

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 11942005

Frame	: 324/6T	Cooling method	: IC411 - TEFC
Insulation class	: F	Mounting	: F-1
Duty cycle	: Cont.(S1)	Rotation <sup>1</sup>	: Both (CW and CCW)
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line
Altitude	: 1000 m.a.s.l.	Approx. weight <sup>3</sup>	: 0.0 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.5561 kgm <sup>2</sup>
Design	: B		

Output [HP]	30	25	25	25	30	30	30
Poles	6	6	6	6	6	6	6
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	460	380	400	415	380	400	415
Rated current [A]	36.2	36.9	36.2	35.4	43.7	41.7	40.7
L. R. Amperes [A]	224	214	228	237	214	225	236
LRC [A]	6.2x(Code G)	5.8x(Code G)	6.3x(Code H)	6.7x(Code H)	4.9x(Code E)	5.4x(Code F)	5.8x(Code G)
No load current [A]	14.5	14.0	15.0	16.0	14.0	15.0	16.0
Rated speed [RPM]	1180	975	980	980	970	975	980
Slip [%]	1.67	2.50	2.00	2.00	3.00	2.50	2.00
Rated torque [kgfm]	18.5	18.6	18.5	18.5	22.4	22.3	22.2
Locked rotor torque [%]	220	190	220	240	160	180	200
Breakdown torque [%]	240	229	260	280	200	220	240
Service factor	1.25	1.00	1.15	1.15	1.00	1.15	1.15
Temperature rise	80 K	80 K	80 K	80 K	80 K	80 K	80 K
Locked rotor time	37s (cold) 21s (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 <sup>2</sup>	62.0 dB(A)	60.0 dB(A)	60.0 dB(A)	60.0 dB(A)	60.0 dB(A)	60.0 dB(A)	60.0 dB(A)
Efficiency (%)	25%						
	50%	91.7	91.3	91.3	90.7	91.7	91.0
	75%	93.0	91.8	92.2	91.9	91.7	92.4
	100%	93.0	91.7	92.1	92.0	91.0	91.7
Power Factor	25%						
	50%	0.65	0.64	0.61	0.58	0.71	0.65
	75%	0.77	0.76	0.74	0.71	0.81	0.76
	100%	0.82	0.83	0.80	0.79	0.84	0.82

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

Losses (%)	P1 (0,9;1,0)	7.3	7.3	7.3	7.3	7.3	7.3
	P2 (0,5;1,0)	6.2	6.2	6.2	6.2	6.2	6.2
	P3 (0,25;1,0)	6.0	6.0	6.0	6.0	6.0	6.0
	P4 (0,9;0,5)	3.5	3.5	3.5	3.5	3.5	3.5
	P5 (0,5;0,5)	2.4	2.4	2.4	2.4	2.4	2.4
	P6 (0,5;0,25)	1.6	1.6	1.6	1.6	1.6	1.6
	P7 (0,25;0,25)	1.1	1.1	1.1	1.1	1.1	1.1

Bearing type	: 6312 C3	Non drive end	6212 C3	Foundation loads	
Sealing	: Taconite		Taconite	Max. traction	: 671 kgf
	: Labyrinth		Labyrinth	Max. compression	: 671 kgf
Lubrication interval	: 20000 h		20000 h		
Lubricant amount	: 21 g		13 g		
Lubricant type	: Mobil Polyrex EM				

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Customer :

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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# LOAD PERFORMANCE CURVE

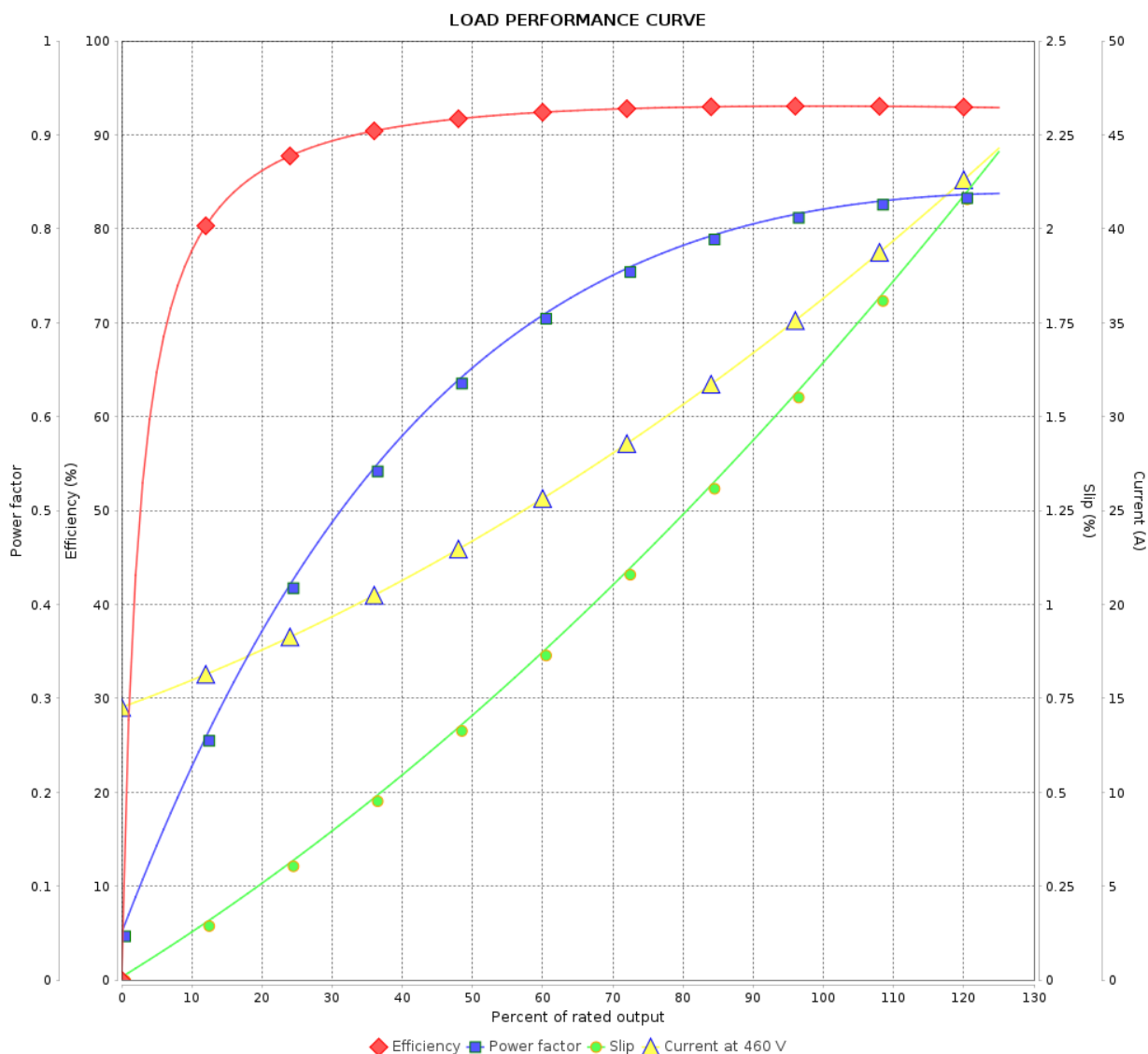
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11942005



Performance : 460 V 60 Hz 6P

Rated current : 36.2 A  
LRC : 6.2  
Rated torque : 18.5 kgfm  
Locked rotor torque : 220 %  
Breakdown torque : 240 %  
Rated speed : 1180 rpm

Moment of inertia (J) : 0.5561 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
Temperature rise : 80 K  
Design : B

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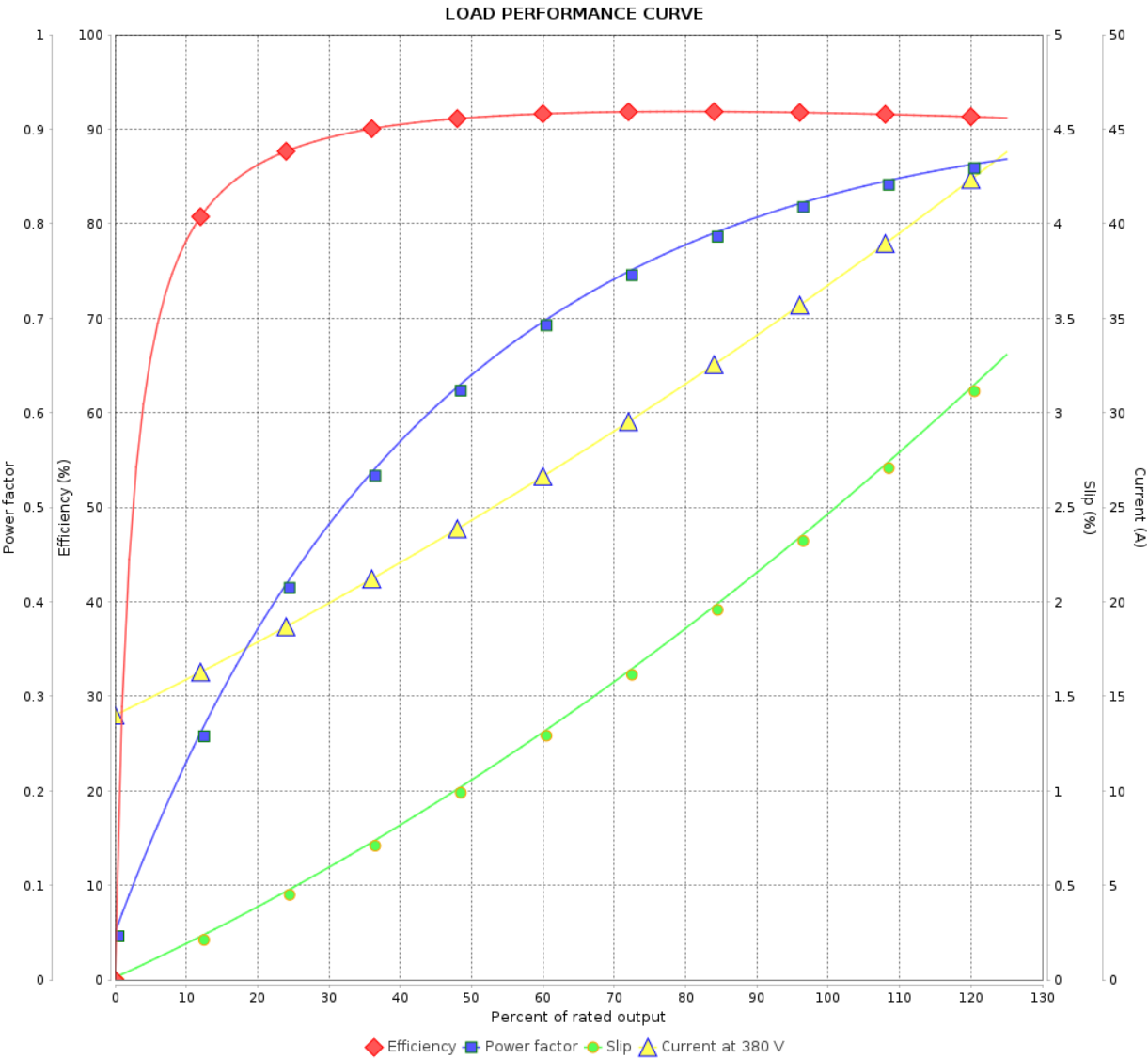
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Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase      Product code : 11942005



Performance : 380 V 50 Hz 6P IE3

Rated current	: 36.9 A	Moment of inertia (J)	: 0.5561 kgm <sup>2</sup>
LRC	: 5.8	Duty cycle	: Cont.(S1)
Rated torque	: 18.6 kgfm	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 975 rpm	Design	: B

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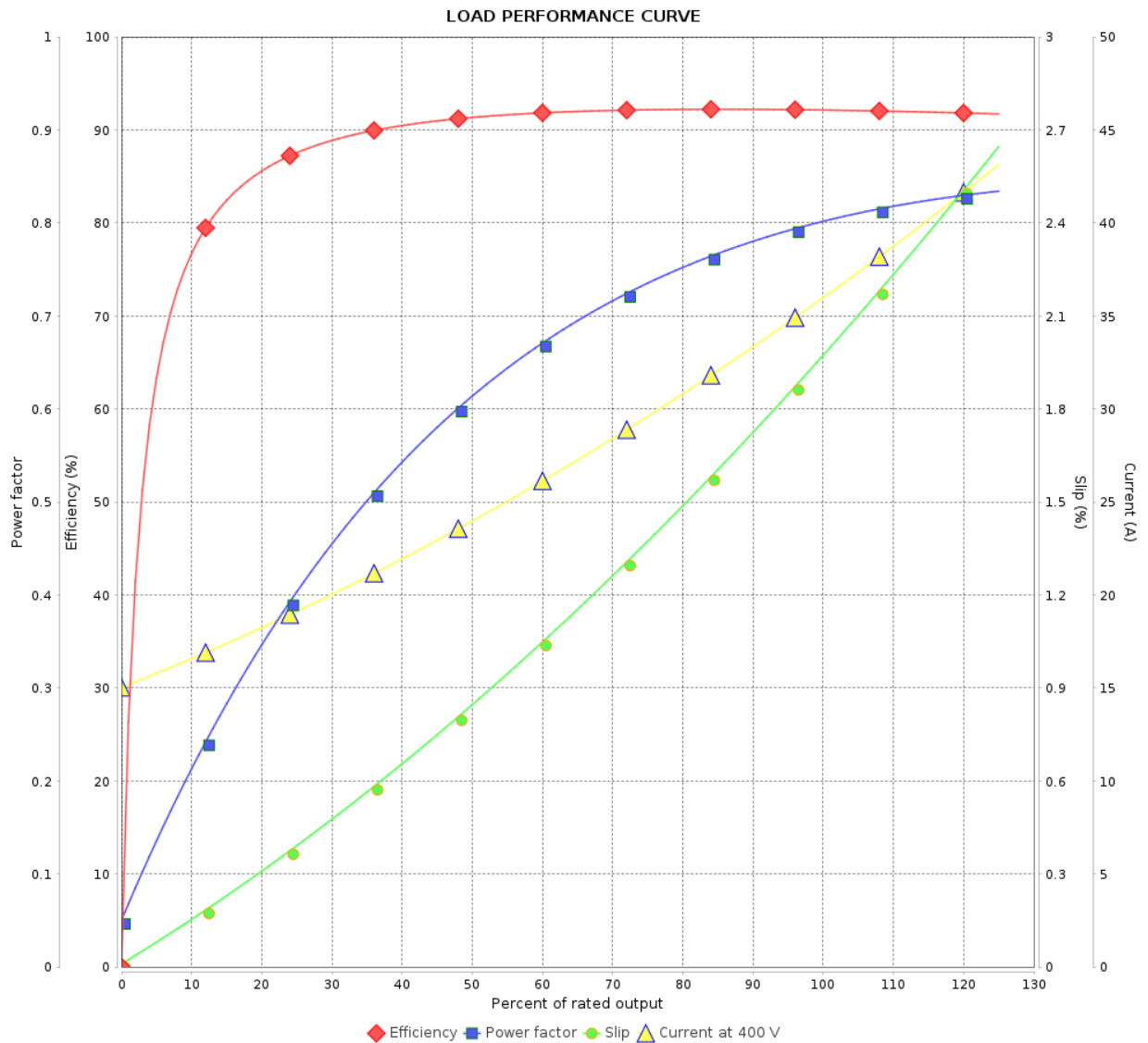
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11942005



Performance : 400 V 50 Hz 6P IE3

Rated current : 36.2 A  
LRC : 6.3  
Rated torque : 18.5 kgfm  
Locked rotor torque : 220 %  
Breakdown torque : 260 %  
Rated speed : 980 rpm

Moment of inertia (J) : 0.5561 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

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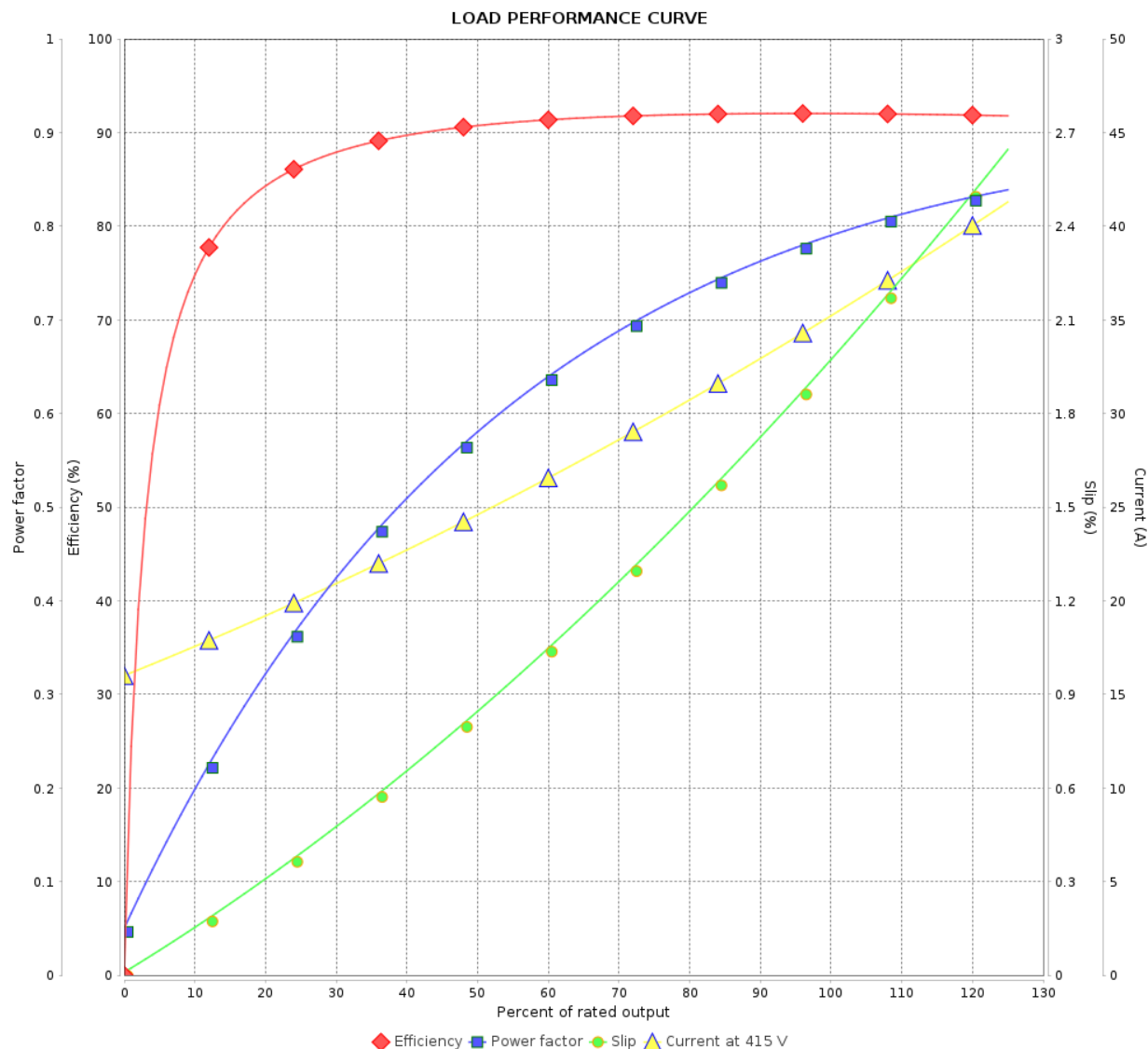
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11942005



Performance : 415 V 50 Hz 6P IE3

Rated current : 35.4 A  
LRC : 6.7  
Rated torque : 18.5 kgfm  
Locked rotor torque : 240 %  
Breakdown torque : 280 %  
Rated speed : 980 rpm

Moment of inertia (J) : 0.5561 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

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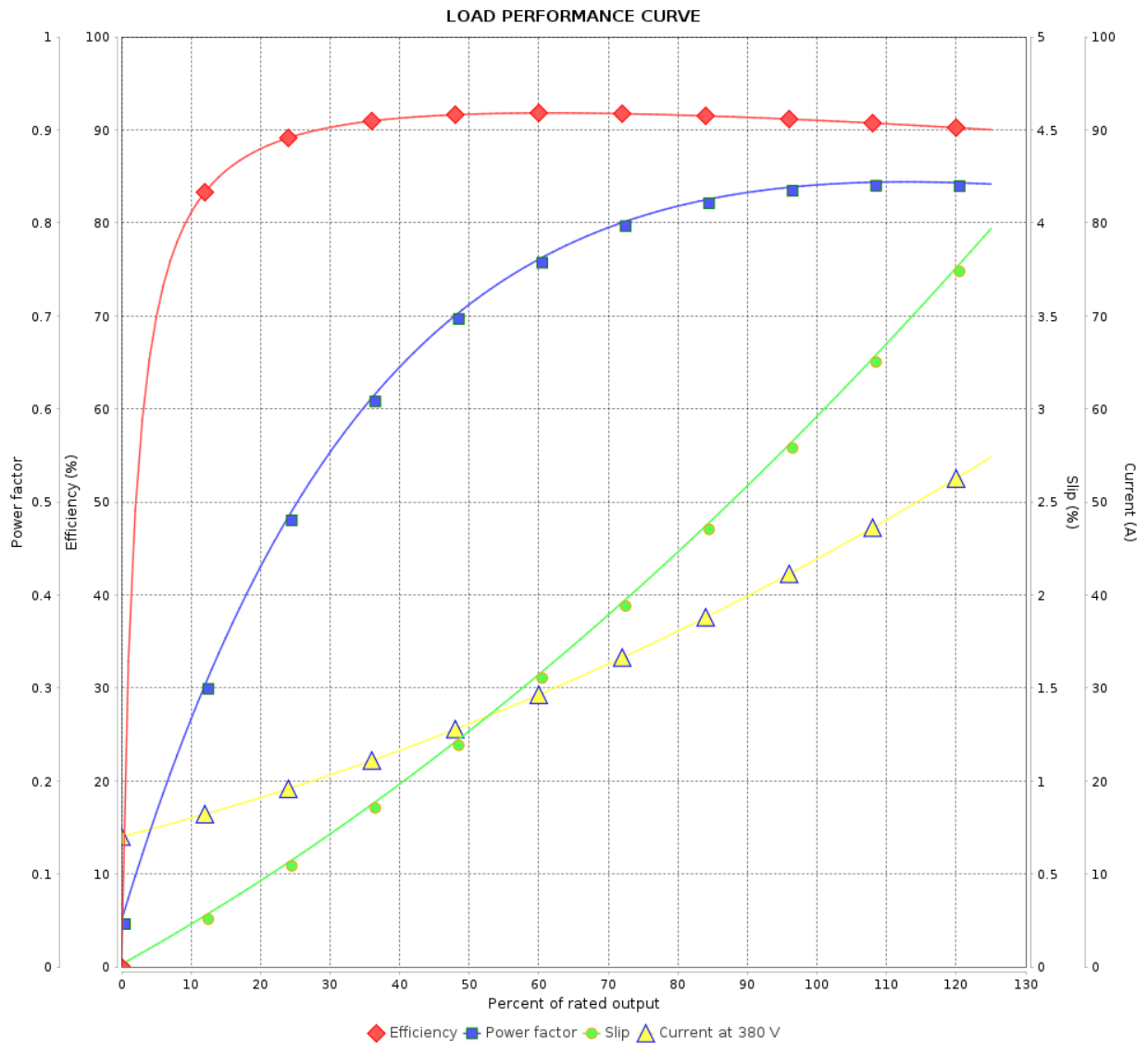
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11942005



Performance : 380 V 50 Hz 6P IE2

Rated current : 43.7 A  
LRC : 4.9  
Rated torque : 22.4 kgfm  
Locked rotor torque : 160 %  
Breakdown torque : 200 %  
Rated speed : 970 rpm

Moment of inertia (J) : 0.5561 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

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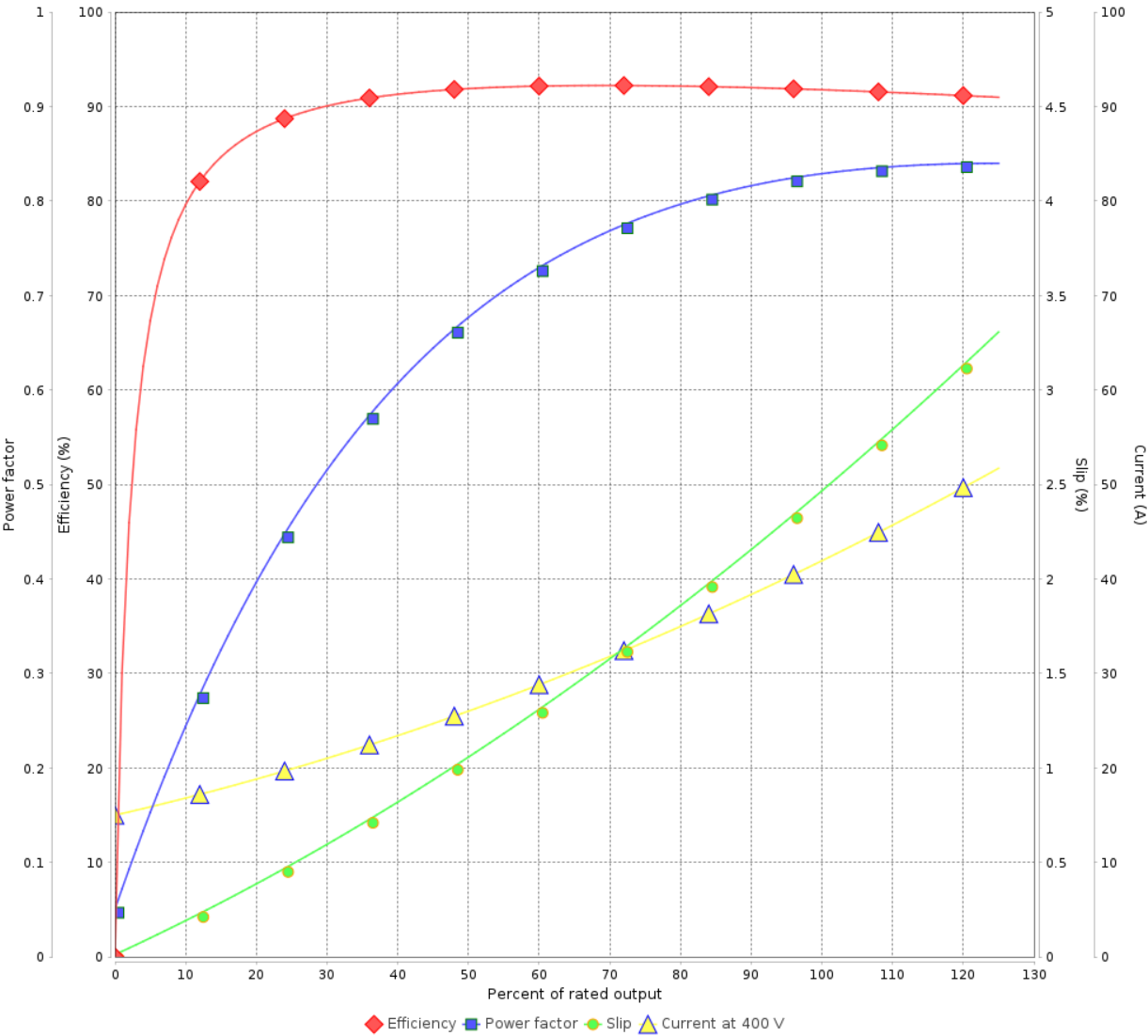
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase      Product code : 11942005

LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 6P IE2

Rated current	: 41.7 A	Moment of inertia (J)	: 0.5561 kgm <sup>2</sup>
LRC	: 5.4	Duty cycle	: Cont.(S1)
Rated torque	: 22.3 kgfm	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.15
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 975 rpm	Design	: B

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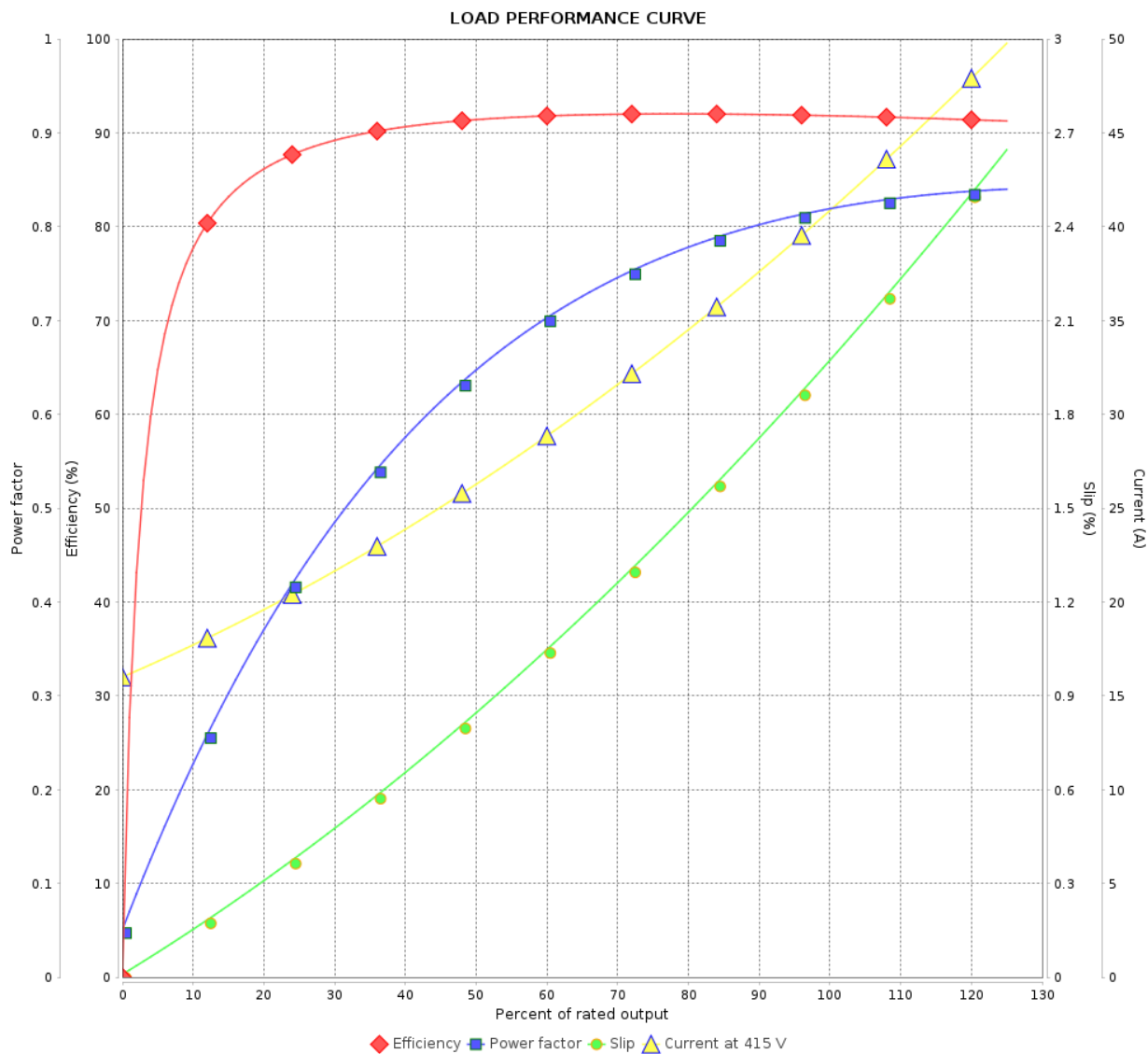
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11942005

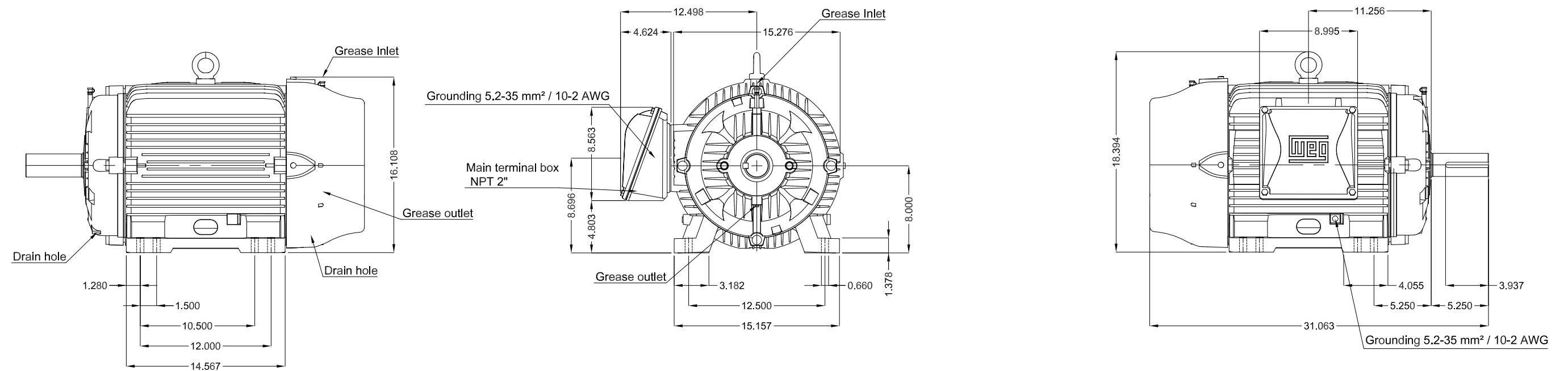




Performance : 415 V 50 Hz 6P IE2

Rated current : 40.7 A  
LRC : 5.8  
Rated torque : 22.2 kgfm  
Locked rotor torque : 200 %  
Breakdown torque : 240 %  
Rated speed : 980 rpm

Moment of inertia (J) : 0.5561 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

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