

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 11943566

Frame : 404/5TC	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) : 1.26 kgm <sup>2</sup>
Design : B	

Output [HP]	100	100	100	100
Poles	4	4	4	4
Frequency [Hz]	60	50	50	50
Rated voltage [V]	460	380	400	415
Rated current [A]	116	142	135	131
L. R. Amperes [A]	719	795	837	865
LRC [A]	6.2x(Code G)	5.6x(Code F)	6.2x(Code G)	6.6x(Code G)
No load current [A]	32.0	31.7	33.7	35.0
Rated speed [RPM]	1775	1465	1470	1475
Slip [%]	1.39	2.33	2.00	1.67
Rated torque [kgfm]	40.9	49.5	49.4	49.2
Locked rotor torque [%]	240	190	210	220
Breakdown torque [%]	220	170	190	210
Service factor	1.25	1.00	1.00	1.00
Temperature rise	80 K	105 K	105 K	105 K
Locked rotor time	23s (cold) 13s (hot)	16s (cold) 9s (hot)	16s (cold) 9s (hot)	16s (cold) 9s (hot)
Noise level <sup>2</sup>	68.0 dB(A)	64.0 dB(A)	64.0 dB(A)	64.0 dB(A)
Efficiency (%)	25%			
	50%	95.0	94.5	94.5
	75%	95.0	94.1	94.5
	100%	95.4	93.6	94.1
Power Factor	25%			
	50%	0.77	0.82	0.79
	75%	0.84	0.86	0.85
	100%	0.85	0.86	0.85

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

Losses (%)	P1 (0,9;1,0)	4.6	4.6	4.6	4.6
	P2 (0,5;1,0)	3.8	3.8	3.8	3.8
	P3 (0,25;1,0)	3.7	3.7	3.7	3.7
	P4 (0,9;0,5)	2.0	2.0	2.0	2.0
	P5 (0,5;0,5)	1.4	1.4	1.4	1.4
	P6 (0,5;0,25)	0.8	0.8	0.8	0.8
	P7 (0,25;0,25)	0.5	0.5	0.5	0.5

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads
Bearing type :	6316 C3	6314 C3	Max. traction : 1017 kgf
Sealing :	Taconite	Taconite	Max. compression : 1017 kgf
	Labyrinth	Labyrinth	
Lubrication interval :	10000 h	12000 h	
Lubricant amount :	34 g	27 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.

(2) Measured at 1m and with tolerance of +3dB(A).

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 :

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# LOAD PERFORMANCE CURVE

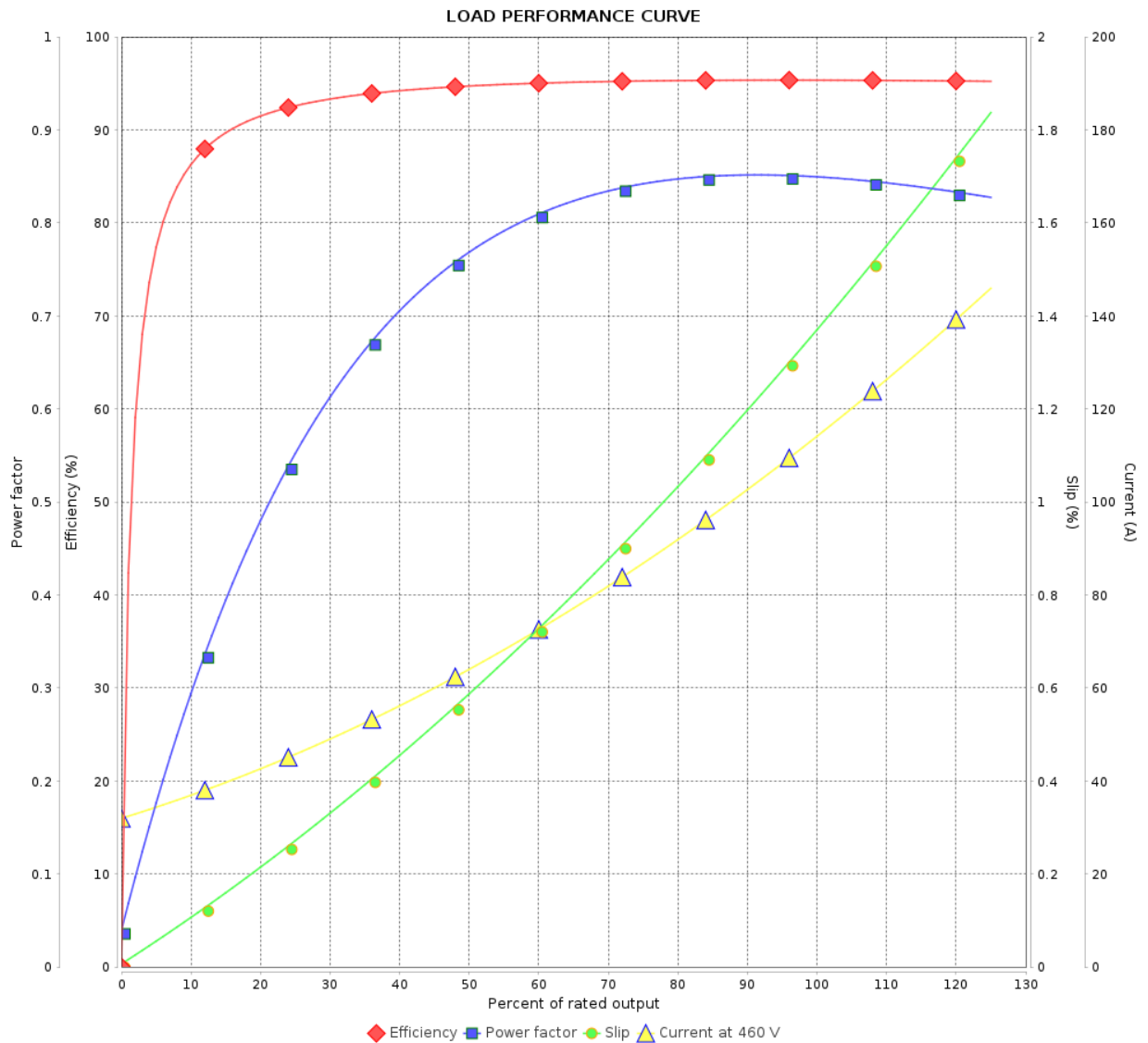
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11943566



Performance : 460 V 60 Hz 4P

Rated current : 116 A  
LRC : 6.2  
Rated torque : 40.9 kgfm  
Locked rotor torque : 240 %  
Breakdown torque : 220 %  
Rated speed : 1775 rpm

Moment of inertia (J) : 1.26 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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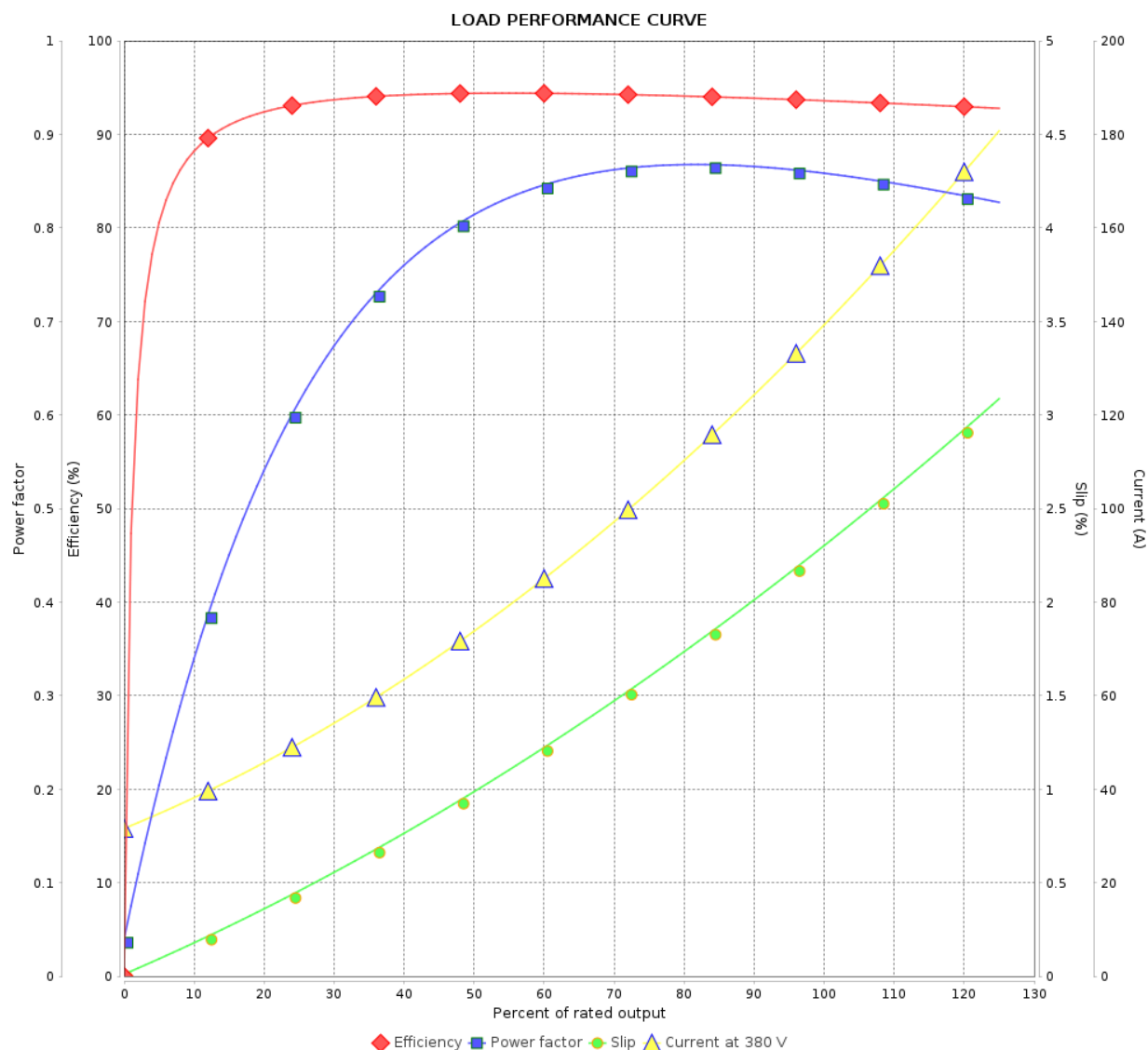
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11943566



Performance : 380 V 50 Hz 4P IE1

Rated current : 142 A  
LRC : 5.6  
Rated torque : 49.5 kgfm  
Locked rotor torque : 190 %  
Breakdown torque : 170 %  
Rated speed : 1465 rpm

Moment of inertia (J) : 1.26 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 105 K  
Design : B

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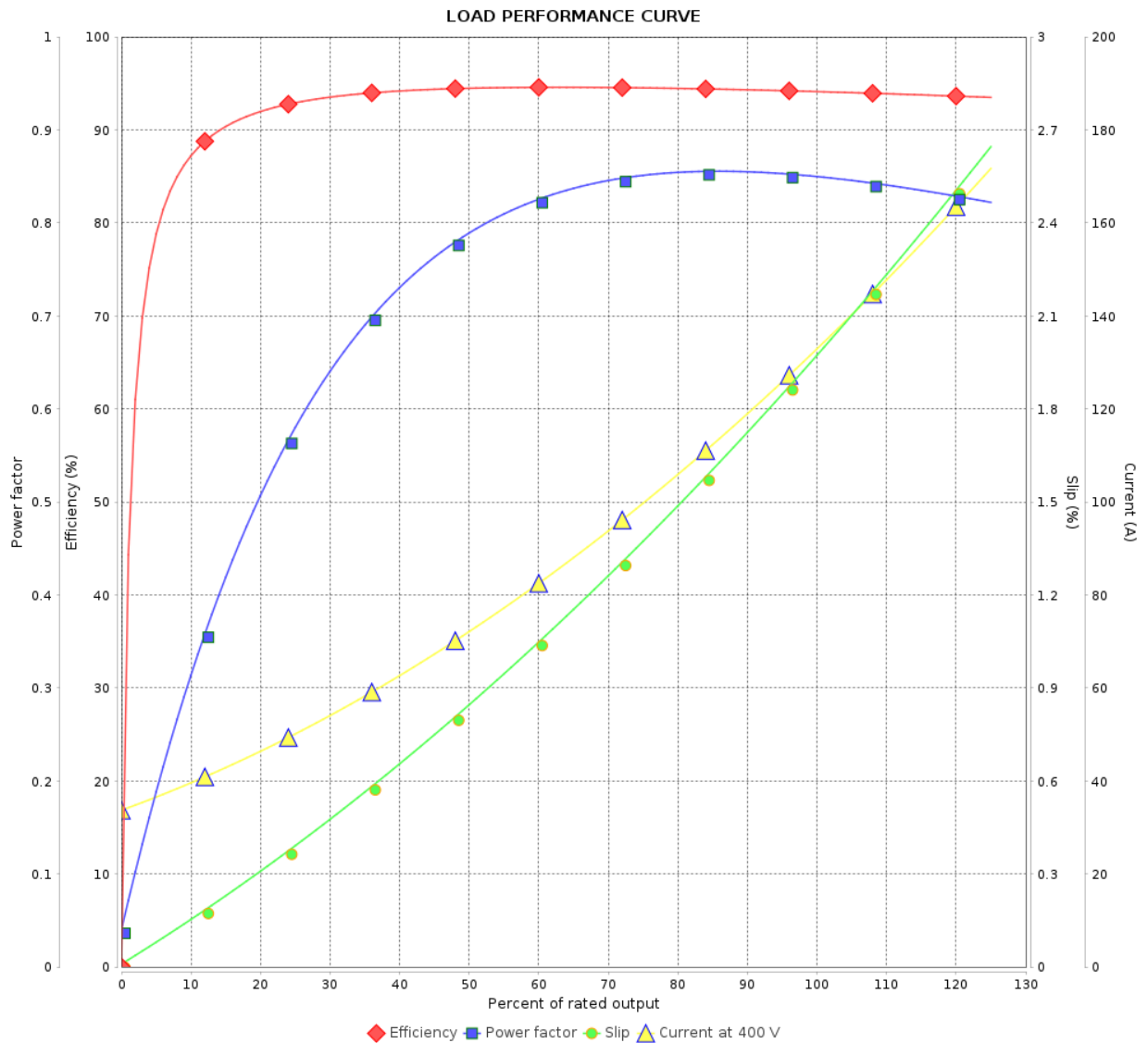
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11943566



Performance : 400 V 50 Hz 4P IE2

Rated current : 135 A  
LRC : 6.2  
Rated torque : 49.4 kgfm  
Locked rotor torque : 210 %  
Breakdown torque : 190 %  
Rated speed : 1470 rpm

Moment of inertia (J) : 1.26 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 105 K  
Design : B

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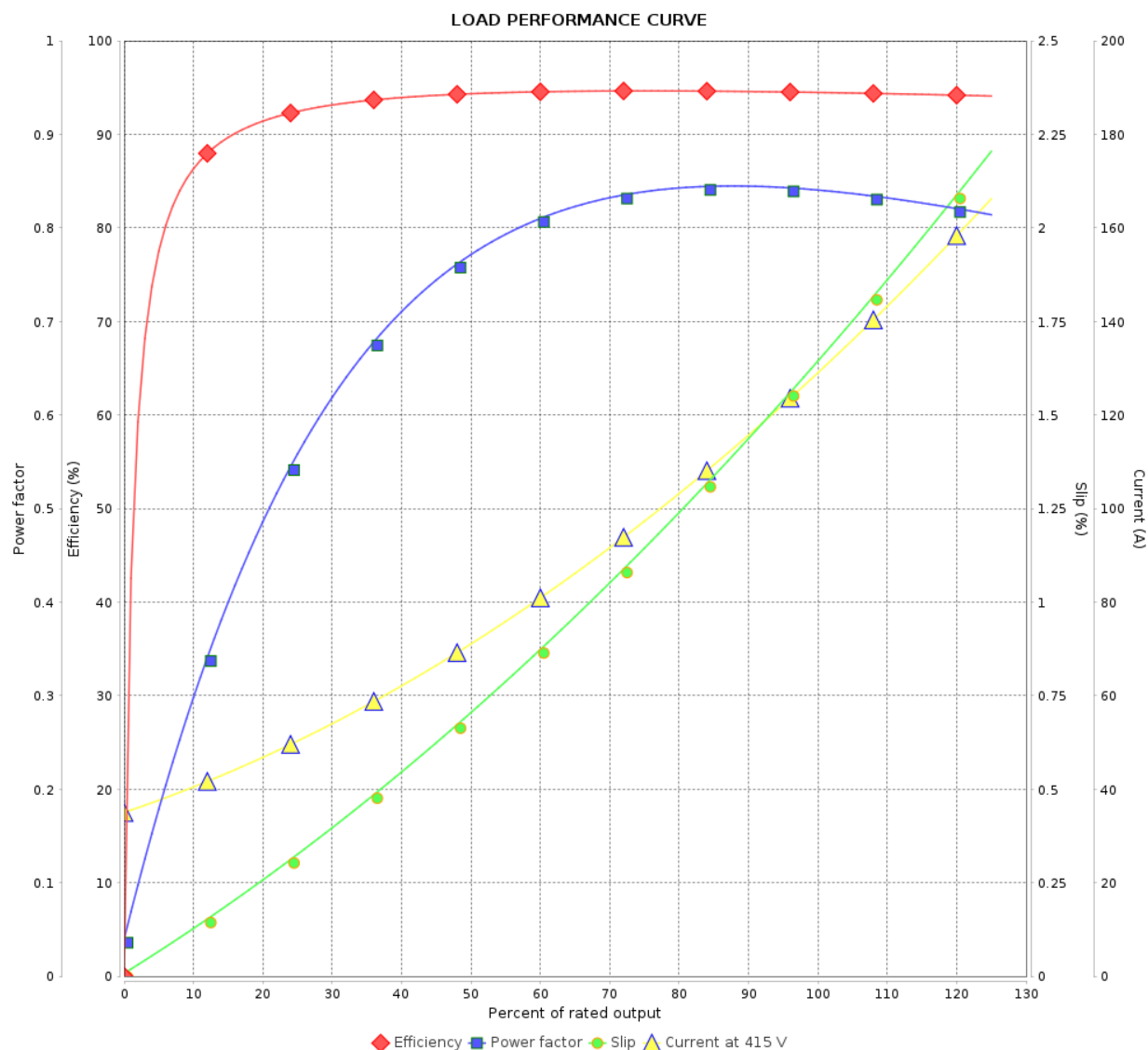
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11943566



Performance : 415 V 50 Hz 4P IE2

Rated current : 131 A  
LRC : 6.6  
Rated torque : 49.2 kgfm  
Locked rotor torque : 220 %  
Breakdown torque : 210 %  
Rated speed : 1475 rpm

Moment of inertia (J) : 1.26 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 105 K  
Design : B

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