

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 12447815

Frame	: 324/6TS	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	: 242 kg
Protection degree	: IP56	Moment of inertia (J)	: 0.2063 kgm ²
Design	: B		

Output [HP]	40	30	30	30	40	40	40
Poles	2	2	2	2	2	2	2
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	460	380	400	415	380	400	415
Rated current [A]	46.3	41.0	39.4	38.4	56.9	53.7	51.7
L. R. Amperes [A]	292	295	296	292	285	301	321
LRC [A]	6.3x(Code G)	7.2x(Code H)	7.5x(Code H)	7.6x(Code H)	5.0x(Code E)	5.6x(Code F)	6.2x(Code G)
No load current [A]	11.0	12.0	11.0	12.0	10.0	11.0	12.0
Rated speed [RPM]	3555	2960	2965	2970	2930	2940	2950
Slip [%]	1.25	1.33	1.17	1.00	2.33	2.00	1.67
Rated torque [kgfm]	8.17	7.36	7.34	7.33	9.91	9.87	9.84
Locked rotor torque [%]	250	240	270	290	180	200	220
Breakdown torque [%]	240	250	280	310	200	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	39s (cold) 22s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)
Noise level ²	76.0 dB(A)	72.0 dB(A)	72.0 dB(A)	72.0 dB(A)	72.0 dB(A)	72.0 dB(A)	72.0 dB(A)
Efficiency (%)	25%						
	50%	91.7	90.9	90.3	90.7	91.7	91.7
	75%	92.4	91.8	91.7	92.1	91.7	92.4
	100%	92.4	92.7	92.7	92.7	91.0	91.7
Power Factor	25%						
	50%	0.80	0.77	0.75	0.73	0.84	0.80
	75%	0.86	0.85	0.83	0.82	0.88	0.86
	100%	0.88	0.88	0.87	0.86	0.88	0.88

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

Losses (%)	P1 (0,9;1,0)	8.9	8.6	8.6	8.6	10.8	9.9	9.9
	P2 (0,5;1,0)	7.3	6.9	6.9	6.9	9.0	8.2	8.2
	P3 (0,25;1,0)	6.5	6.2	6.2	6.2	8.3	7.4	7.4
	P4 (0,9;0,5)	4.4	4.2	4.2	4.2	5.2	4.8	4.8
	P5 (0,5;0,5)	2.8	2.7	2.7	2.7	3.4	3.1	3.1
	P6 (0,5;0,25)	1.8	1.7	1.7	1.7	2.2	2.0	2.0
	P7 (0,25;0,25)	1.2	1.1	1.1	1.1	1.5	1.4	1.4

Bearing type	: 6312 C3	Non drive end	6212 C3	Foundation loads	
Sealing	: Inpro/Seal	Inpro/Seal		Max. traction	: 164 kgf
Lubrication interval	: 12000 h	15000 h		Max. compression	: 406 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 2 / 9	Revision
Checked by					
Date	22/10/2024				

LOAD PERFORMANCE CURVE

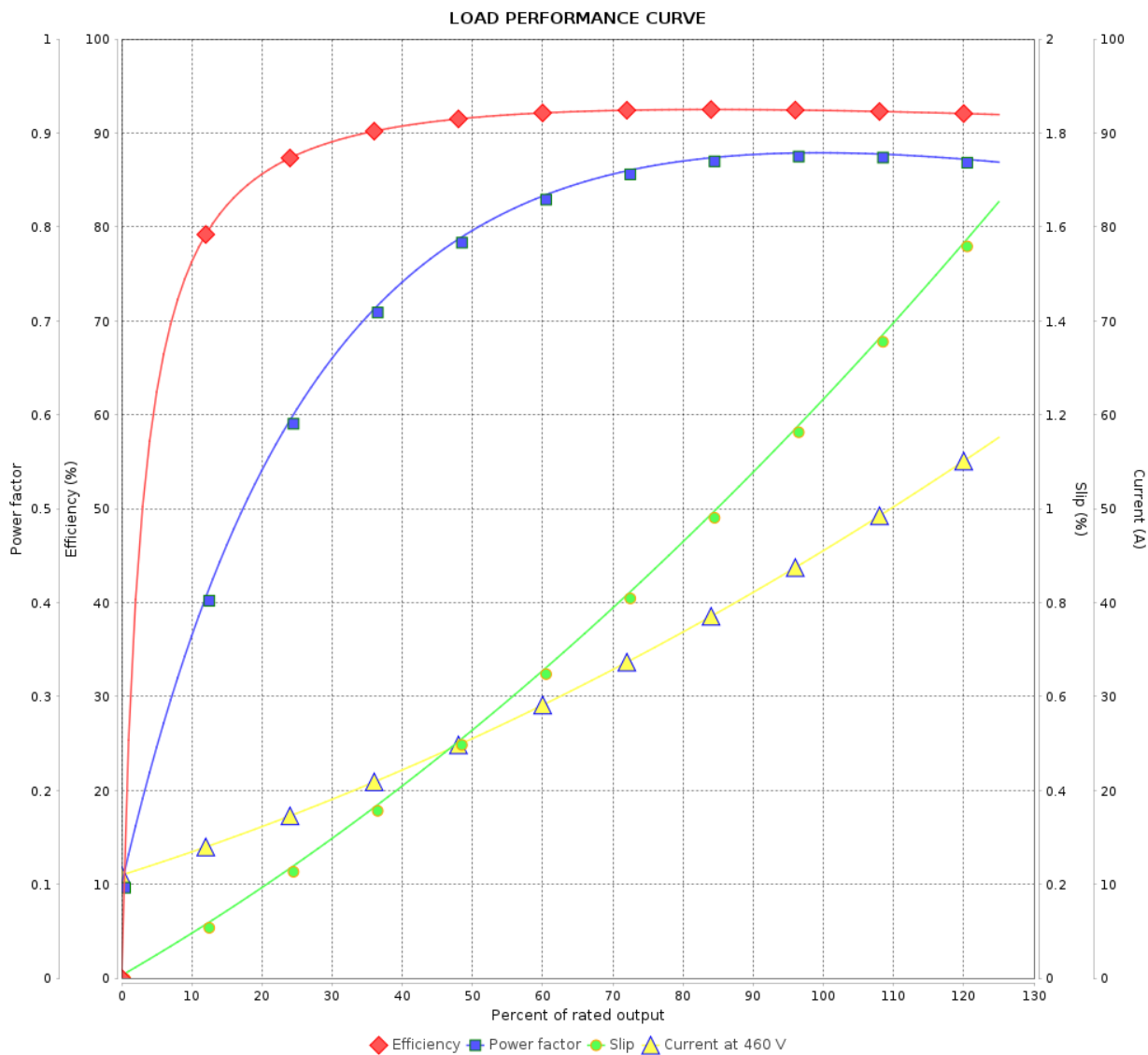
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12447815



Performance : 460 V 60 Hz 2P

Rated current : 46.3 A
LRC : 6.3
Rated torque : 8.17 kgfm
Locked rotor torque : 250 %
Breakdown torque : 240 %
Rated speed : 3555 rpm

Moment of inertia (J) : 0.2063 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

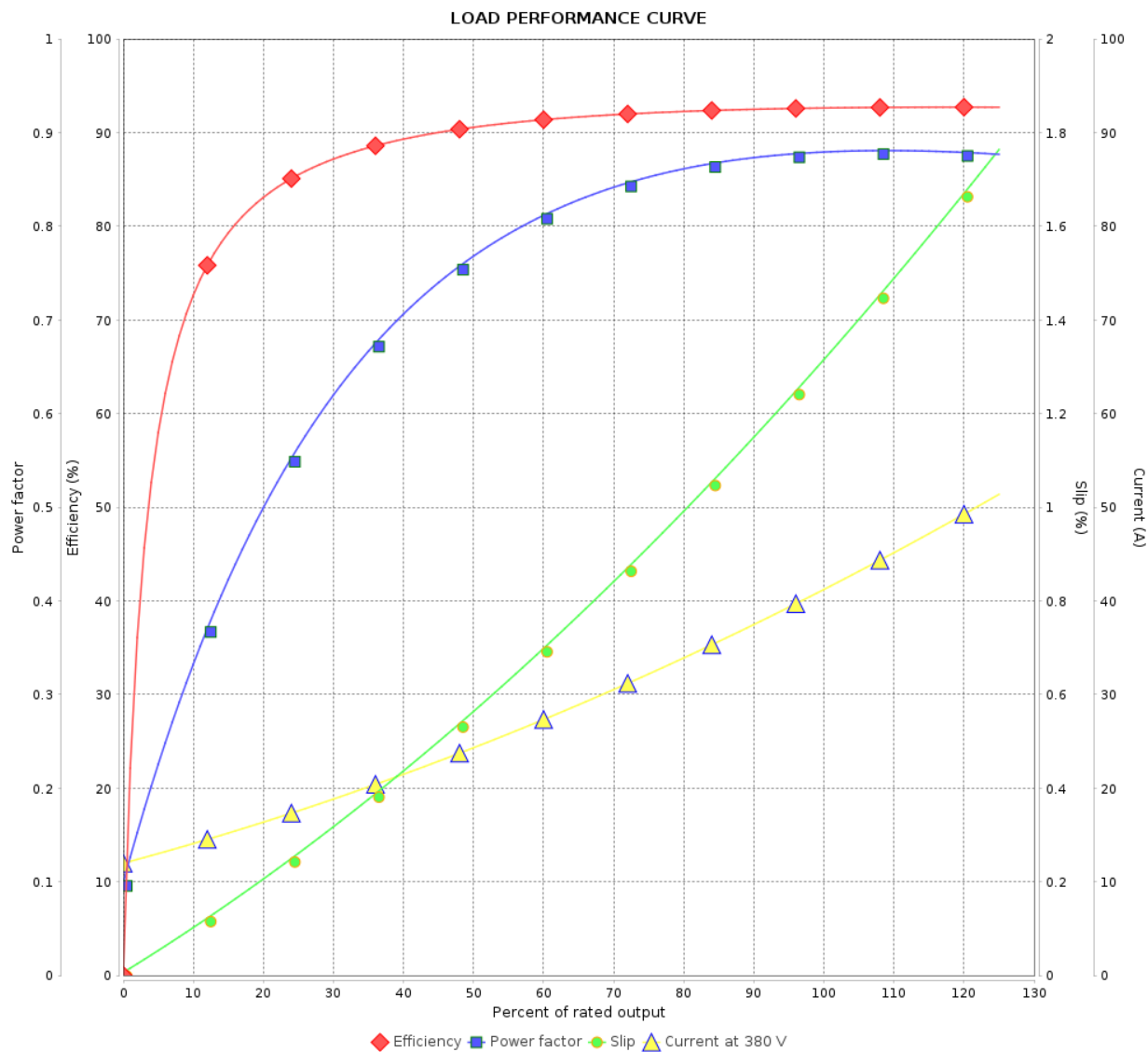
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12447815



Performance : 380 V 50 Hz 2P IE3

Rated current : 41.0 A
LRC : 7.2
Rated torque : 7.36 kgfm
Locked rotor torque : 240 %
Breakdown torque : 250 %
Rated speed : 2960 rpm

Moment of inertia (J) : 0.2063 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 4 / 9	Revision
Checked by					
Date	22/10/2024				

LOAD PERFORMANCE CURVE

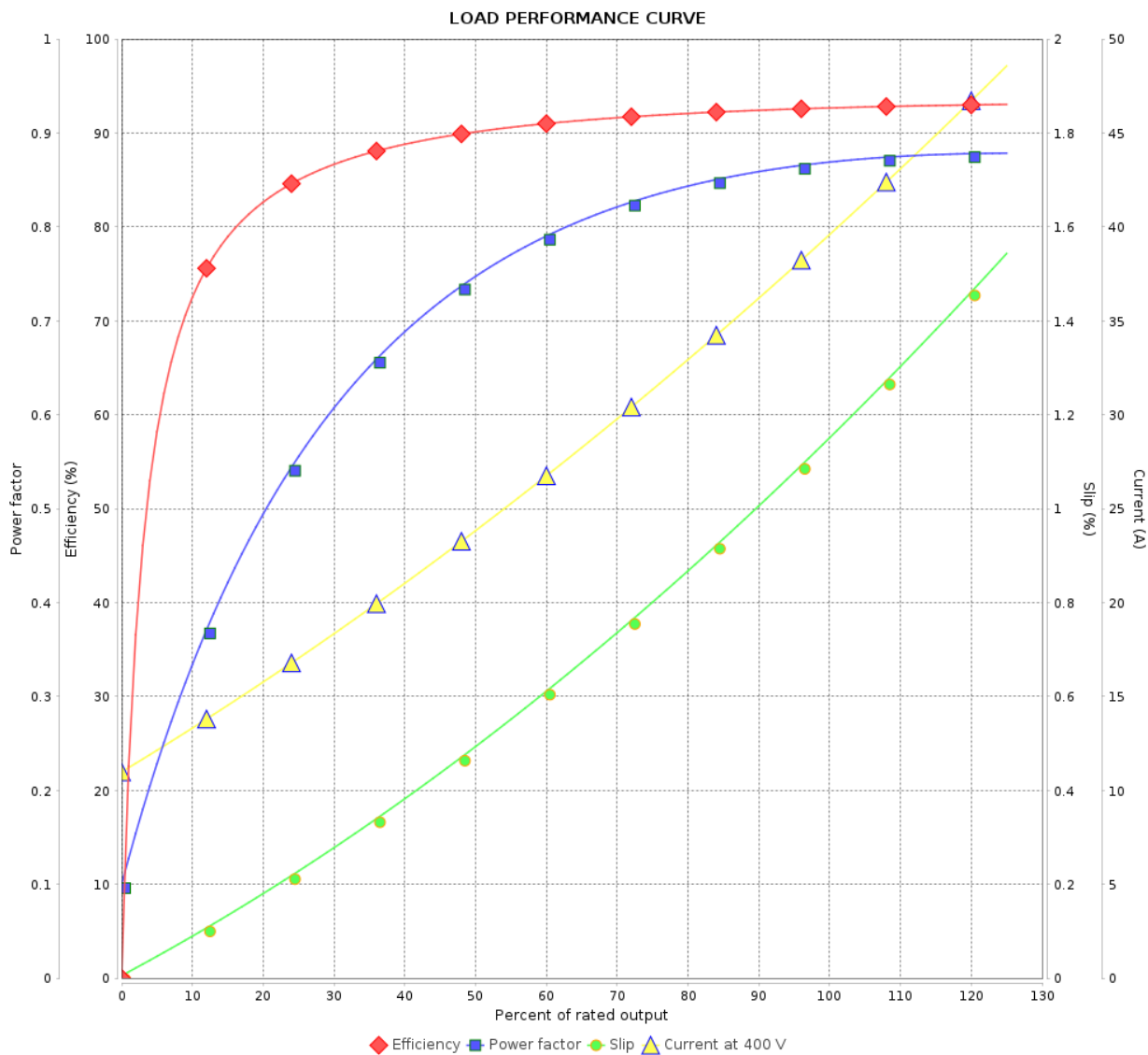
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12447815



Performance : 400 V 50 Hz 2P IE3

Rated current : 39.4 A
LRC : 7.5
Rated torque : 7.34 kgfm
Locked rotor torque : 270 %
Breakdown torque : 280 %
Rated speed : 2965 rpm

Moment of inertia (J) : 0.2063 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	22/10/2024				

LOAD PERFORMANCE CURVE

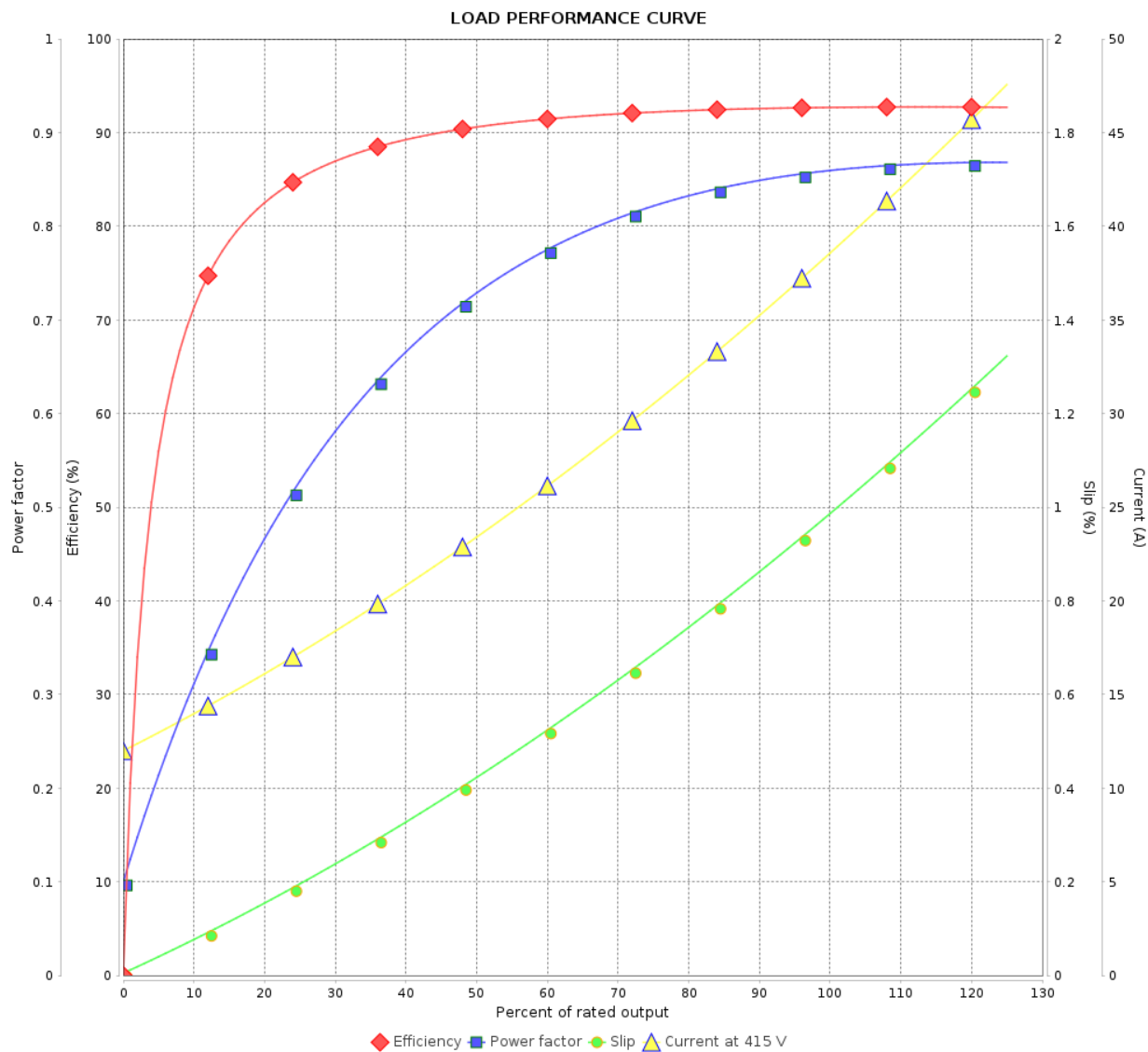
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12447815



Performance : 415 V 50 Hz 2P IE3

Rated current : 38.4 A
LRC : 7.6
Rated torque : 7.33 kgfm
Locked rotor torque : 290 %
Breakdown torque : 310 %
Rated speed : 2970 rpm

Moment of inertia (J) : 0.2063 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	22/10/2024				

LOAD PERFORMANCE CURVE

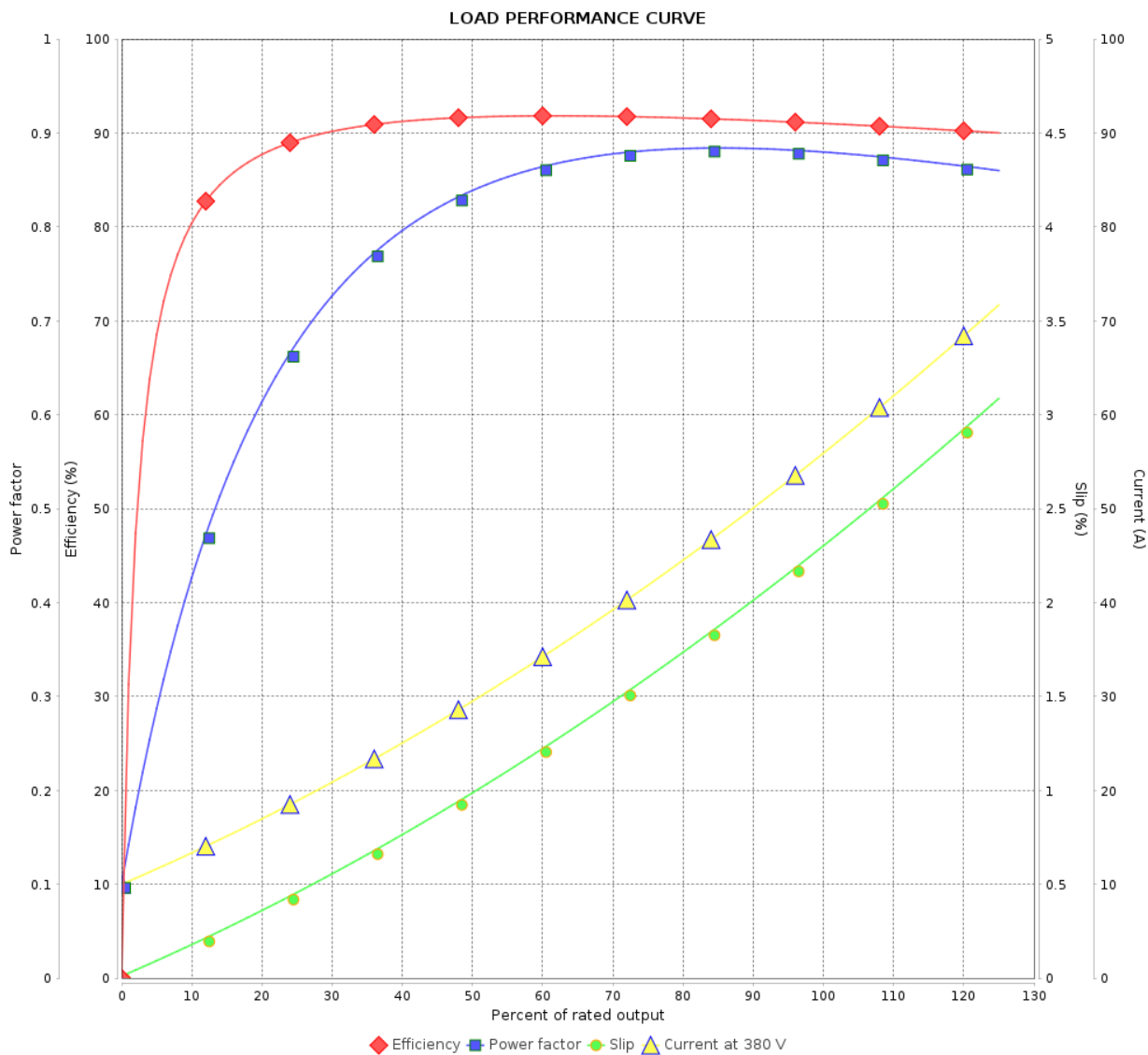
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12447815



Performance : 380 V 50 Hz 2P IE1

Rated current : 56.9 A
LRC : 5.0
Rated torque : 9.91 kgfm
Locked rotor torque : 180 %
Breakdown torque : 200 %
Rated speed : 2930 rpm

Moment of inertia (J) : 0.2063 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	22/10/2024				

LOAD PERFORMANCE CURVE

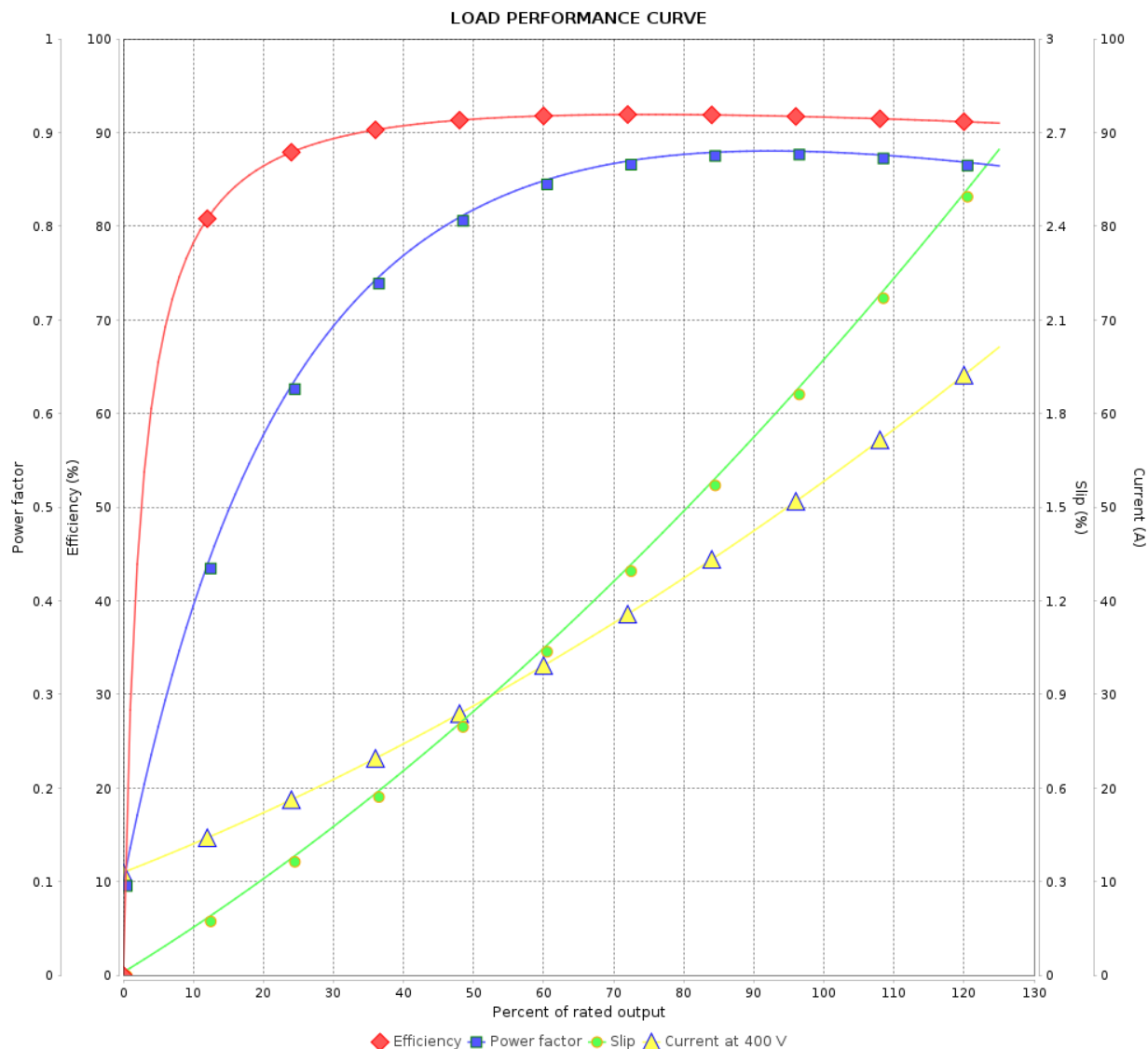
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12447815



Performance : 400 V 50 Hz 2P IE1

Rated current : 53.7 A
LRC : 5.6
Rated torque : 9.87 kgfm
Locked rotor torque : 200 %
Breakdown torque : 210 %
Rated speed : 2940 rpm

Moment of inertia (J) : 0.2063 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

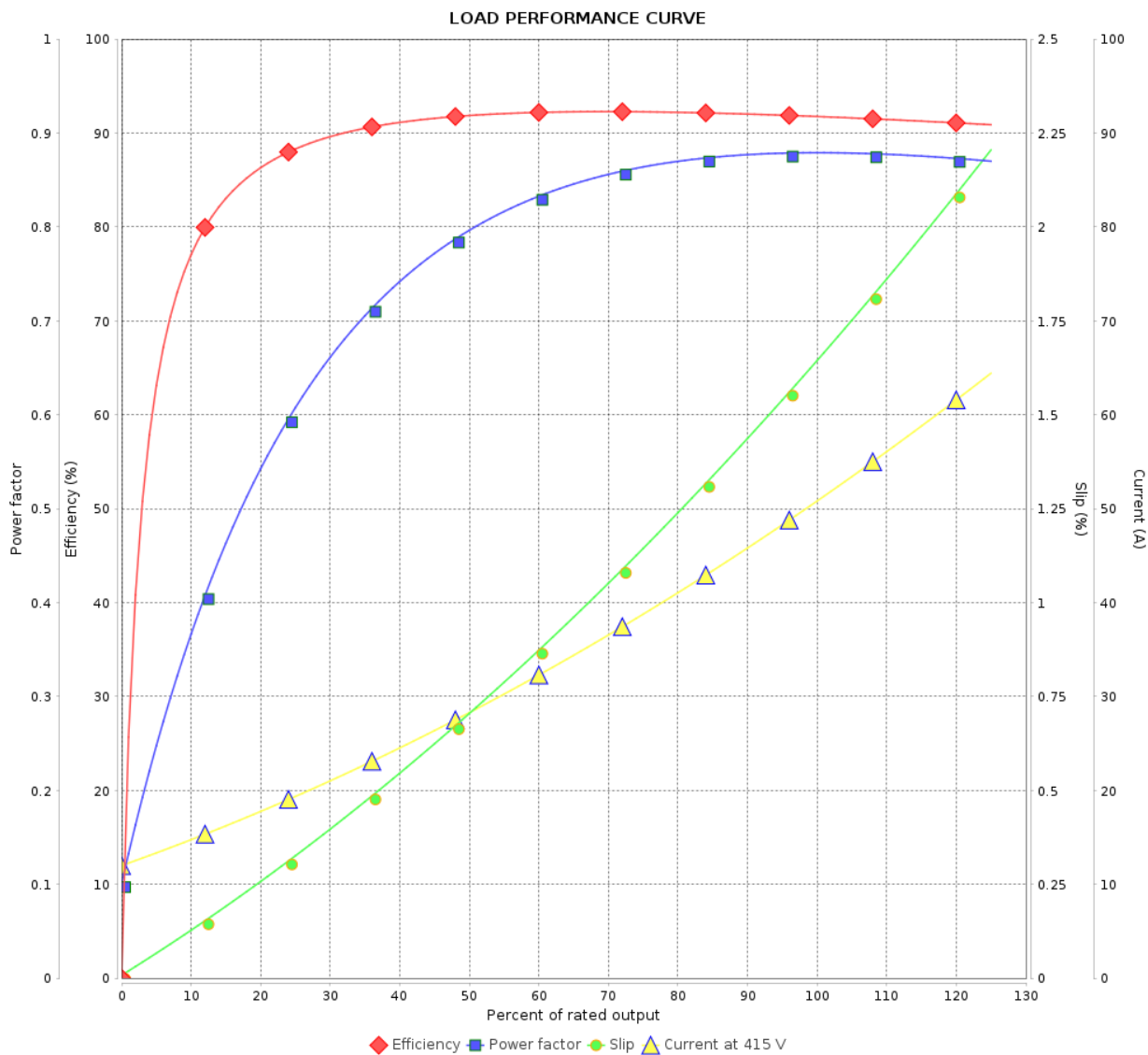
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12447815



Performance : 415 V 50 Hz 2P IE1

Rated current : 51.7 A
LRC : 6.2
Rated torque : 9.84 kgfm
Locked rotor torque : 220 %
Breakdown torque : 229 %
Rated speed : 2950 rpm

Moment of inertia (J) : 0.2063 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			

