

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 13334675

Frame	: 254/6T	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	: 130 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.0647 kgm ²
Design	: B		

Output [HP]	20	15	15	15	20	20	20
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]	23.3	20.8	20.0	19.5	28.6	27.2	26.0
L. R. Amperes [A]	142	146	154	158	146	155	159
LRC [A]	6.1x(Code G)	7.0x(Code H)	7.7x(Code J)	8.1x(Code J)	5.1x(Code E)	5.7x(Code F)	6.1x(Code G)
No load current [A]	6.50	6.20	6.60	6.90	6.20	6.60	6.90
Rated speed [RPM]	3520	2925	2935	2940	2870	2905	2915
Slip [%]	2.22	2.50	2.17	2.00	4.33	3.17	2.83
Rated torque [kgfm]	4.12	3.72	3.71	3.70	5.06	5.00	4.98
Locked rotor torque [%]	220	220	240	270	160	180	200
Breakdown torque [%]	250	260	280	310	200	210	229
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	34s (cold) 19s (hot)	28s (cold) 16s (hot)	28s (cold) 16s (hot)	28s (cold) 16s (hot)	14s (cold) 8s (hot)	18s (cold) 10s (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%						
	50%	91.0	90.6	90.4	89.8	91.0	91.0
	75%	91.7	90.9	91.2	91.1	90.2	91.0
	100%	91.0	91.2	91.2	91.2	88.5	89.5
Power Factor	25%						
	50%	0.80	0.78	0.75	0.73	0.85	0.83
	75%	0.87	0.86	0.85	0.83	0.89	0.88
	100%	0.89	0.88	0.87	0.86	0.90	0.89

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

Losses (%)	P1 (0,9;1,0)	9.0	8.8	8.8	8.8	11.9	10.7	9.9
	P2 (0,5;1,0)	7.0	6.8	6.8	6.8	9.2	8.3	7.7
	P3 (0,25;1,0)	6.8	6.6	6.6	6.6	8.9	8.1	7.5
	P4 (0,9;0,5)	4.6	4.5	4.5	4.5	6.0	5.4	5.0
	P5 (0,5;0,5)	2.6	2.5	2.5	2.5	3.4	3.1	2.8
	P6 (0,5;0,25)	1.6	1.5	1.5	1.5	2.1	1.9	1.7
	P7 (0,25;0,25)	0.9	0.9	0.9	0.9	1.2	1.1	1.0

Bearing type	: 6309 C3	Non drive end	6209 C3	Foundation loads	
Sealing	: Taconite		Taconite	Max. traction	: 115 kgf
	: Labyrinth		Labyrinth	Max. compression	: 245 kgf
Lubrication interval	: 19000 h		20000 h		
Lubricant amount	: 13 g		9 g		
Lubricant type	: Mobil Polyrex EM				

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Customer

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Notes

This revision replaces and cancel the previous one, which must be eliminated.

- (1) Looking the motor from the shaft end.
- (2) Measured at 1m and with tolerance of +3dB(A).
- (3) Approximate weight subject to changes after manufacturing process.
- (4) At 100% of full load.

These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.

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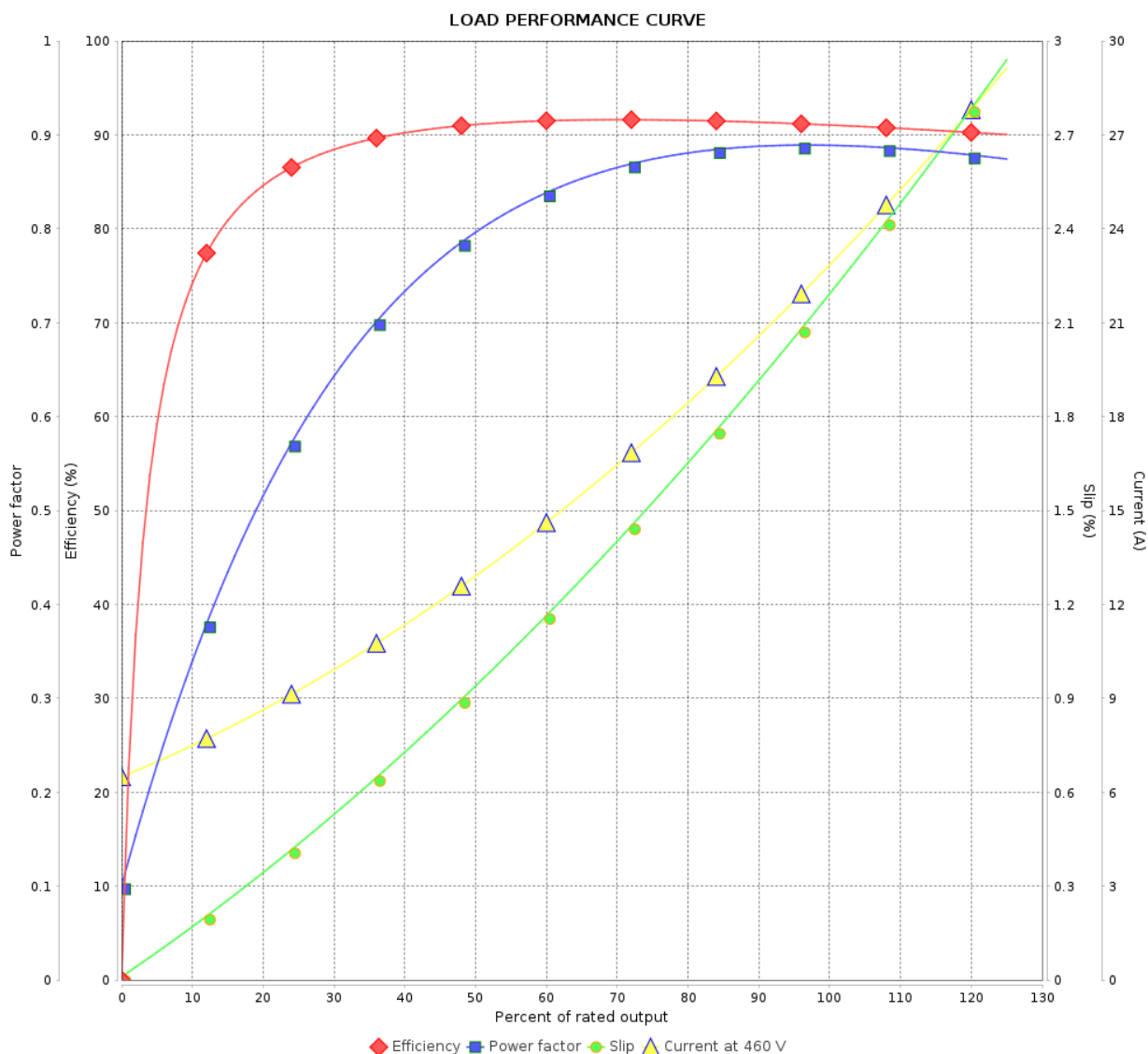
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 13334675



Performance : 460 V 60 Hz 2P

Rated current : 23.3 A
LRC : 6.1
Rated torque : 4.12 kgfm
Locked rotor torque : 220 %
Breakdown torque : 250 %
Rated speed : 3520 rpm

Moment of inertia (J) : 0.0647 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

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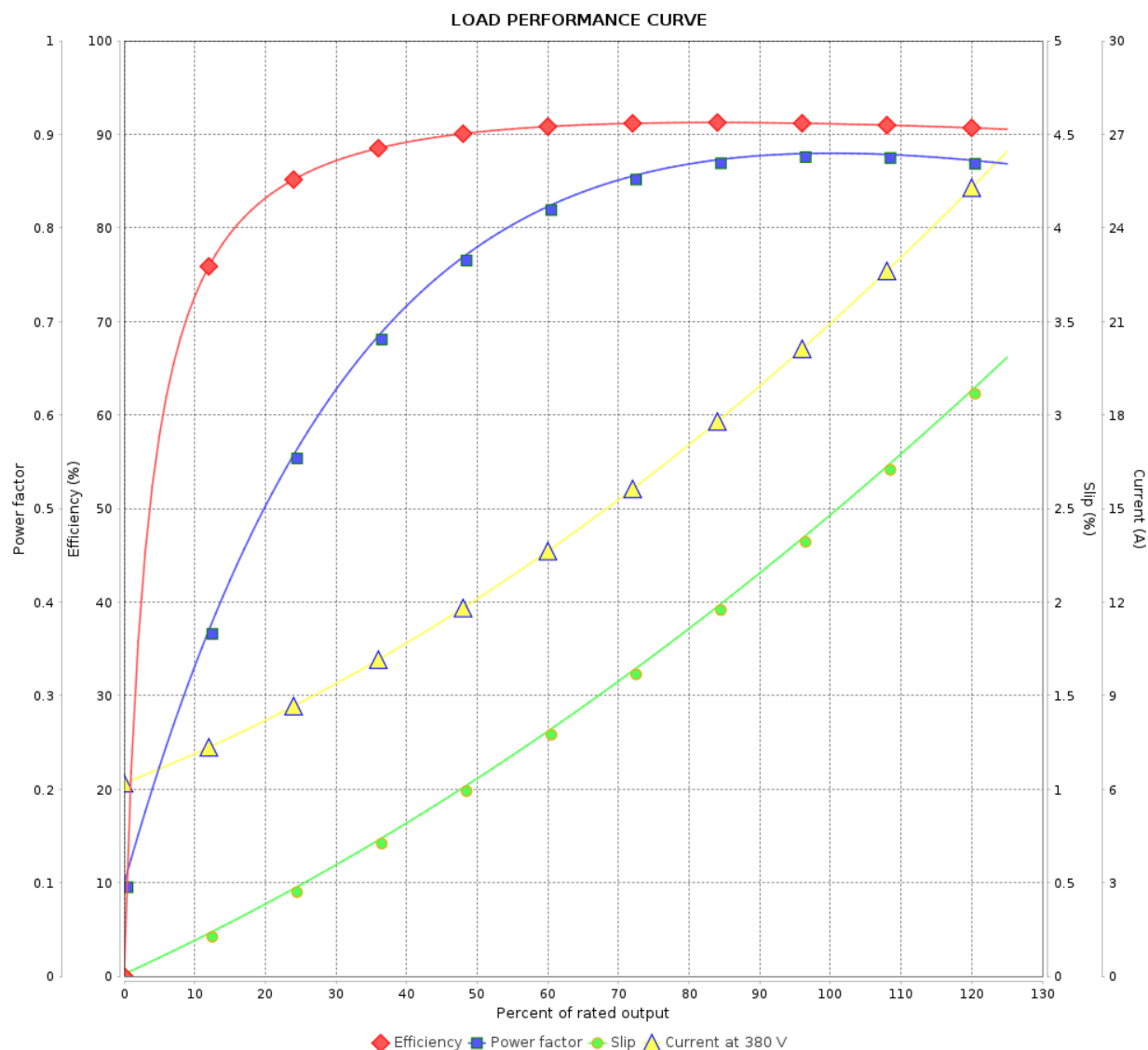
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 13334675



Performance : 380 V 50 Hz 2P IE3

Rated current : 20.8 A
LRC : 7.0
Rated torque : 3.72 kgfm
Locked rotor torque : 220 %
Breakdown torque : 260 %
Rated speed : 2925 rpm

Moment of inertia (J) : 0.0647 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

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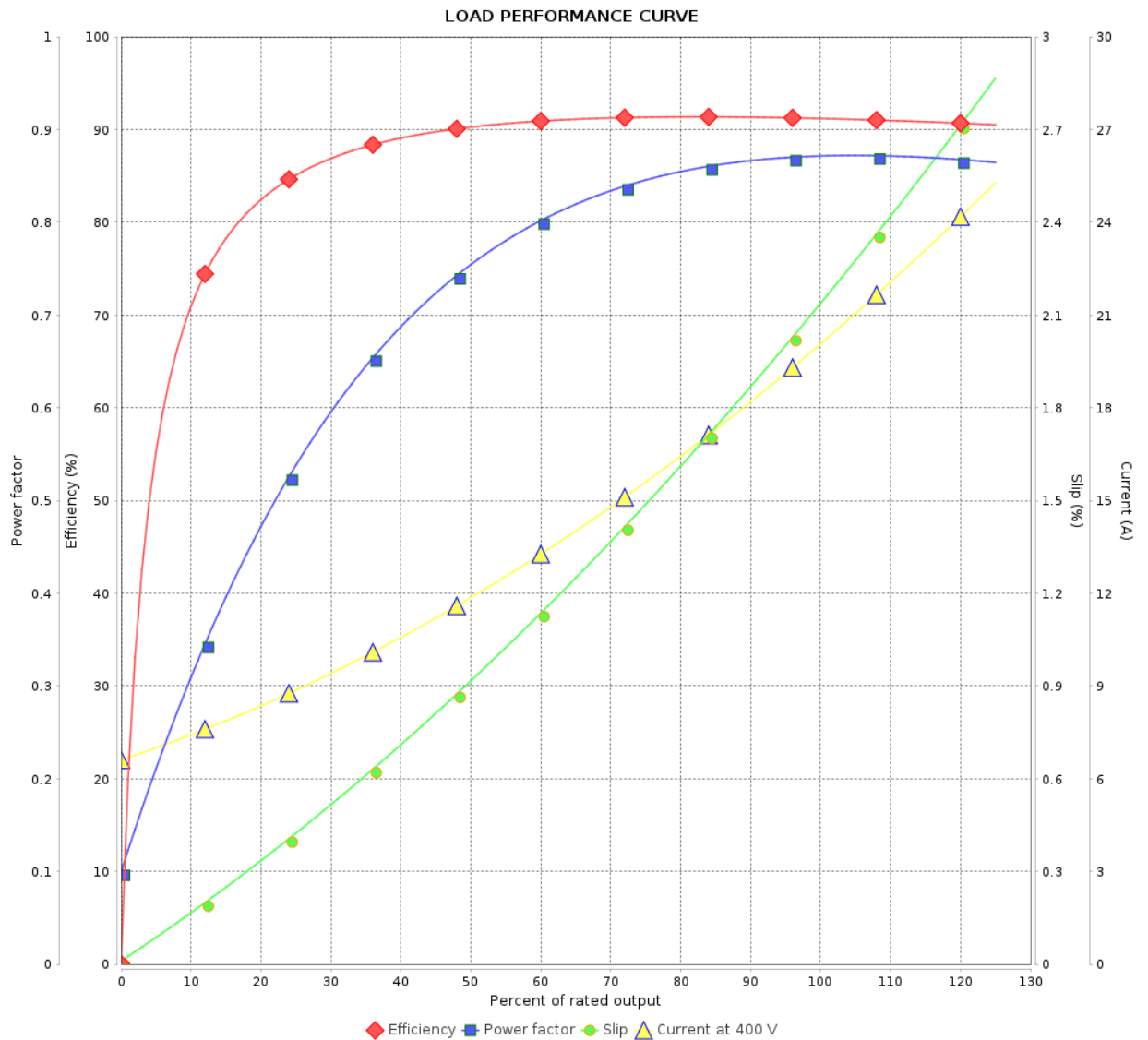
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 13334675



Performance : 400 V 50 Hz 2P IE3

Rated current	: 20.0 A	Moment of inertia (J)	: 0.0647 kgm ²
LRC	: 7.7	Duty cycle	: Cont.(S1)
Rated torque	: 3.71 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.15
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 2935 rpm	Design	: B

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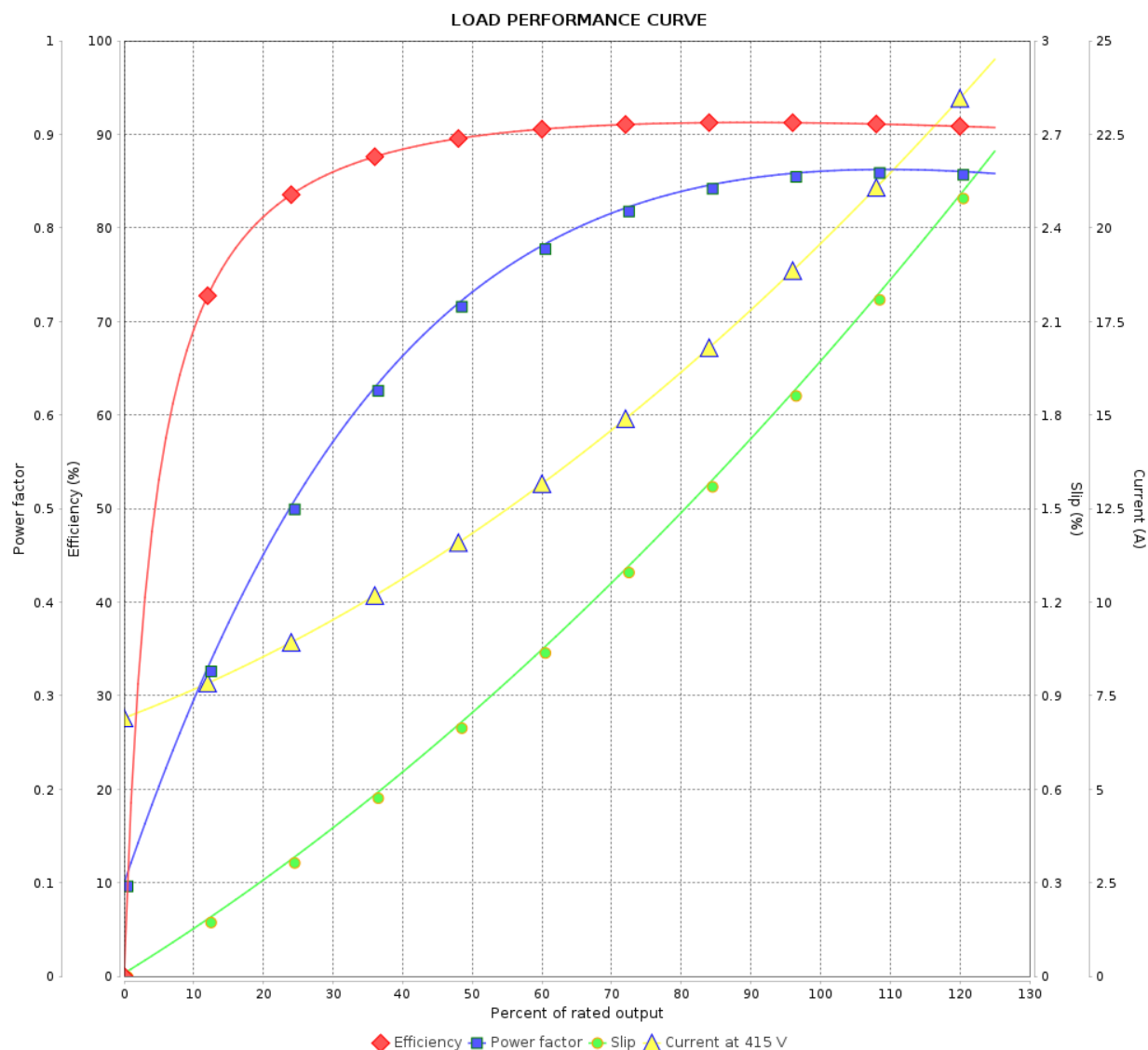
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 13334675



Performance : 415 V 50 Hz 2P IE3

Rated current : 19.5 A
LRC : 8.1
Rated torque : 3.70 kgfm
Locked rotor torque : 270 %
Breakdown torque : 310 %
Rated speed : 2940 rpm

Moment of inertia (J) : 0.0647 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

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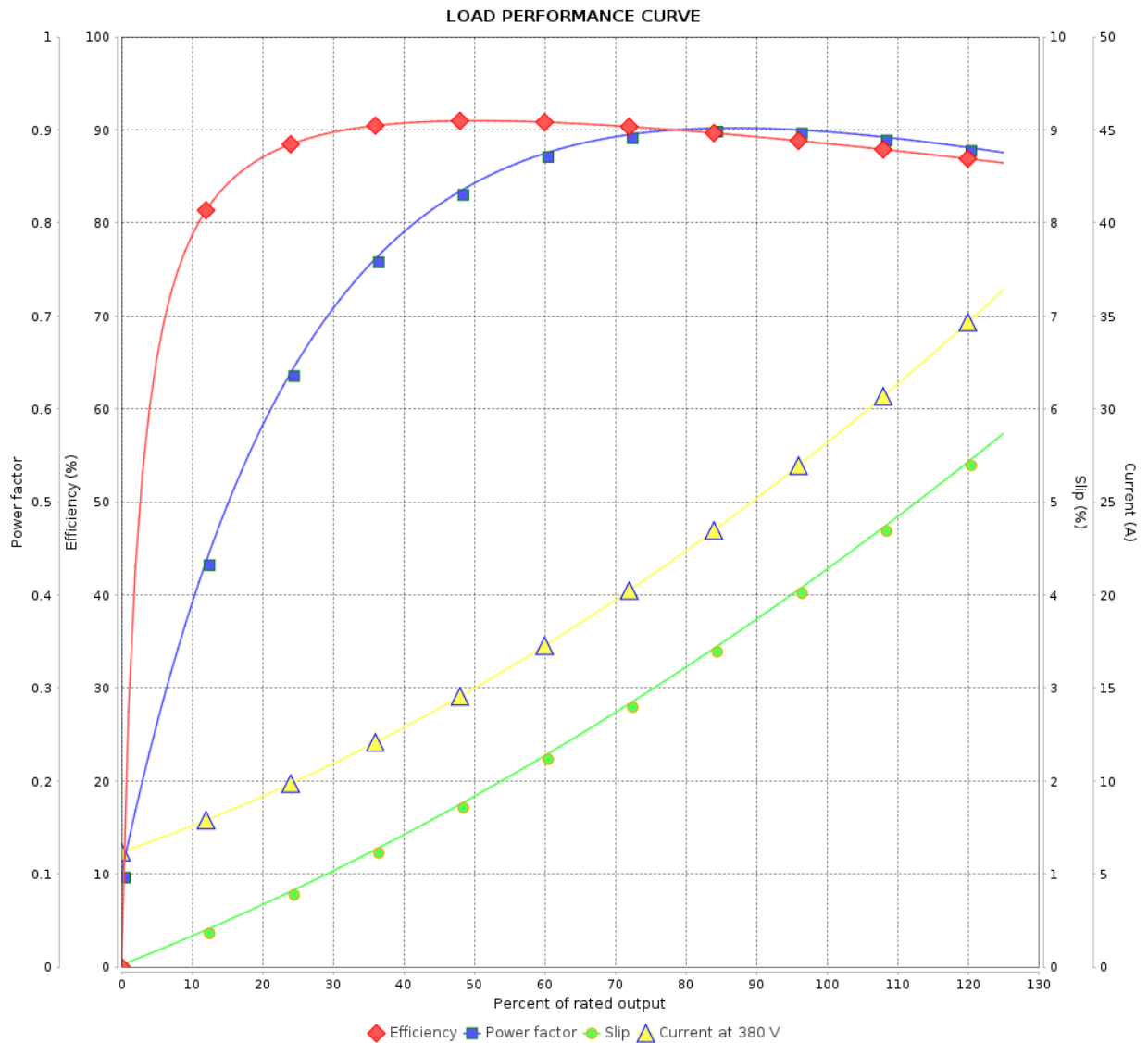
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 13334675



Performance : 380 V 50 Hz 2P

Rated current	: 28.6 A	Moment of inertia (J)	: 0.0647 kgm ²
LRC	: 5.1	Duty cycle	: Cont.(S1)
Rated torque	: 5.06 kgfm	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 105 K
Rated speed	: 2870 rpm	Design	: B

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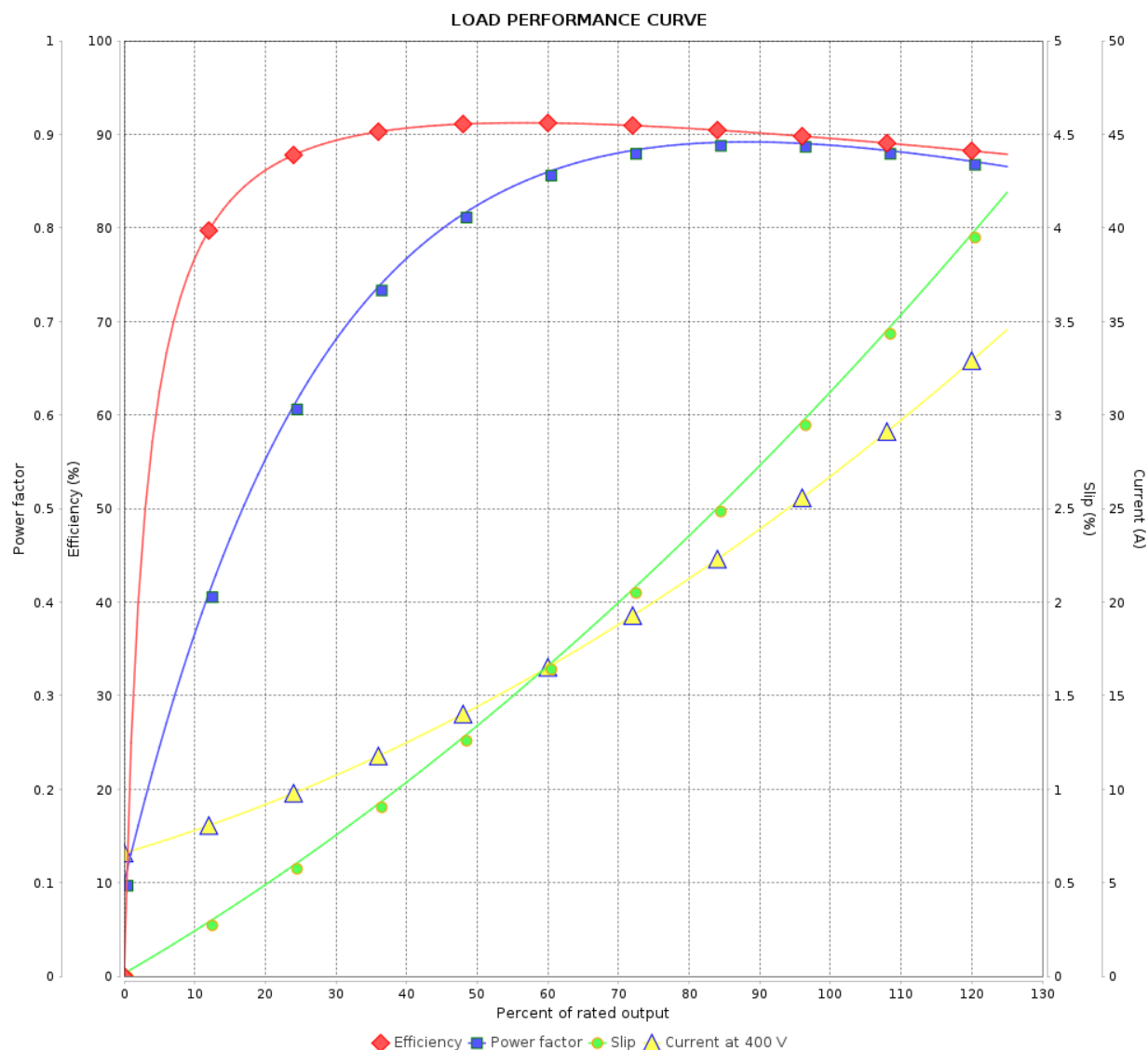
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 13334675



Performance : 400 V 50 Hz 2P IE1

Rated current : 27.2 A
LRC : 5.7
Rated torque : 5.00 kgfm
Locked rotor torque : 180 %
Breakdown torque : 210 %
Rated speed : 2905 rpm

Moment of inertia (J) : 0.0647 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 105 K
Design : B

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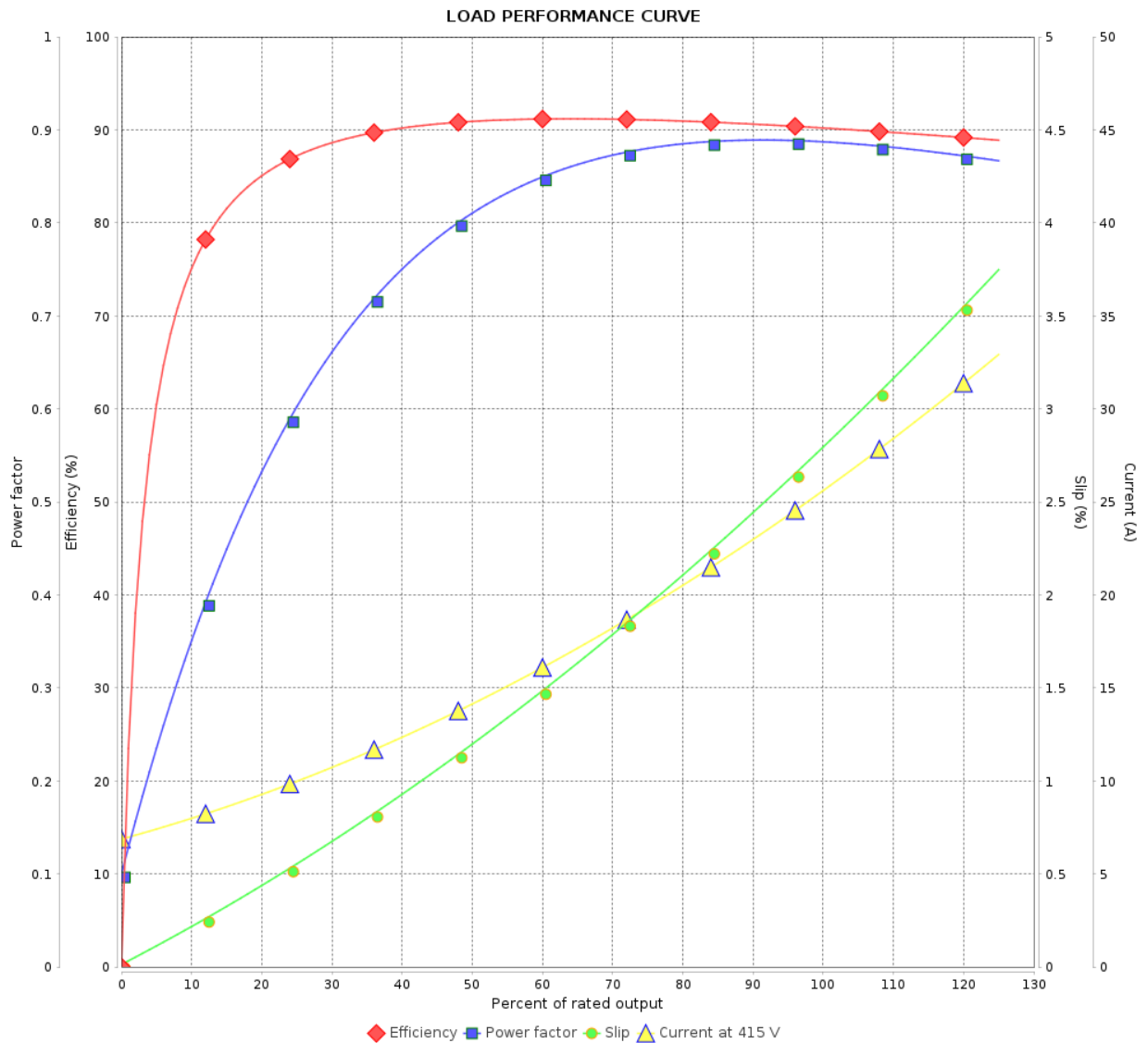
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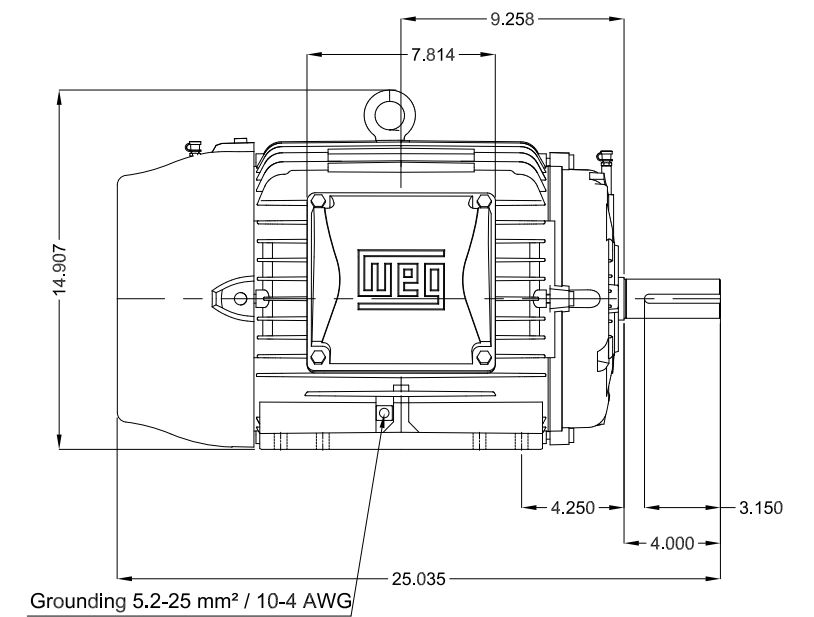
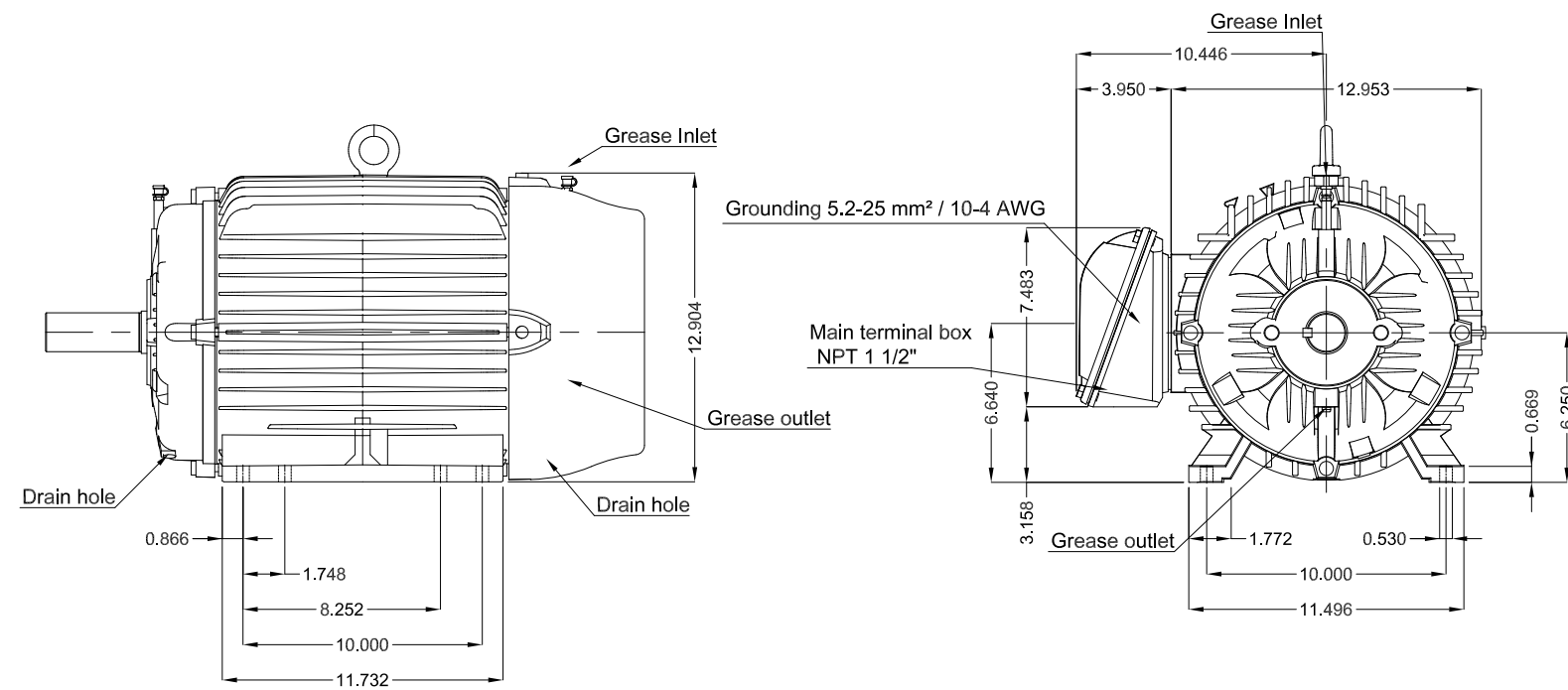




Performance : 415 V 50 Hz 2P IE1

Rated current : 26.0 A
LRC : 6.1
Rated torque : 4.98 kgfm
Locked rotor torque : 200 %
Breakdown torque : 229 %
Rated speed : 2915 rpm

Moment of inertia (J) : 0.0647 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 105 K
Design : B

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