

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 14653999

Frame : 404/5T	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 : 505 kg
Protection degree : IP55	Moment of inertia (J) : 1.46 kgm ²
Design : B	

Output [HP]	50	40	40	40	50	50	50
Poles	8	8	8	8	8	8	8
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	230/460	380	400	415	380	400	415
Rated current [A]	120/60.2	59.4	57.6	56.8	73.3	69.9	68.2
L. R. Amperes [A]	867/433	404	420	443	403	419	443
LRC [A]	7.2x(Code H)	6.8x(Code H)	7.3x(Code J)	7.8x(Code J)	5.5x(Code F)	6.0x(Code G)	6.5x(Code H)
No load current [A]	49.0/24.5	23.5	25.0	26.0	23.0	25.0	26.0
Rated speed [RPM]	880	730	733	735	720	725	725
Slip [%]	2.22	2.67	2.27	2.00	4.00	3.33	3.33
Rated torque [kgfm]	41.2	39.8	39.6	39.5	50.4	50.1	50.1
Locked rotor torque [%]	170	170	200	229	140	160	180
Breakdown torque [%]	260	240	290	310	200	229	250
Service factor	1.25	1.00	1.00	1.00	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	52s (cold) 29s (hot)	57s (cold) 32s (hot)	54s (cold) 30s (hot)	50s (cold) 28s (hot)	36s (cold) 20s (hot)	37s (cold) 21s (hot)	36s (cold) 20s (hot)
Noise level ²	60.0 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%	93.0	92.9	91.8	91.8	92.4	92.4
	75%	93.0	92.3	92.2	92.2	91.7	91.7
	100%	93.0	91.3	91.7	91.8	90.2	91.0
Power Factor	25%						
	50%	0.68	0.65	0.63	0.60	0.74	0.68
	75%	0.78	0.78	0.76	0.73	0.82	0.78
	100%	0.83	0.84	0.82	0.80	0.85	0.83

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

Losses (%)	P1 (0,9;1,0)	7.3	7.3	7.3	7.3	7.3	7.3
	P2 (0,5;1,0)	6.3	6.3	6.3	6.3	6.3	6.3
	P3 (0,25;1,0)	6.3	6.3	6.3	6.3	6.3	6.3
	P4 (0,9;0,5)	3.0	3.0	3.0	3.0	3.0	3.0
	P5 (0,5;0,5)	2.2	2.2	2.2	2.2	2.2	2.2
	P6 (0,5;0,25)	1.3	1.3	1.3	1.3	1.3	1.3
	P7 (0,25;0,25)	0.9	0.9	0.9	0.9	0.9	0.9

	Drive end	Non drive end	Foundation loads
Bearing type :	NU-316 C3	6314 C3	Max. traction : 980 kgf
Sealing :	WSeal	WSeal	Max. compression : 1485 kgf
Lubrication interval :	17000 h	20000 h	
Lubricant amount :	34 g	27 g	
Lubricant type :	Mobil Polyrex EM		

This revision replaces and cancel the previous one, which must be eliminated.
(1) Looking the motor from the shaft end.

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				
Checked by			Page	Revision
Date	21/10/2024		1 / 9	

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer : _____

Notes

Rev.	Changes Summary		Performed	Checked	Date
Performed by			Page		Revision
Checked by					
Date	21/10/2024				

LOAD PERFORMANCE CURVE

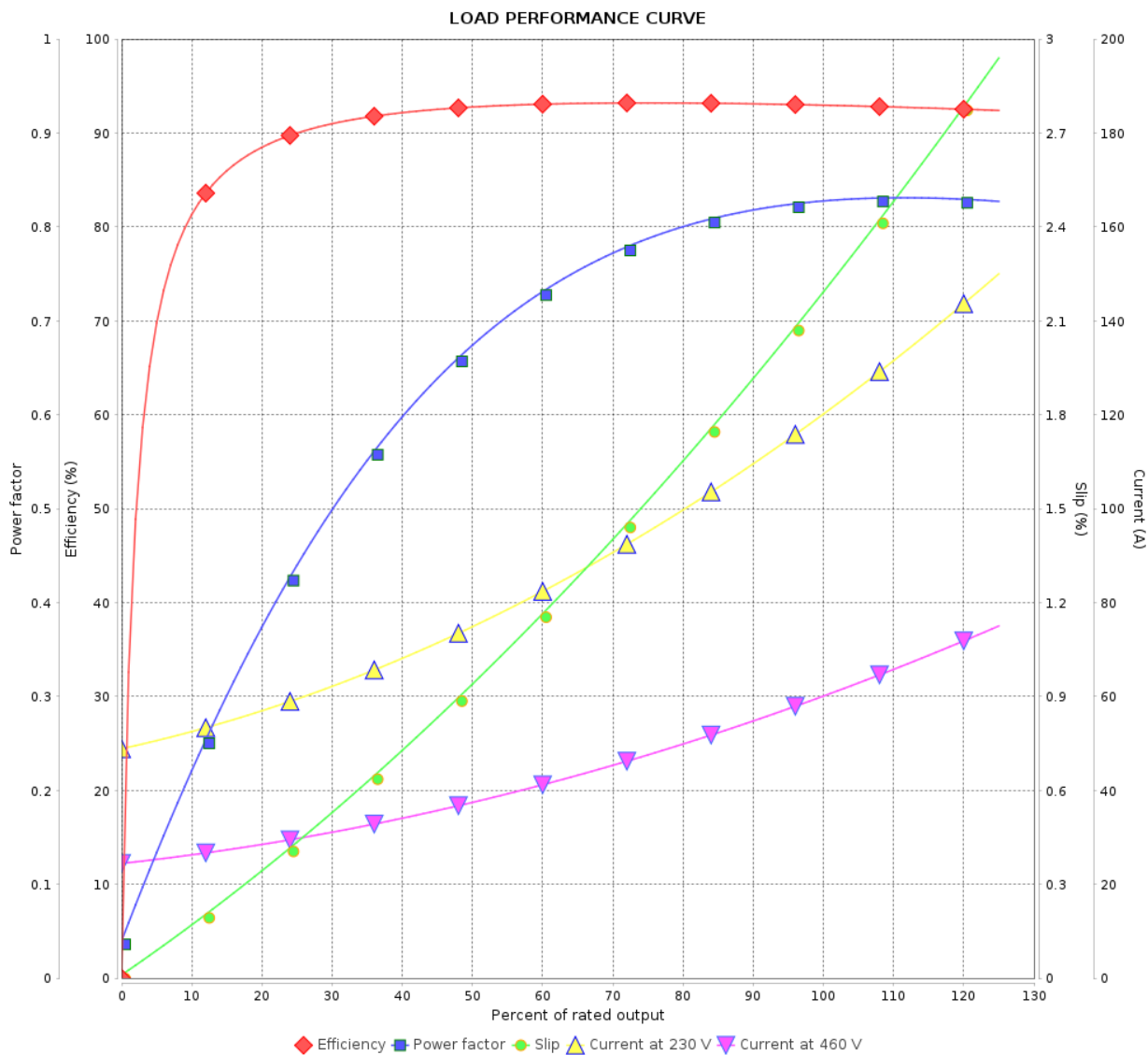
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 14653999



Performance : 230/460 V 60 Hz 8P

Rated current : 120/60.2 A
LRC : 7.2
Rated torque : 41.2 kgfm
Locked rotor torque : 170 %
Breakdown torque : 260 %
Rated speed : 880 rpm

Moment of inertia (J) : 1.46 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	21/10/2024			

LOAD PERFORMANCE CURVE

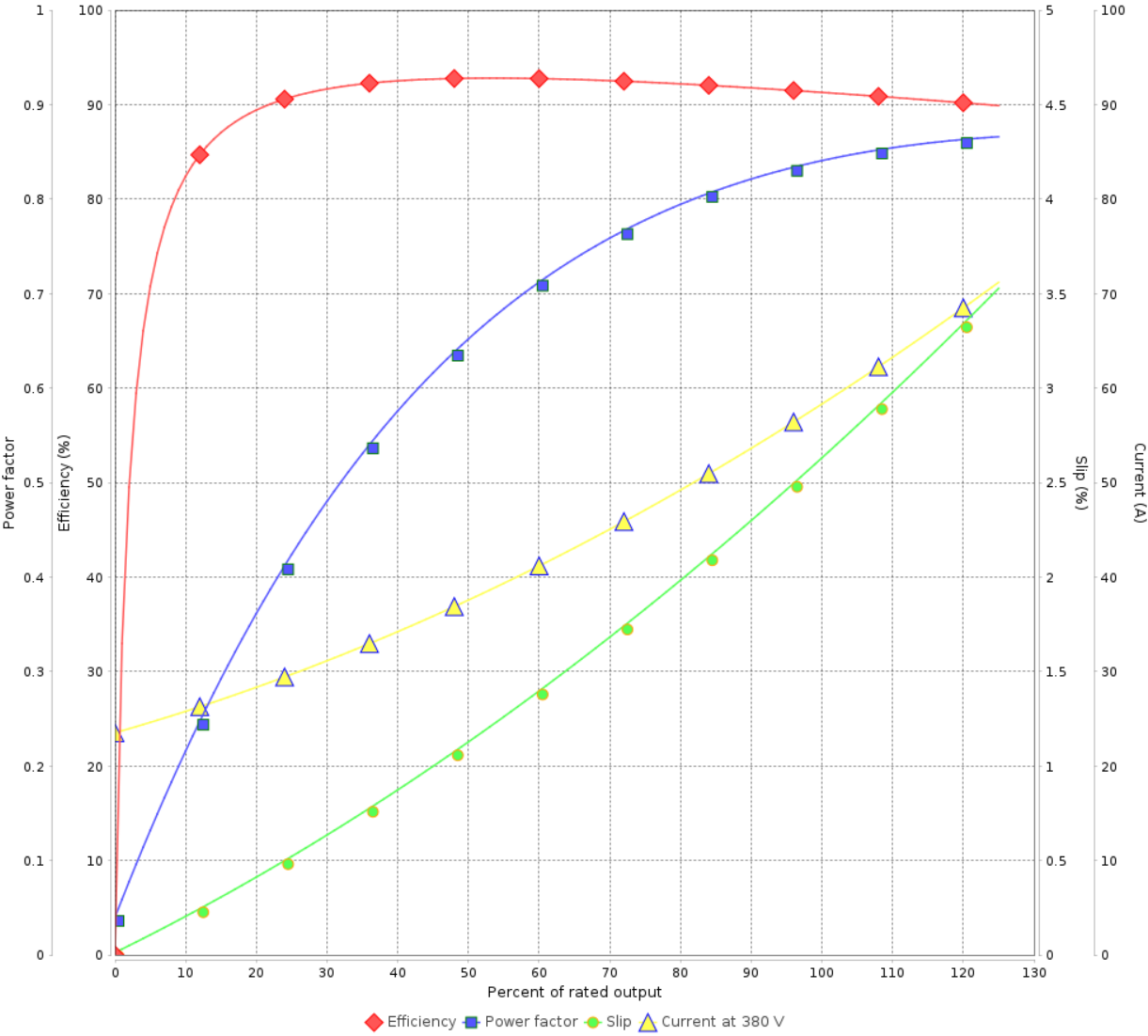
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 14653999

LOAD PERFORMANCE CURVE



Performance : 380 V 50 Hz 8P IE3			
Rated current	: 59.4 A	Moment of inertia (J)	: 1.46 kgm ²
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 39.8 kgfm	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 730 rpm	Design	: B

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 4 / 9	Revision
Checked by					
Date	21/10/2024				

LOAD PERFORMANCE CURVE

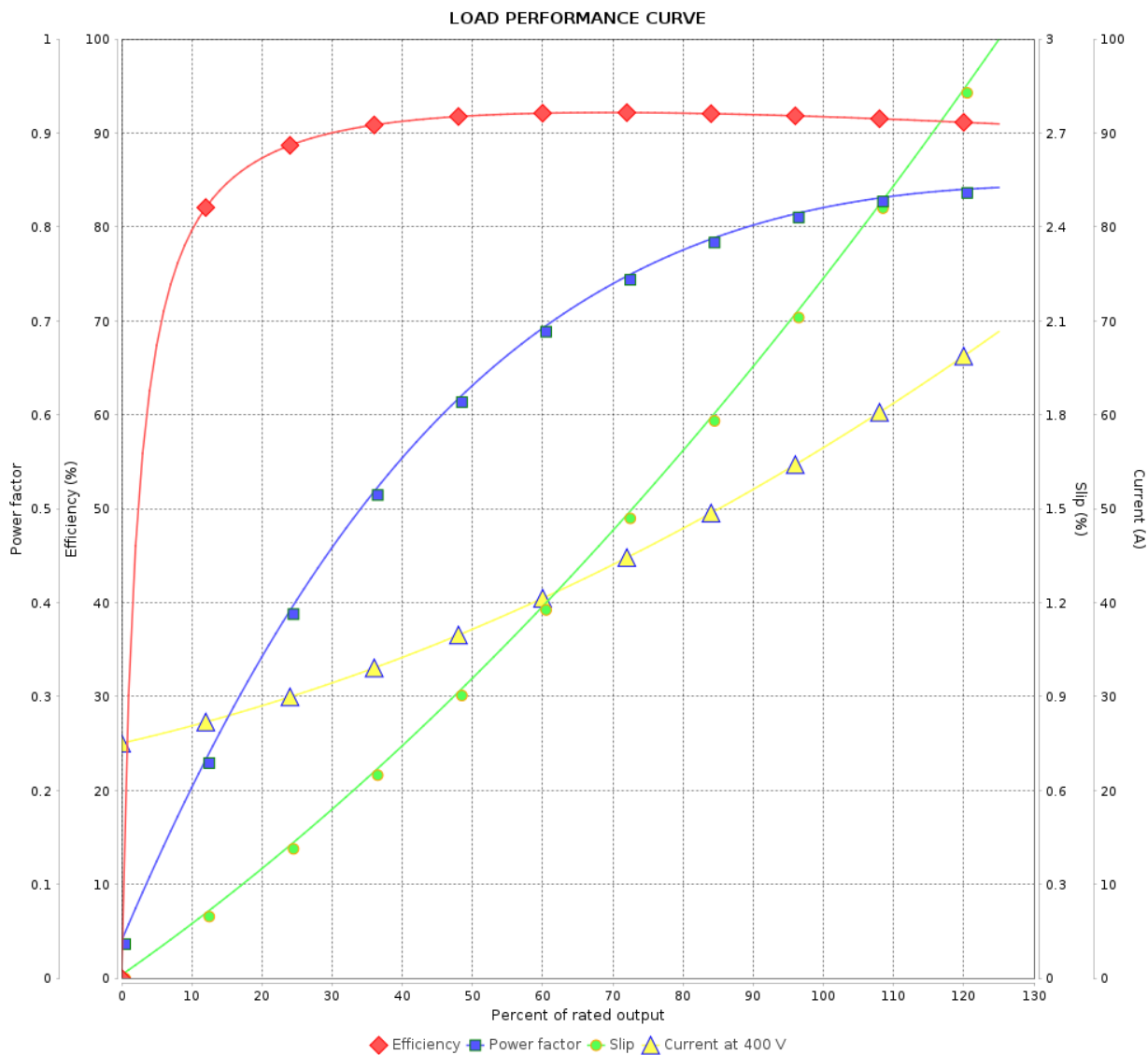
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 14653999



Performance : 400 V 50 Hz 8P IE3

Rated current : 57.6 A
LRC : 7.3
Rated torque : 39.6 kgfm
Locked rotor torque : 200 %
Breakdown torque : 290 %
Rated speed : 733 rpm

Moment of inertia (J) : 1.46 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 5 / 9Revision		
Checked by				
Date	21/10/2024			

LOAD PERFORMANCE CURVE

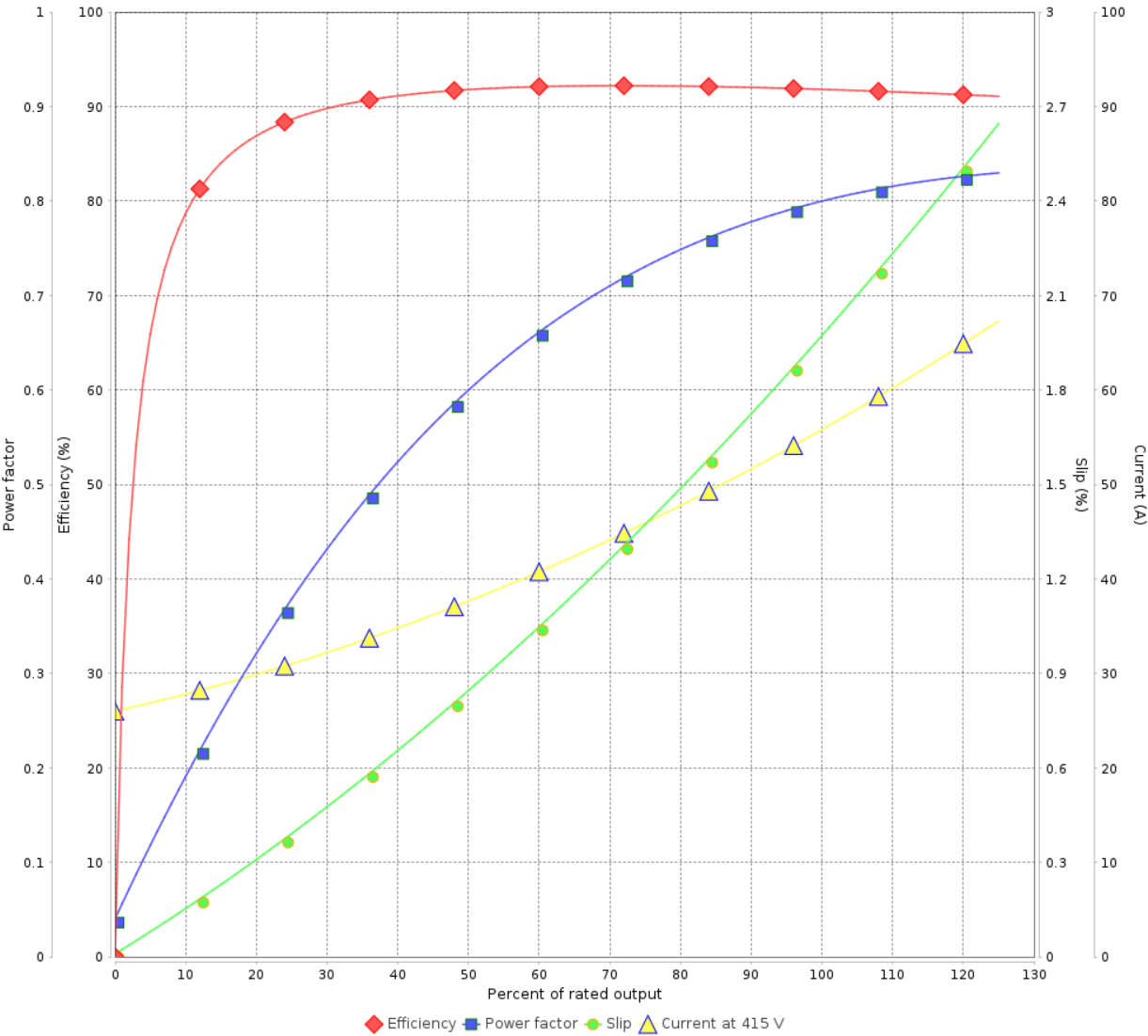
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 14653999

LOAD PERFORMANCE CURVE



Performance : 415 V 50 Hz 8P IE3

Rated current	: 56.8 A	Moment of inertia (J)	: 1.46 kgm ²
LRC	: 7.8	Duty cycle	: Cont.(S1)
Rated torque	: 39.5 kgfm	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 735 rpm	Design	: B

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 6 / 9	Revision
Checked by					
Date	21/10/2024				

LOAD PERFORMANCE CURVE

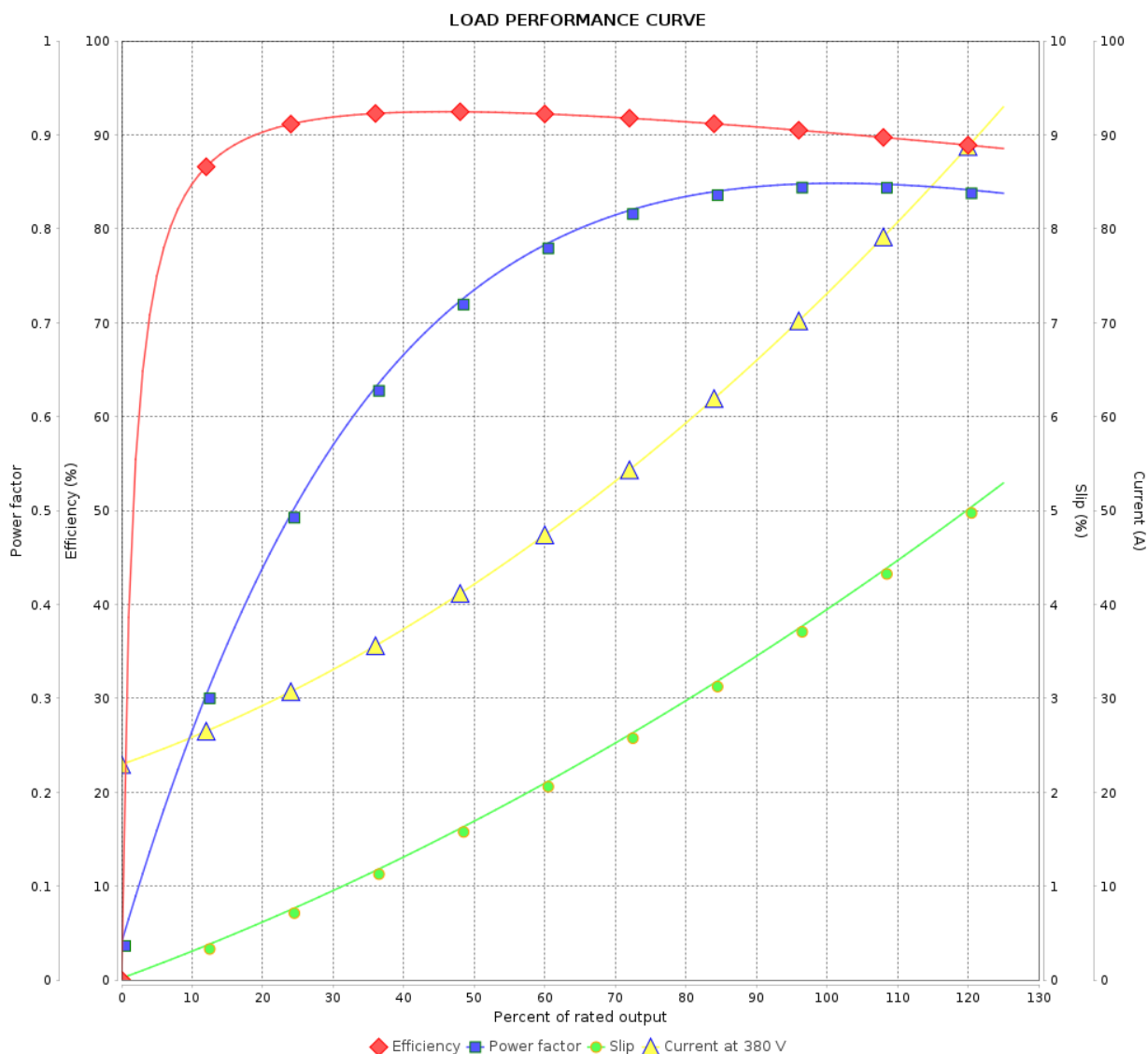
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 14653999



Performance : 380 V 50 Hz 8P IE1

Rated current : 73.3 A
LRC : 5.5
Rated torque : 50.4 kgfm
Locked rotor torque : 140 %
Breakdown torque : 200 %
Rated speed : 720 rpm

Moment of inertia (J) : 1.46 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 105 K
Design : B

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 7 / 9	Revision
Checked by					
Date	21/10/2024				

LOAD PERFORMANCE CURVE

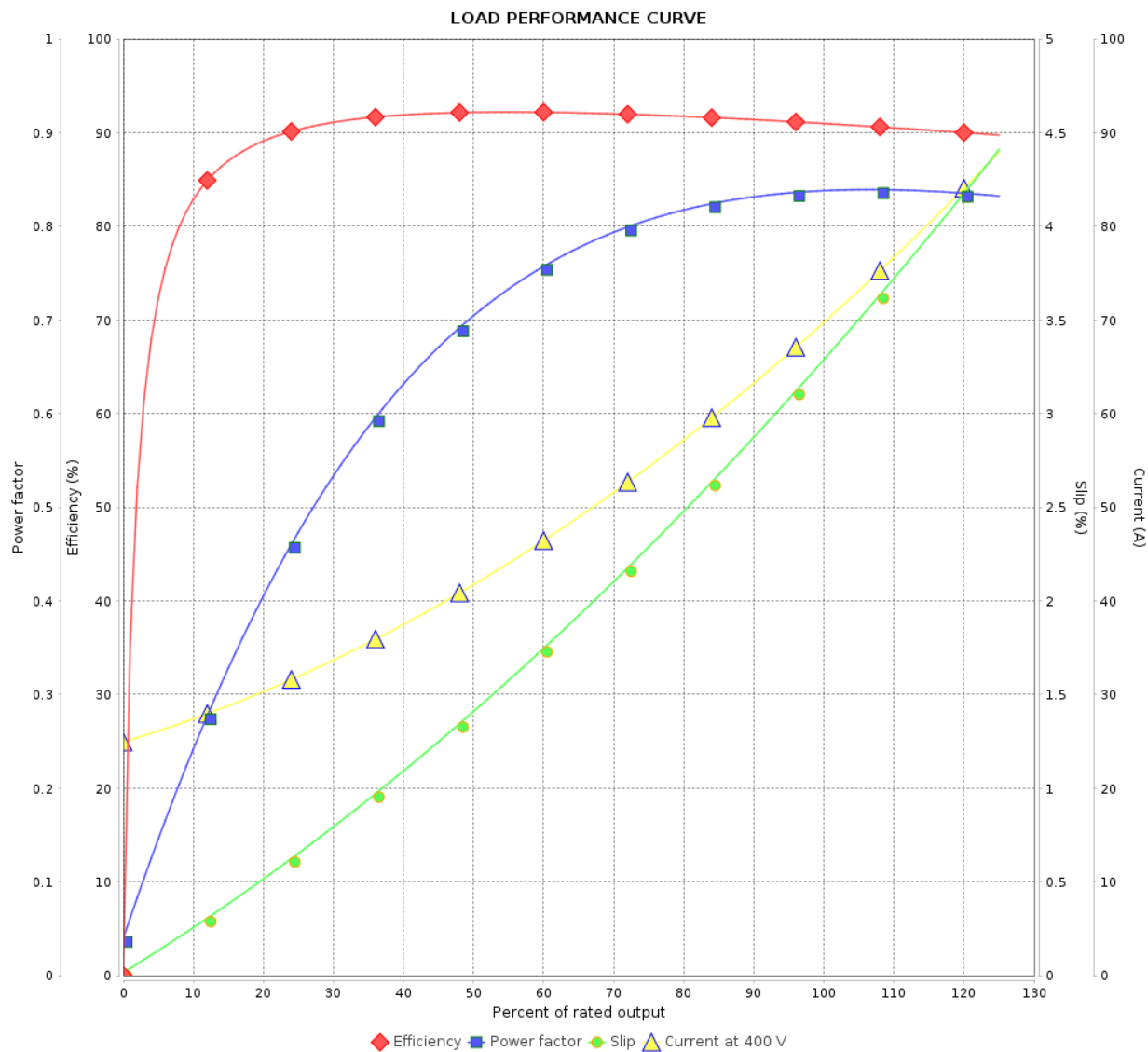
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 14653999



Performance : 400 V 50 Hz 8P IE2

Rated current : 69.9 A
LRC : 6.0
Rated torque : 50.1 kgfm
Locked rotor torque : 160 %
Breakdown torque : 229 %
Rated speed : 725 rpm

Moment of inertia (J) : 1.46 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 105 K
Design : B

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 8 / 9	Revision
Checked by					
Date	21/10/2024				

LOAD PERFORMANCE CURVE

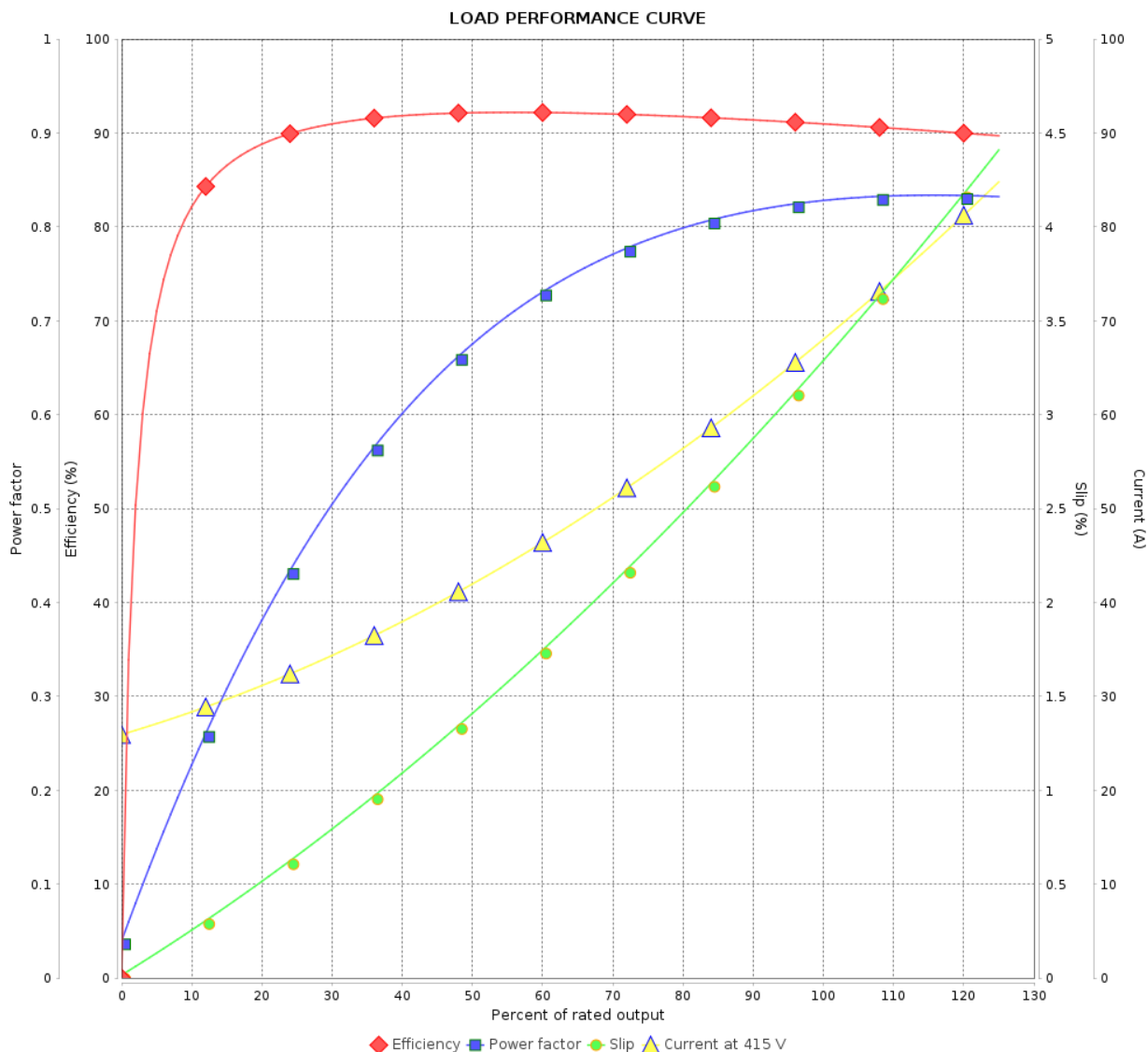
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 14653999



Performance : 415 V 50 Hz 8P IE2

Rated current : 68.2 A
LRC : 6.5
Rated torque : 50.1 kgfm
Locked rotor torque : 180 %
Breakdown torque : 250 %
Rated speed : 725 rpm

Moment of inertia (J) : 1.46 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 105 K
Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 9 / 9Revision		
Checked by				
Date	21/10/2024			