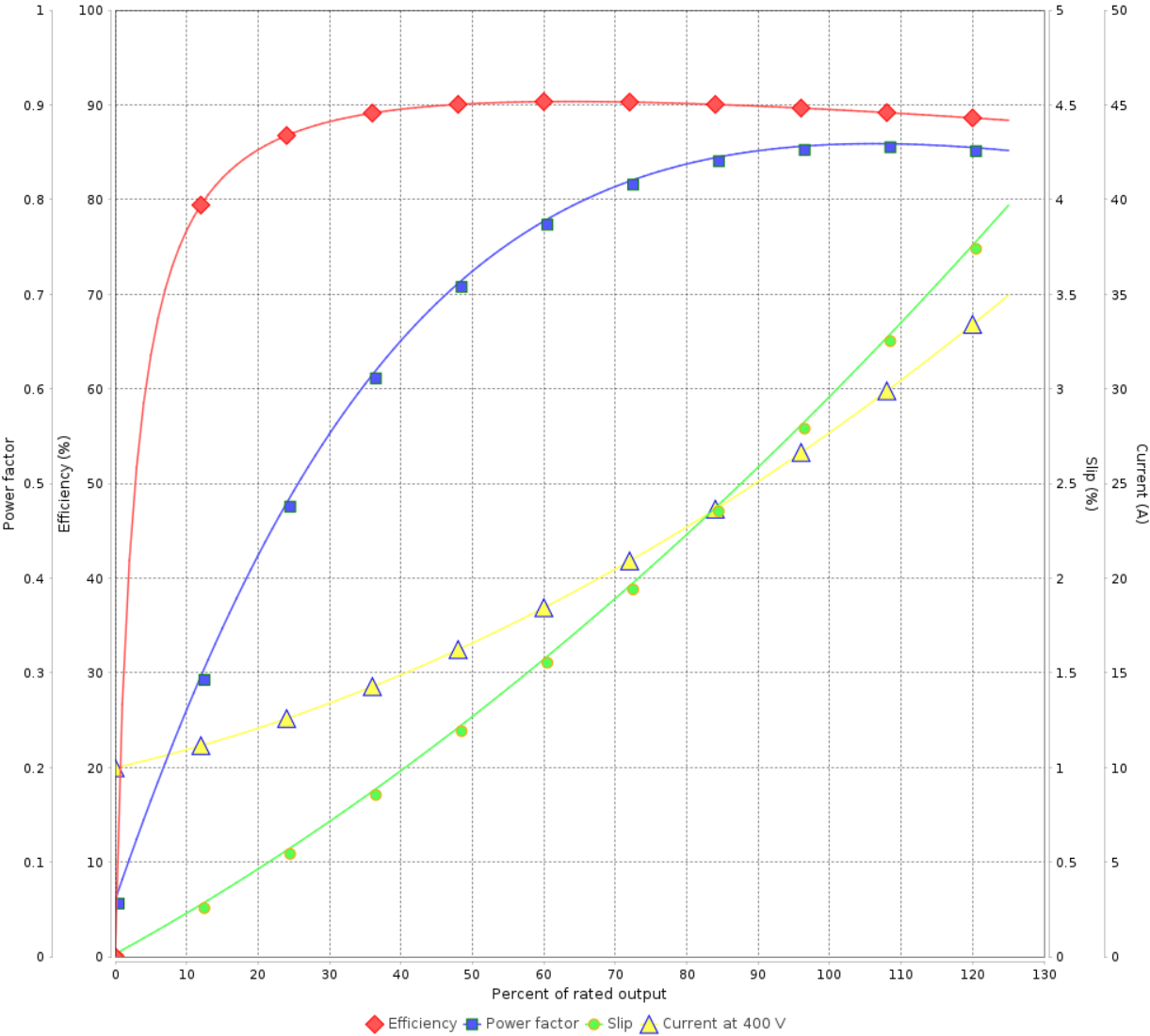
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 11580967

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Performance : 400 V 50 Hz 6P IE1

Rated current	: 28.1 A	Moment of inertia (J)	: 0.3861 kgm ²
LRC	: 5.3	Duty cycle	: Cont.(S1)
Rated torque	: 15.0 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15
Breakdown torque	: 220 %	Temperature rise	: 105 K
Rated speed	: 970 rpm	Design	: B

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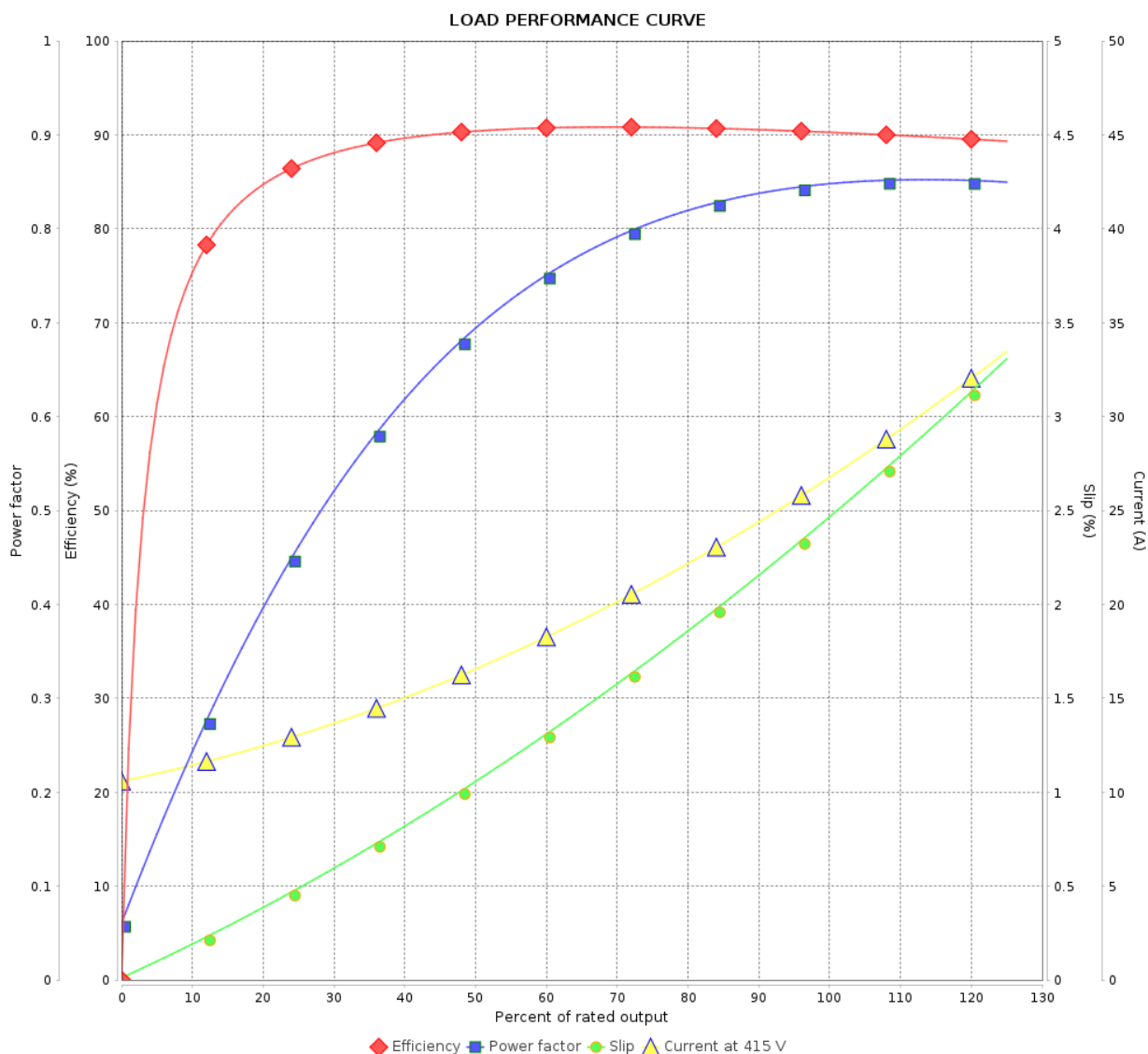
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 11580967



Performance : 415 V 50 Hz 6P IE2

Rated current : 27.2 A
LRC : 5.8
Rated torque : 14.9 kgfm
Locked rotor torque : 210 %
Breakdown torque : 240 %
Rated speed : 975 rpm

Moment of inertia (J) : 0.3861 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

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