

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 11940579

Frame : 213/5T	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> : 82.3 kg
Protection degree : IP55	Moment of inertia (J) : 0.0268 kgm <sup>2</sup>
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]	460	380	400	415	380	400	415
Rated current [A]	11.7	10.6	10.4	10.0	14.3	13.7	13.4
L. R. Amperes [A]	84.5	83.8	90.8	91.2	80.1	87.9	92.5
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]	3.60	3.50	3.70	3.90	3.50	3.70	3.90
Rated speed [RPM]	3520	2930	2940	2945	2885	2900	2910
Slip [%]	2.22	2.33	2.00	1.83	3.83	3.33	3.00
Rated torque [kgfm]	2.06	1.86	1.85	1.85	2.52	2.50	2.49
Locked rotor torque [%]	220	220	240	260	170	190	200
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 <sup>2</sup>	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%	0.86	0.85	0.83	0.81	0.89	0.87
	100%	0.89	0.88	0.85	0.85	0.90	0.88

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

Losses (%)	P1 (0,9;1,0)	10.5	11.4	11.4	11.0	12.6	12.6	12.6
	P2 (0,5;1,0)	8.5	9.2	9.2	8.9	10.1	10.1	10.1
	P3 (0,25;1,0)	7.4	8.0	8.0	7.8	8.9	8.9	8.9
	P4 (0,9;0,5)	5.1	5.6	5.6	5.4	6.2	6.2	6.2
	P5 (0,5;0,5)	3.2	3.4	3.4	3.3	3.8	3.8	3.8
	P6 (0,5;0,25)	2.0	2.2	2.2	2.1	2.4	2.4	2.4
	P7 (0,25;0,25)	1.2	1.3	1.3	1.3	1.5	1.5	1.5

Bearing type	: 6308 C3	Non drive end 6207 C3	Foundation loads
Sealing	: Taconite	Taconite	Max. traction : 83 kgf
	Labyrinth	Labyrinth	Max. compression : 165 kgf
Lubrication interval	: 20000 h	20000 h	
Lubricant amount	: 11 g	7 g	
Lubricant type	: Mobil Polyrex EM		

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Customer :

Notes

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

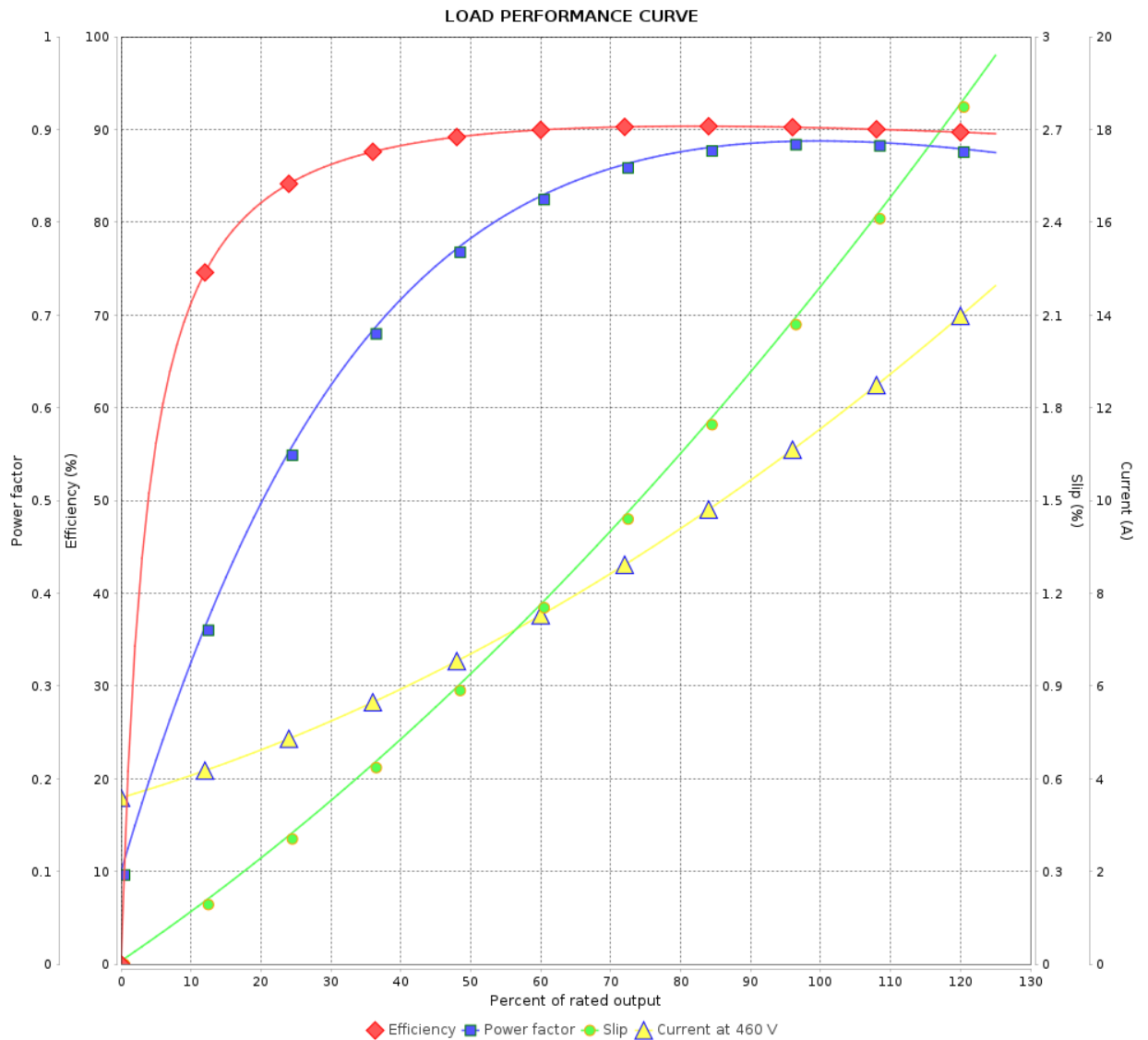
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11940579



Performance : 460 V 60 Hz 2P

Rated current	: 11.7 A	Moment of inertia (J)	: 0.0268 kgm <sup>2</sup>
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 2.06 kgfm	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.25
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 3520 rpm	Design	: B

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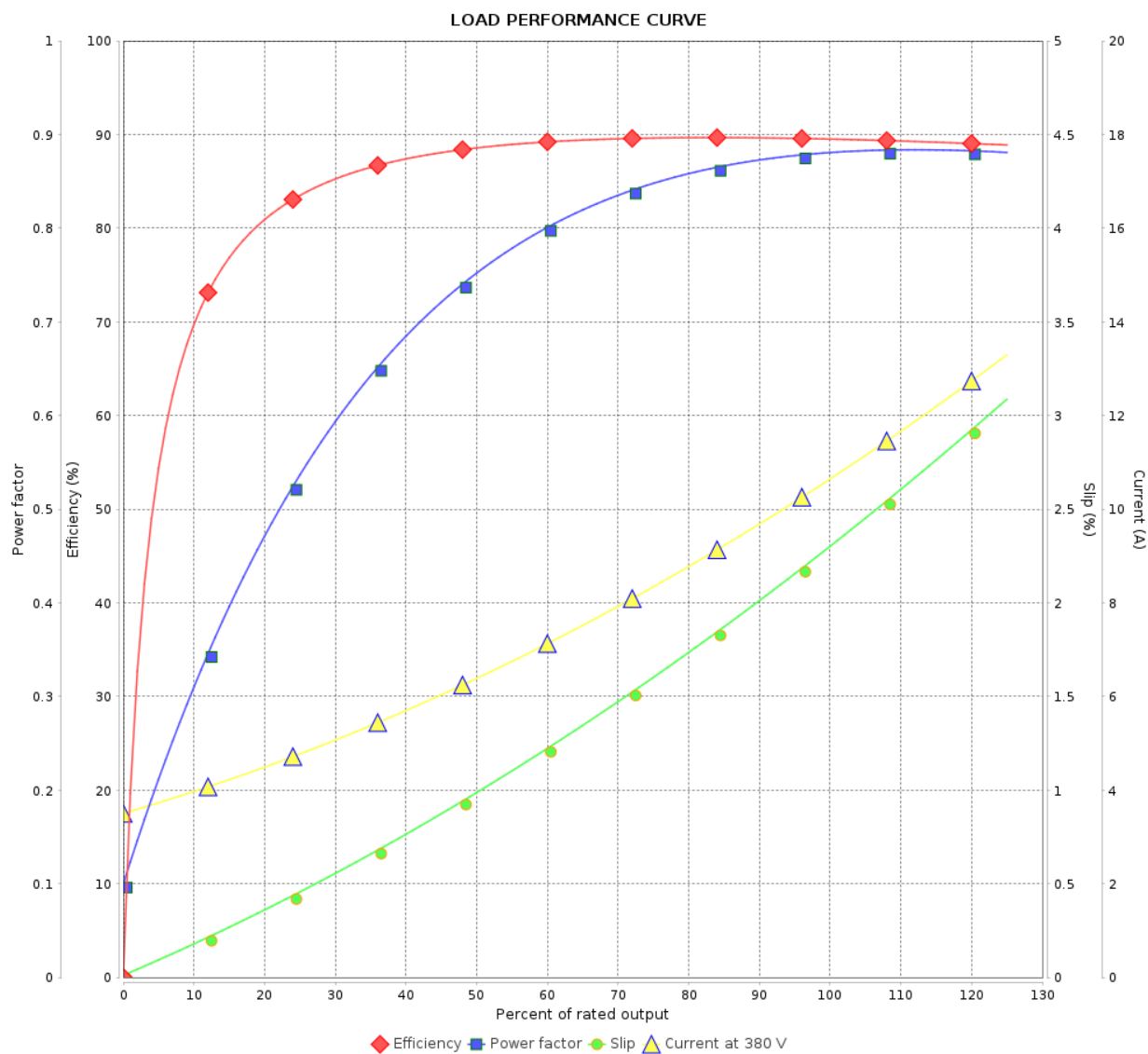
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11940579



Performance : 380 V 50 Hz 2P IE3

Rated current : 10.6 A  
LRC : 7.9  
Rated torque : 1.86 kgfm  
Locked rotor torque : 220 %  
Breakdown torque : 300 %  
Rated speed : 2930 rpm

Moment of inertia (J) : 0.0268 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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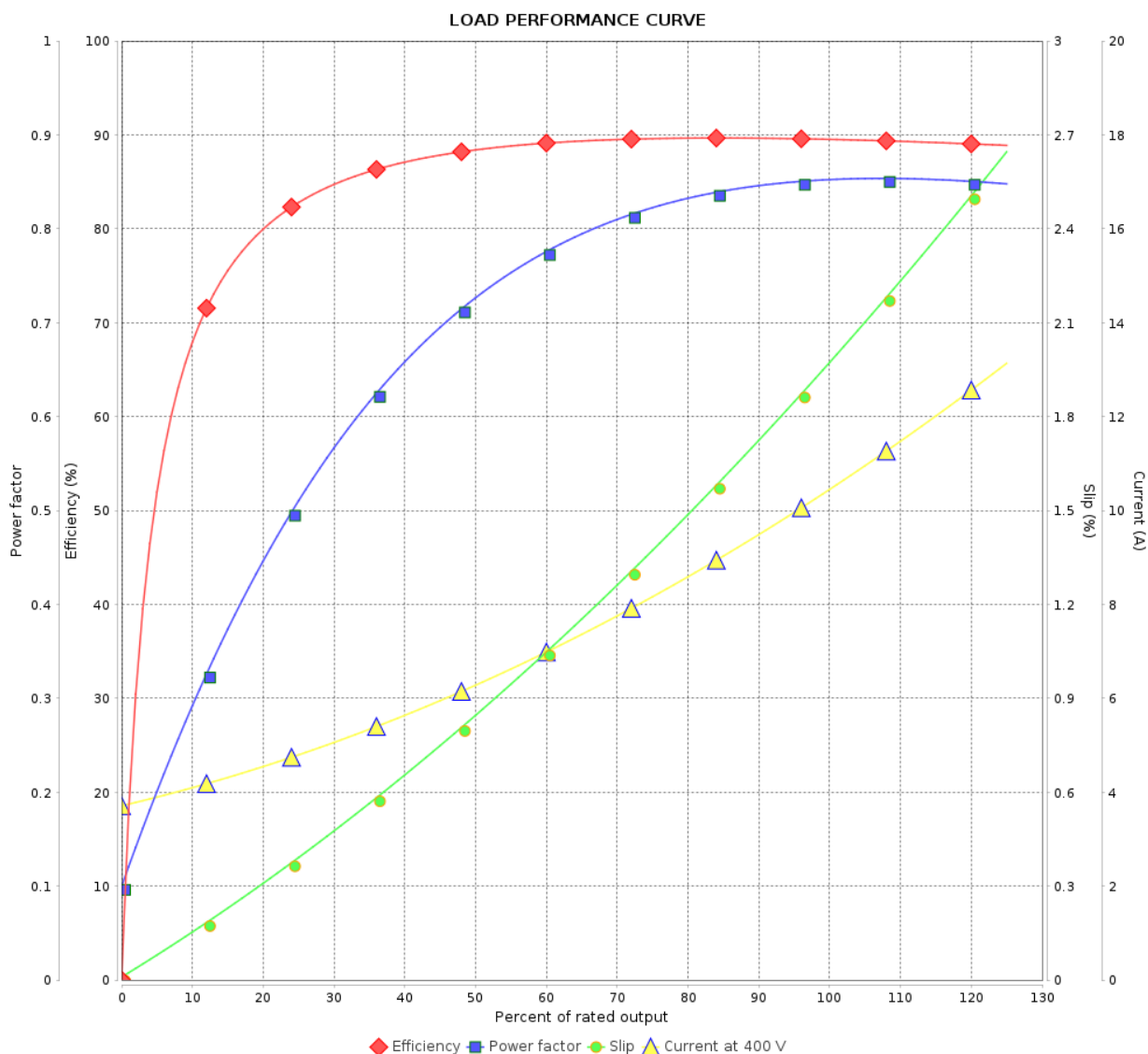
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11940579



Performance : 400 V 50 Hz 2P IE3

Rated current : 10.4 A  
LRC : 8.7  
Rated torque : 1.85 kgfm  
Locked rotor torque : 240 %  
Breakdown torque : 340 %  
Rated speed : 2940 rpm

Moment of inertia (J) : 0.0268 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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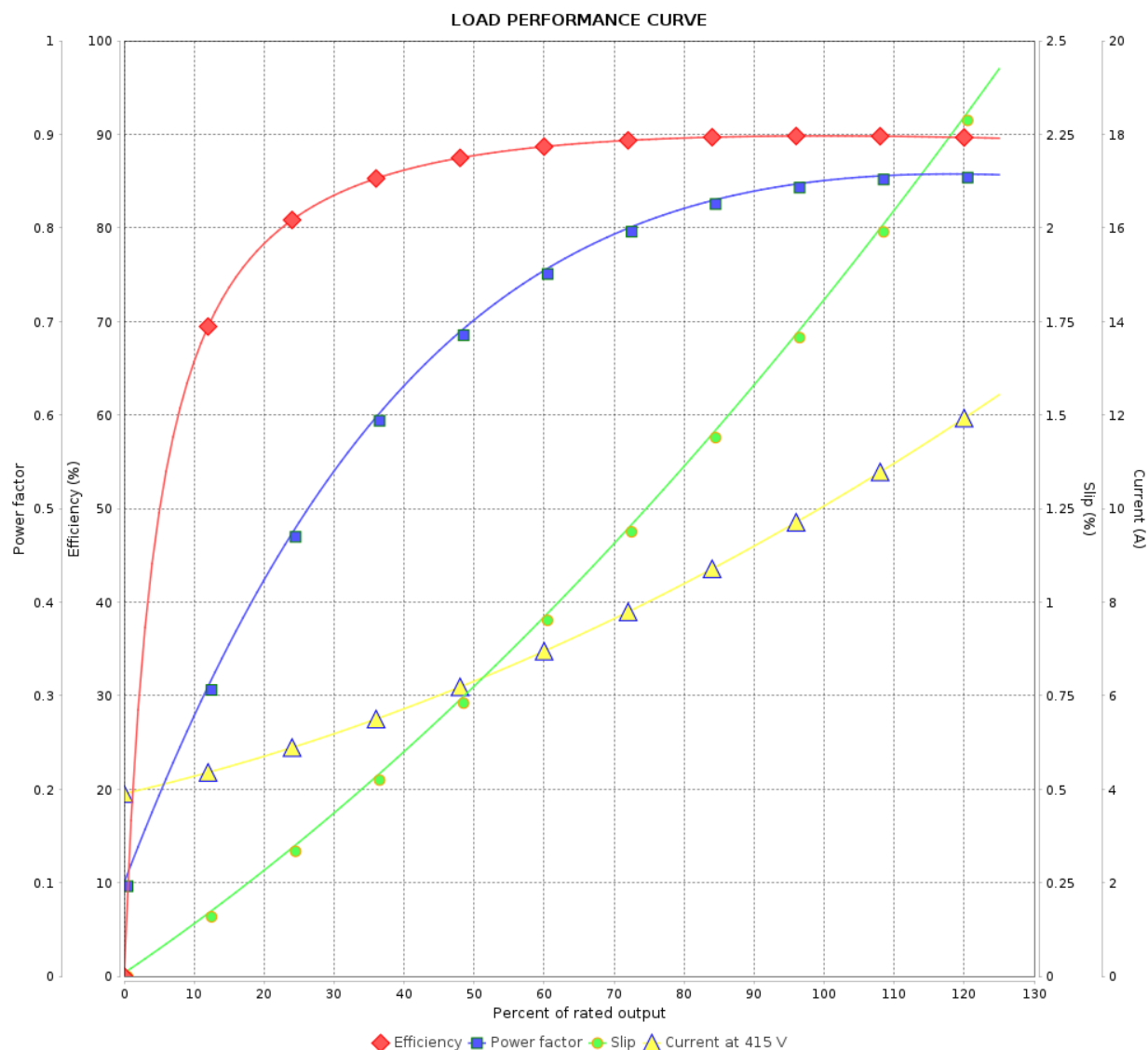
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11940579



Performance : 415 V 50 Hz 2P IE3

Rated current : 10.0 A  
LRC : 9.1  
Rated torque : 1.85 kgfm  
Locked rotor torque : 260 %  
Breakdown torque : 360 %  
Rated speed : 2945 rpm

Moment of inertia (J) : 0.0268 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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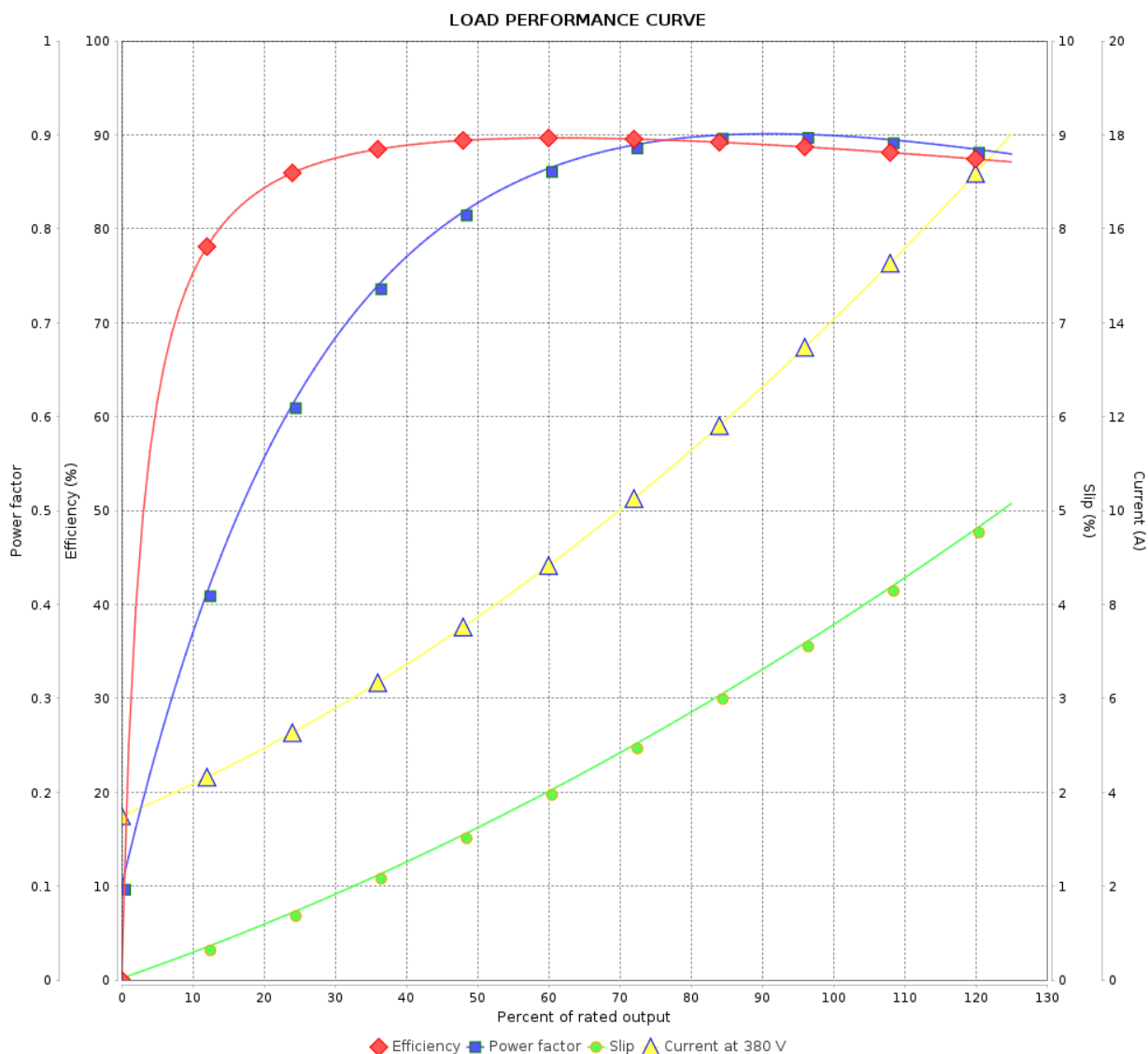
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11940579



Performance : 380 V 50 Hz 2P IE2

Rated current : 14.3 A  
LRC : 5.6  
Rated torque : 2.52 kgfm  
Locked rotor torque : 170 %  
Breakdown torque : 220 %  
Rated speed : 2885 rpm

Moment of inertia (J) : 0.0268 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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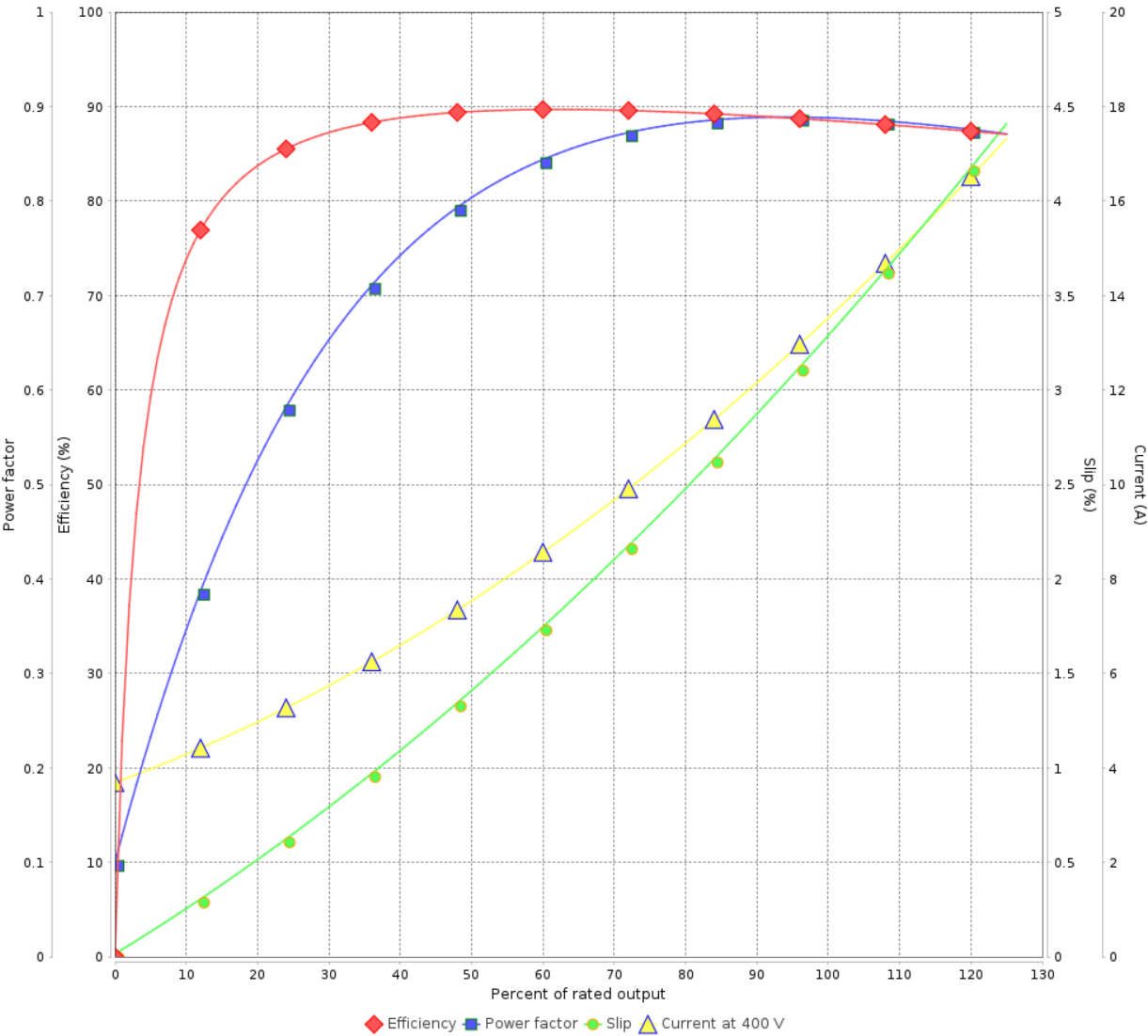
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase      Product code : 11940579

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Performance : 400 V 50 Hz 2P IE2

Rated current	: 13.7 A	Moment of inertia (J)	: 0.0268 kgm <sup>2</sup>
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 2.50 kgfm	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 105 K
Rated speed	: 2900 rpm	Design	: B

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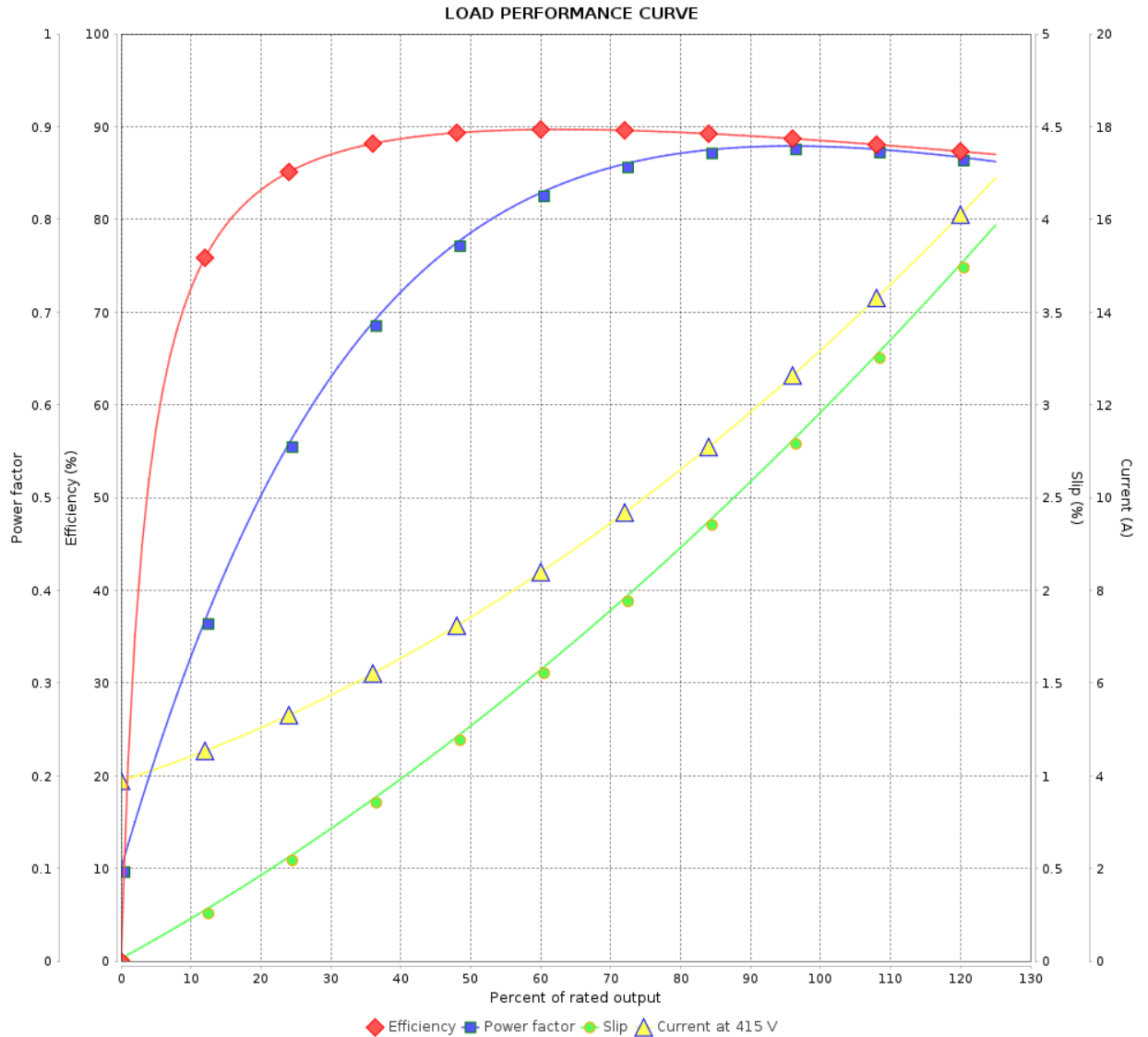
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11940579



Performance : 415 V 50 Hz 2P IE2

Rated current : 13.4 A  
LRC : 6.9  
Rated torque : 2.49 kgfm  
Locked rotor torque : 200 %  
Breakdown torque : 270 %  
Rated speed : 2910 rpm

Moment of inertia (J) : 0.0268 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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