

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 12447812

Frame	: 324/6T	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	: 258 kg
Protection degree	: IP56	Moment of inertia (J)	: 0.3861 kgm ²
Design	: B		

Output [HP]	40	30	30	30	40	40	40
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]	47.1	42.8	41.6	41.1	57.4	54.1	52.8
L. R. Amperes [A]	287	291	308	316	287	303	317
LRC [A]	6.1x(Code G)	6.8x(Code H)	7.4x(Code J)	7.7x(Code J)	5.0x(Code E)	5.6x(Code F)	6.0x(Code G)
No load current [A]	17.0	16.8	17.3	18.6	16.8	17.3	18.6
Rated speed [RPM]	1775	1477	1480	1481	1460	1465	1470
Slip [%]	1.39	1.53	1.33	1.27	2.67	2.33	2.00
Rated torque [kgfm]	16.4	14.7	14.7	14.7	19.9	19.8	19.7
Locked rotor torque [%]	229	240	270	280	170	190	210
Breakdown torque [%]	240	250	290	310	180	210	229
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	36s (cold) 20s (hot)	25s (cold) 14s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	25s (cold) 14s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)
Noise level ²	66.0 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%	93.6	92.9	92.4	91.7	93.6	93.0
	75%	94.1	93.1	93.0	92.6	93.0	93.0
	100%	94.1	93.0	93.2	93.1	92.4	93.0
Power Factor	25%						
	50%	0.72	0.68	0.64	0.62	0.78	0.72
	75%	0.80	0.78	0.75	0.73	0.84	0.80
	100%	0.85	0.84	0.82	0.80	0.86	0.85

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

Losses (%)	P1 (0,9;1,0)	6.1	6.1	6.1	6.1	6.1	6.1
	P2 (0,5;1,0)	5.1	5.1	5.1	5.1	5.1	5.1
	P3 (0,25;1,0)	4.9	4.9	4.9	4.9	4.9	4.9
	P4 (0,9;0,5)	2.8	2.8	2.8	2.8	2.8	2.8
	P5 (0,5;0,5)	1.9	1.9	1.9	1.9	1.9	1.9
	P6 (0,5;0,25)	1.2	1.2	1.2	1.2	1.2	1.2
	P7 (0,25;0,25)	0.8	0.8	0.8	0.8	0.8	0.8

Bearing type	: 6312 C3	Non drive end	6212 C3	Foundation loads	
Sealing	: Inpro/Seal	Inpro/Seal		Max. traction	: 443 kgf
Lubrication interval	: 20000 h	20000 h		Max. compression	: 701 kgf
Lubricant amount	: 21 g	13 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	22/10/2024		Page 1 / 9	Revision

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Notes

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

LOAD PERFORMANCE CURVE

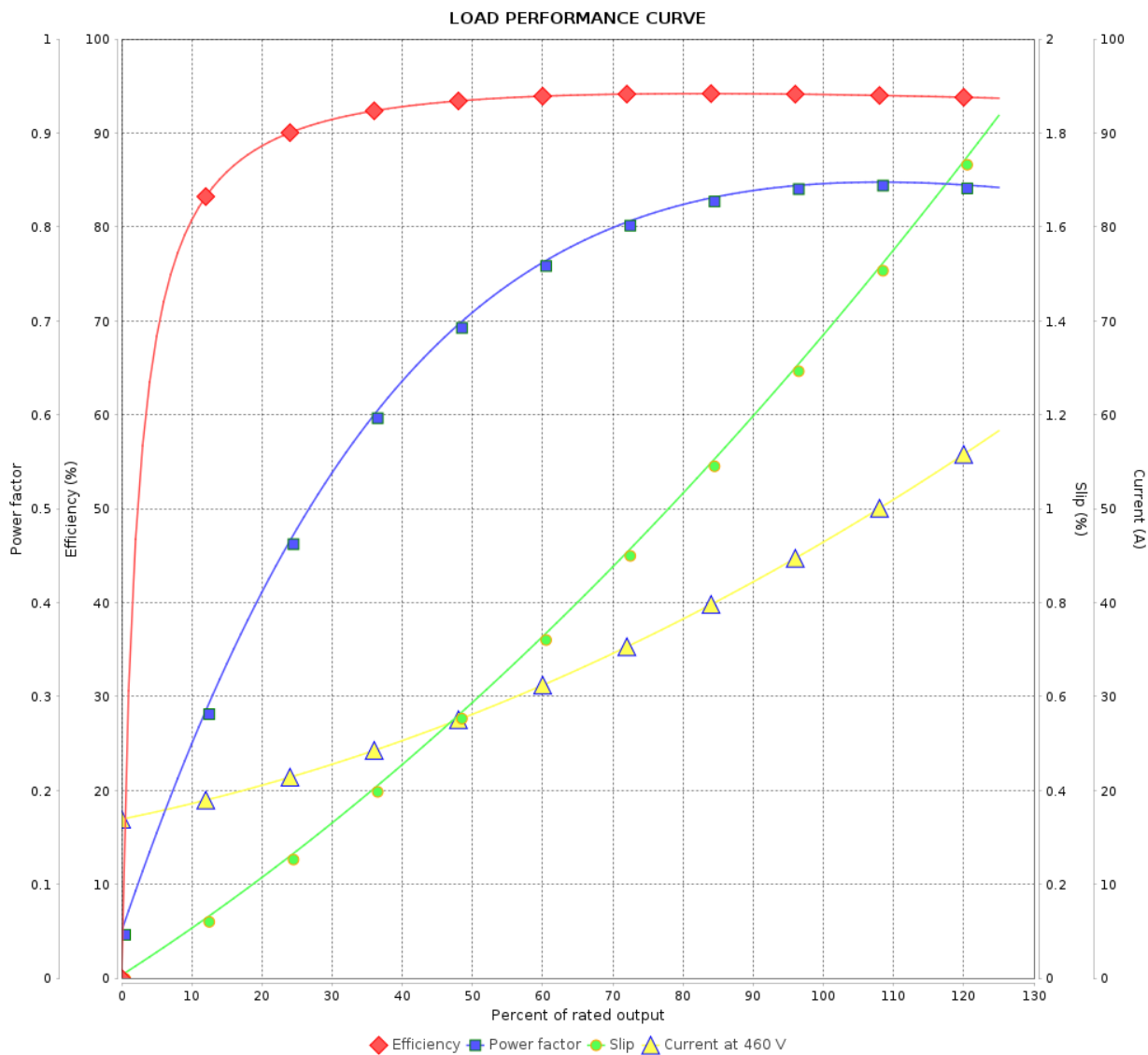
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12447812



Performance : 460 V 60 Hz 4P

Rated current : 47.1 A
LRC : 6.1
Rated torque : 16.4 kgfm
Locked rotor torque : 229 %
Breakdown torque : 240 %
Rated speed : 1775 rpm

Moment of inertia (J) : 0.3861 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 / 9	Revision
Checked by					
Date	22/10/2024				

LOAD PERFORMANCE CURVE

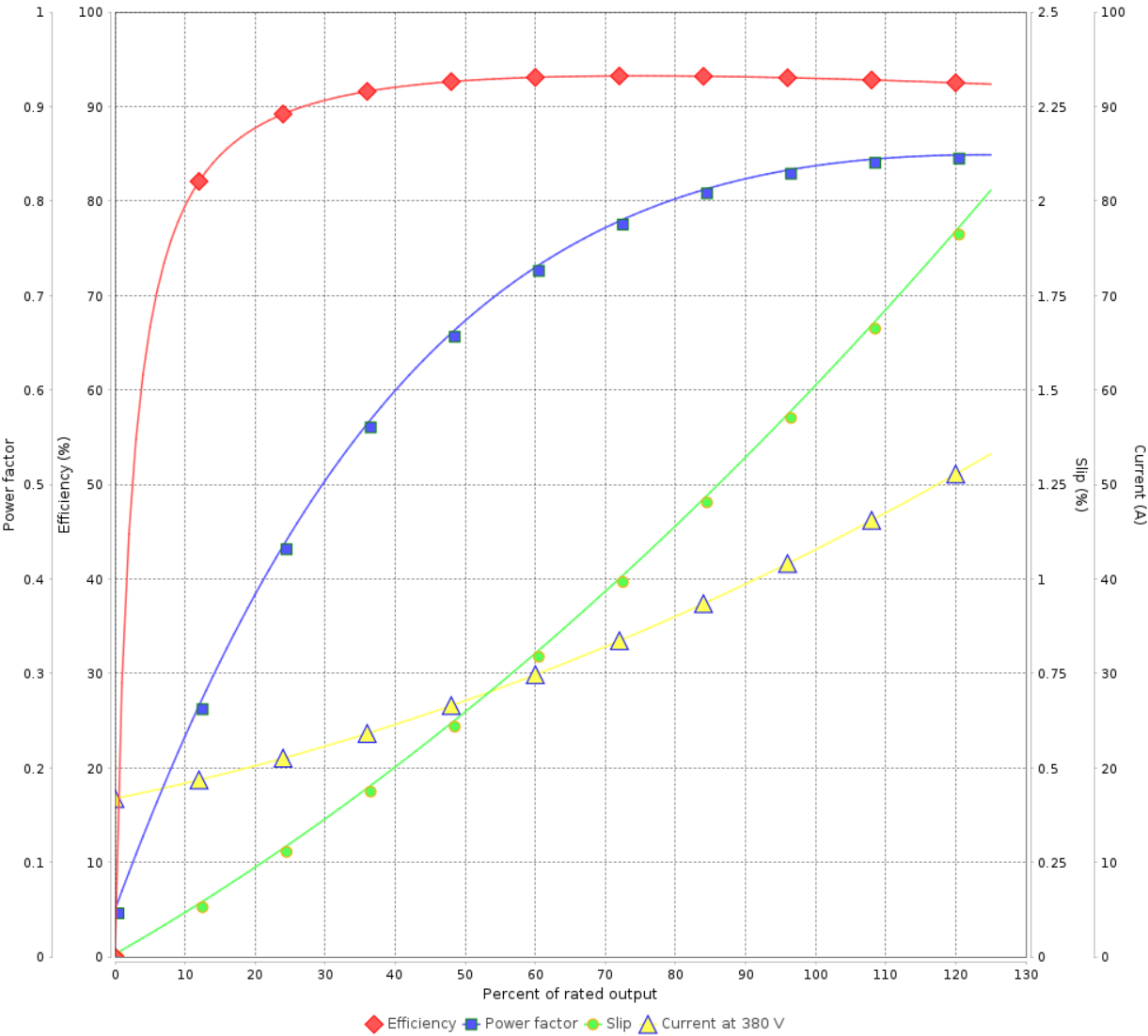
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 12447812

LOAD PERFORMANCE CURVE



Performance : 380 V 50 Hz 4P IE3			
Rated current	: 42.8 A	Moment of inertia (J)	: 0.3861 kgm ²
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 14.7 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1477 rpm	Design	: B

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 4 / 9	Revision
Checked by					
Date	22/10/2024				

LOAD PERFORMANCE CURVE

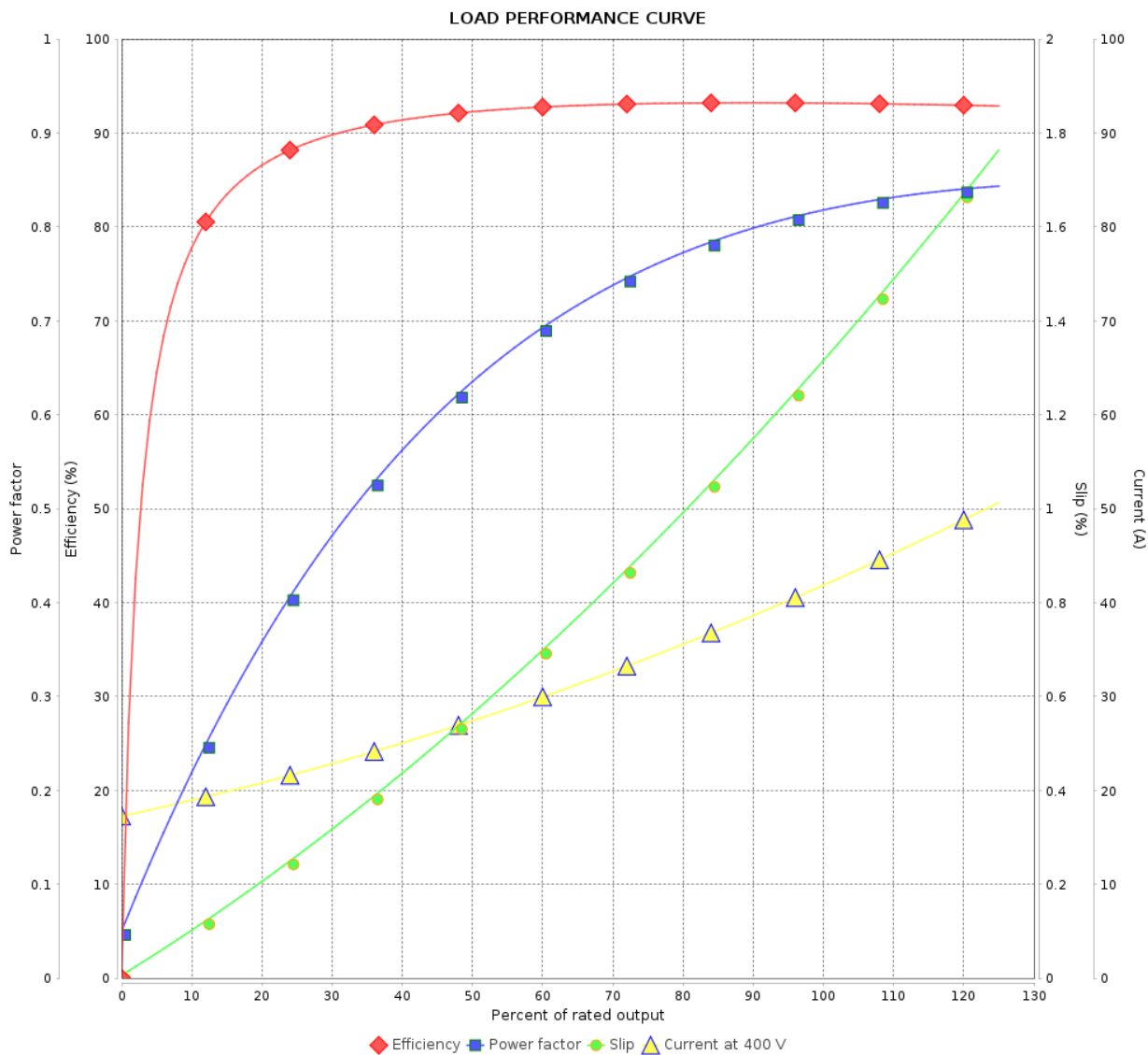
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12447812



Performance : 400 V 50 Hz 4P IE3

Rated current : 41.6 A
LRC : 7.4
Rated torque : 14.7 kgfm
Locked rotor torque : 270 %
Breakdown torque : 290 %
Rated speed : 1480 rpm

Moment of inertia (J) : 0.3861 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	22/10/2024			

LOAD PERFORMANCE CURVE

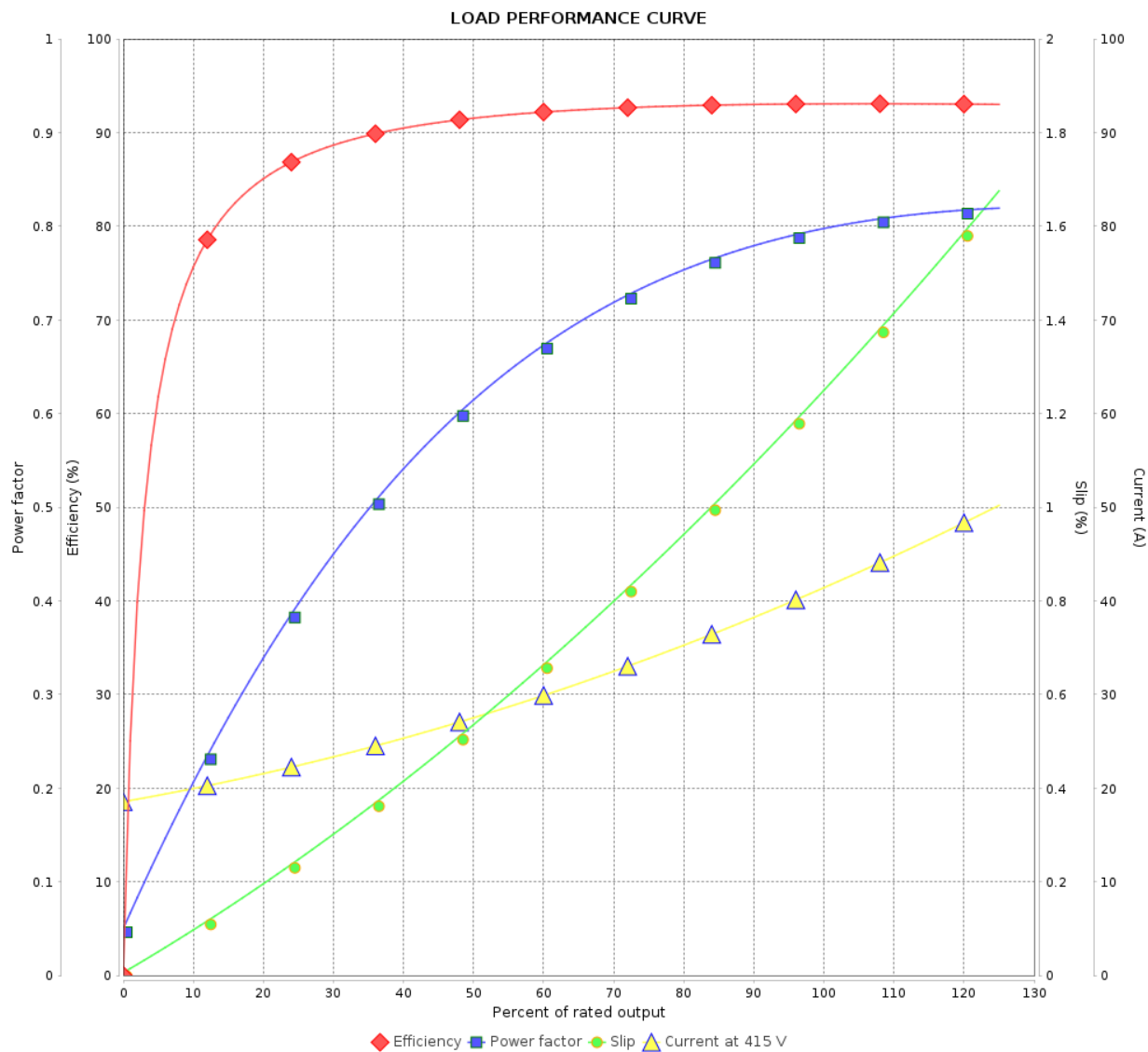
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12447812



Performance : 415 V 50 Hz 4P IE3

Rated current : 41.1 A
LRC : 7.7
Rated torque : 14.7 kgfm
Locked rotor torque : 280 %
Breakdown torque : 310 %
Rated speed : 1481 rpm

Moment of inertia (J) : 0.3861 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	Revision
Checked by				6 / 9	
Date					

LOAD PERFORMANCE CURVE

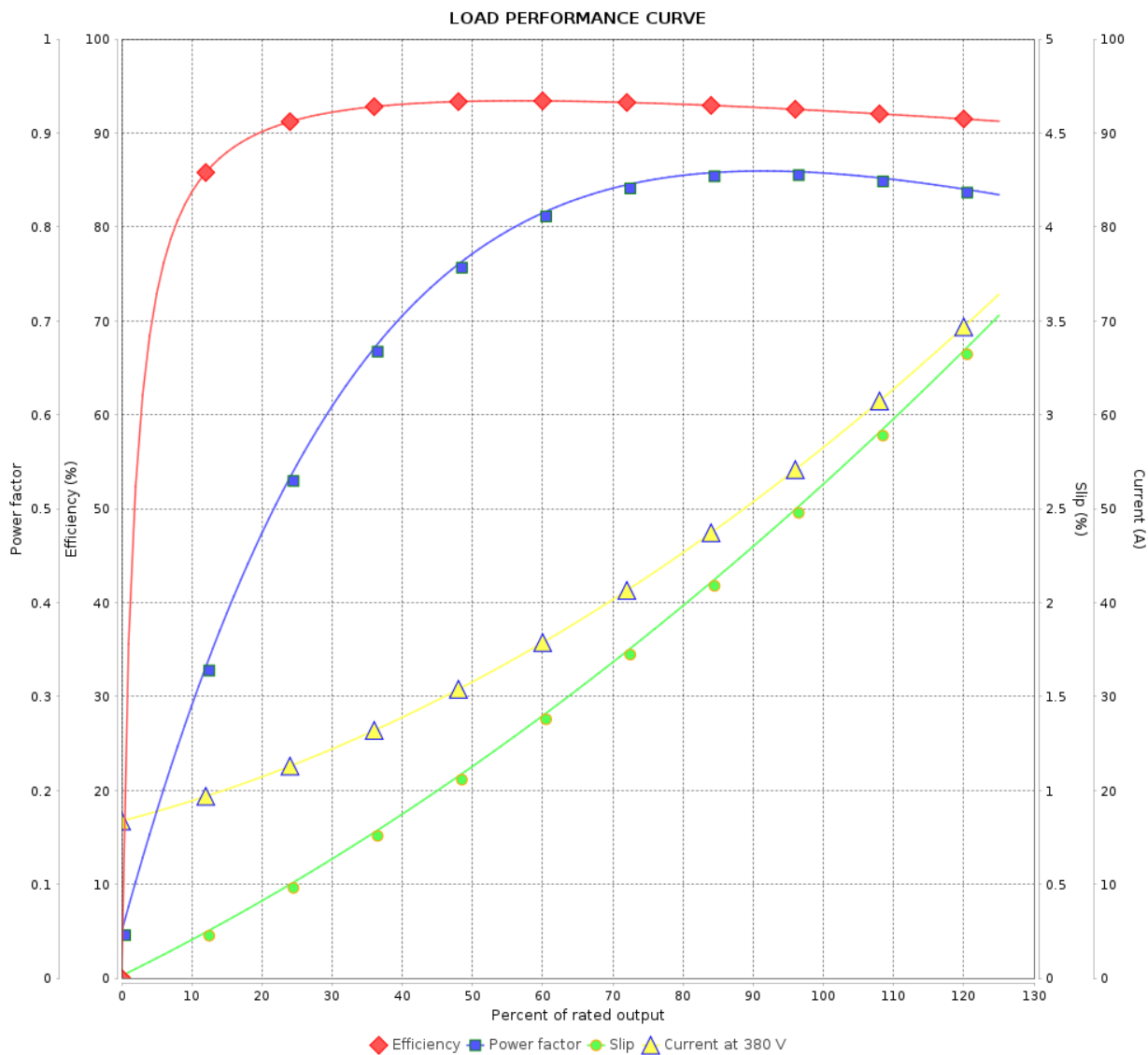
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12447812



Performance : 380 V 50 Hz 4P IE2

Rated current : 57.4 A
LRC : 5.0
Rated torque : 19.9 kgfm
Locked rotor torque : 170 %
Breakdown torque : 180 %
Rated speed : 1460 rpm

Moment of inertia (J) : 0.3861 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 / 9Revision		
Checked by				
Date	22/10/2024			

LOAD PERFORMANCE CURVE

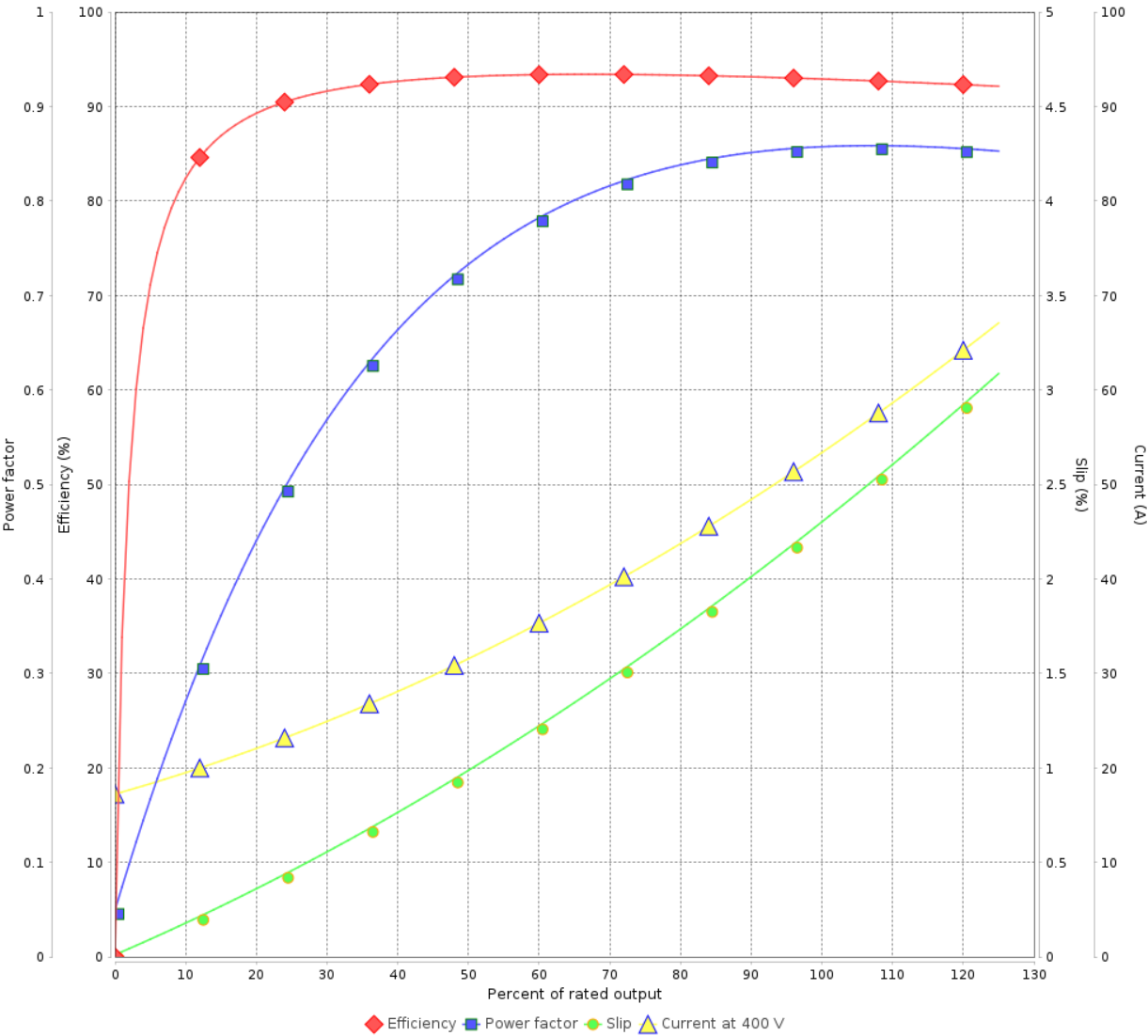
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 12447812

LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 4P IE2

Rated current	: 54.1 A	Moment of inertia (J)	: 0.3861 kgm ²
LRC	: 5.6	Duty cycle	: Cont.(S1)
Rated torque	: 19.8 kgfm	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 1465 rpm	Design	: B

Rev.	Changes Summary		Performed	Checked	Date
Performed by		Page 8 / 9 Revision			
Checked by					
Date	22/10/2024				

LOAD PERFORMANCE CURVE

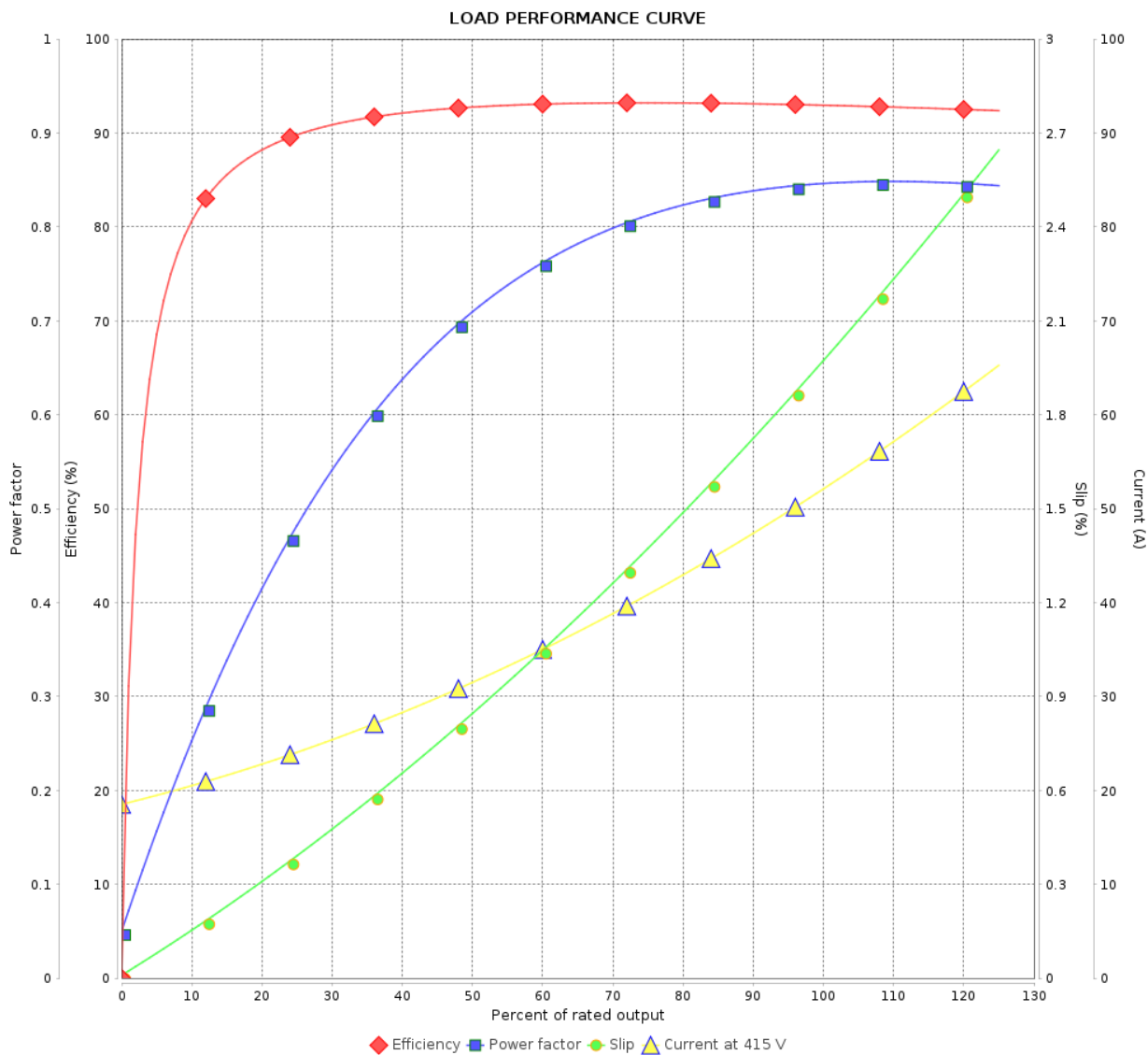
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12447812



Performance : 415 V 50 Hz 4P IE2

Rated current : 52.8 A
LRC : 6.0
Rated torque : 19.7 kgfm
Locked rotor torque : 210 %
Breakdown torque : 229 %
Rated speed : 1470 rpm

Moment of inertia (J) : 0.3861 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	22/10/2024			

