

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 11355409

Frame : 404/5TC	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 : 545 kg
Protection degree : IP55	Moment of inertia (J) : 1.26 kgm ²
Design : B	

Output [HP]	100	75	75	75	100	100	100
Poles	4	4	4	4	4	4	4
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	230/460	380	400	415	380	400	415
Rated current [A]	226/113	102	98.3	95.9	138	131	127
L. R. Amperes [A]	1650/825	785	826	854	814	852	902
LRC [A]	7.3x(Code H)	7.7x(Code H)	8.4x(Code J)	8.9x(Code K)	5.9x(Code F)	6.5x(Code G)	7.1x(Code H)
No load current [A]	76.0/38.0	37.6	40.1	42.0	37.6	40.1	42.0
Rated speed [RPM]	1780	1485	1485	1485	1470	1475	1475
Slip [%]	1.11	1.00	1.00	1.00	2.00	1.67	1.67
Rated torque [kgfm]	40.8	36.7	36.7	36.7	49.4	49.2	49.2
Locked rotor torque [%]	240	260	280	290	190	210	220
Breakdown torque [%]	260	280	310	330	210	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	23s (cold) 13s (hot)	16s (cold) 9s (hot)	16s (cold) 9s (hot)	16s (cold) 9s (hot)	16s (cold) 9s (hot)	16s (cold) 9s (hot)	16s (cold) 9s (hot)
Noise level ²	68.0 dB(A)	64.0 dB(A)	64.0 dB(A)	64.0 dB(A)	64.0 dB(A)	64.0 dB(A)	64.0 dB(A)
Efficiency (%)	25%	0.000			0.000		
	50%	95.0	94.0	93.9	93.6	94.5	94.5
	75%	95.0	94.4	94.5	94.5	94.1	94.5
	100%	95.4	95.0	95.0	95.0	93.6	94.5
Power Factor	25%	0.00			0.00		
	50%	0.77	0.72	0.69	0.66	0.82	0.79
	75%	0.84	0.83	0.81	0.79	0.86	0.85
	100%	0.87	0.86	0.85	0.84	0.88	0.87

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

Losses (%)	P1 (0,9;1,0)	4.7	4.7	4.7	4.7	4.7	4.7
	P2 (0,5;1,0)	3.8	3.8	3.8	3.8	3.8	3.8
	P3 (0,25;1,0)	3.7	3.7	3.7	3.7	3.7	3.7
	P4 (0,9;0,5)	2.2	2.2	2.2	2.2	2.2	2.2
	P5 (0,5;0,5)	1.5	1.5	1.5	1.5	1.5	1.5
	P6 (0,5;0,25)	0.9	0.9	0.9	0.9	0.9	0.9
	P7 (0,25;0,25)	0.6	0.6	0.6	0.6	0.6	0.6

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads
Bearing type :	6316 C3	6314 C3	Max. traction : 939 kgf
Sealing :	Oil Seal	Oil Seal	Max. compression : 1484 kgf
Lubrication interval :	10000 h	12000 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				
Date	19/10/2024		Page 1 / 9	Revision

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Notes
USABLE @208V 245A SF 1.10 SFA 270A

Rev.	Changes Summary		Performed	Checked	Date
Performed by			Page 2 / 9		Revision
Checked by					
Date	19/10/2024				

LOAD PERFORMANCE CURVE

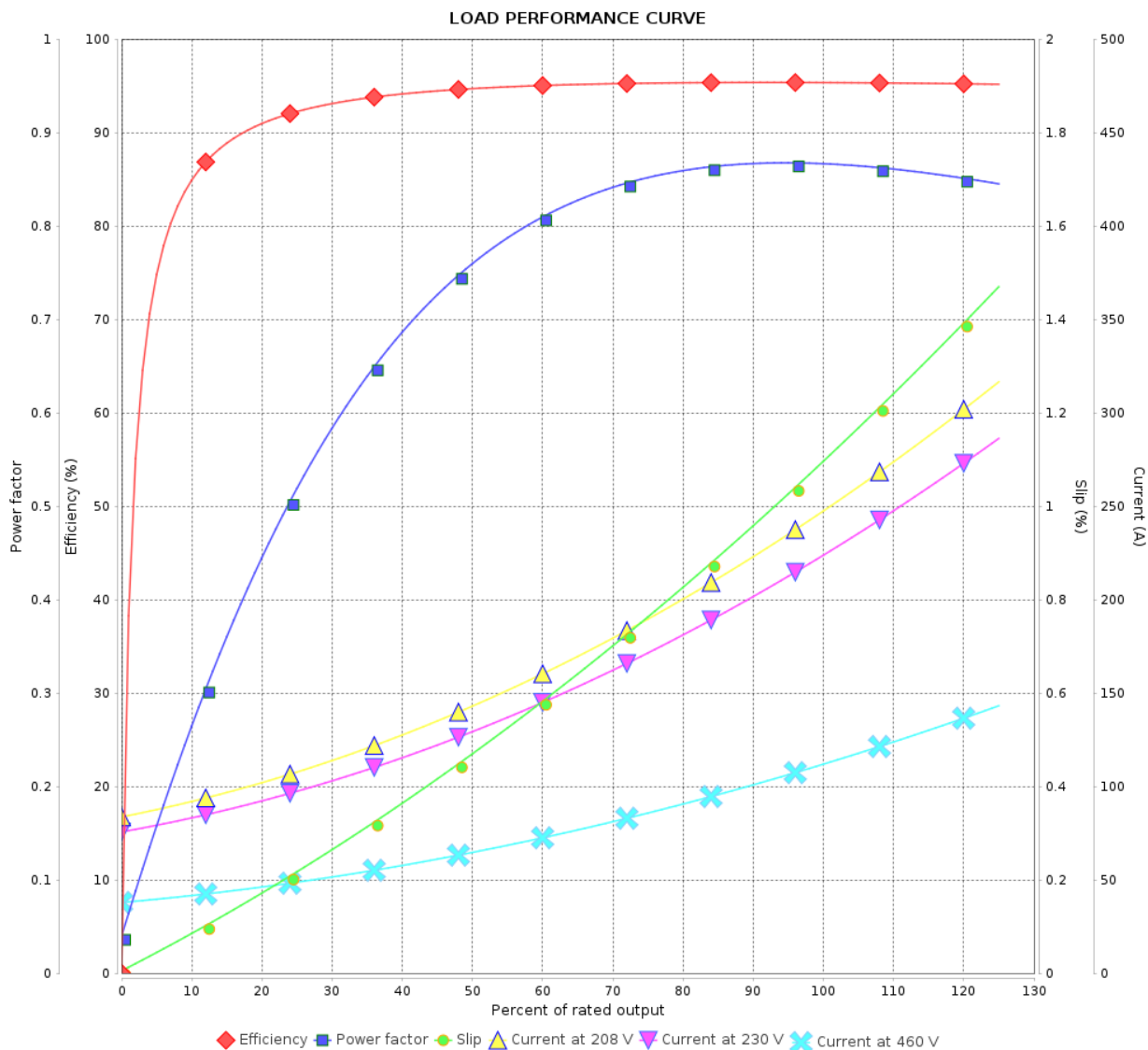
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 11355409



Performance : 230/460 V 60 Hz 4P

Rated current : 226/113 A
LRC : 7.3
Rated torque : 40.8 kgfm
Locked rotor torque : 240 %
Breakdown torque : 260 %
Rated speed : 1780 rpm

Moment of inertia (J) : 1.26 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	19/10/2024				

LOAD PERFORMANCE CURVE

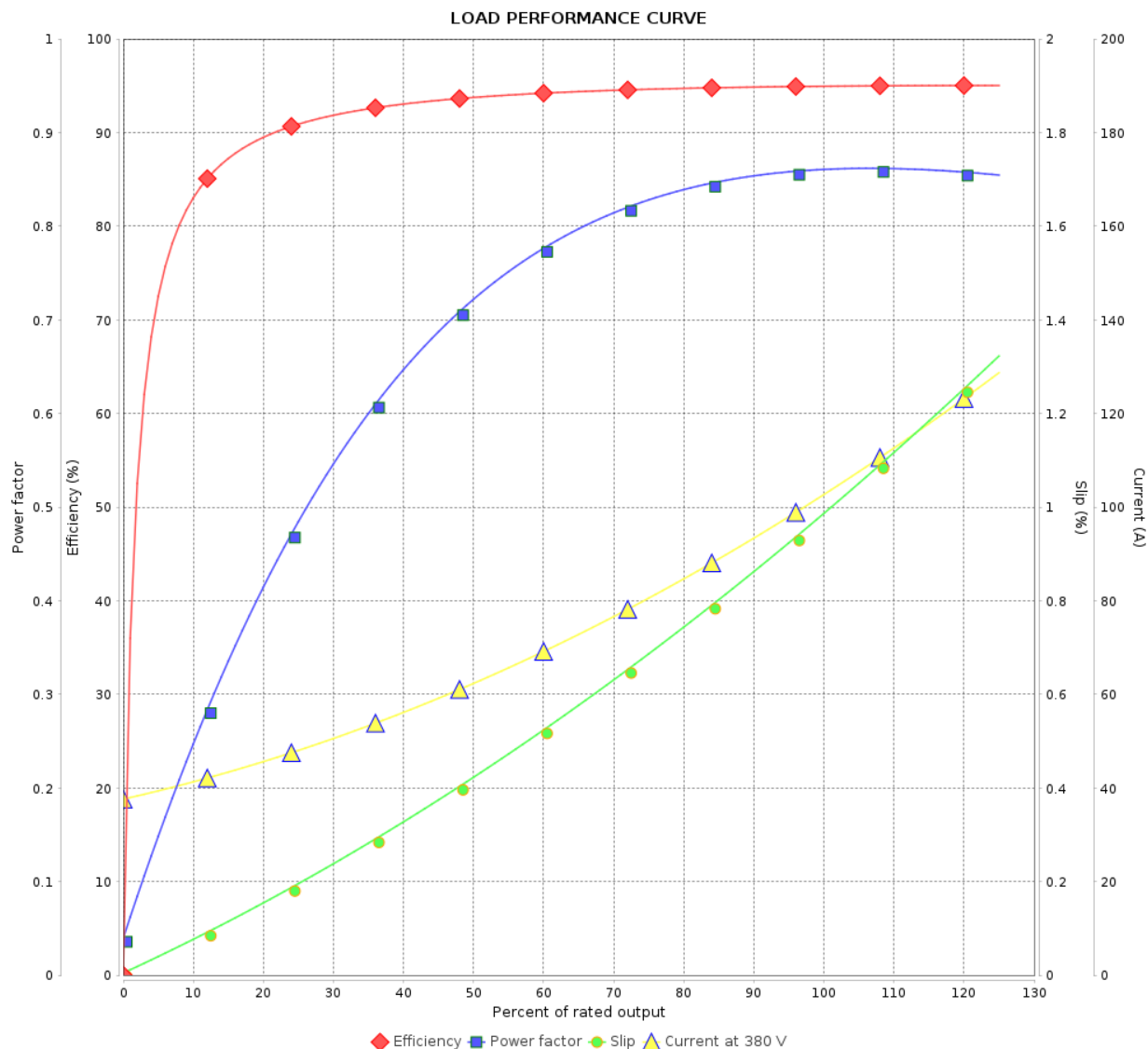
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 11355409



Performance : 380 V 50 Hz 4P IE3

Rated current	: 102 A	Moment of inertia (J)	: 1.26 kgm ²
LRC	: 7.7	Duty cycle	: Cont.(S1)
Rated torque	: 36.7 kgfm	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 4 / 9	Revision
Checked by					
Date	19/10/2024				

LOAD PERFORMANCE CURVE

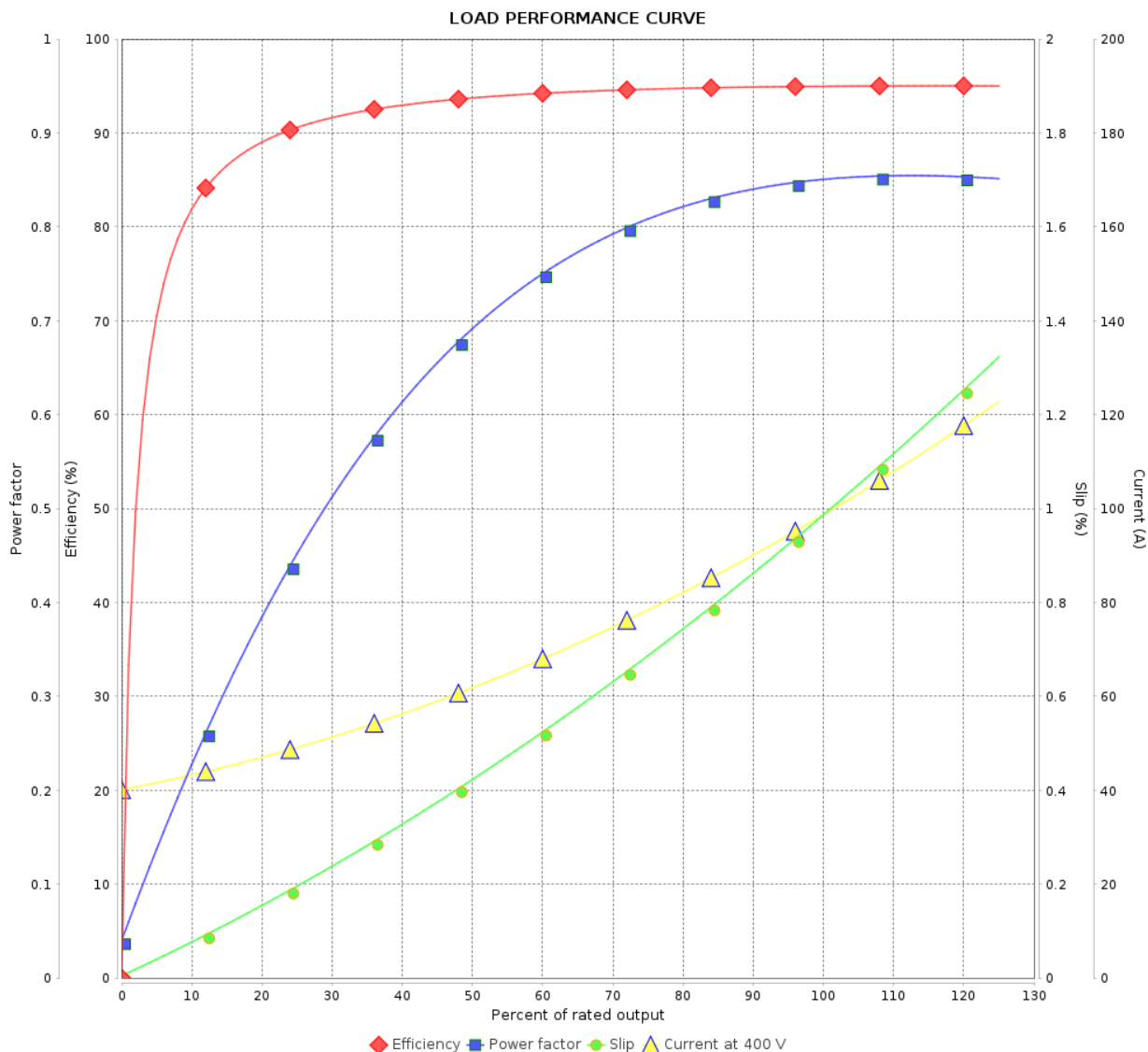
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 11355409



Performance : 400 V 50 Hz 4P IE3

Rated current : 98.3 A
LRC : 8.4
Rated torque : 36.7 kgfm
Locked rotor torque : 280 %
Breakdown torque : 310 %
Rated speed : 1485 rpm

Moment of inertia (J) : 1.26 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	19/10/2024			

LOAD PERFORMANCE CURVE

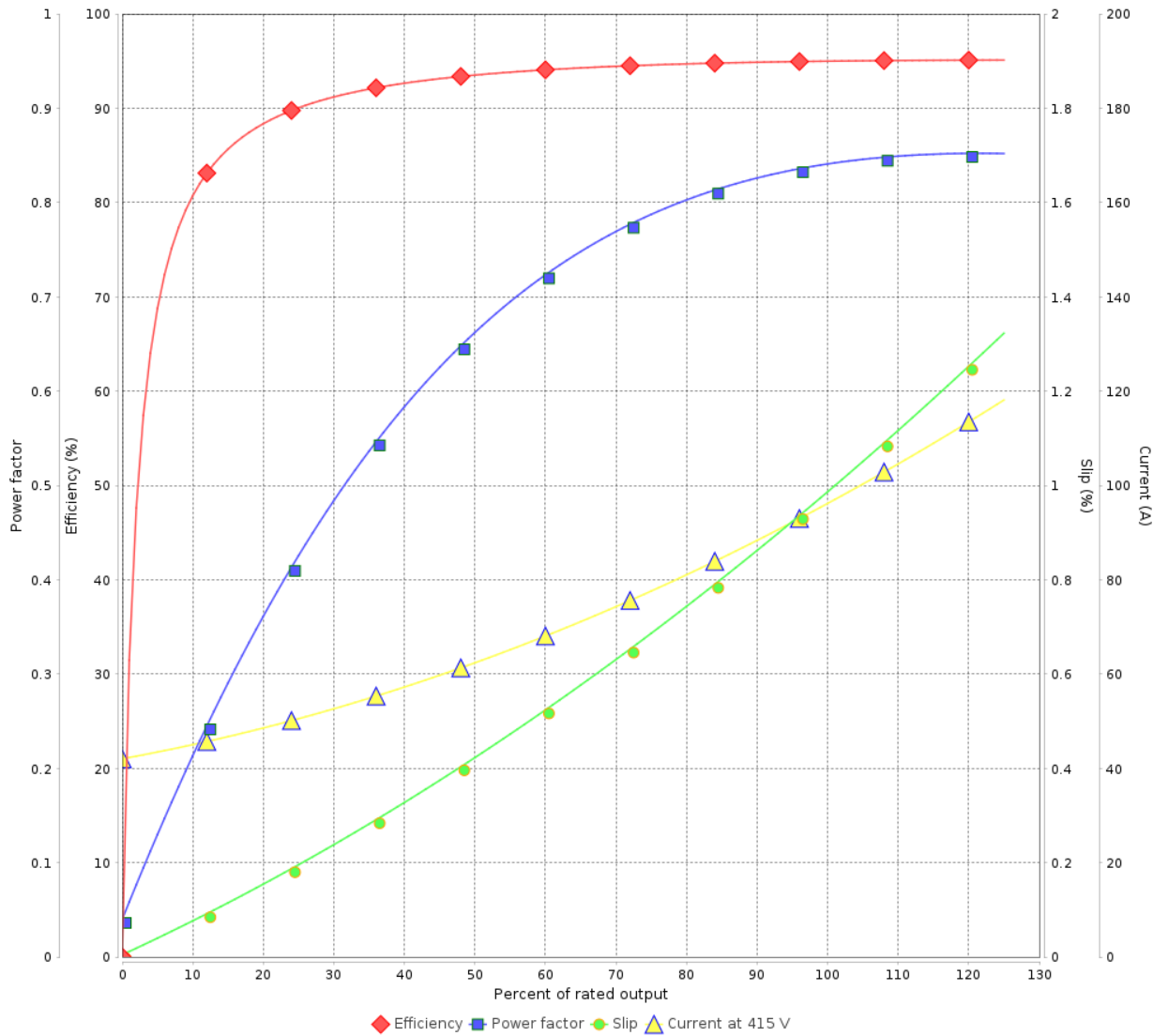
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 11355409

LOAD PERFORMANCE CURVE



Performance : 415 V 50 Hz 4P IE3			
Rated current	: 95.9 A	Moment of inertia (J)	: 1.26 kgm ²
LRC	: 8.9	Duty cycle	: Cont.(S1)
Rated torque	: 36.7 kgfm	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 6 / 9	Revision
Checked by					
Date	19/10/2024				

LOAD PERFORMANCE CURVE

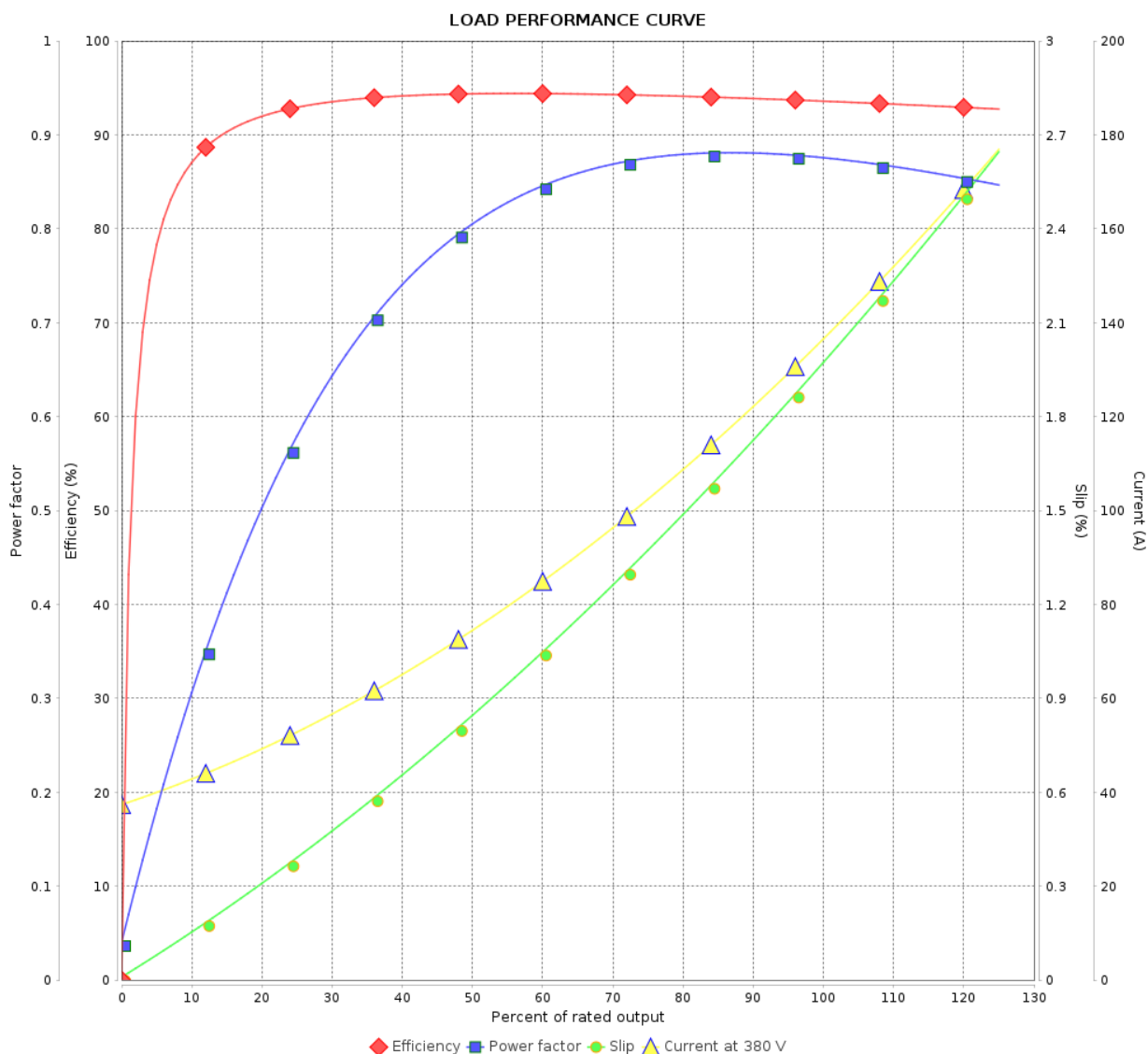
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 11355409



Performance : 380 V 50 Hz 4P IE1

Rated current : 138 A
LRC : 5.9
Rated torque : 49.4 kgfm
Locked rotor torque : 190 %
Breakdown torque : 210 %
Rated speed : 1470 rpm

Moment of inertia (J) : 1.26 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	19/10/2024				

LOAD PERFORMANCE CURVE

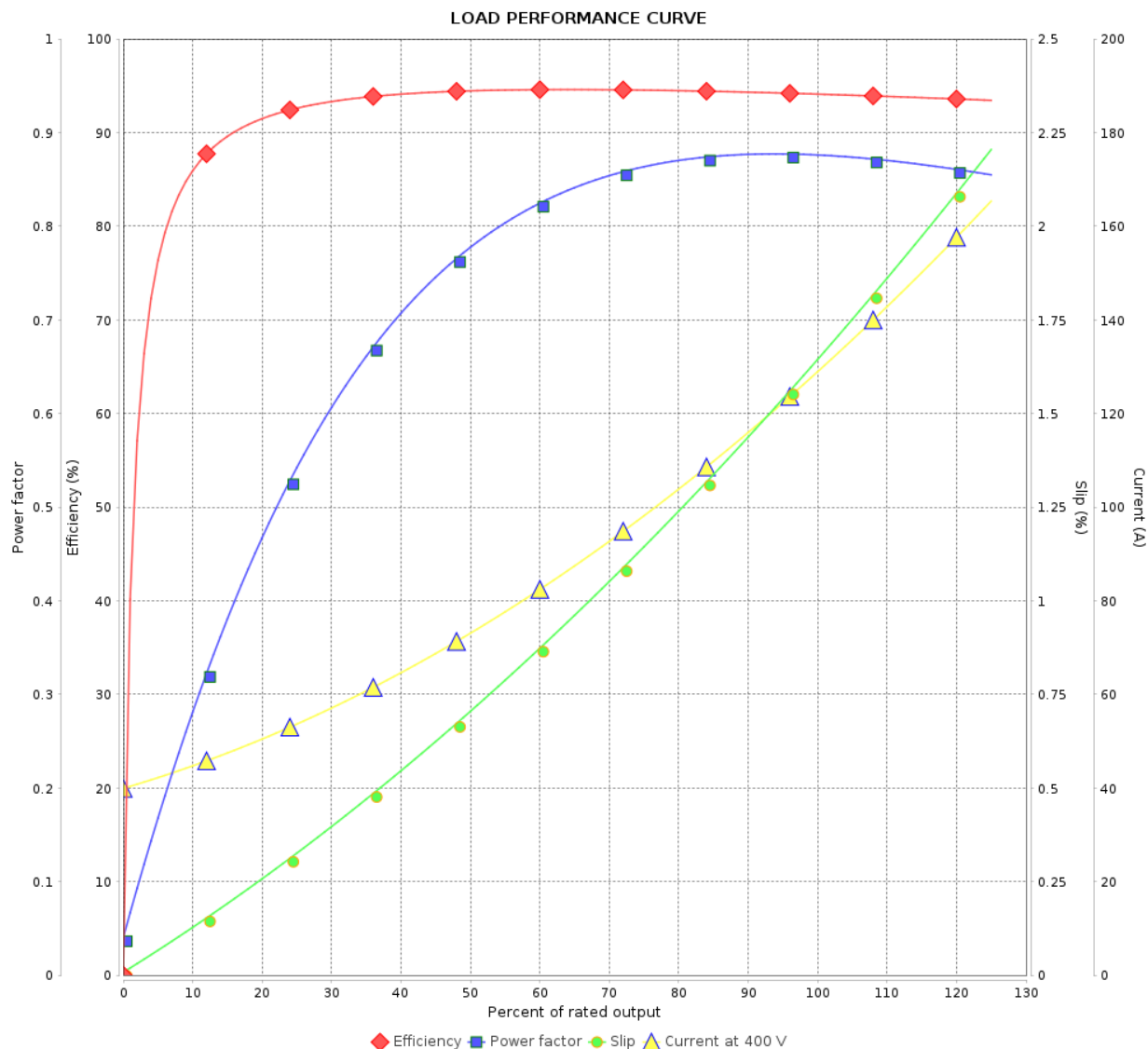
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 11355409



Performance : 400 V 50 Hz 4P IE2

Rated current : 131 A
LRC : 6.5
Rated torque : 49.2 kgfm
Locked rotor torque : 210 %
Breakdown torque : 229 %
Rated speed : 1475 rpm

Moment of inertia (J) : 1.26 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	Revision
Checked by				8 / 9	
Date					

LOAD PERFORMANCE CURVE

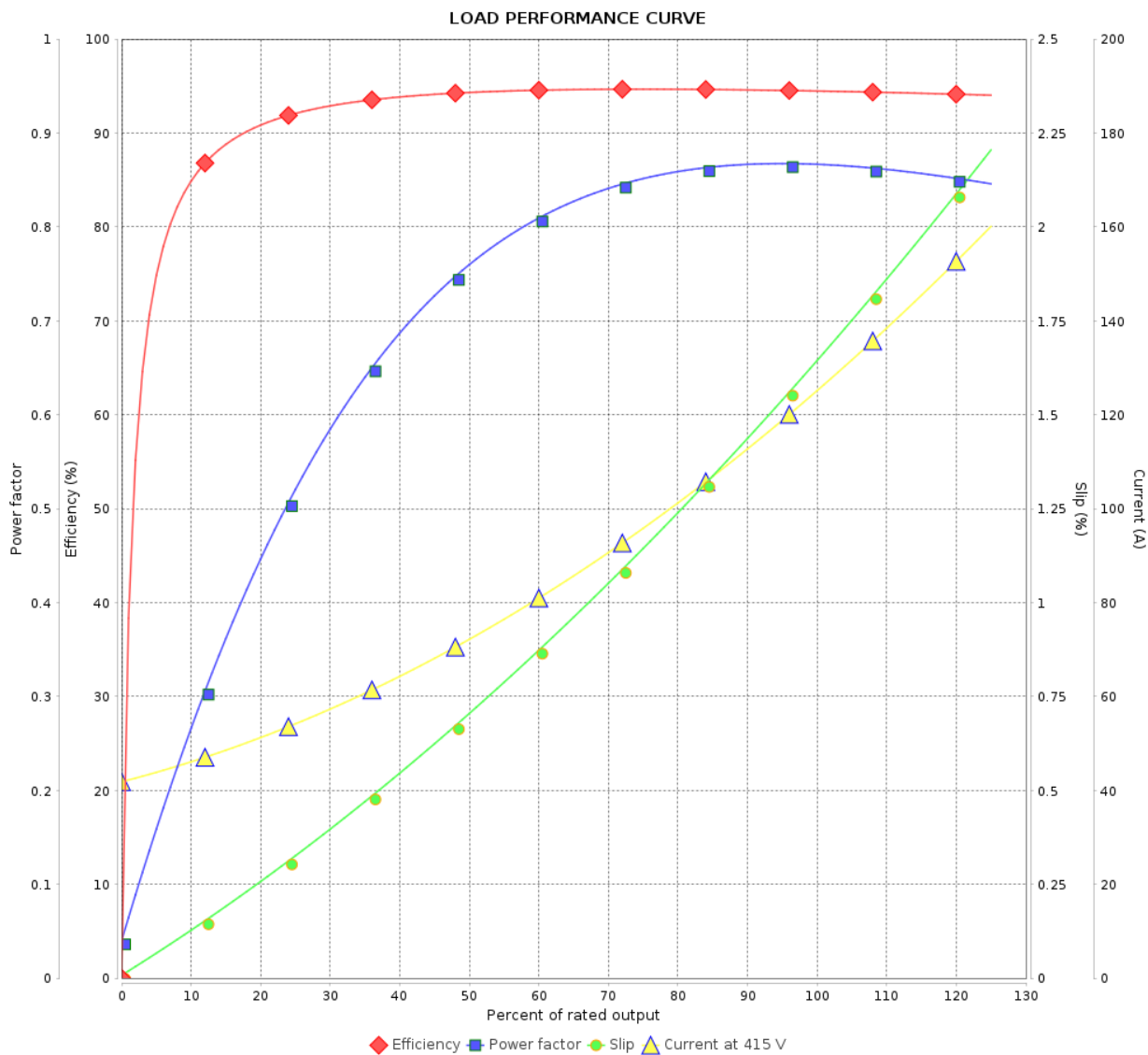
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 11355409



Performance : 415 V 50 Hz 4P IE2

Rated current : 127 A
LRC : 7.1
Rated torque : 49.2 kgfm
Locked rotor torque : 220 %
Breakdown torque : 250 %
Rated speed : 1475 rpm

Moment of inertia (J) : 1.26 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 / 9 Revision		
Checked by				
Date	19/10/2024			