

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 11919902

Frame	: 182/4TC	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	: 50.8 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.0169 kgm ²
Design	: B		

Output [HP]	5	4	4	4	5	5	5
Poles	4	4	4	4	4	4	4
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	460	380	400	415	380	400	415
Rated current [A]	6.49	6.42	6.21	6.23	7.74	7.44	7.35
L. R. Amperes [A]	50.0	44.9	47.8	51.1	44.9	47.6	50.7
LRC [A]	7.7x(Code J)	7.0x(Code J)	7.7x(Code K)	8.2x(Code L)	5.8x(Code G)	6.4x(Code H)	6.9x(Code J)
No load current [A]	2.90	2.80	3.10	3.30	2.80	3.10	3.30
Rated speed [RPM]	1750	1455	1455	1460	1430	1440	1445
Slip [%]	2.78	3.00	3.00	2.67	4.67	4.00	3.67
Rated torque [kgfm]	2.07	2.00	2.00	1.99	2.54	2.52	2.51
Locked rotor torque [%]	229	229	260	290	185	210	229
Breakdown torque [%]	290	300	300	350	225	250	270
Service factor	1.25	1.15	1.15	1.15	1.15	1.15	1.15
Temperature rise	80 K	80 K	80 K	80 K	80 K	80 K	80 K
Locked rotor time	21s (cold) 12s (hot)	54s (cold) 30s (hot)	48s (cold) 27s (hot)	43s (cold) 24s (hot)	41s (cold) 23s (hot)	39s (cold) 22s (hot)	36s (cold) 20s (hot)
Noise level ²	56.0 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%	88.5	87.5	86.7	86.5	88.5	87.5
	75%	89.5	88.2	88.2	88.2	87.5	88.5
	100%	89.5	87.7	88.2	88.2	86.5	87.5
Power Factor	25%						
	50%	0.62	0.61	0.57	0.53	0.69	0.61
	75%	0.74	0.75	0.71	0.67	0.80	0.74
	100%	0.80	0.81	0.79	0.76	0.84	0.80

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

Losses (%)	P1 (0,9;1,0)	11.3	13.6	12.9	12.9	15.1	13.8	13.8
	P2 (0,5;1,0)	9.5	11.4	10.9	10.9	12.7	11.6	11.6
	P3 (0,25;1,0)	8.7	10.4	10.0	10.0	11.6	10.6	10.6
	P4 (0,9;0,5)	5.5	6.5	6.2	6.2	7.3	6.7	6.7
	P5 (0,5;0,5)	3.8	4.5	4.3	4.3	5.0	4.6	4.6
	P6 (0,5;0,25)	2.5	3.0	2.9	2.9	3.4	3.1	3.1
	P7 (0,25;0,25)	1.8	2.2	2.1	2.1	2.4	2.2	2.2

Bearing type	: 6207 C3	Non drive end	6206 C3	Foundation loads	
Sealing	: Taconite		Taconite	Max. traction	: 116 kgf
	: Labyrinth		Labyrinth	Max. compression	: 167 kgf
Lubrication interval	: 20000 h		20000 h		
Lubricant amount	: 7 g		5 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 2 / 9		Revision
Checked by					
Date	22/10/2024				

LOAD PERFORMANCE CURVE

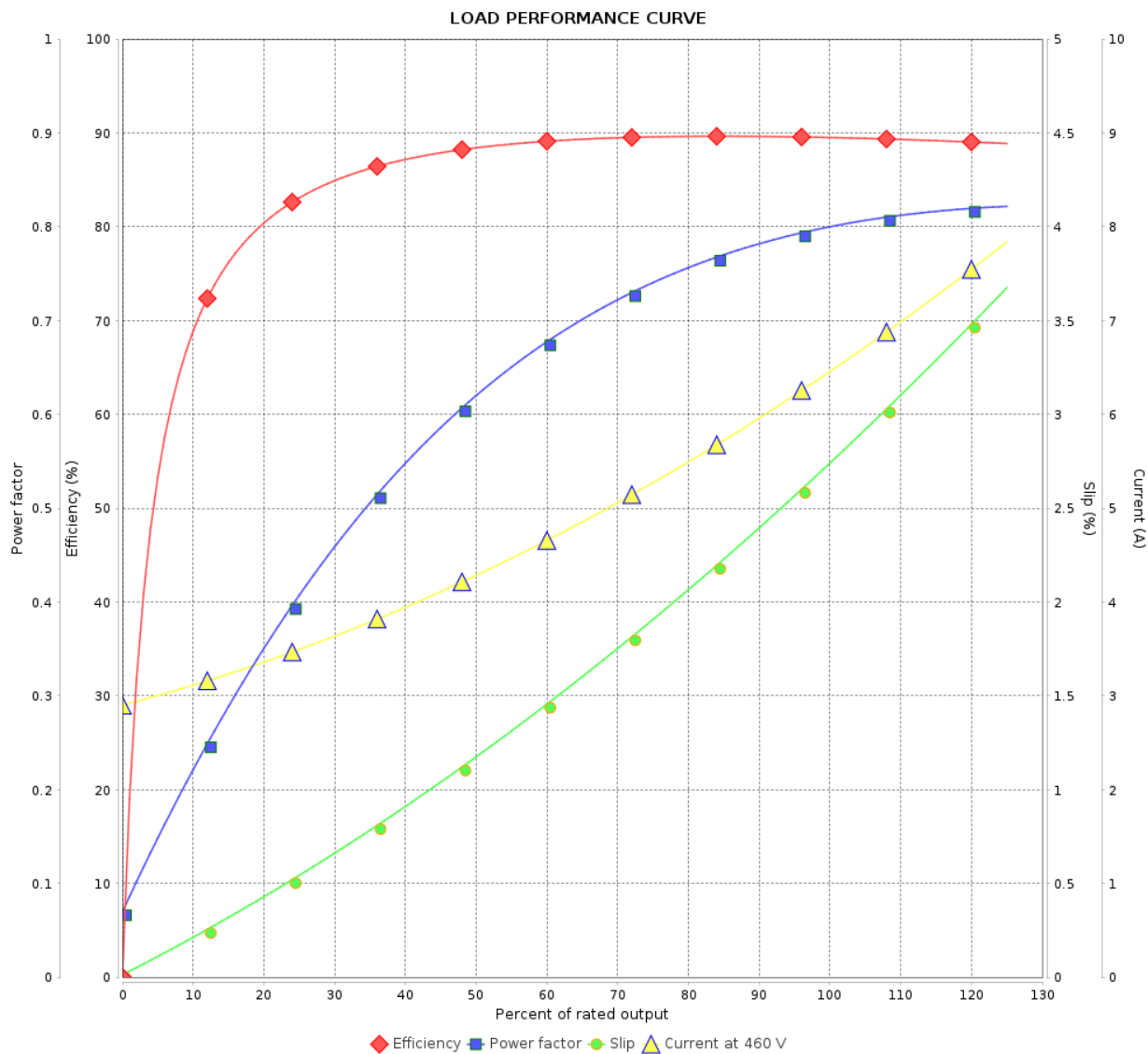
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11919902



Performance : 460 V 60 Hz 4P

Rated current : 6.49 A
LRC : 7.7
Rated torque : 2.07 kgfm
Locked rotor torque : 229 %
Breakdown torque : 290 %
Rated speed : 1750 rpm

Moment of inertia (J) : 0.0169 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 3 / 9Revision		
Checked by				
Date	22/10/2024			

LOAD PERFORMANCE CURVE

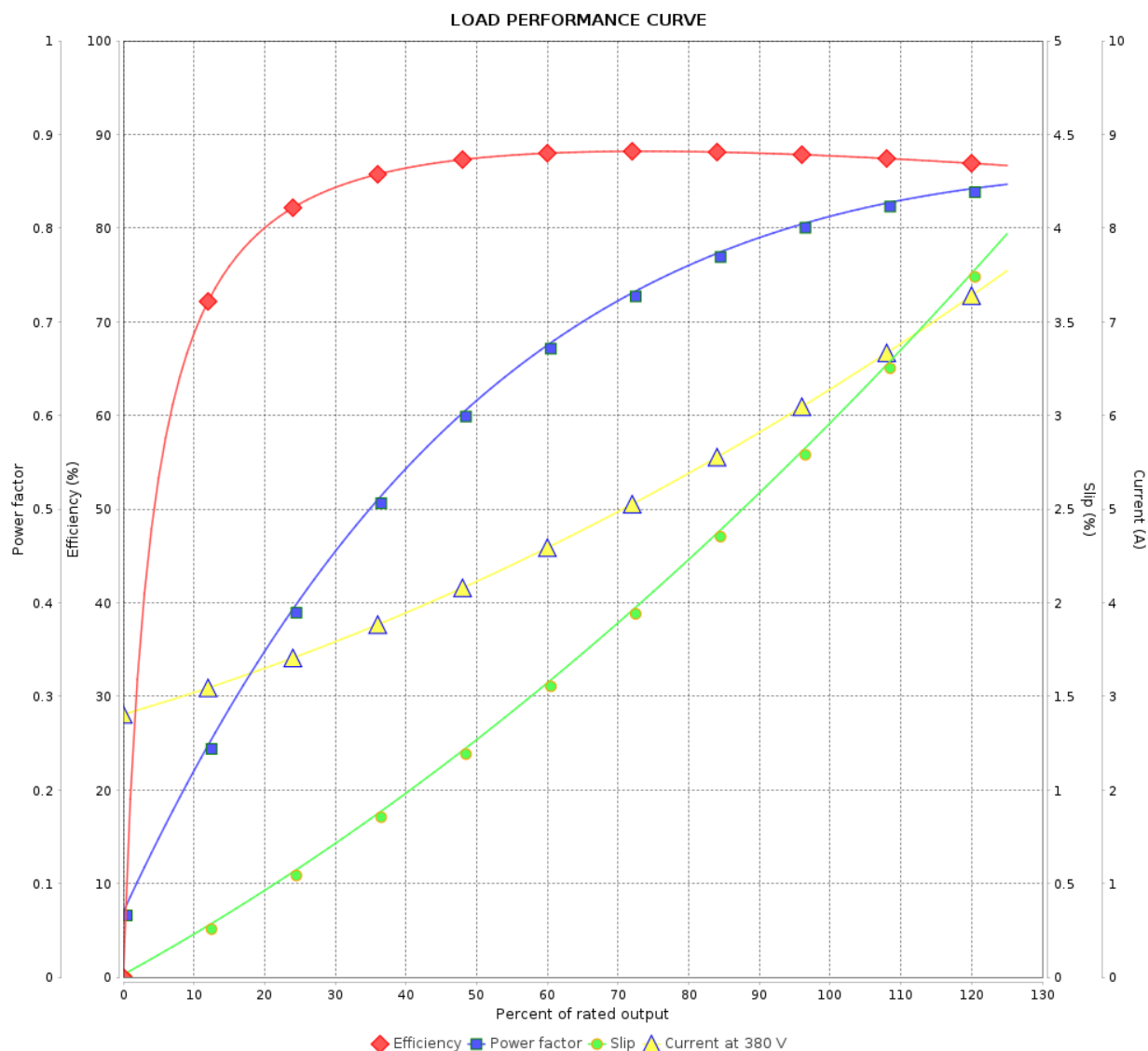
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11919902



Performance : 380 V 50 Hz 4P IE3

Rated current : 6.42 A
LRC : 7.0
Rated torque : 2.00 kgfm
Locked rotor torque : 229 %
Breakdown torque : 300 %
Rated speed : 1455 rpm

Moment of inertia (J) : 0.0169 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
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

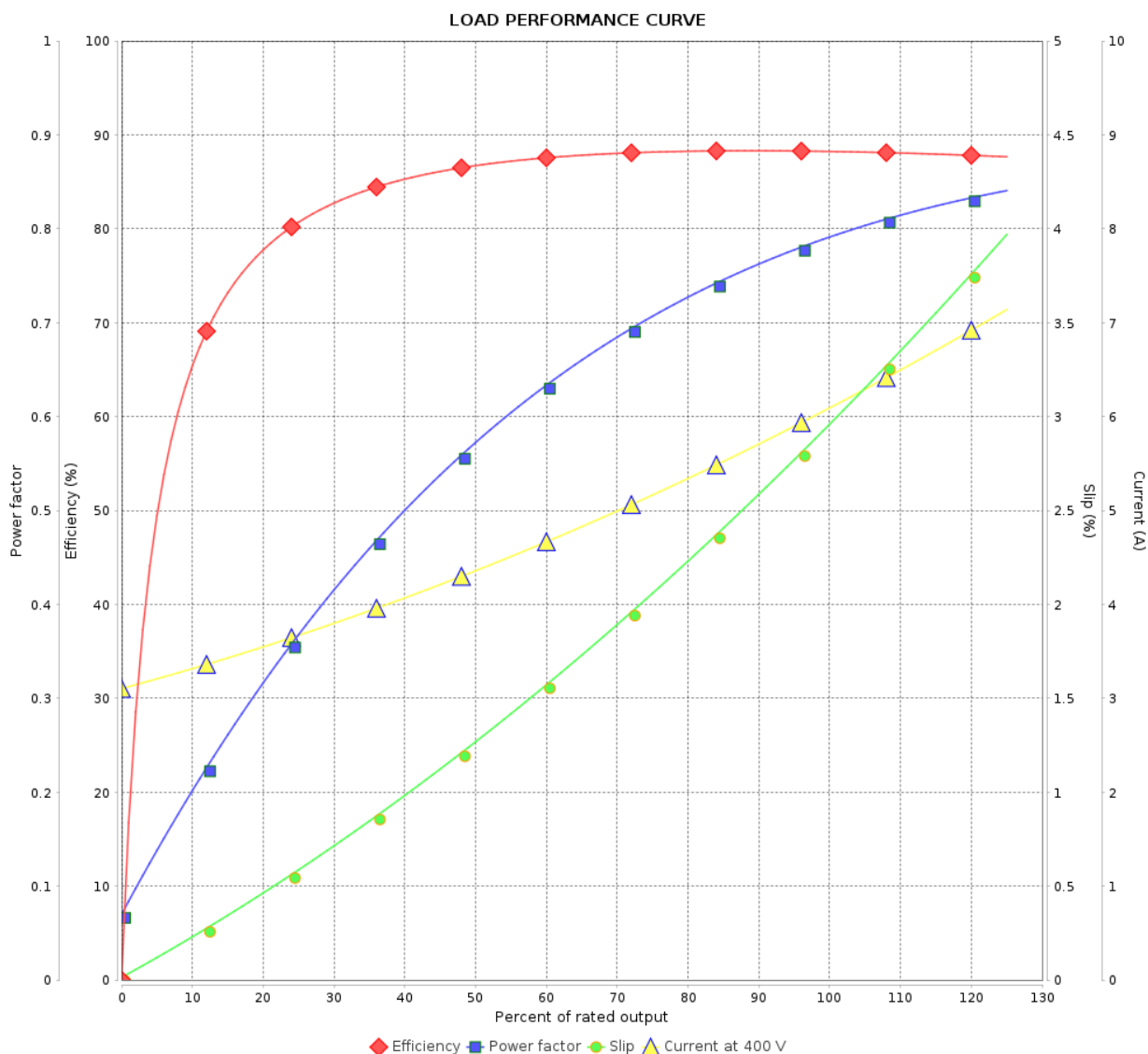
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11919902



Performance : 400 V 50 Hz 4P IE3

Rated current : 6.21 A
LRC : 7.7
Rated torque : 2.00 kgfm
Locked rotor torque : 260 %
Breakdown torque : 300 %
Rated speed : 1455 rpm

Moment of inertia (J) : 0.0169 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
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

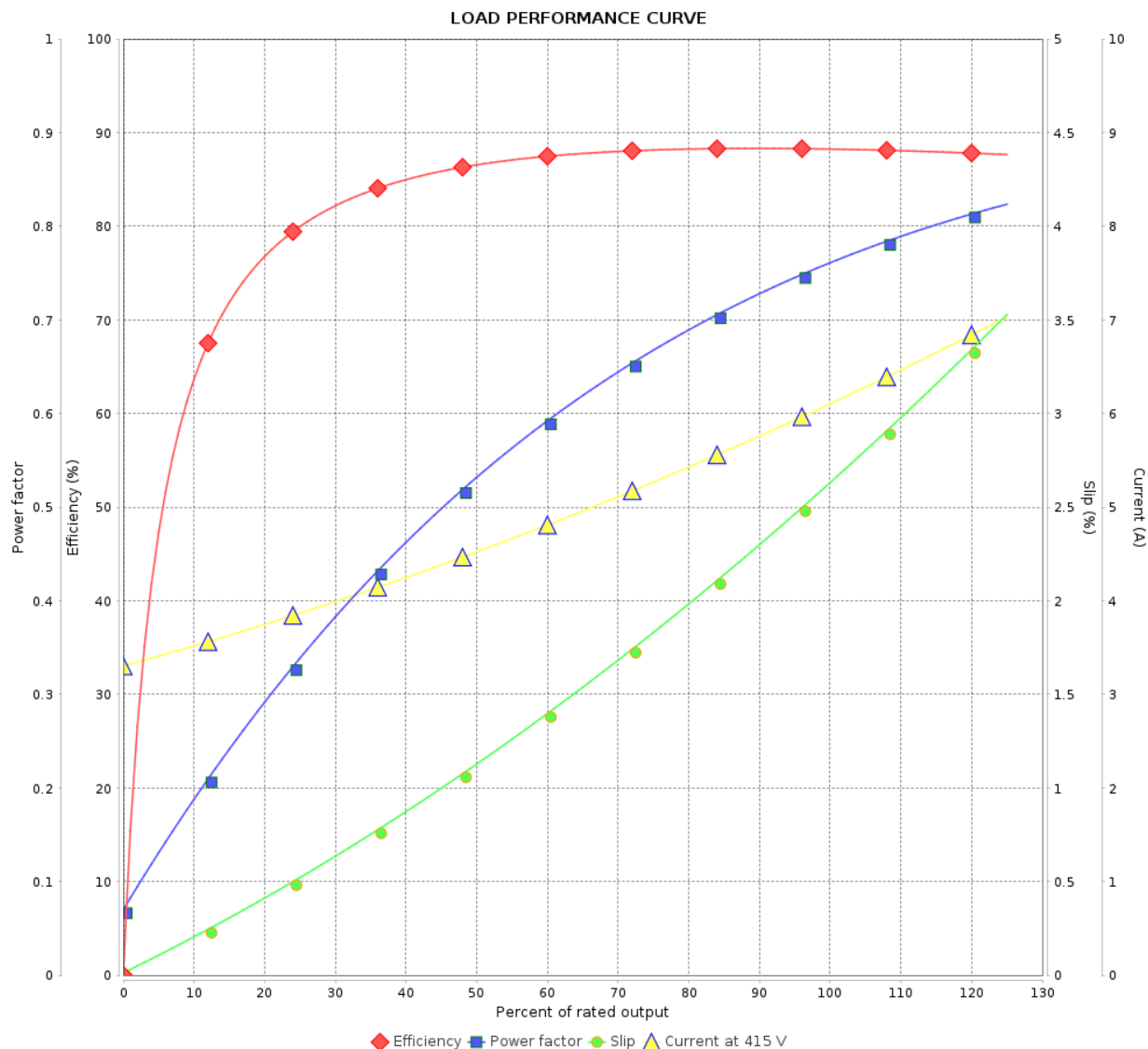
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11919902



Performance : 415 V 50 Hz 4P IE3

Rated current : 6.23 A
LRC : 8.2
Rated torque : 1.99 kgfm
Locked rotor torque : 290 %
Breakdown torque : 350 %
Rated speed : 1460 rpm

Moment of inertia (J) : 0.0169 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

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

LOAD PERFORMANCE CURVE

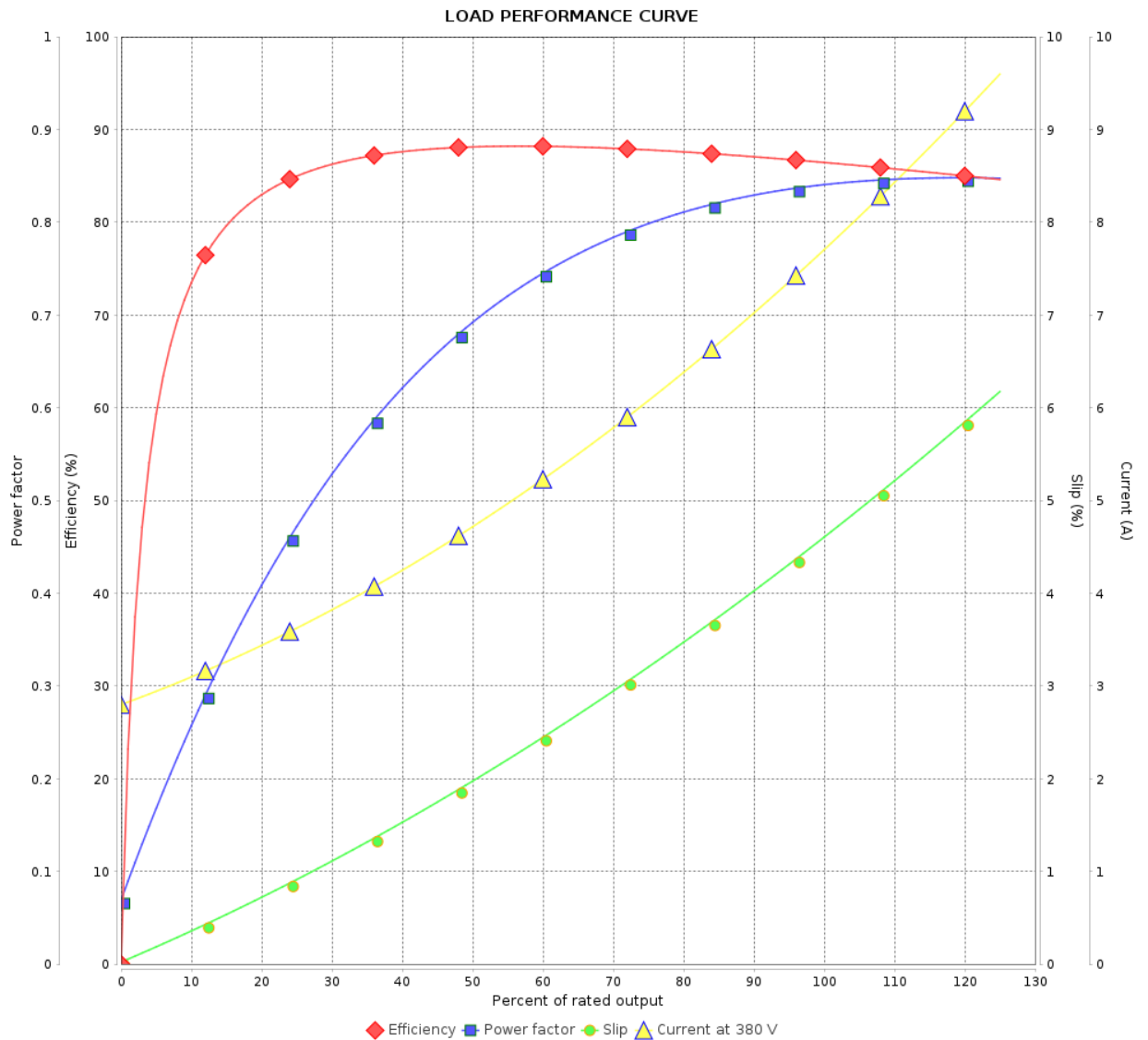
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11919902



Performance : 380 V 50 Hz 4P IE2

Rated current	: 7.74 A	Moment of inertia (J)	: 0.0169 kgm ²
LRC	: 5.8	Duty cycle	: Cont.(S1)
Rated torque	: 2.54 kgfm	Insulation class	: F
Locked rotor torque	: 185 %	Service factor	: 1.15
Breakdown torque	: 225 %	Temperature rise	: 80 K
Rated speed	: 1430 rpm	Design	: B

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

LOAD PERFORMANCE CURVE

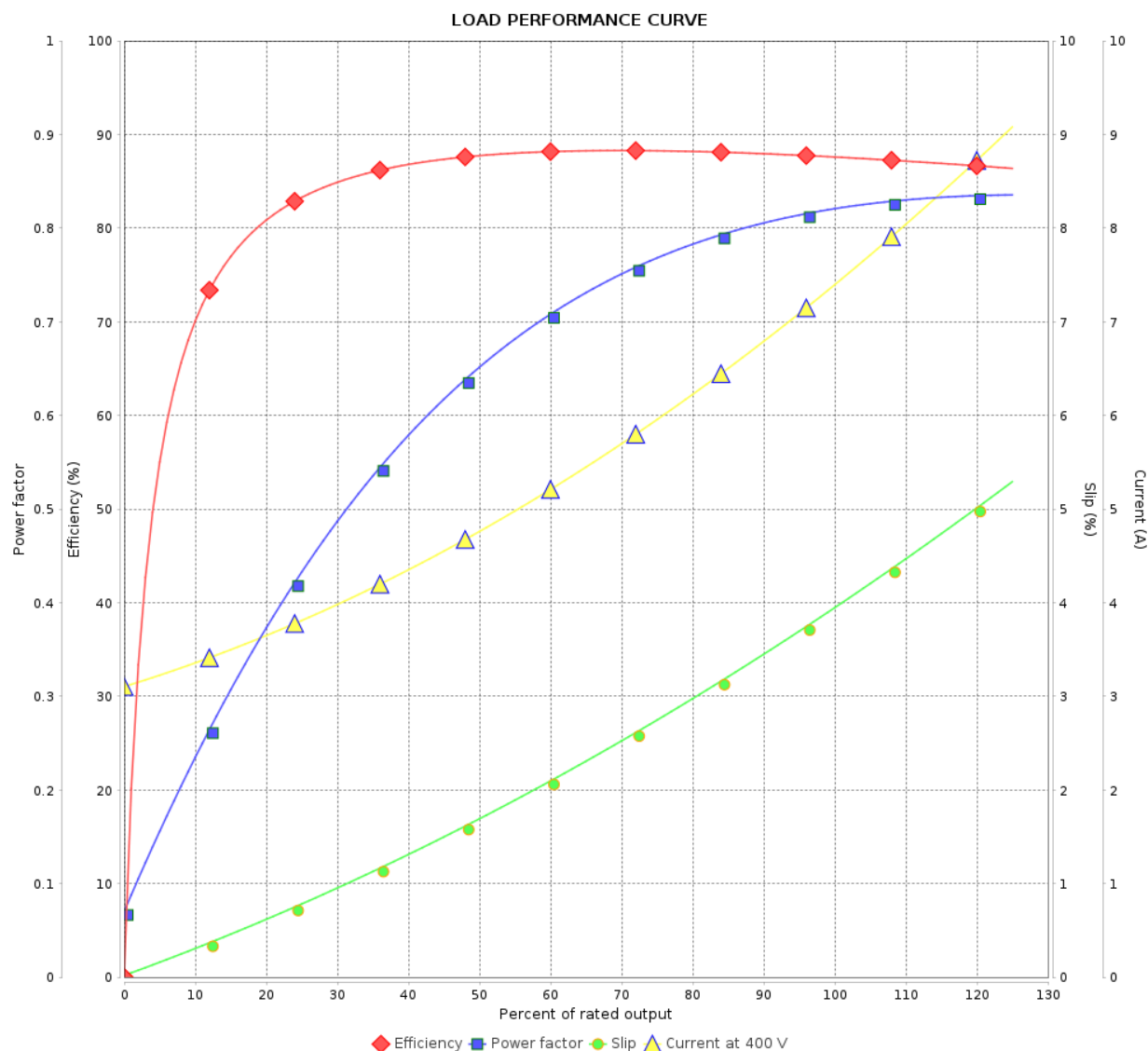
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11919902



Performance : 400 V 50 Hz 4P IE2

Rated current : 7.44 A
LRC : 6.4
Rated torque : 2.52 kgfm
Locked rotor torque : 210 %
Breakdown torque : 250 %
Rated speed : 1440 rpm

Moment of inertia (J) : 0.0169 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

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

LOAD PERFORMANCE CURVE

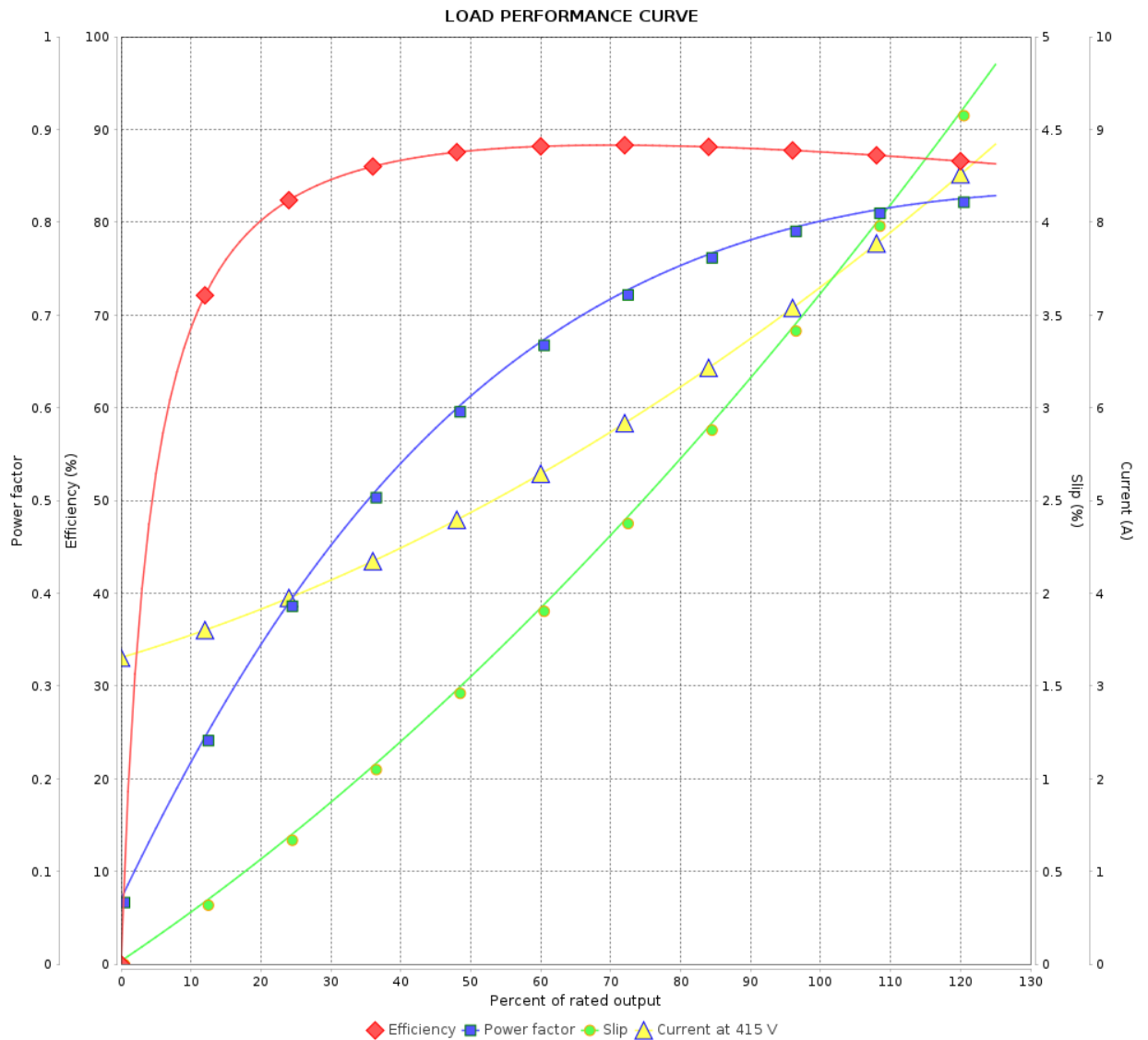
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11919902



Performance : 415 V 50 Hz 4P IE2

Rated current	: 7.35 A	Moment of inertia (J)	: 0.0169 kgm ²
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 2.51 kgfm	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.15
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1445 rpm	Design	: B

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

