

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 12744764

Frame : 284/6TC	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> : 195 kg
Protection degree : IP55	Moment of inertia (J) : 0.3448 kgm <sup>2</sup>
Design : B	

Output [HP]	15	15	15	15
Poles	8	8	8	8
Frequency [Hz]	60	50	50	50
Rated voltage [V]	230/460	380	400	415
Rated current [A]	40.1/20.0	23.9	23.0	22.4
L. R. Amperes [A]	220/110	103	110	114
LRC [A]	5.5x(Code G)	4.3x(Code E)	4.8x(Code F)	5.1x(Code F)
No load current [A]	20.0/10.0	9.80	10.5	11.5
Rated speed [RPM]	880	720	725	725
Slip [%]	2.22	4.00	3.33	3.33
Rated torque [kgfm]	12.4	15.1	15.0	15.0
Locked rotor torque [%]	220	150	170	190
Breakdown torque [%]	229	200	200	220
Service factor	1.25	1.00	1.00	1.15
Temperature rise	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)
Noise level <sup>2</sup>	54.0 dB(A)	52.0 dB(A)	52.0 dB(A)	52.0 dB(A)
Efficiency (%)	25%			
	50%	85.5	88.0	88.0
	75%	90.0	88.5	88.5
	100%	89.5	88.6	88.6
Power Factor	25%			
	50%	0.61	0.66	0.59
	75%	0.71	0.75	0.70
	100%	0.77	0.79	0.78

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

Losses (%)	P1 (0,9;1,0)	11.4	12.5	12.5	12.5
	P2 (0,5;1,0)	9.9	10.8	10.8	10.8
	P3 (0,25;1,0)	9.3	10.2	10.2	10.2
	P4 (0,9;0,5)	5.6	6.2	6.2	6.2
	P5 (0,5;0,5)	4.1	4.4	4.4	4.4
	P6 (0,5;0,25)	2.8	3.1	3.1	3.1
	P7 (0,25;0,25)	2.1	2.3	2.3	2.3

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads
Bearing type :	6311 C3	6211 C3	Max. traction : 375 kgf
Sealing :	V'Ring	V'Ring	Max. compression : 570 kgf
Lubrication interval :	20000 h	20000 h	
Lubricant amount :	18 g	11 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).  
 (3) Approximate weight subject to changes after manufacturing process.

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 : \_\_\_\_\_

Notes  
USABLE @208V 42.9A SF 1.15 SFA 49.3A

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# LOAD PERFORMANCE CURVE

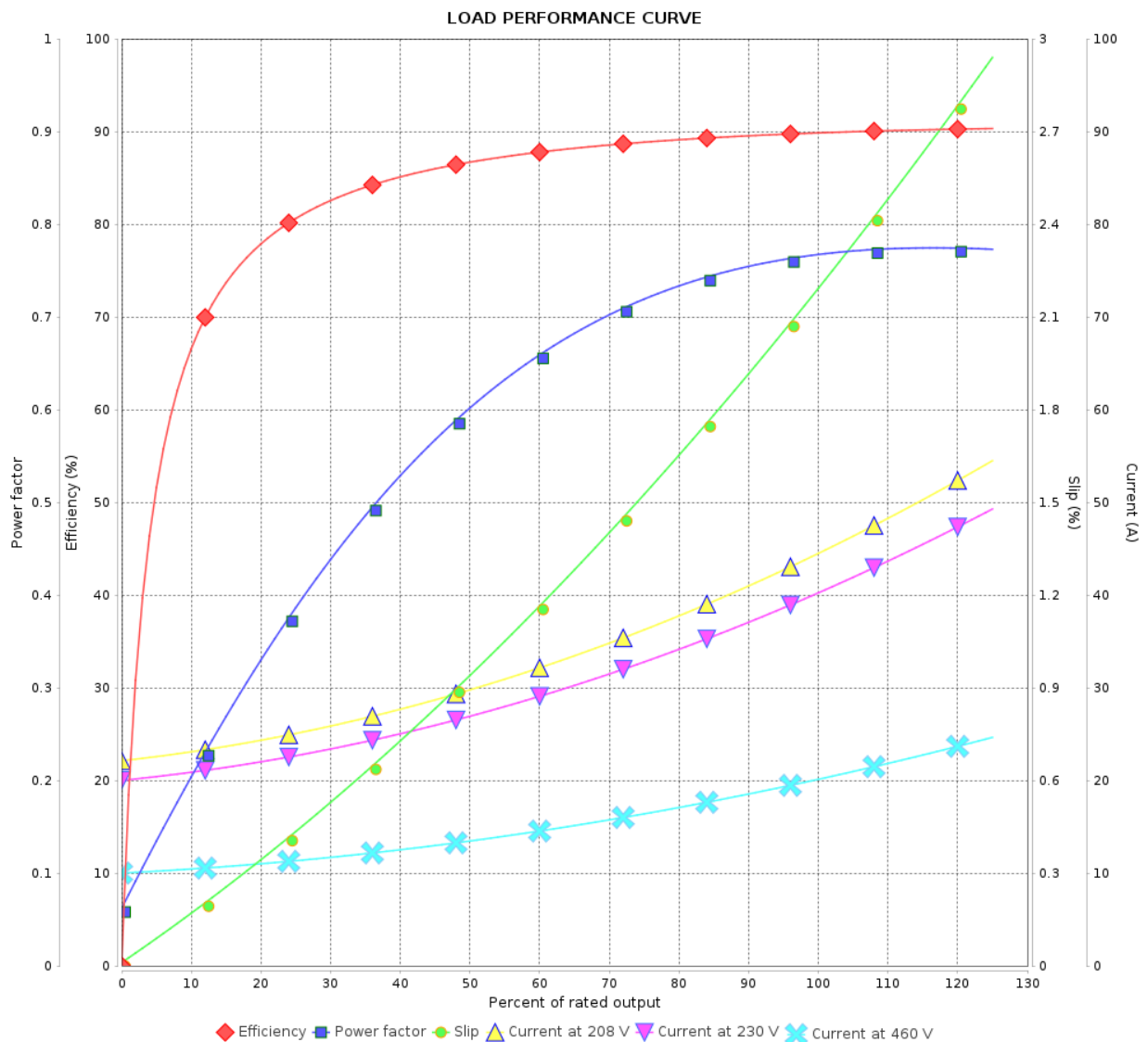
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 12744764



Performance : 230/460 V 60 Hz 8P

Rated current : 40.1/20.0 A  
LRC : 5.5  
Rated torque : 12.4 kgfm  
Locked rotor torque : 220 %  
Breakdown torque : 229 %  
Rated speed : 880 rpm

Moment of inertia (J) : 0.3448 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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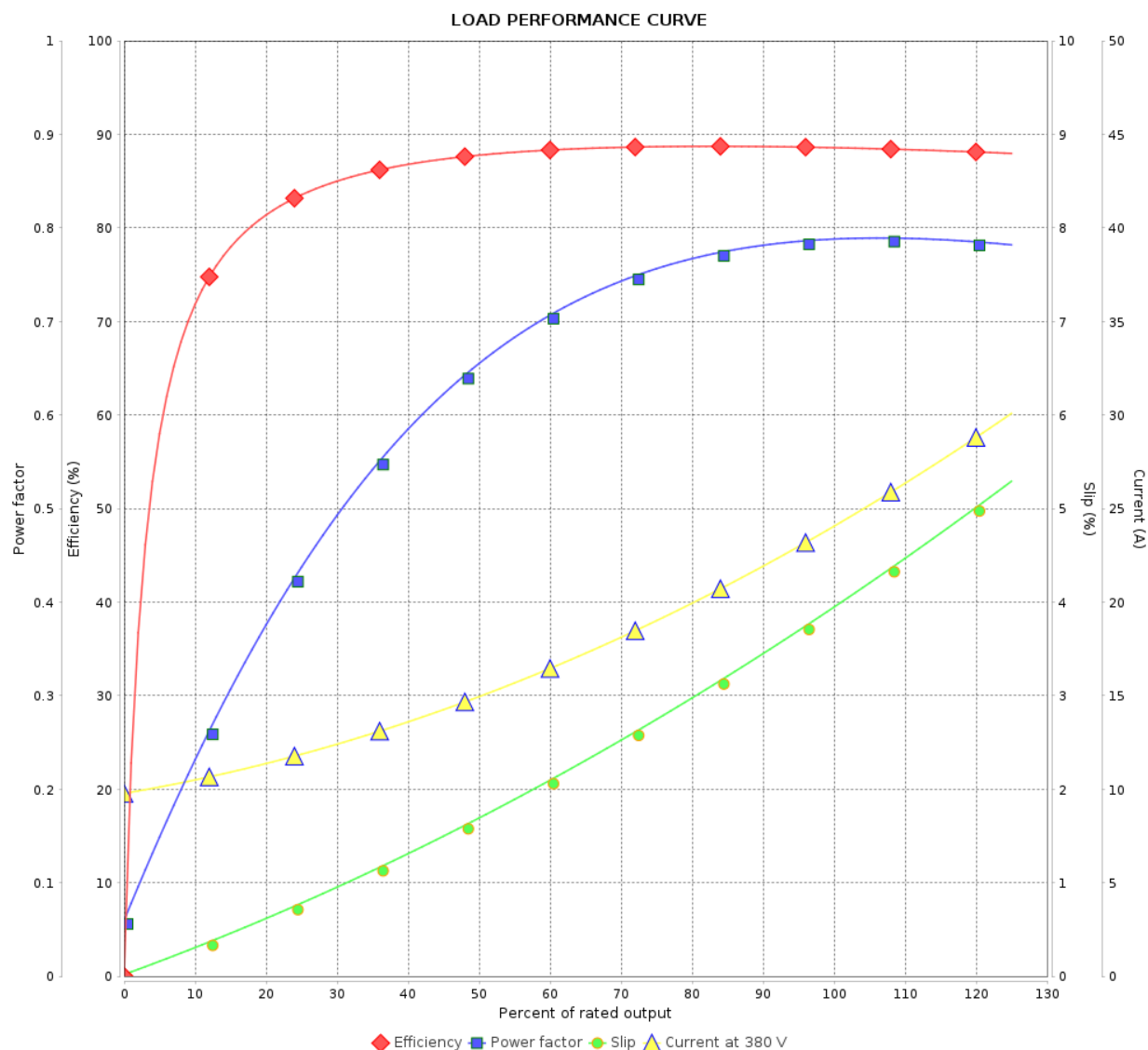
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 12744764



Performance : 380 V 50 Hz 8P IE3

Rated current : 23.9 A  
LRC : 4.3  
Rated torque : 15.1 kgfm  
Locked rotor torque : 150 %  
Breakdown torque : 200 %  
Rated speed : 720 rpm

Moment of inertia (J) : 0.3448 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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# LOAD PERFORMANCE CURVE

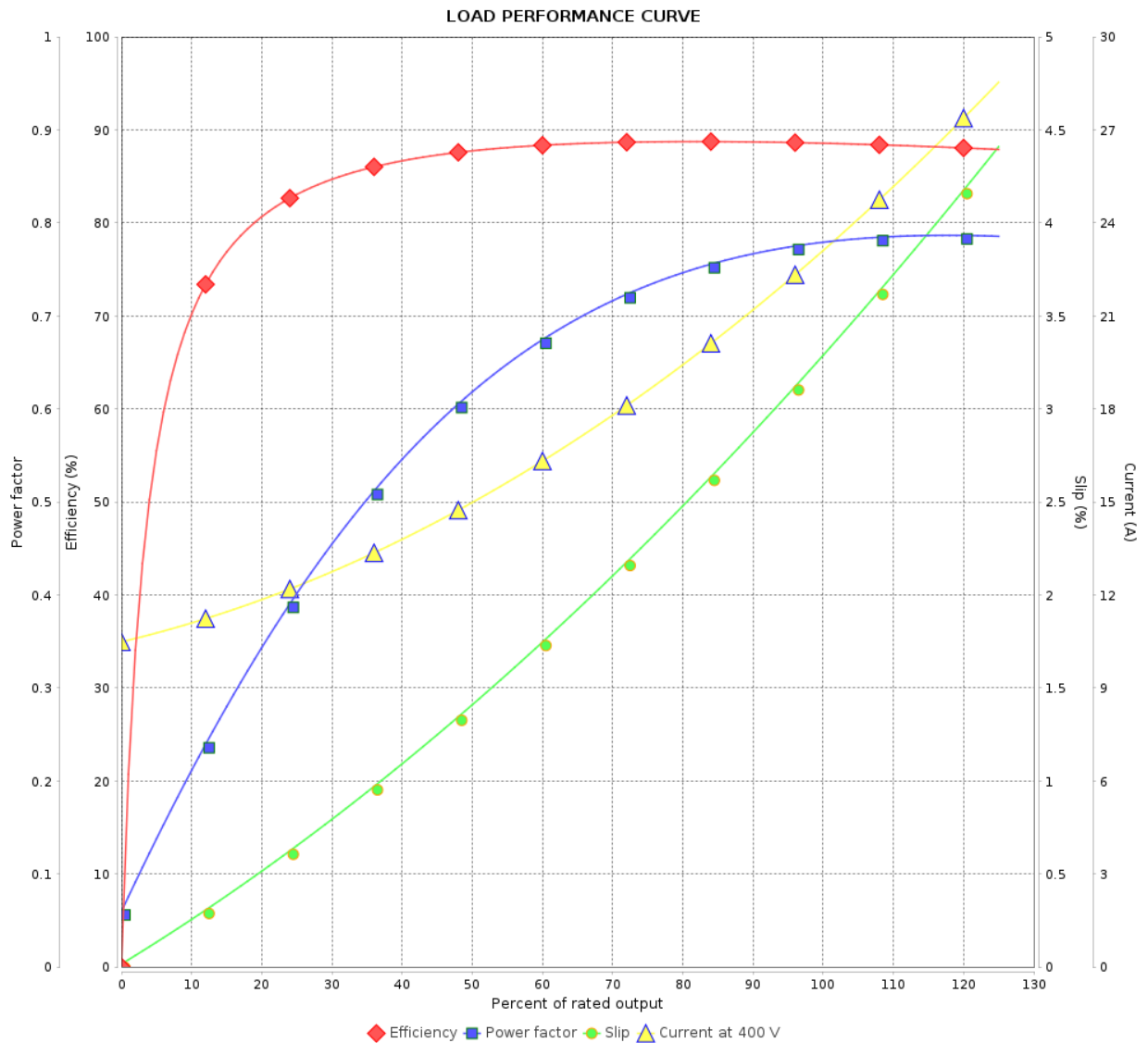
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 12744764



Performance : 400 V 50 Hz 8P IE3

Rated current : 23.0 A  
LRC : 4.8  
Rated torque : 15.0 kgfm  
Locked rotor torque : 170 %  
Breakdown torque : 200 %  
Rated speed : 725 rpm

Moment of inertia (J) : 0.3448 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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# LOAD PERFORMANCE CURVE

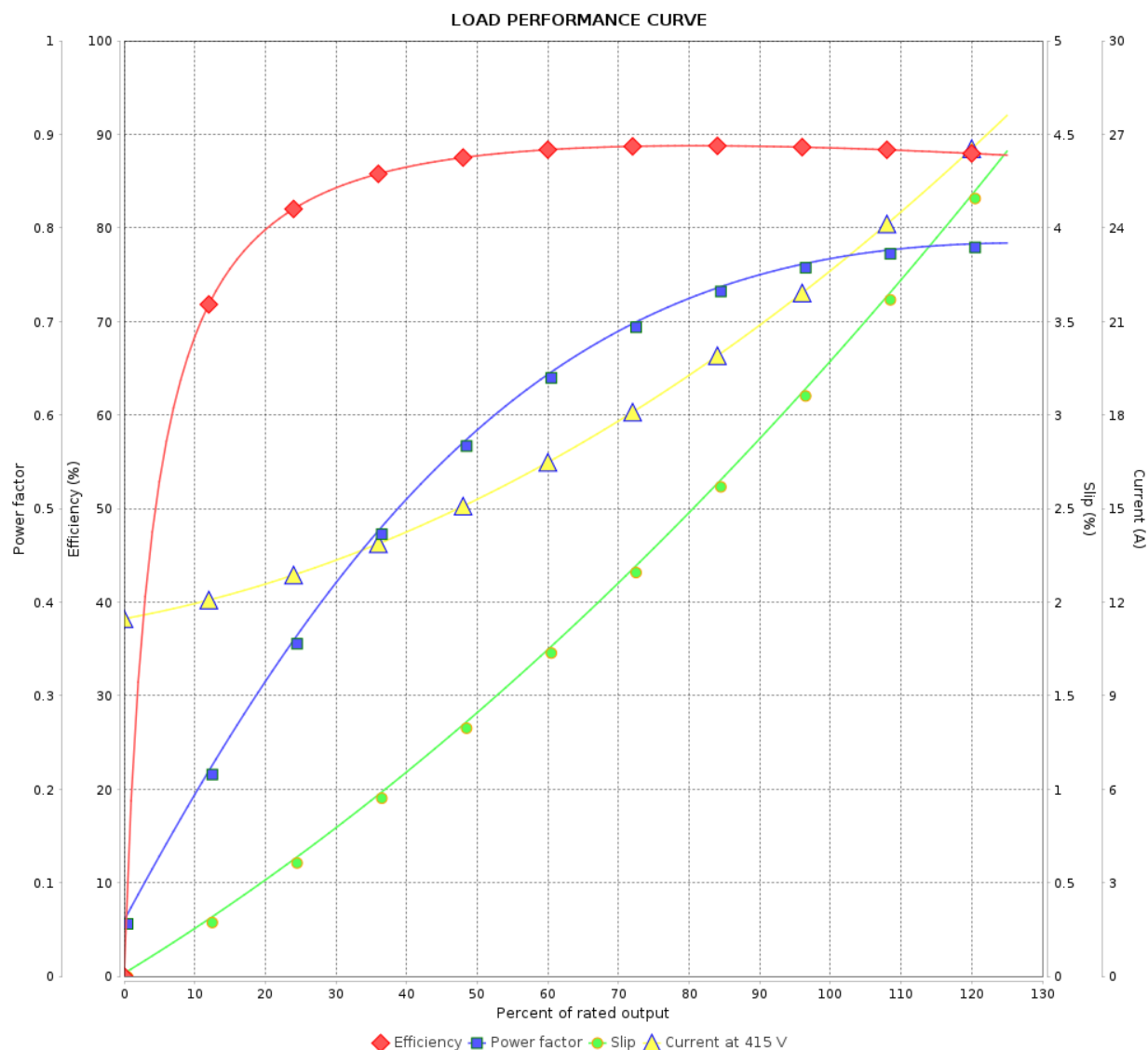
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 12744764



Performance : 415 V 50 Hz 8P IE3

Rated current : 22.4 A  
LRC : 5.1  
Rated torque : 15.0 kgfm  
Locked rotor torque : 190 %  
Breakdown torque : 220 %  
Rated speed : 725 rpm

Moment of inertia (J) : 0.3448 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 105 K  
Design : B

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