

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 11919904

Frame	: 213T	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	: 71.3 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.0197 kgm ²
Design	: B		

Output [HP]	7.5	5	5	5	7.5	7.5	7.5
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]	8.97	7.59	7.38	7.27	10.7	10.3	10.1
L. R. Amperes [A]	64.6	62.2	67.2	70.5	61.2	66.0	69.3
LRC [A]	7.2x(Code H)	8.2x(Code K)	9.1x(Code L)	9.7x(Code M)	5.7x(Code F)	6.4x(Code G)	6.9x(Code H)
No load current [A]	3.20	3.00	3.20	3.50	3.00	3.20	3.50
Rated speed [RPM]	3525	2940	2950	2950	2895	2905	2915
Slip [%]	2.08	2.00	1.67	1.67	3.50	3.17	2.83
Rated torque [kgfm]	1.54	1.23	1.23	1.23	1.88	1.87	1.87
Locked rotor torque [%]	210	250	270	300	160	180	200
Breakdown torque [%]	290	360	400	430	229	260	280
Service factor	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Temperature rise	80 K	80 K	80 K	80 K	105 K	105 K	80 K
Locked rotor time	39s (cold) 22s (hot)	54s (cold) 30s (hot)	52s (cold) 29s (hot)	46s (cold) 26s (hot)	36s (cold) 20s (hot)	34s (cold) 19s (hot)	34s (cold) 19s (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%	87.5	86.7	86.4	86.1	88.5	87.5
	75%	89.5	88.2	88.3	88.5	88.5	88.5
	100%	89.5	88.2	88.3	88.5	87.5	88.5
Power Factor	25%						
	50%	0.74	0.68	0.66	0.62	0.80	0.76
	75%	0.83	0.80	0.76	0.73	0.86	0.85
	100%	0.86	0.84	0.82	0.80	0.89	0.88

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

Losses (%)	P1 (0,9;1,0)	11.2	12.8	12.7	12.4	13.6	13.6	12.4
	P2 (0,5;1,0)	8.7	9.9	9.8	9.6	10.6	10.6	9.6
	P3 (0,25;1,0)	7.6	8.7	8.6	8.4	9.2	9.2	8.4
	P4 (0,9;0,5)	6.0	6.9	6.8	6.7	7.3	7.3	6.7
	P5 (0,5;0,5)	3.6	4.1	4.0	4.0	4.3	4.3	4.0
	P6 (0,5;0,25)	2.4	2.8	2.7	2.7	2.9	2.9	2.7
	P7 (0,25;0,25)	1.5	1.7	1.7	1.6	1.8	1.8	1.6

Bearing type	: 6308 C3	Non drive end	6207 C3	Foundation loads	
Sealing	: Taconite		Taconite	Max. traction	: 61 kgf
	: Labyrinth		Labyrinth	Max. compression	: 132 kgf
Lubrication interval	: 20000 h		20000 h		
Lubricant amount	: 11 g		7 g		
Lubricant type	: Mobil Polyrex EM				

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	22/10/2024		1 / 9	

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



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.

Rev.	Changes Summary		Performed	Checked	Date
Performed by			Page		Revision
Checked by					
Date	22/10/2024				

LOAD PERFORMANCE CURVE

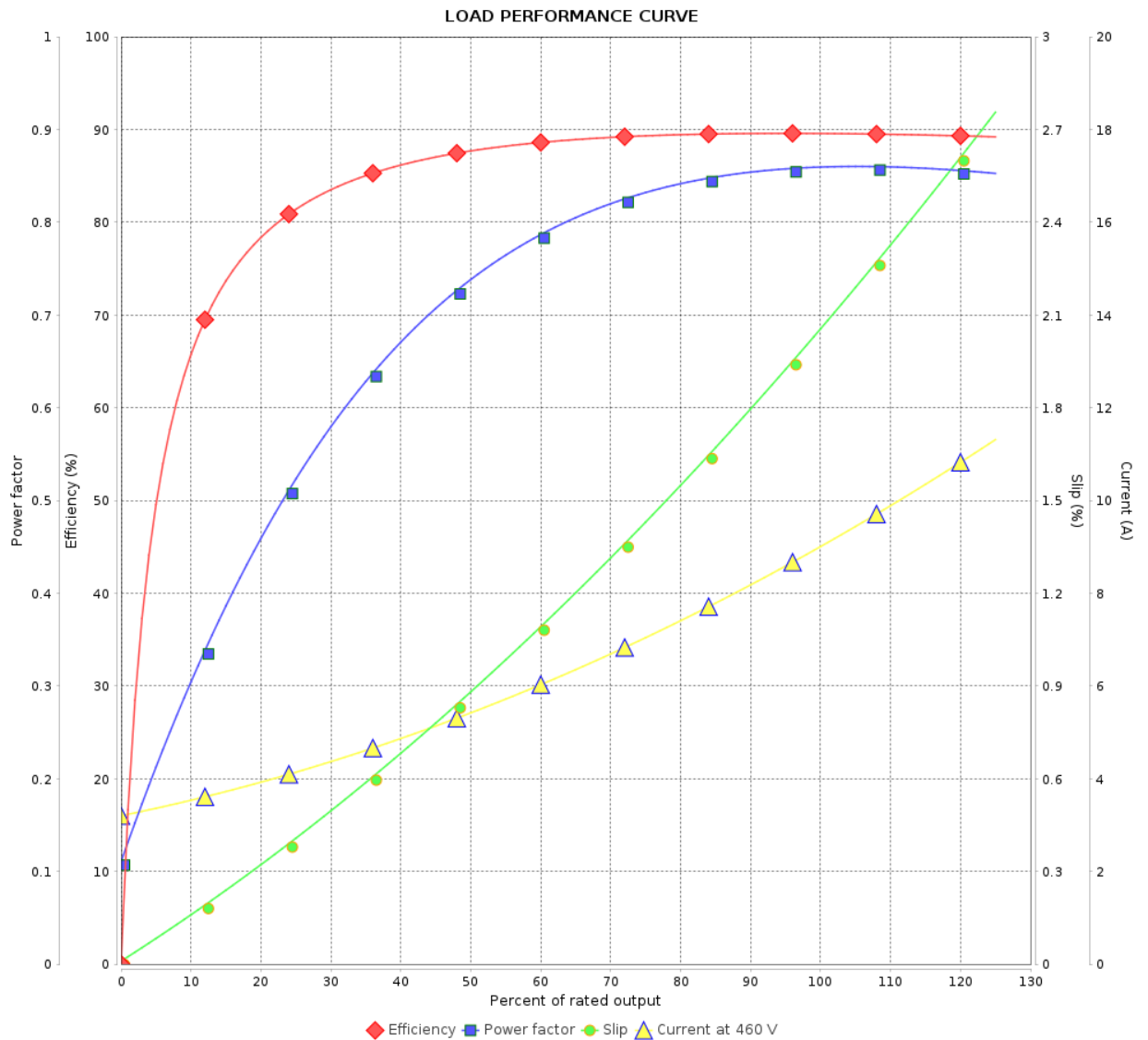
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11919904



Performance : 460 V 60 Hz 2P

Rated current	: 8.97 A	Moment of inertia (J)	: 0.0197 kgm ²
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 1.54 kgfm	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.25
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 3525 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 3 / 9Revision		
Checked by				
Date	22/10/2024			

LOAD PERFORMANCE CURVE

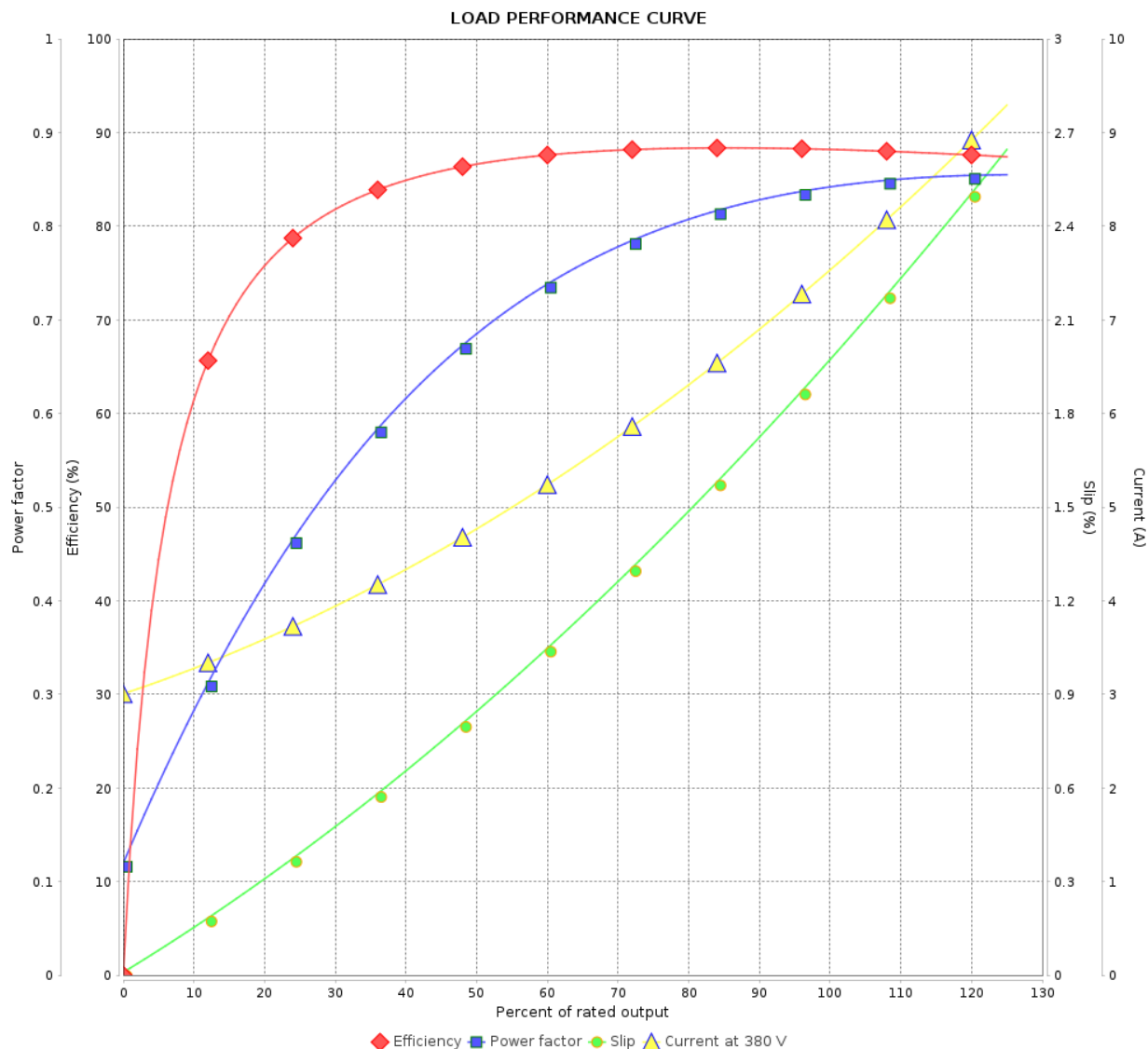
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11919904



Performance : 380 V 50 Hz 2P IE3

Rated current : 7.59 A
LRC : 8.2
Rated torque : 1.23 kgfm
Locked rotor torque : 250 %
Breakdown torque : 360 %
Rated speed : 2940 rpm

Moment of inertia (J) : 0.0197 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 4 / 9	Revision
Checked by					
Date	22/10/2024				

LOAD PERFORMANCE CURVE

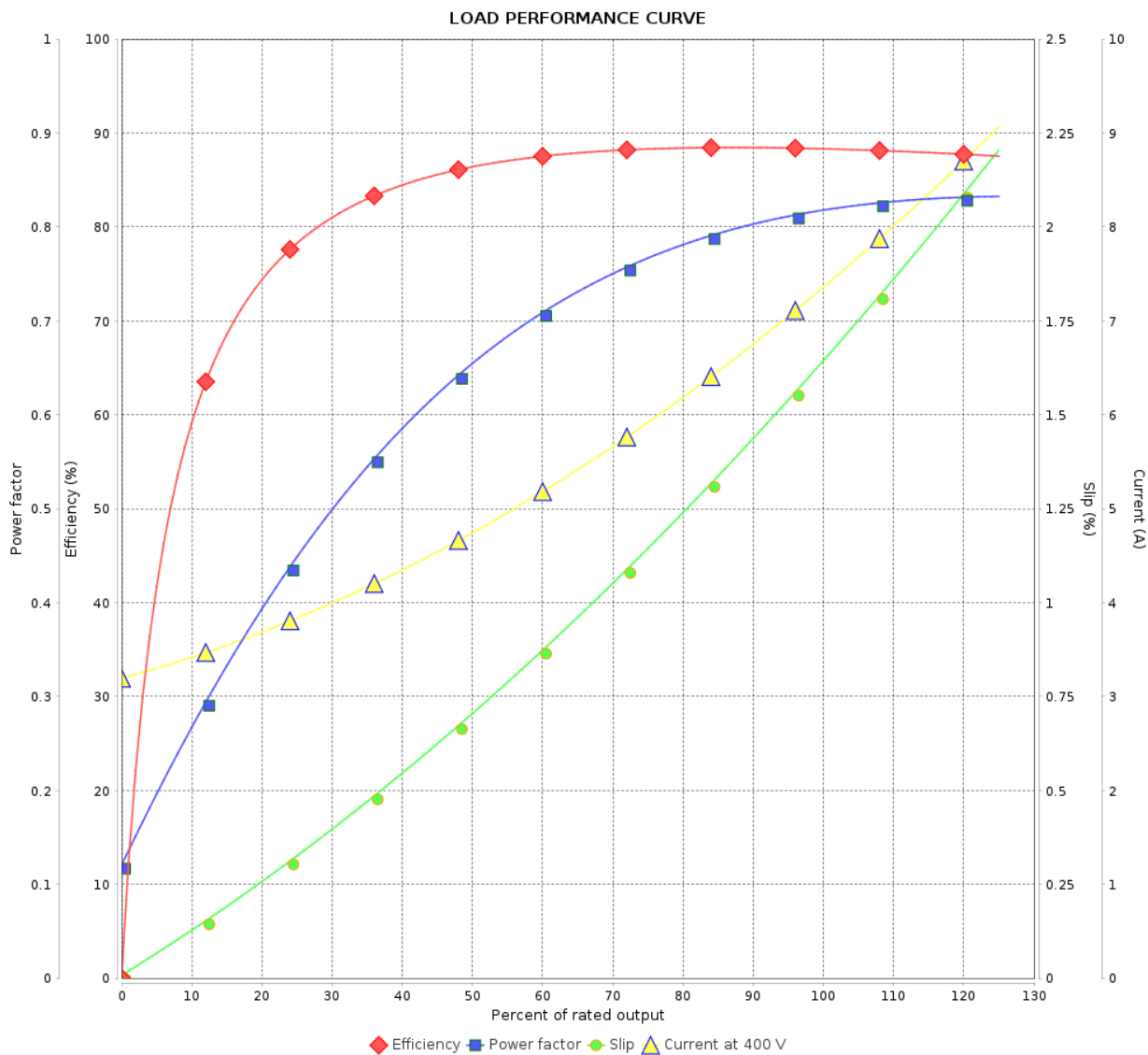
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11919904



Performance : 400 V 50 Hz 2P IE3

Rated current : 7.38 A
LRC : 9.1
Rated torque : 1.23 kgfm
Locked rotor torque : 270 %
Breakdown torque : 400 %
Rated speed : 2950 rpm

Moment of inertia (J) : 0.0197 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 5 / 9Revision		
Checked by				
Date	22/10/2024			

LOAD PERFORMANCE CURVE

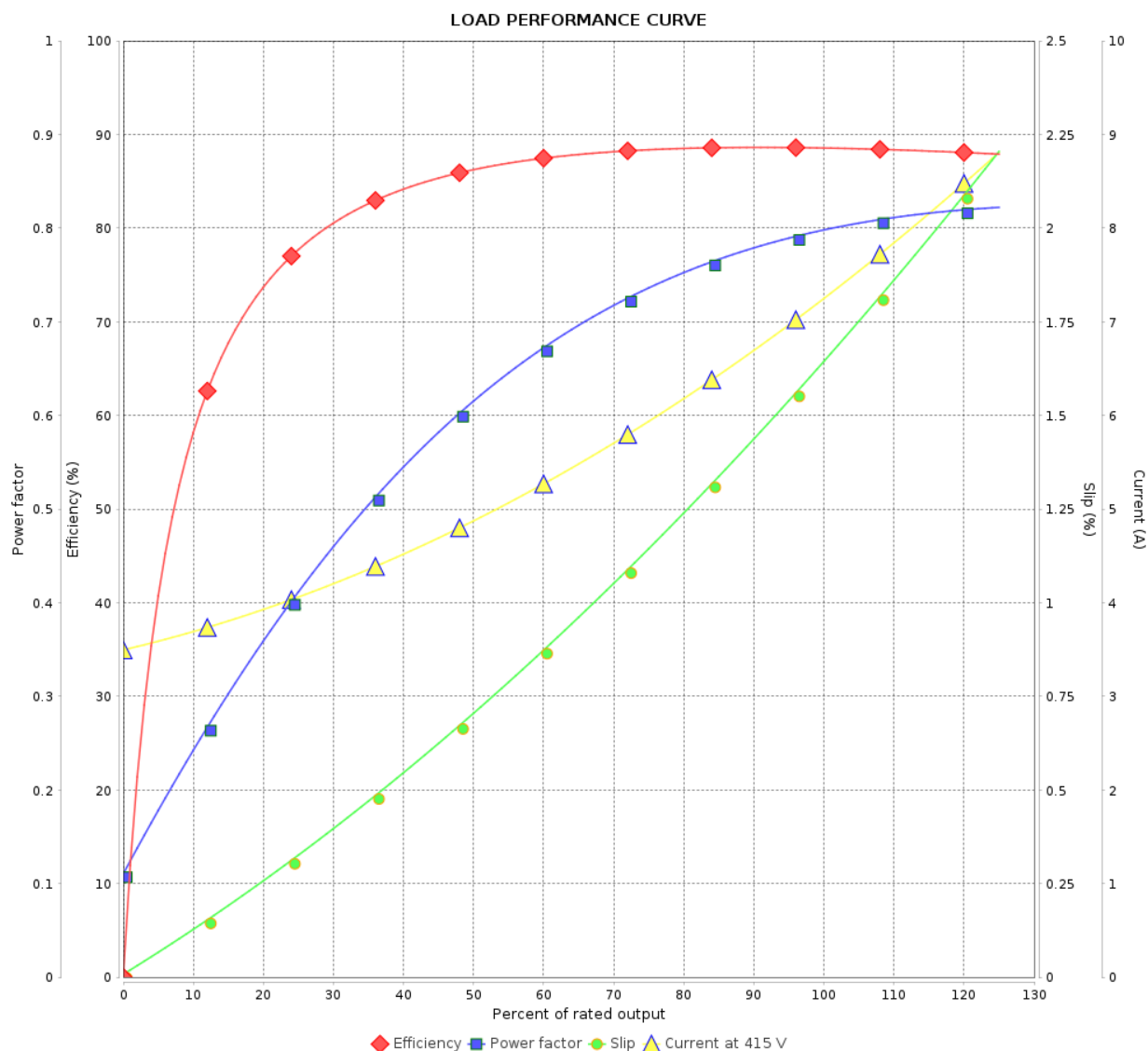
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11919904



Performance : 415 V 50 Hz 2P IE3

Rated current : 7.27 A
LRC : 9.7
Rated torque : 1.23 kgfm
Locked rotor torque : 300 %
Breakdown torque : 430 %
Rated speed : 2950 rpm

Moment of inertia (J) : 0.0197 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page	Revision
Checked by				6 / 9	
Date					

LOAD PERFORMANCE CURVE

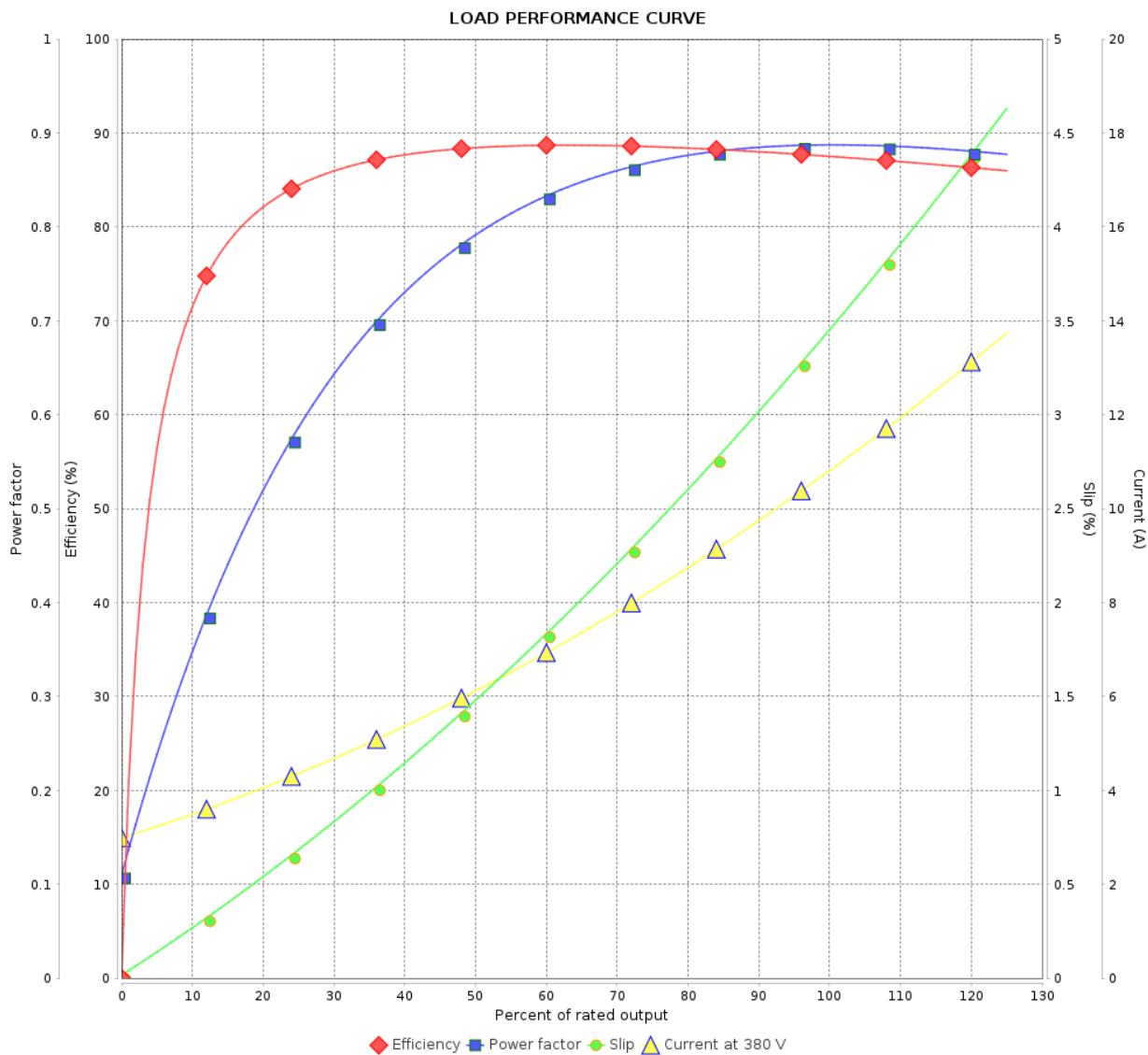
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11919904



Performance : 380 V 50 Hz 2P IE2

Rated current : 10.7 A
LRC : 5.7
Rated torque : 1.88 kgfm
Locked rotor torque : 160 %
Breakdown torque : 229 %
Rated speed : 2895 rpm

Moment of inertia (J) : 0.0197 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 105 K
Design : B

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 7 / 9	Revision
Checked by					
Date	22/10/2024				

LOAD PERFORMANCE CURVE

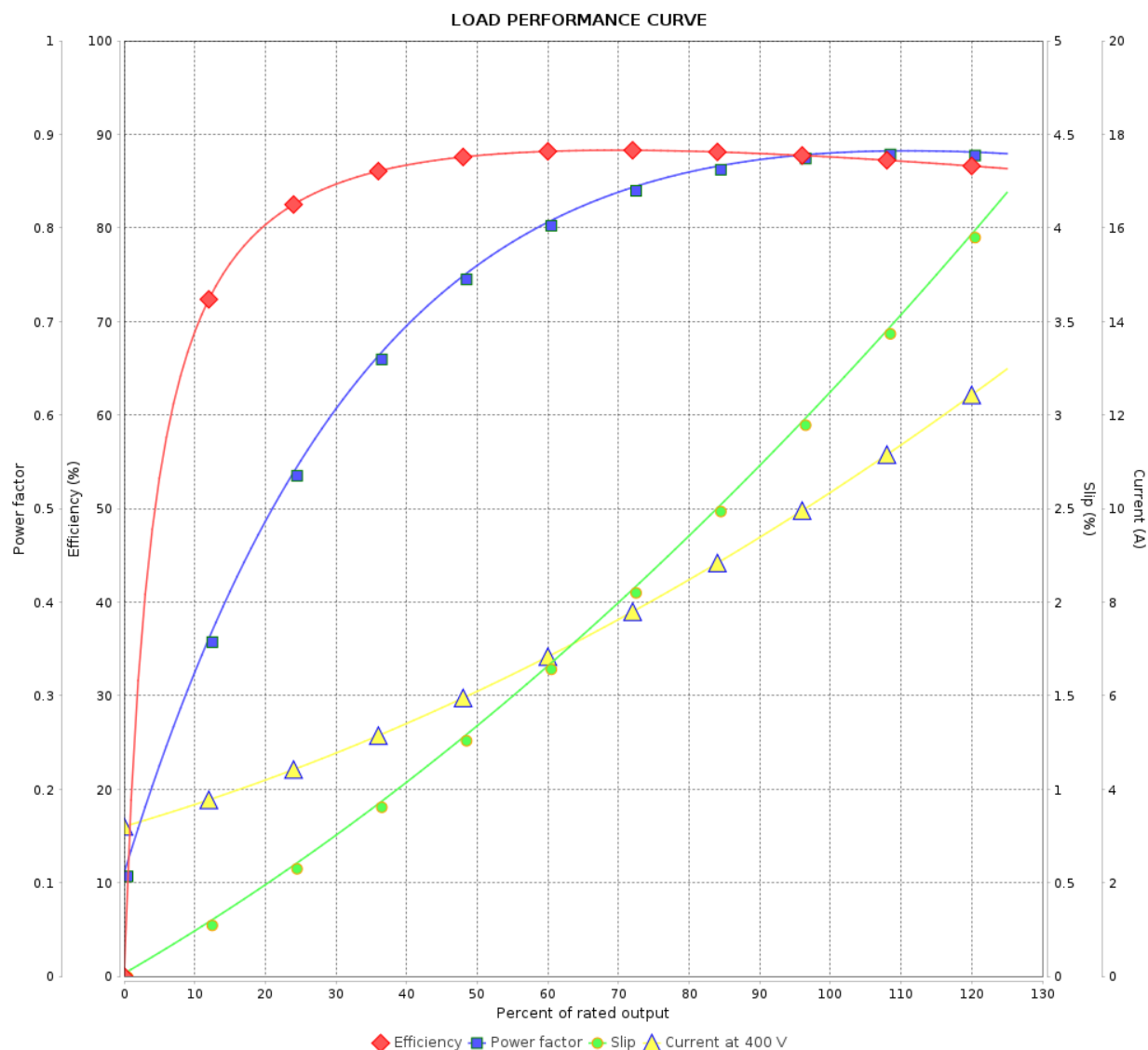
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11919904



Performance : 400 V 50 Hz 2P IE2

Rated current : 10.3 A
LRC : 6.4
Rated torque : 1.87 kgfm
Locked rotor torque : 180 %
Breakdown torque : 260 %
Rated speed : 2905 rpm

Moment of inertia (J) : 0.0197 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 105 K
Design : B

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 8 / 9	Revision
Checked by					
Date	22/10/2024				

LOAD PERFORMANCE CURVE

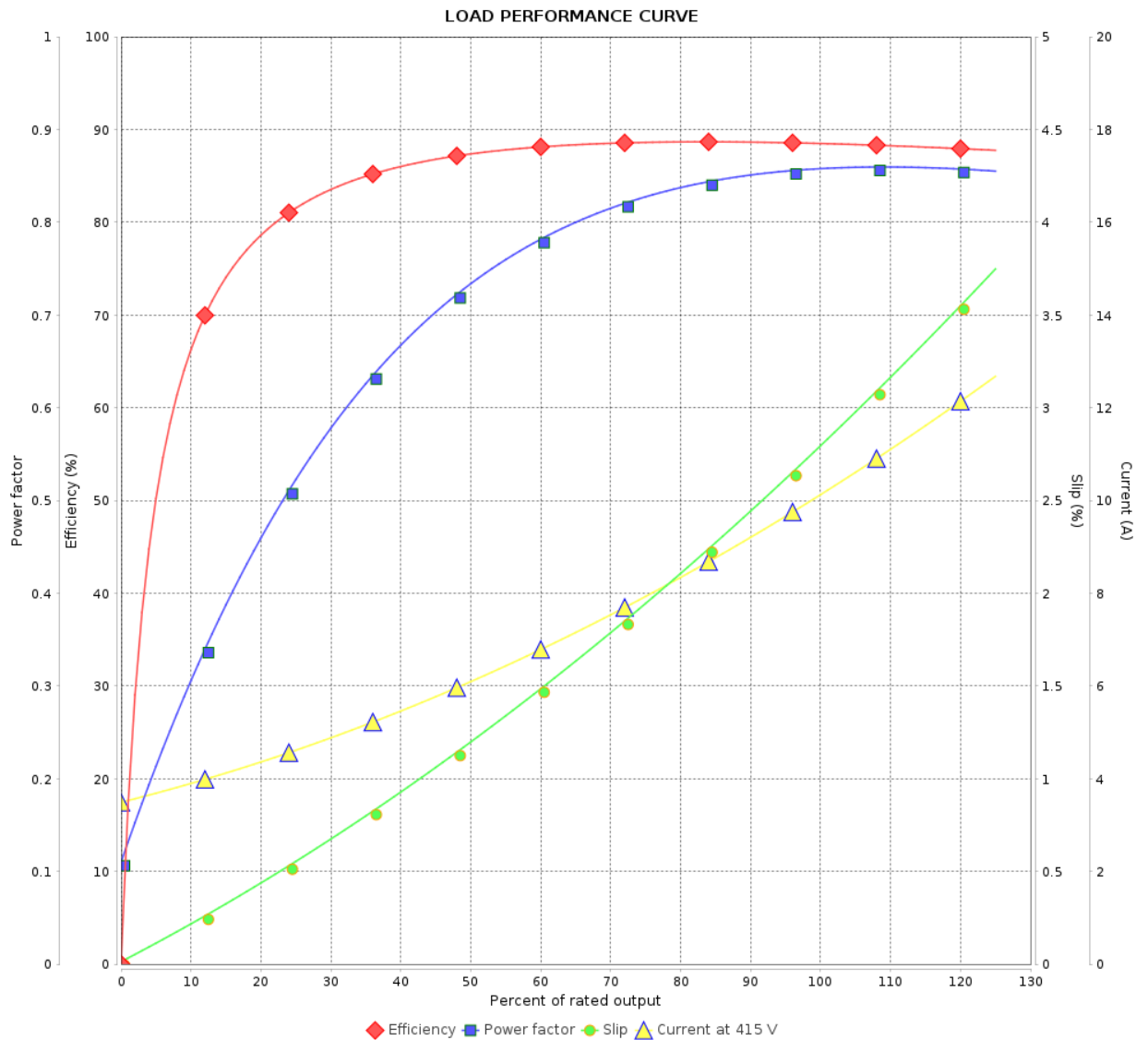
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11919904



Performance : 415 V 50 Hz 2P IE2

Rated current : 10.1 A
LRC : 6.9
Rated torque : 1.87 kgfm
Locked rotor torque : 200 %
Breakdown torque : 280 %
Rated speed : 2915 rpm

Moment of inertia (J) : 0.0197 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 9 / 9	Revision
Checked by					
Date	22/10/2024				