

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 11783939

Frame : 213/5T	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 : 78.3 kg
Protection degree : IP55	Moment of inertia (J) : 0.0268 kgm ²
Design : A	

Output [HP]	15	10	10	10	15	15	15
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]	34.0/17.0	14.5	14.1	14.0	20.6	19.7	19.3
L. R. Amperes [A]	269/134	125	133	140	134	142	149
LRC [A]	7.9x(Code J)	8.6x(Code K)	9.4x(Code L)	10.0x(Code M)	6.5x(Code G)	7.2x(Code H)	7.7x(Code J)
No load current [A]	11.6/5.80	5.60	6.20	6.70	5.60	6.20	6.70
Rated speed [RPM]	3520	2940	2945	2950	2885	2900	2910
Slip [%]	2.22	2.00	1.83	1.67	3.83	3.33	3.00
Rated torque [kgfm]	3.09	2.47	2.46	2.46	3.77	3.75	3.74
Locked rotor torque [%]	240	280	320	340	190	220	240
Breakdown torque [%]	280	340	380	420	220	250	280
Service factor	1.25	1.15	1.15	1.15	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	21s (cold) 12s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	10s (cold) 6s (hot)	12s (cold) 7s (hot)	12s (cold) 7s (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%	90.2	89.5	89.0	88.5	88.5	89.0
	75%	91.0	90.1	90.1	90.1	89.0	89.5
	100%	91.0	90.1	90.1	90.1	89.0	89.7
Power Factor	25%						
	50%	0.76	0.72	0.68	0.64	0.81	0.78
	75%	0.85	0.82	0.79	0.77	0.88	0.86
	100%	0.89	0.87	0.85	0.83	0.91	0.90

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

Losses (%)	P1 (0,9;1,0)	9.8	9.8	9.8	9.8	9.8	9.8
	P2 (0,5;1,0)	7.9	7.9	7.9	7.9	7.9	7.9
	P3 (0,25;1,0)	6.9	6.9	6.9	6.9	6.9	6.9
	P4 (0,9;0,5)	4.8	4.8	4.8	4.8	4.8	4.8
	P5 (0,5;0,5)	3.1	3.1	3.1	3.1	3.1	3.1
	P6 (0,5;0,25)	2.0	2.0	2.0	2.0	2.0	2.0
	P7 (0,25;0,25)	1.3	1.3	1.3	1.3	1.3	1.3

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads
Bearing type :	6308 ZZ	6207 ZZ	Max. traction : 154 kgf
Sealing :	V'Ring	V'Ring	Max. compression : 233 kgf
Lubrication interval :	-	-	
Lubricant amount :	-	-	
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	20/10/2024		Page 1 / 9	Revision

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Notes

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 2 / 9	Revision
Checked by					
Date	20/10/2024				

LOAD PERFORMANCE CURVE

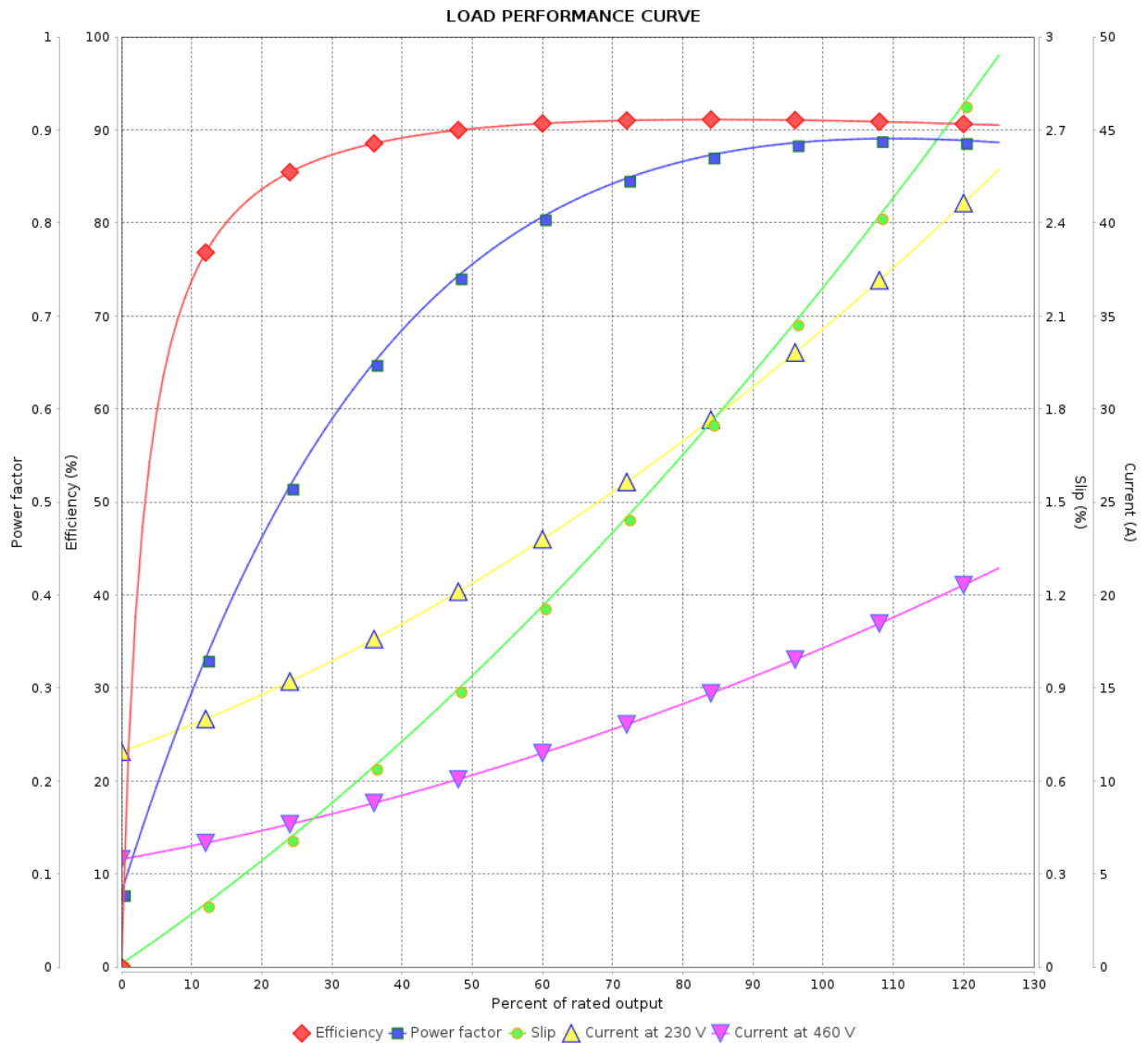
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 11783939



Performance : 230/460 V 60 Hz 2P

Rated current : 34.0/17.0 A
LRC : 7.9
Rated torque : 3.09 kgfm
Locked rotor torque : 240 %
Breakdown torque : 280 %
Rated speed : 3520 rpm

Moment of inertia (J) : 0.0268 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : A

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 3 / 9	Revision
Checked by					
Date	20/10/2024				

LOAD PERFORMANCE CURVE

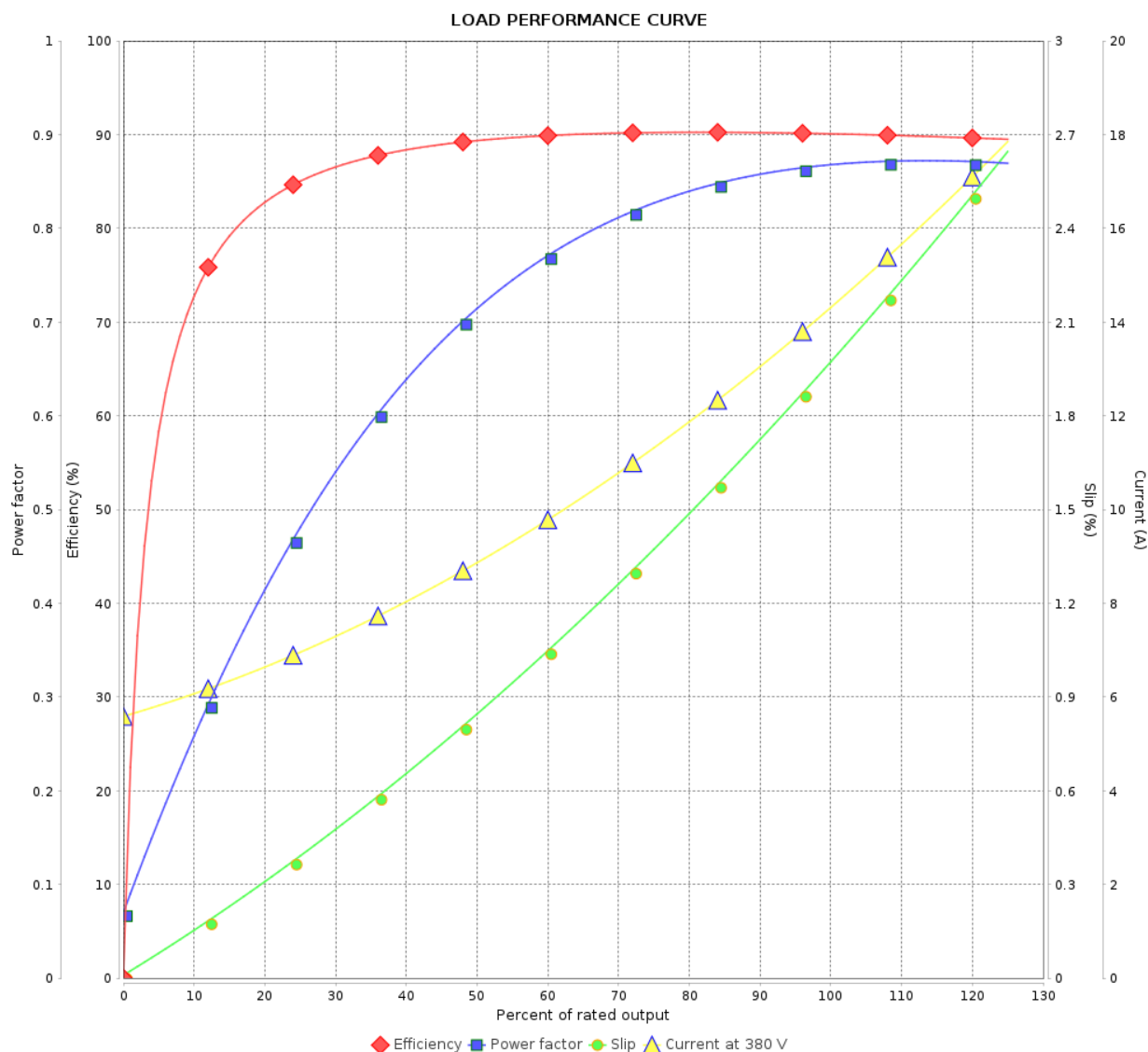
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 11783939



Performance : 380 V 50 Hz 2P IE3

Rated current : 14.5 A
LRC : 8.6
Rated torque : 2.47 kgfm
Locked rotor torque : 280 %
Breakdown torque : 340 %
Rated speed : 2940 rpm

Moment of inertia (J) : 0.0268 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : A

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

LOAD PERFORMANCE CURVE

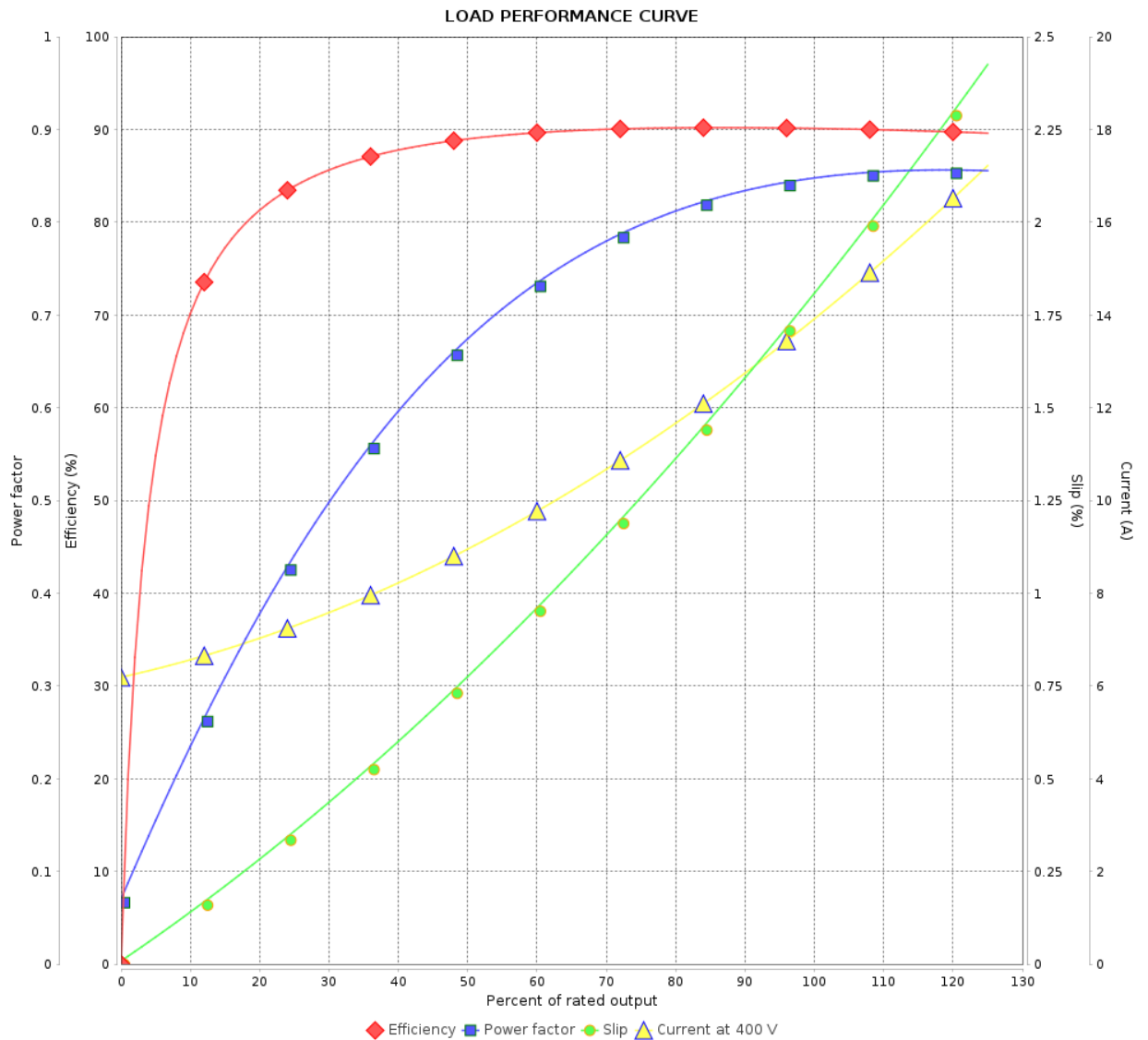
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 11783939



Performance : 400 V 50 Hz 2P IE3

Rated current	: 14.1 A	Moment of inertia (J)	: 0.0268 kgm ²
LRC	: 9.4	Duty cycle	: Cont.(S1)
Rated torque	: 2.46 kgfm	Insulation class	: F
Locked rotor torque	: 320 %	Service factor	: 1.15
Breakdown torque	: 380 %	Temperature rise	: 80 K
Rated speed	: 2945 rpm	Design	: A

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 5 / 9Revision		
Checked by				
Date	20/10/2024			

LOAD PERFORMANCE CURVE

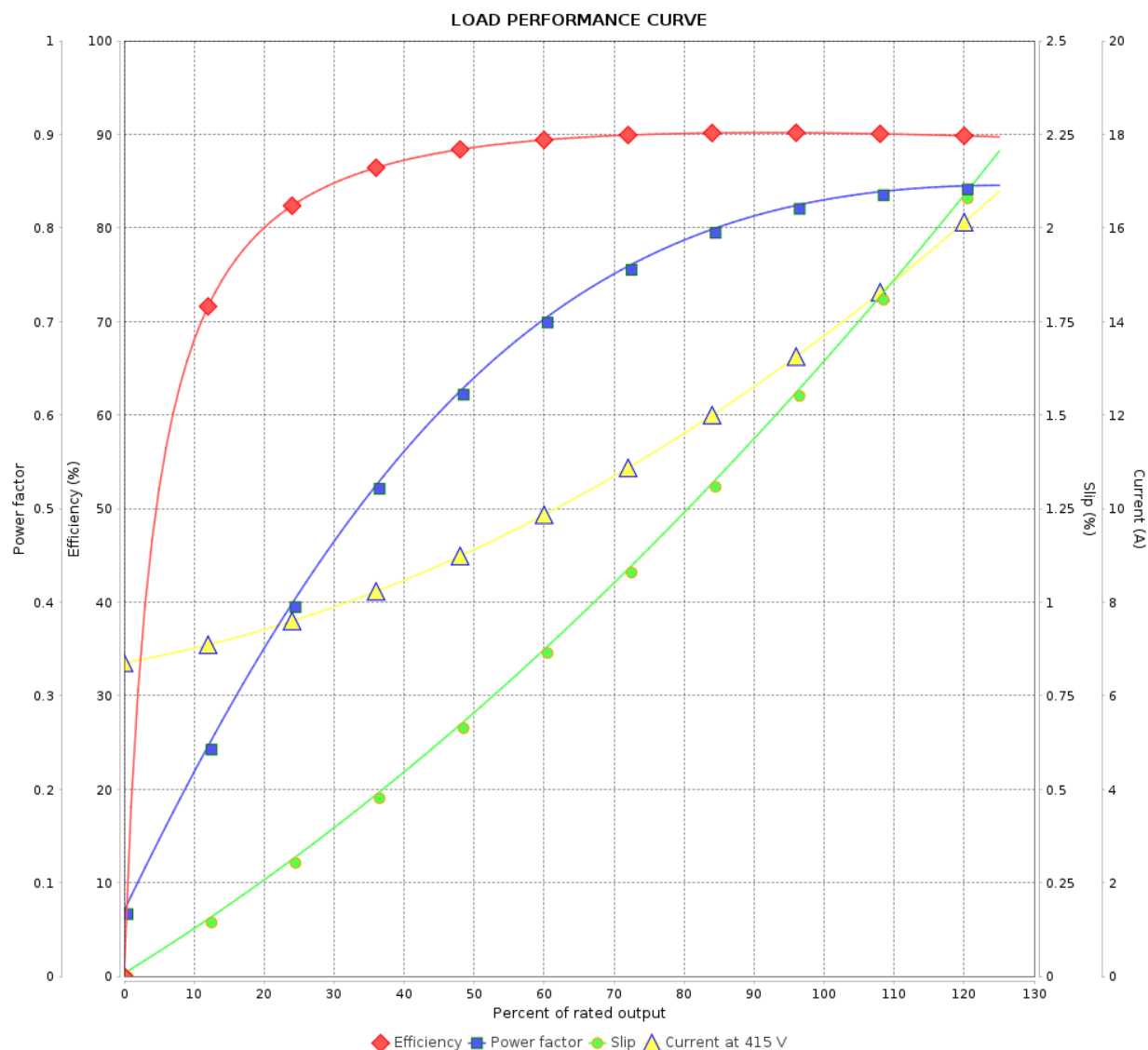
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 11783939



Performance : 415 V 50 Hz 2P IE3

Rated current : 14.0 A
LRC : 10.0
Rated torque : 2.46 kgfm
Locked rotor torque : 340 %
Breakdown torque : 420 %
Rated speed : 2950 rpm

Moment of inertia (J) : 0.0268 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : A

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

LOAD PERFORMANCE CURVE

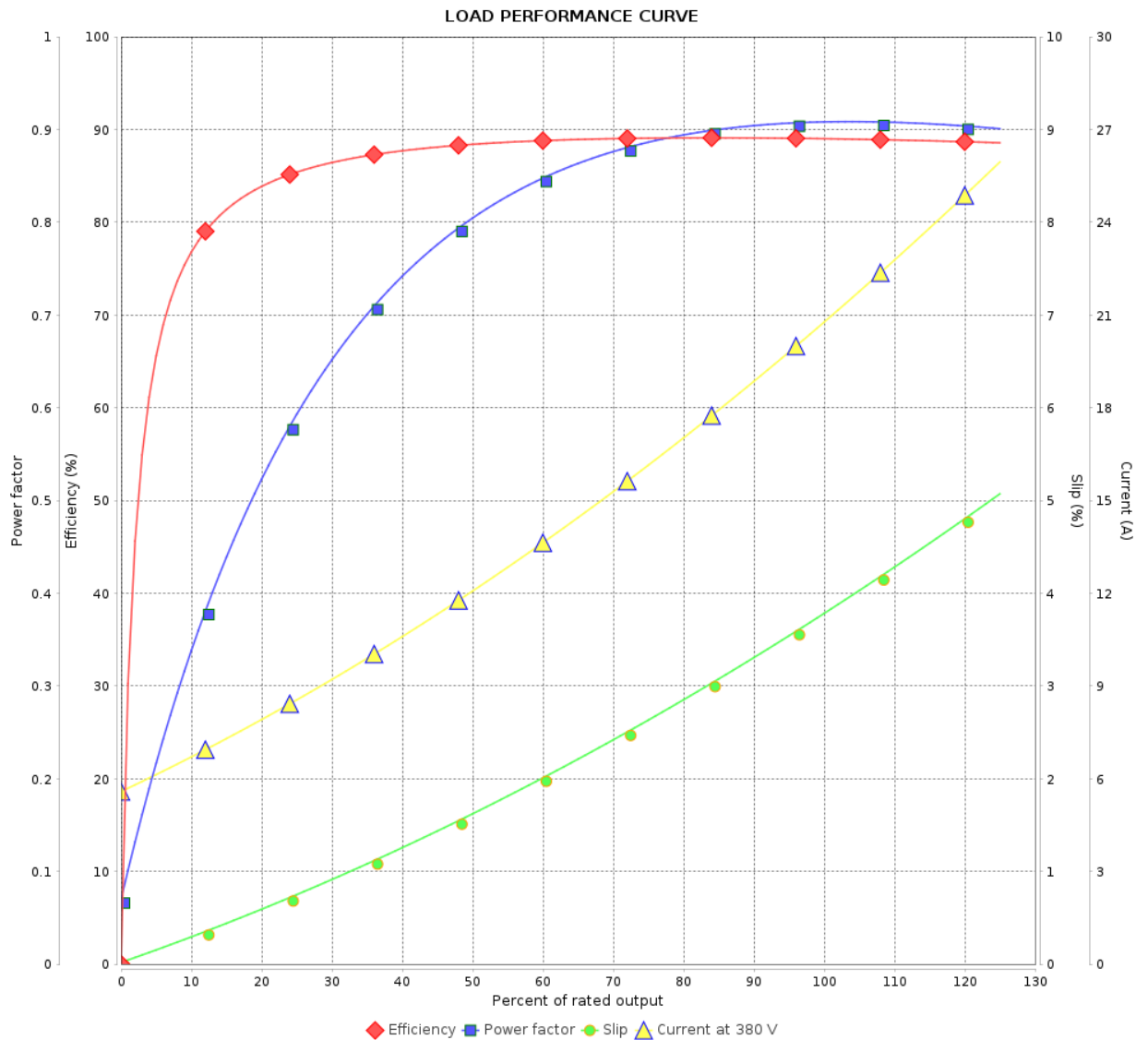
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 11783939



Performance : 380 V 50 Hz 2P IE1

Rated current	: 20.6 A	Moment of inertia (J)	: 0.0268 kgm ²
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 3.77 kgfm	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 105 K
Rated speed	: 2885 rpm	Design	: A

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date	20/10/2024		Page 7 / 9	Revision

LOAD PERFORMANCE CURVE

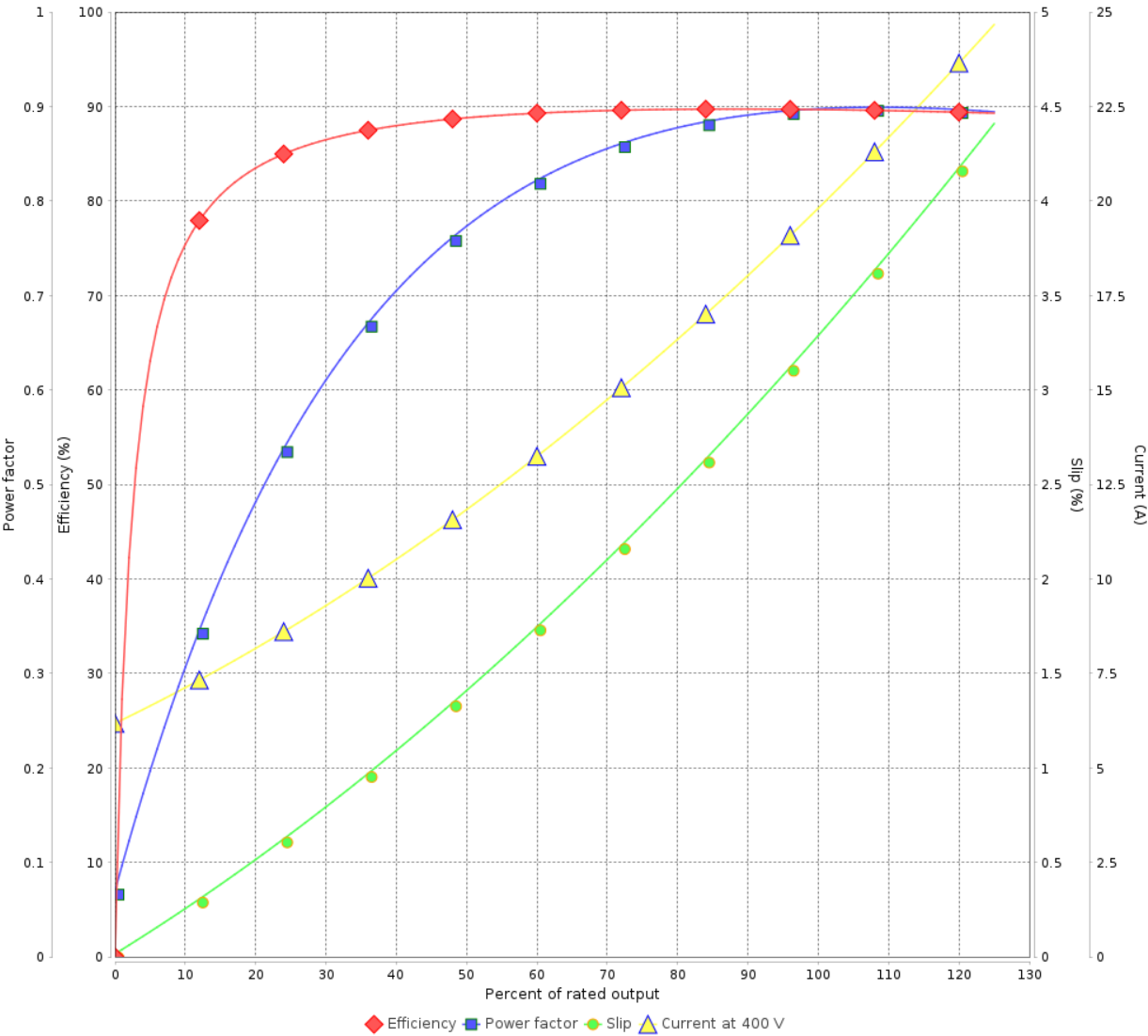
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 11783939

LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 2P IE2

Rated current	: 19.7 A	Moment of inertia (J)	: 0.0268 kgm ²
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 3.75 kgfm	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 105 K
Rated speed	: 2900 rpm	Design	: A

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 8 / 9Revision		
Checked by				
Date	20/10/2024			

LOAD PERFORMANCE CURVE

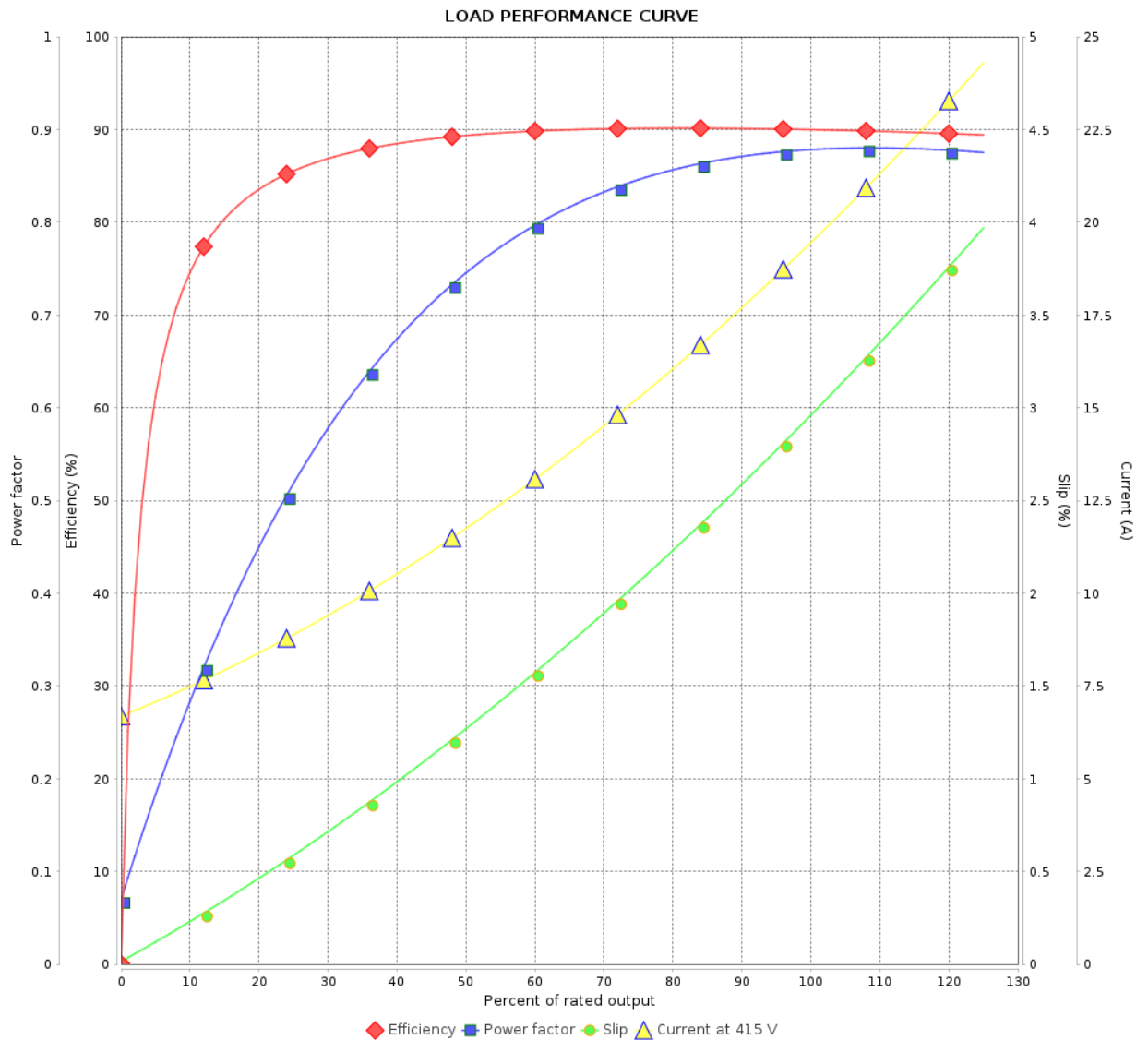
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 11783939



Performance : 415 V 50 Hz 2P IE2

Rated current	: 19.3 A	Moment of inertia (J)	: 0.0268 kgm ²
LRC	: 7.7	Duty cycle	: Cont.(S1)
Rated torque	: 3.74 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 105 K
Rated speed	: 2910 rpm	Design	: A

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 9 / 9		
Checked by				
Date	20/10/2024			
			Page	Revision