

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 11413120

Frame	: 284/6TS	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	: 174 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.1419 kgm ²
Design	: B		

Output [HP]	30	25	25	25	30	30	30
Poles	2	2	2	2	2	2	2
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	230/460	380	400	415	380	400	415
Rated current [A]	68.4/34.2	34.2	32.8	32.0	42.0	39.6	38.2
L. R. Amperes [A]	431/216	202	220	231	206	218	229
LRC [A]	6.3x(Code G)	5.9x(Code F)	6.7x(Code G)	7.2x(Code H)	4.9x(Code E)	5.5x(Code F)	6.0x(Code F)
No load current [A]	18.2/9.10	9.00	10.0	10.5	9.00	10.0	10.5
Rated speed [RPM]	3545	2940	2950	2955	2910	2930	2935
Slip [%]	1.53	2.00	1.67	1.50	3.00	2.33	2.17
Rated torque [kgfm]	6.14	6.17	6.15	6.14	7.48	7.43	7.42
Locked rotor torque [%]	200	190	220	229	160	180	190
Breakdown torque [%]	250	229	270	290	200	220	240
Service factor	1.25	1.00	1.00	1.00	1.00	1.00	1.00
Temperature rise	80 K	105 K	80 K	80 K	105 K	105 K	105 K
Locked rotor time	27s (cold) 15s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)
Noise level ²	72.0 dB(A)	67.0 dB(A)	67.0 dB(A)	67.0 dB(A)	67.0 dB(A)	67.0 dB(A)	67.0 dB(A)
Efficiency (%)	25%	0.000			0.000		
	50%	91.7	91.0	91.1	91.2	91.7	91.7
	75%	91.7	91.5	91.5	91.8	90.2	91.0
	100%	91.7	92.4	92.4	92.4	89.5	90.2
Power Factor	25%	0.00			0.00		
	50%	0.80	0.80	0.78	0.76	0.84	0.82
	75%	0.86	0.87	0.85	0.84	0.88	0.87
	100%	0.88	0.89	0.88	0.87	0.89	0.88

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

Losses (%)	P1 (0,9;1,0)	8.6	7.8	7.8	7.8	11.2	10.3	9.4
	P2 (0,5;1,0)	6.7	6.1	6.1	6.1	8.7	8.1	7.4
	P3 (0,25;1,0)	5.9	5.3	5.3	5.3	7.6	7.0	6.4
	P4 (0,9;0,5)	4.2	3.8	3.8	3.8	5.4	5.0	4.6
	P5 (0,5;0,5)	2.5	2.3	2.3	2.3	3.2	3.0	2.7
	P6 (0,5;0,25)	1.5	1.4	1.4	1.4	2.0	1.8	1.7
	P7 (0,25;0,25)	0.9	0.8	0.8	0.8	1.2	1.1	1.0

Bearing type	Drive end	Non drive end	Foundation loads
	: 6311 C3	6211 C3	
	Sealing	V'Ring V'Ring	
	Lubrication interval	: 14000 h 17000 h	
	Lubricant amount	: 18 g 11 g	
Lubricant type		: Mobil Polyrex EM	Max. traction : 167 kgf
			Max. compression : 341 kgf

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	21/10/2024		Page 1 / 9	Revision

Customer :

Notes

USABLE @208V 76.7A SF 1.10 SFA 84.4A

Rev.	Changes Summary		Performed	Checked	Date
Performed by			Page 2 / 9		Revision
Checked by					
Date	21/10/2024				

LOAD PERFORMANCE CURVE

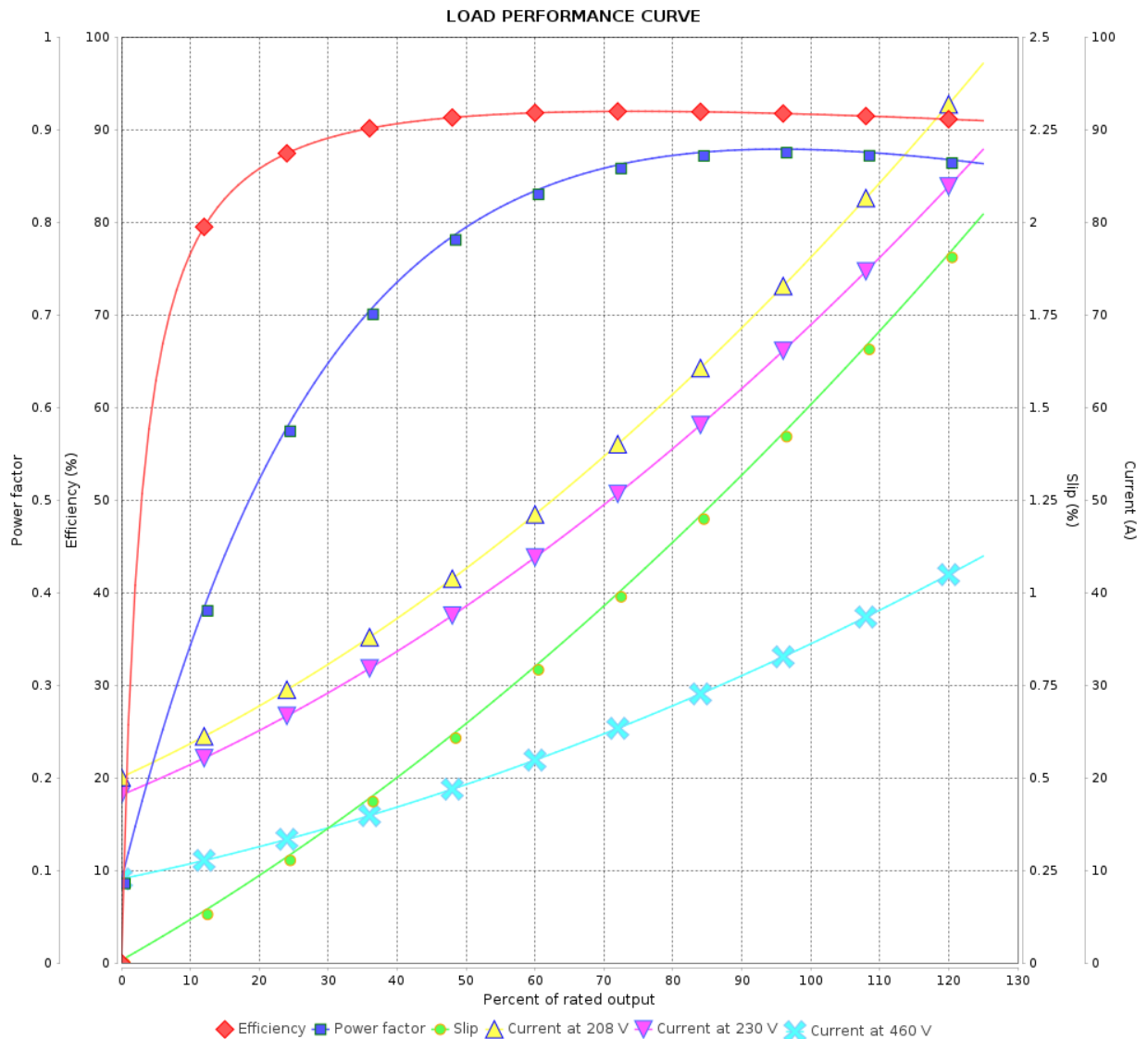
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 11413120



Performance : 230/460 V 60 Hz 2P

Rated current : 68.4/34.2 A
LRC : 6.3
Rated torque : 6.14 kgfm
Locked rotor torque : 200 %
Breakdown torque : 250 %
Rated speed : 3545 rpm

Moment of inertia (J) : 0.1419 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				3 / 9	
Date					

LOAD PERFORMANCE CURVE

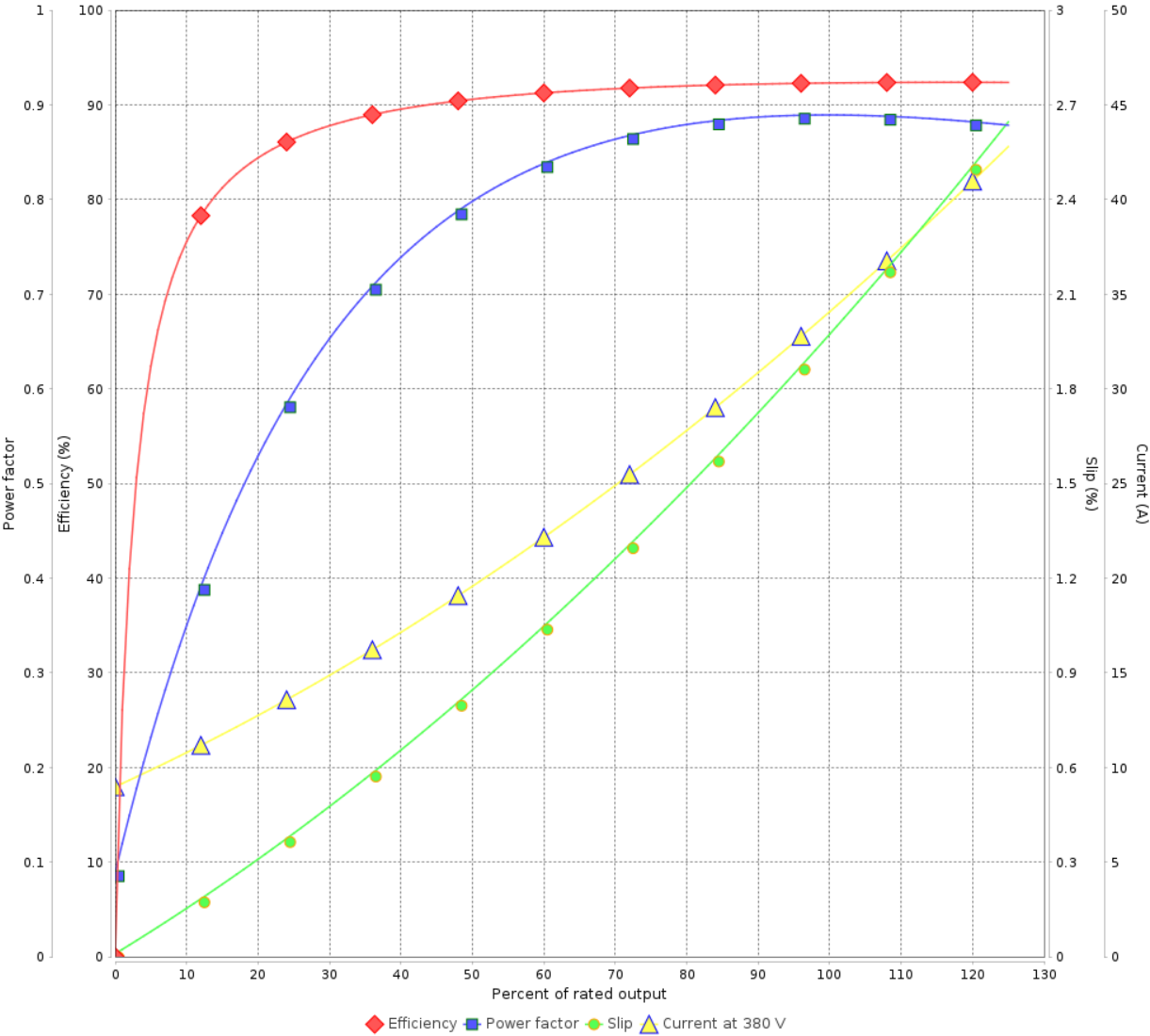
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 11413120

LOAD PERFORMANCE CURVE



Performance : 380 V 50 Hz 2P IE3			
Rated current	: 34.2 A	Moment of inertia (J)	: 0.1419 kgm ²
LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 6.17 kgfm	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 105 K
Rated speed	: 2940 rpm	Design	: B

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

LOAD PERFORMANCE CURVE

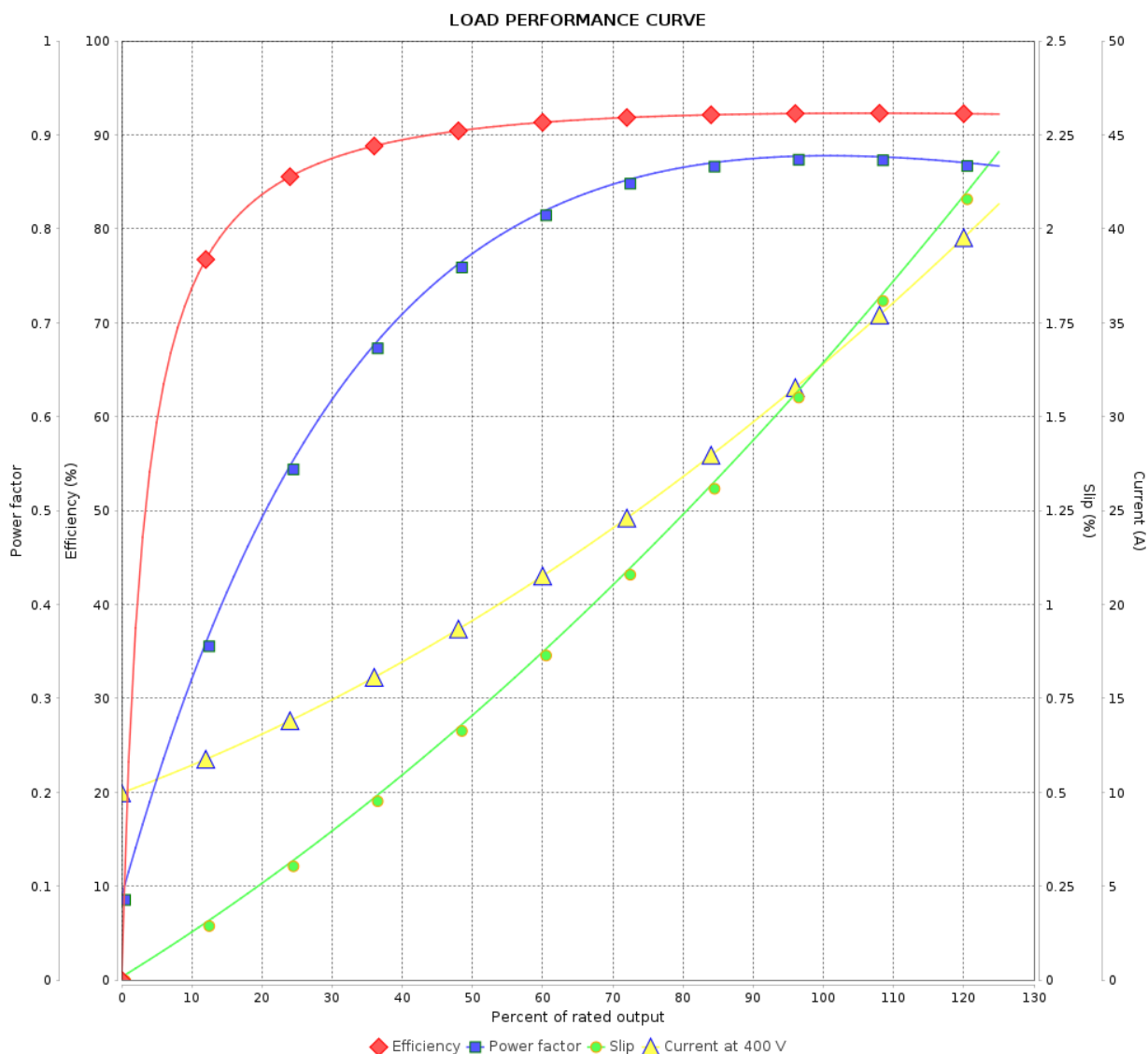
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 11413120



Performance : 400 V 50 Hz 2P IE3

Rated current : 32.8 A
LRC : 6.7
Rated torque : 6.15 kgfm
Locked rotor torque : 220 %
Breakdown torque : 270 %
Rated speed : 2950 rpm

Moment of inertia (J) : 0.1419 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 / 9	Revision
Checked by					
Date	21/10/2024				

LOAD PERFORMANCE CURVE

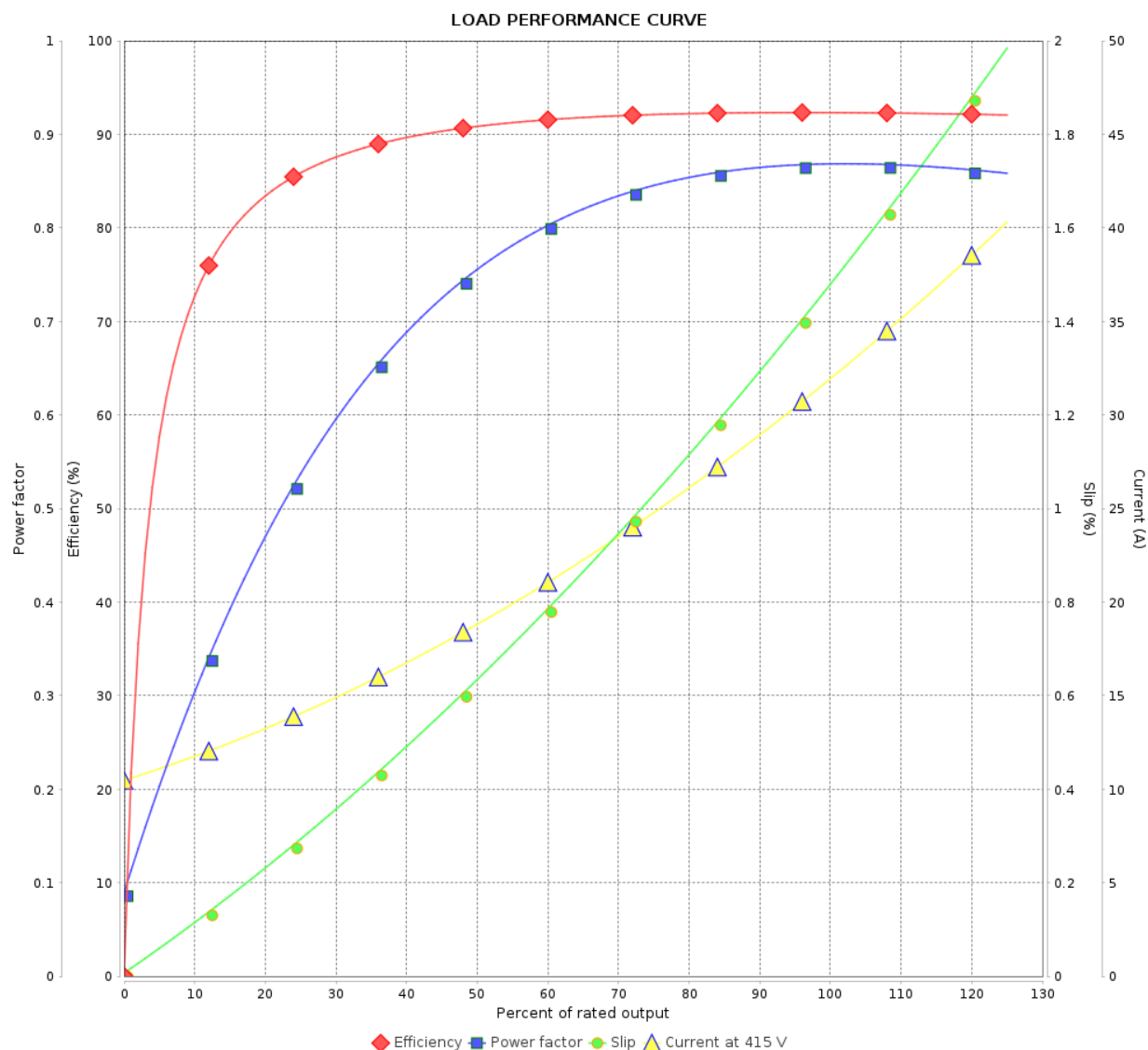
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 11413120



Performance : 415 V 50 Hz 2P IE3

Rated current : 32.0 A
LRC : 7.2
Rated torque : 6.14 kgfm
Locked rotor torque : 229 %
Breakdown torque : 290 %
Rated speed : 2955 rpm

Moment of inertia (J) : 0.1419 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 6 / 9	Revision
Checked by					
Date	21/10/2024				

LOAD PERFORMANCE CURVE

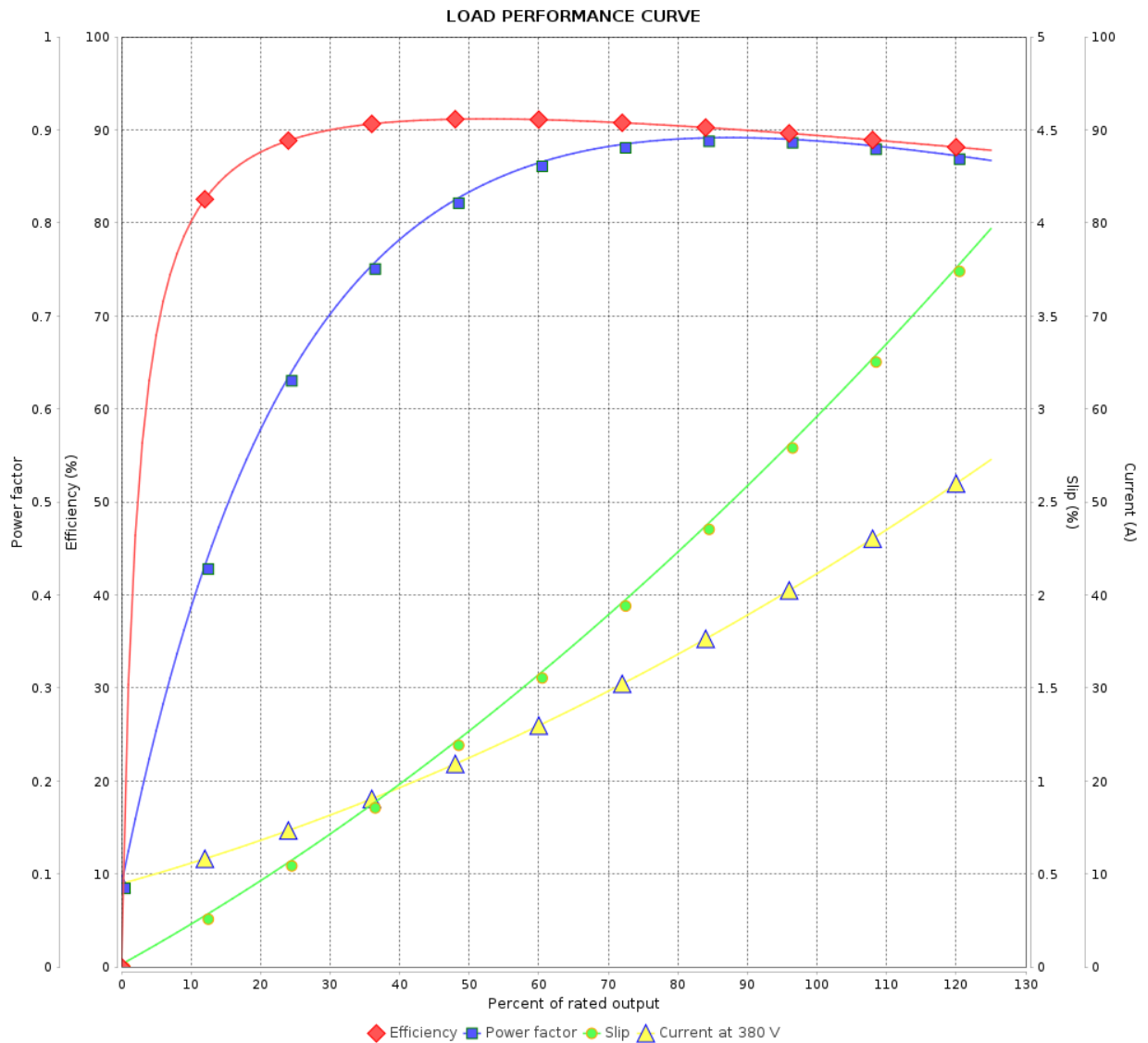
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 11413120



Performance : 380 V 50 Hz 2P

Rated current : 42.0 A
LRC : 4.9
Rated torque : 7.48 kgfm
Locked rotor torque : 160 %
Breakdown torque : 200 %
Rated speed : 2910 rpm

Moment of inertia (J) : 0.1419 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

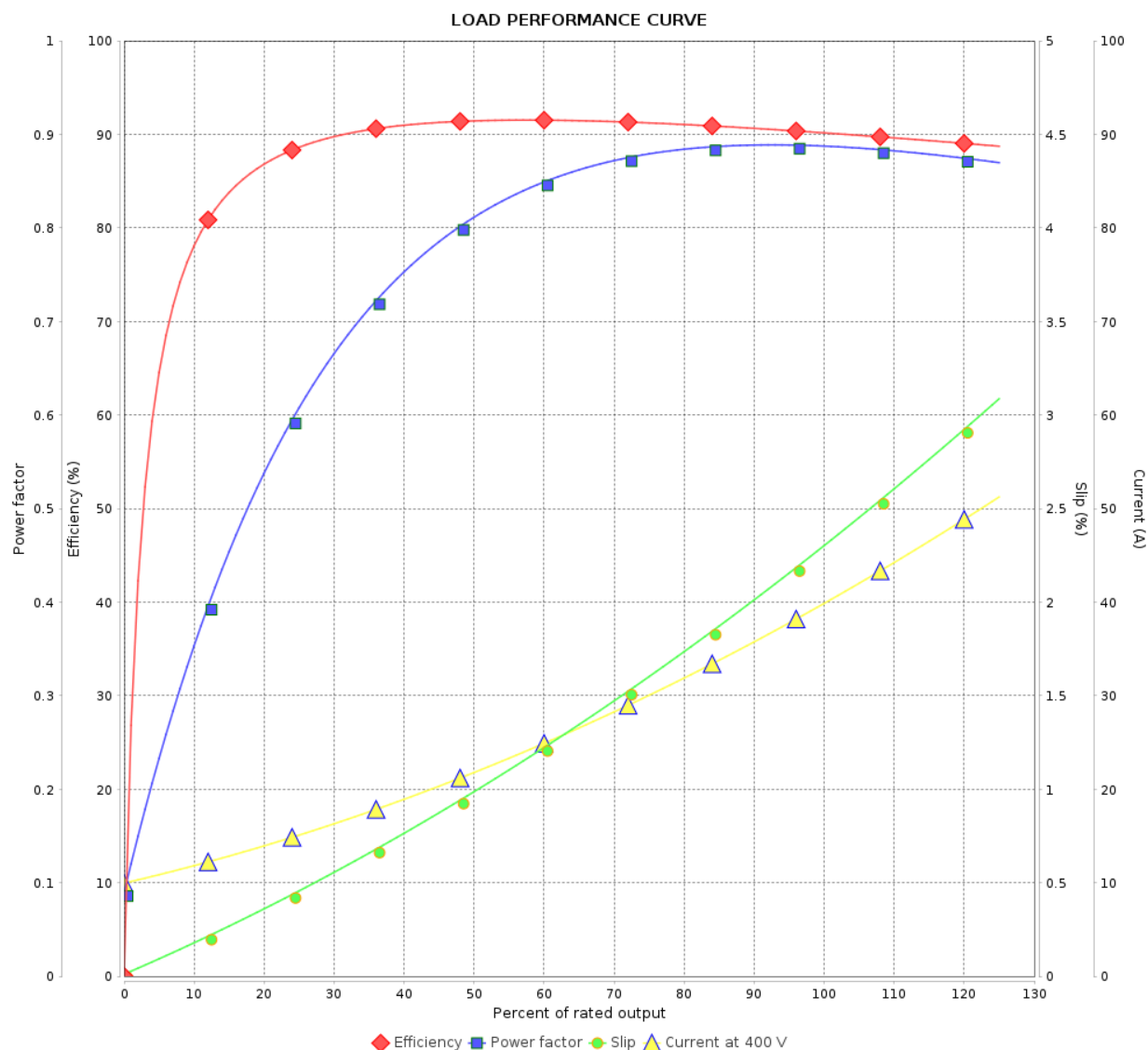
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 11413120



Performance : 400 V 50 Hz 2P IE1

Rated current : 39.6 A
LRC : 5.5
Rated torque : 7.43 kgfm
Locked rotor torque : 180 %
Breakdown torque : 220 %
Rated speed : 2930 rpm

Moment of inertia (J) : 0.1419 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

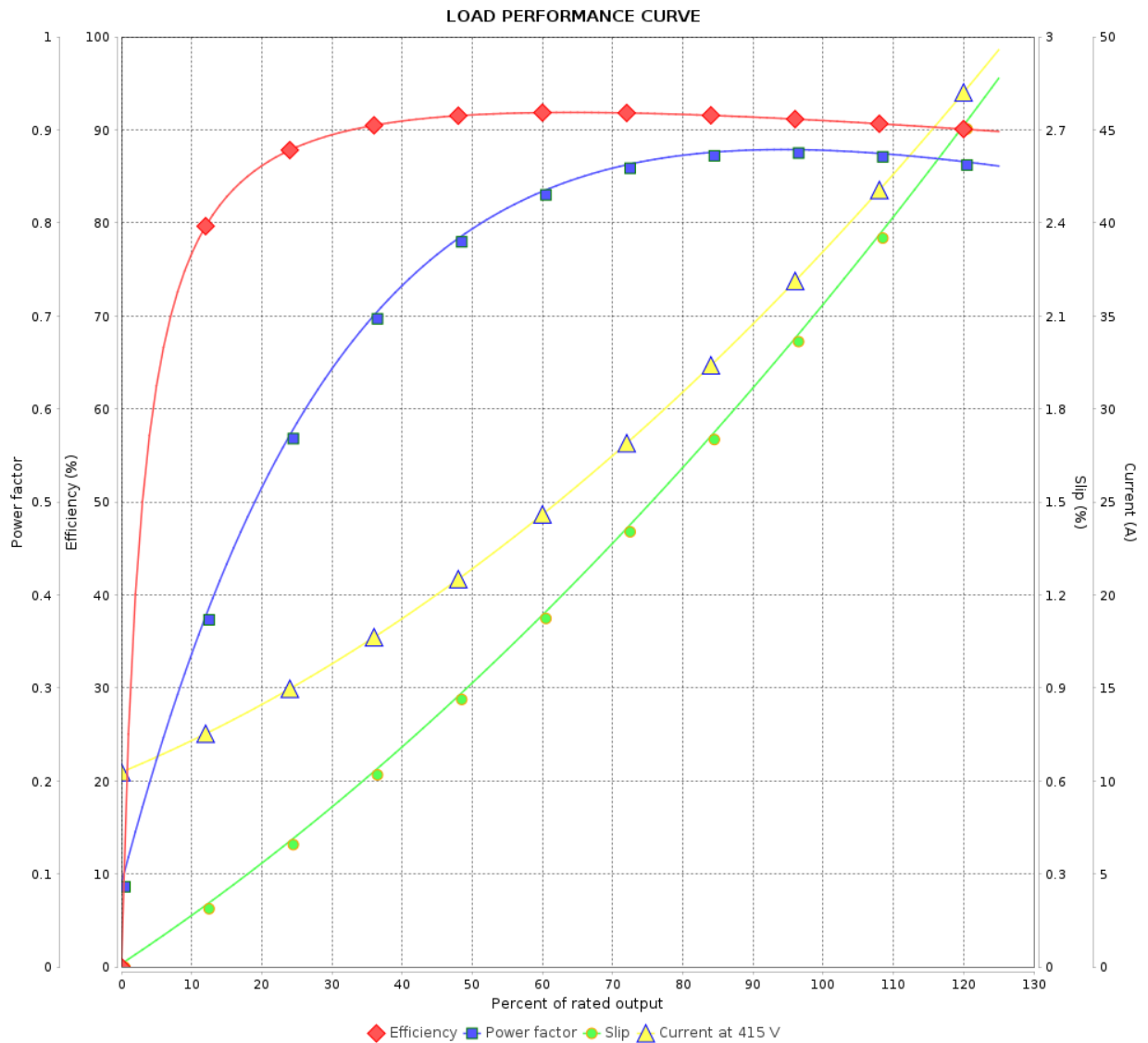
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 11413120



Performance : 415 V 50 Hz 2P IE1

Rated current	: 38.2 A	Moment of inertia (J)	: 0.1419 kgm ²
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 7.42 kgfm	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 105 K
Rated speed	: 2935 rpm	Design	: B

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