

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 13014332

Frame : 213/5TD	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 ² : 82.6 kg
Protection degree : IP55	Moment of inertia (J) : 0.0268 kgm ²
Design : B	

Output [HP]	10	7.5	7.5	7.5	10	10	10
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]	23.2/11.6	10.4	10.1	9.91	14.1	13.4	13.1
L. R. Amperes [A]	167/83.5	82.2	87.9	90.2	79.0	85.8	90.4
LRC [A]	7.2x(Code H)	7.9x(Code J)	8.7x(Code K)	9.1x(Code K)	5.6x(Code F)	6.4x(Code G)	6.9x(Code H)
No load current [A]	7.20/3.60	3.50	3.70	3.90	3.50	3.70	3.90
Rated speed [RPM]	3530	2940	2945	2950	2900	2915	2925
Slip [%]	1.94	2.00	1.83	1.67	3.33	2.83	2.50
Rated torque [kgfm]	2.06	1.85	1.85	1.85	2.49	2.49	2.48
Locked rotor torque [%]	220	240	270	290	170	200	220
Breakdown torque [%]	290	300	340	360	220	250	270
Service factor	1.25	1.25	1.25	1.25	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	32s (cold) 18s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)
Noise level ²	68.0 dB(A)	63.0 dB(A)	63.0 dB(A)	63.0 dB(A)	63.0 dB(A)	63.0 dB(A)	63.0 dB(A)
Efficiency (%)	25%						
	50%	89.5	88.6	88.4	87.7	89.5	89.5
	75%	90.2	89.6	89.6	89.5	89.5	89.5
	100%	90.2	89.5	89.5	89.8	88.5	88.5
Power Factor	25%						
	50%	0.79	0.75	0.72	0.70	0.83	0.81
	75%	0.87	0.86	0.83	0.82	0.90	0.88
	100%	0.90	0.90	0.88	0.86	0.91	0.91

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

Losses (%)	P1 (0,9;1,0)	10.7	10.7	10.7	10.7	10.7	10.7
	P2 (0,5;1,0)	8.7	8.7	8.7	8.7	8.7	8.7
	P3 (0,25;1,0)	7.8	7.8	7.8	7.8	7.8	7.8
	P4 (0,9;0,5)	5.2	5.2	5.2	5.2	5.2	5.2
	P5 (0,5;0,5)	3.3	3.3	3.3	3.3	3.3	3.3
	P6 (0,5;0,25)	2.1	2.1	2.1	2.1	2.1	2.1
	P7 (0,25;0,25)	1.3	1.3	1.3	1.3	1.3	1.3

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads
Bearing type :	6308 ZZ	6207 ZZ	Max. traction : 82 kgf
Sealing :	V/Ring	V/Ring	Max. compression : 165 kgf
Lubrication interval :	-	-	
Lubricant amount :	-	-	
Lubricant type :	Mobil Polyrex EM		

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Notes

USABLE @208V 25.7A SF 1.15 SFA 29.5A

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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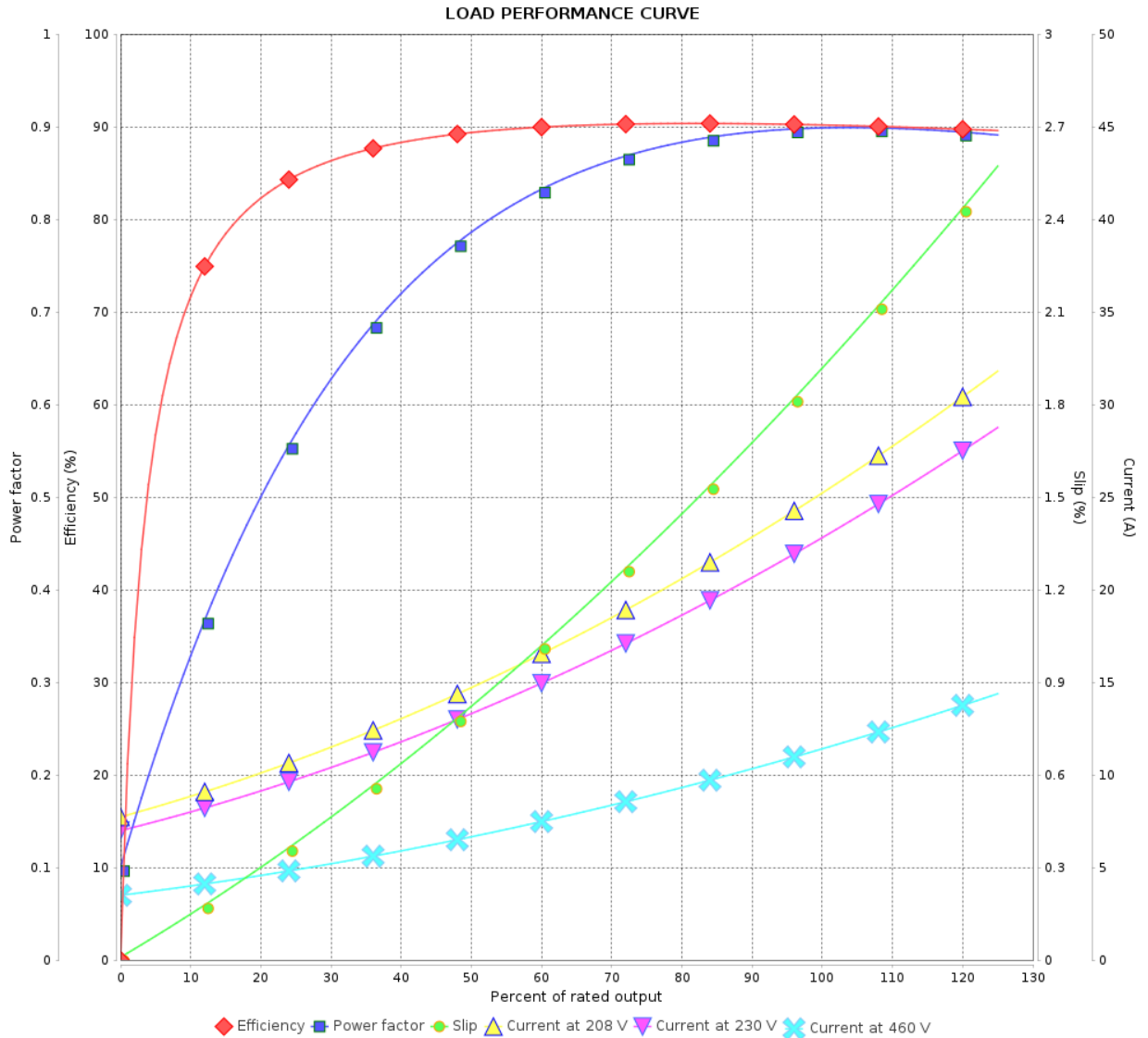
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 13014332



Performance : 230/460 V 60 Hz 2P

Rated current : 23.2/11.6 A
 LRC : 7.2
 Rated torque : 2.06 kgfm
 Locked rotor torque : 220 %
 Breakdown torque : 290 %
 Rated speed : 3530 rpm

Moment of inertia (J) : 0.0268 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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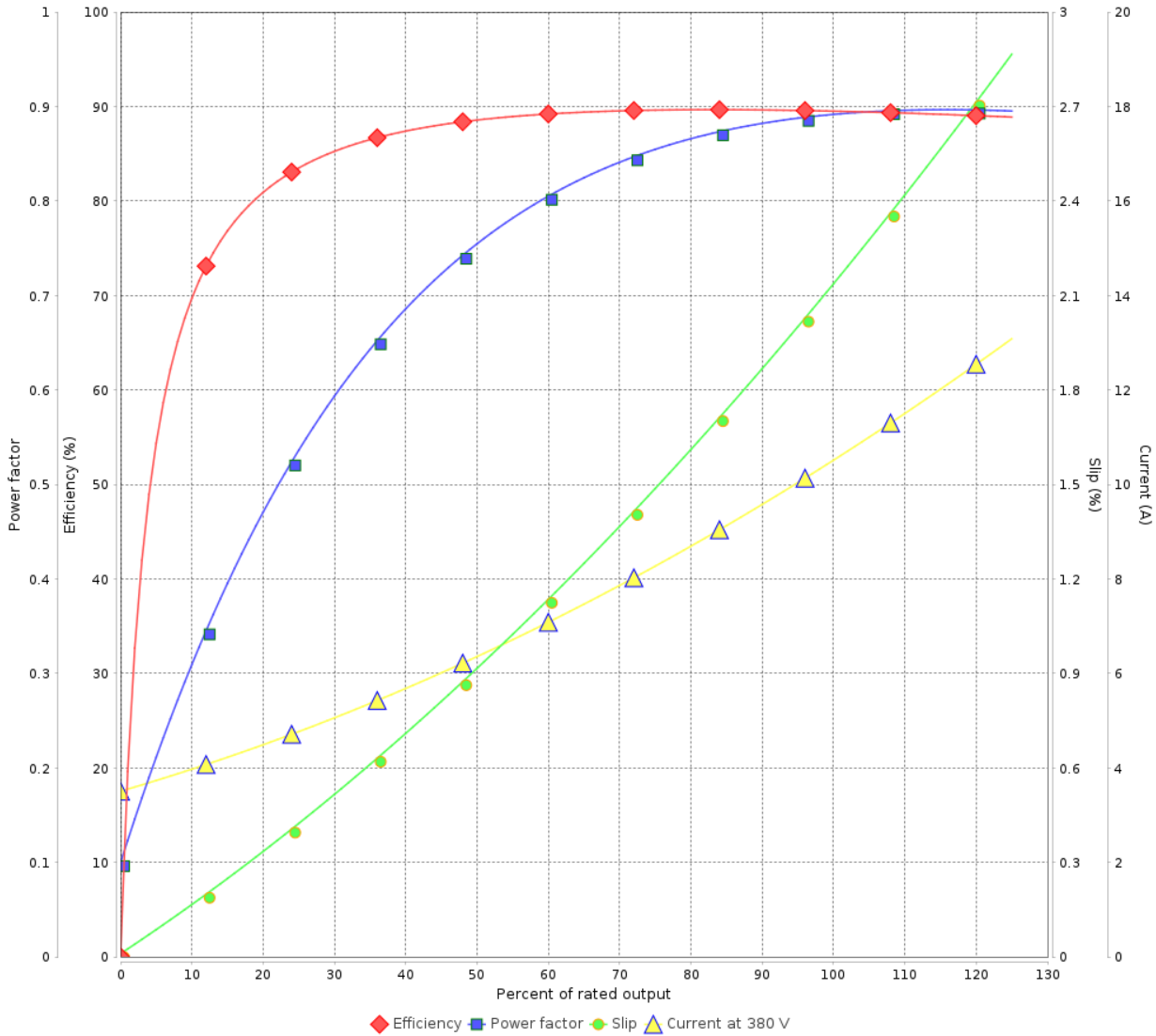
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 13014332

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Performance : 380 V 50 Hz 2P IE3

Rated current	: 10.4 A	Moment of inertia (J)	: 0.0268 kgm ²
LRC	: 7.9	Duty cycle	: Cont.(S1)
Rated torque	: 1.85 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.25
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 2940 rpm	Design	: B

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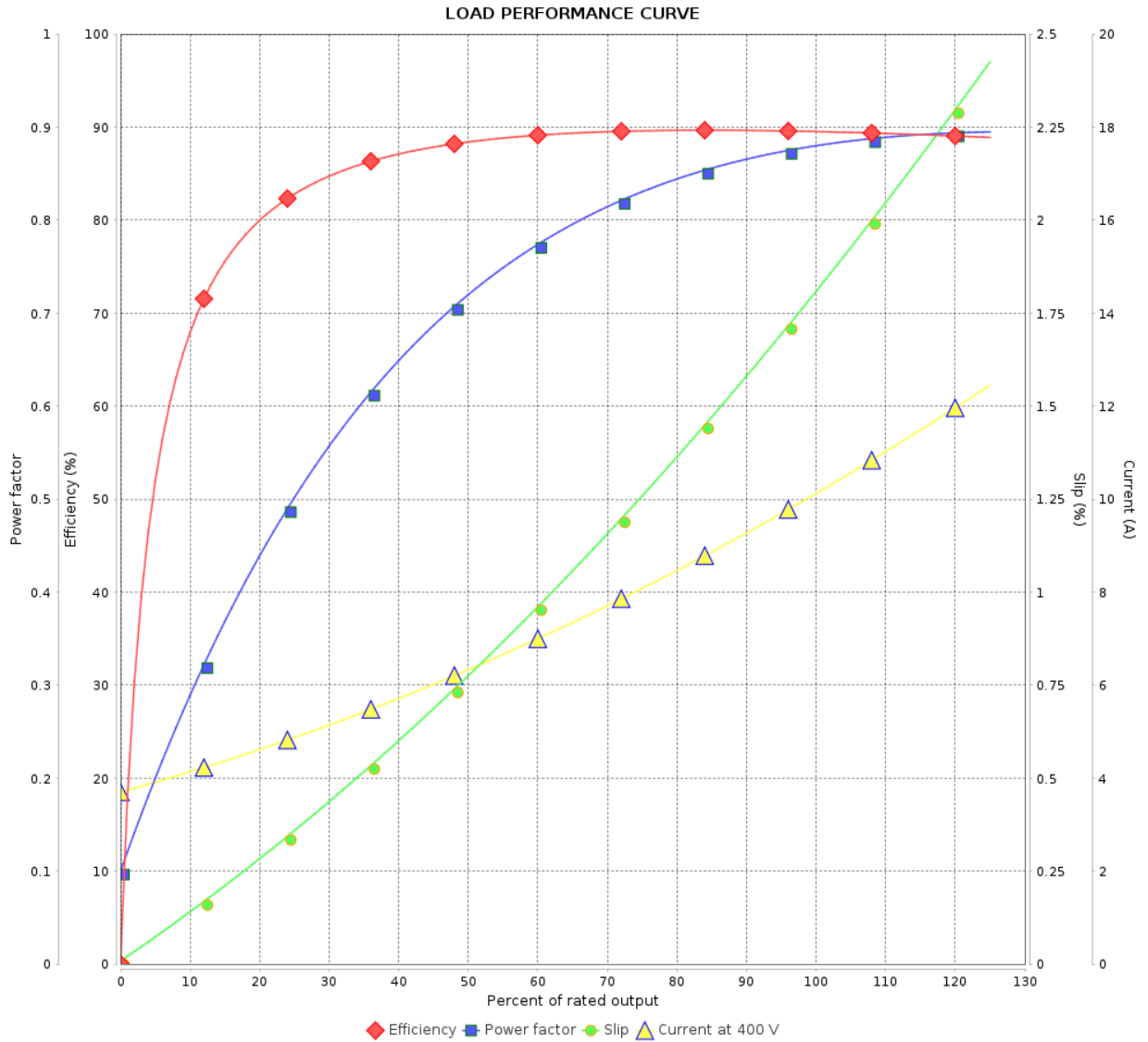
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 13014332



Performance : 400 V 50 Hz 2P IE3

Rated current : 10.1 A
 LRC : 8.7
 Rated torque : 1.85 kgfm
 Locked rotor torque : 270 %
 Breakdown torque : 340 %
 Rated speed : 2945 rpm

Moment of inertia (J) : 0.0268 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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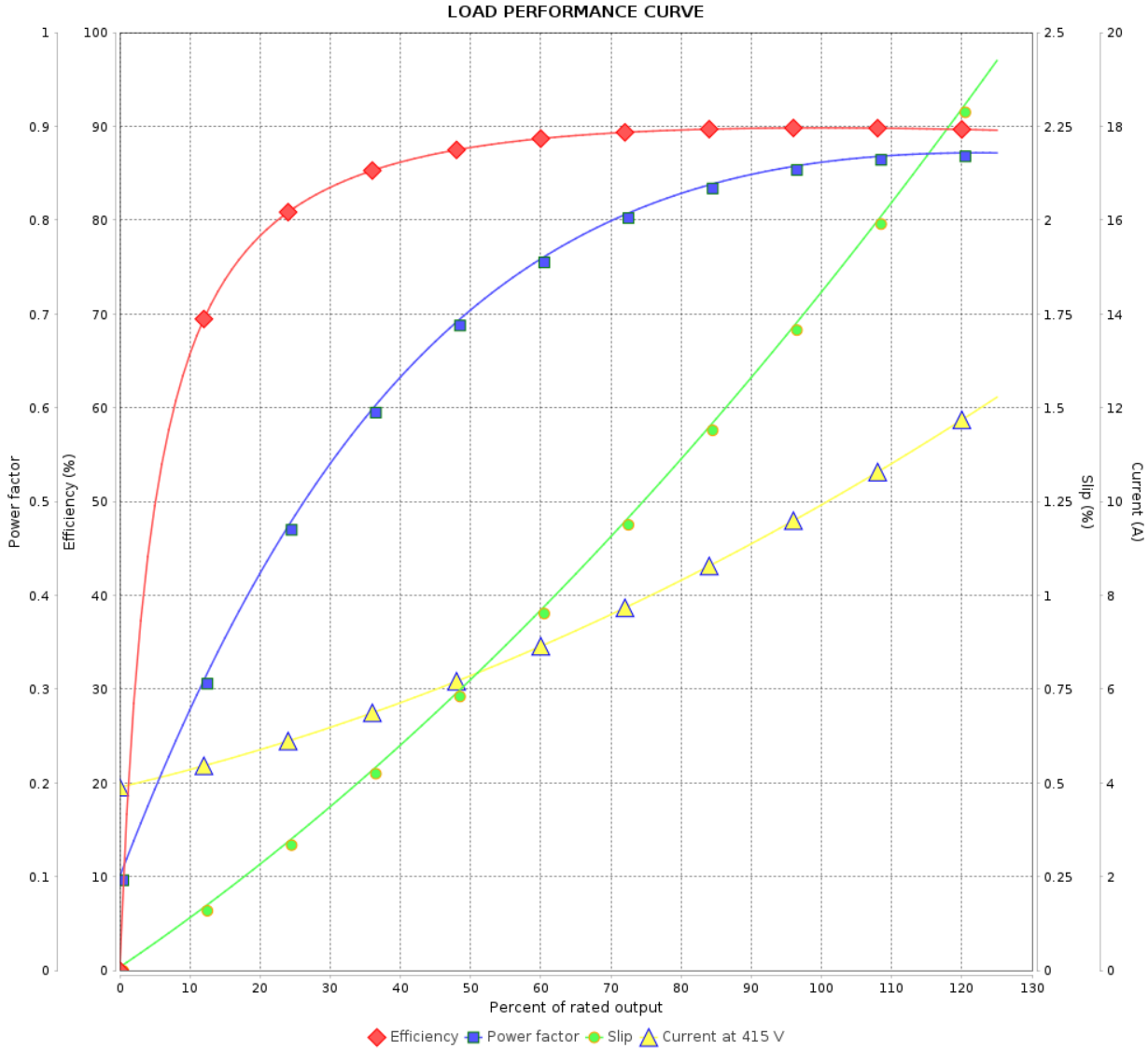
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Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 13014332



Performance : 415 V 50 Hz 2P IE3

Rated current	: 9.91 A	Moment of inertia (J)	: 0.0268 kgm ²
LRC	: 9.1	Duty cycle	: Cont.(S1)
Rated torque	: 1.85 kgfm	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.25
Breakdown torque	: 360 %	Temperature rise	: 80 K
Rated speed	: 2950 rpm	Design	: B

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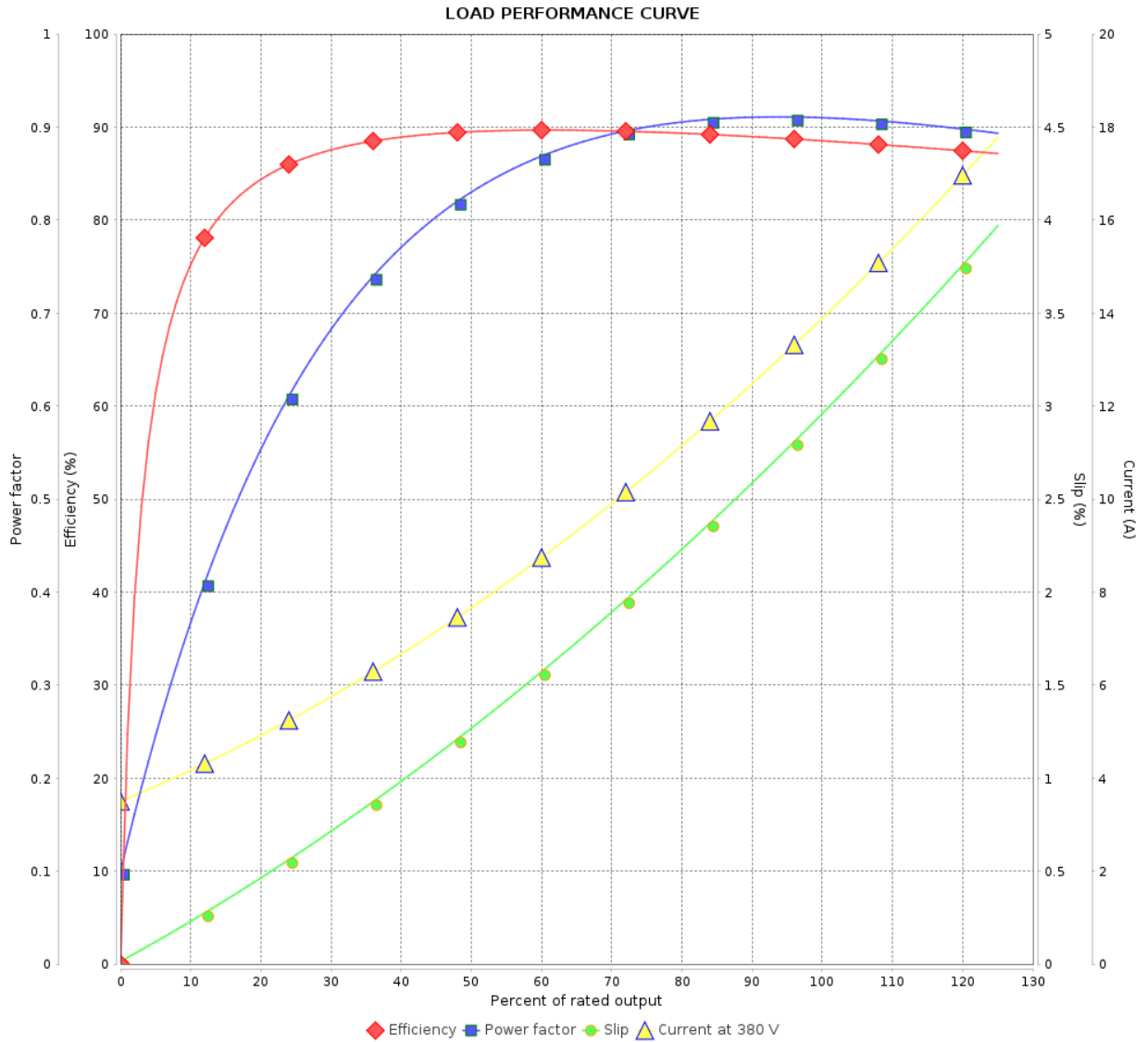
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 13014332



Performance : 380 V 50 Hz 2P IE2

Rated current : 14.1 A
 LRC : 5.6
 Rated torque : 2.49 kgfm
 Locked rotor torque : 170 %
 Breakdown torque : 220 %
 Rated speed : 2900 rpm

Moment of inertia (J) : 0.0268 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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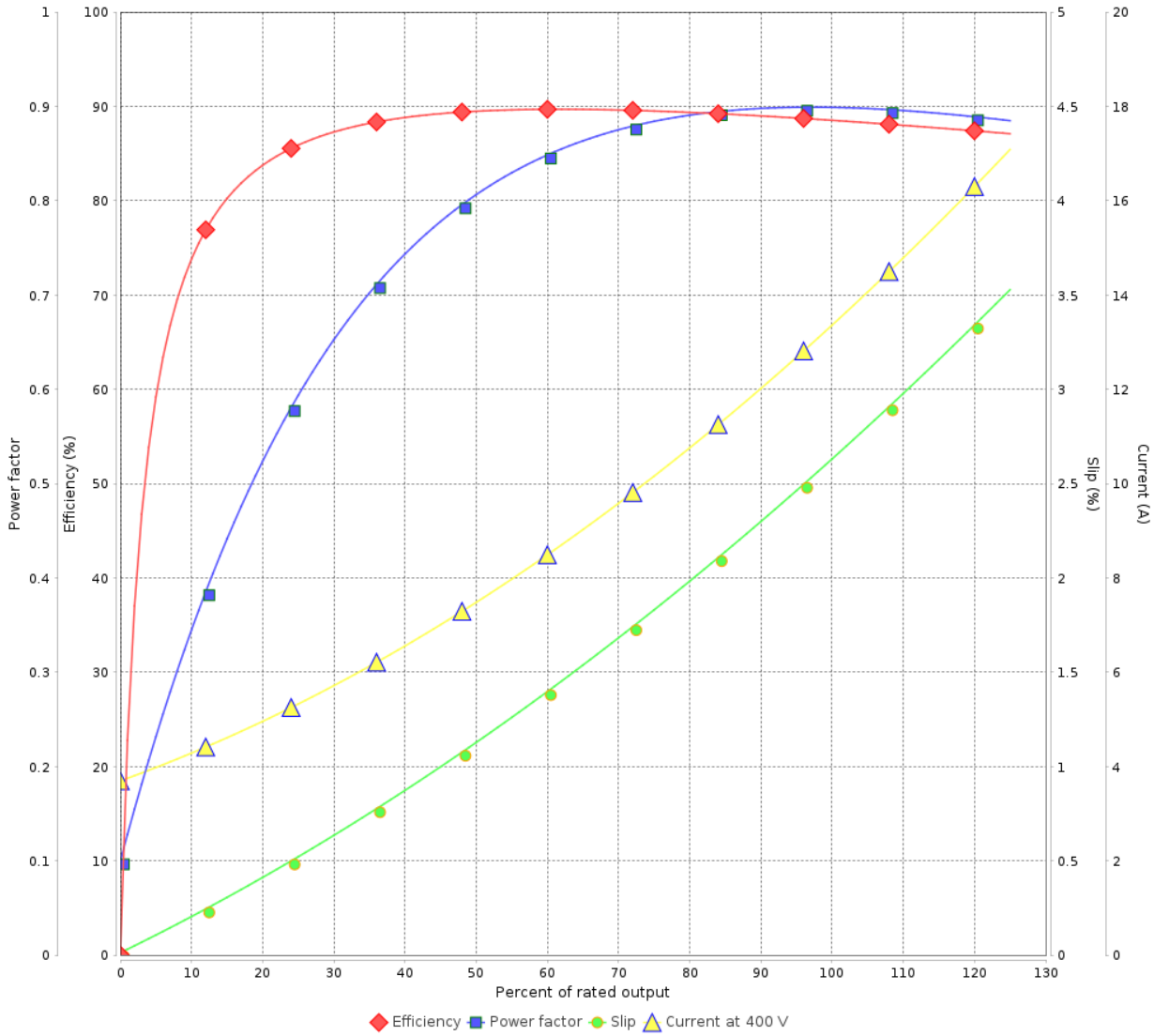
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 13014332

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Performance : 400 V 50 Hz 2P IE2

Rated current	: 13.4 A	Moment of inertia (J)	: 0.0268 kgm ²
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 2.49 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 105 K
Rated speed	: 2915 rpm	Design	: B

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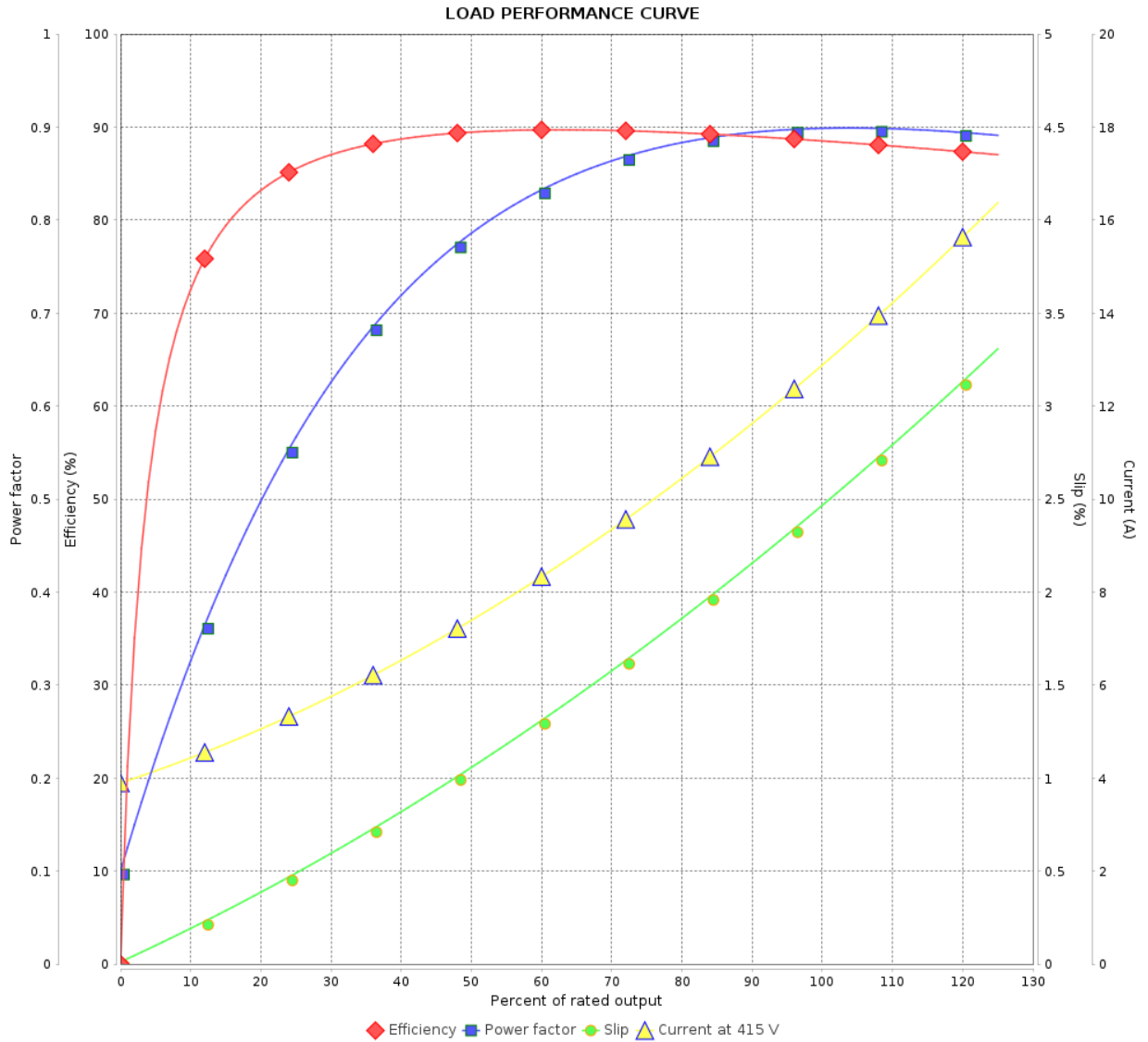
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 13014332



Performance : 415 V 50 Hz 2P IE2

Rated current : 13.1 A
 LRC : 6.9
 Rated torque : 2.48 kgfm
 Locked rotor torque : 220 %
 Breakdown torque : 270 %
 Rated speed : 2925 rpm

Moment of inertia (J) : 0.0268 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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