

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer	:		
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	16521005
Frame	: 254/6TC	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>	: 102 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.0985 kgm <sup>2</sup>
Design	: B		
Output [HP]	7.5	7.5	7.5
Poles	6	6	6
Frequency [Hz]	60	50	50
Rated voltage [V]	230/460	190-220/380	415
Rated current [A]	20.0/9.98	24.0-20.7/12.0	11.3
L. R. Amperes [A]	108/53.9	101-87.1/50.4	57.6
LRC [A]	5.4x(Code G)	4.2x(Code D)	5.1x(Code F)
No load current [A]	10.1/5.03	9.92-8.56/4.96	5.64
Rated speed [RPM]	1175	965	975
Slip [%]	2.08	3.50	2.50
Rated torque [kgfm]	4.63	5.64	5.58
Locked rotor torque [%]	200	150	190
Breakdown torque [%]	229	180	220
Service factor	1.15	1.00	1.00
Temperature rise	80 K	105 K	105 K
Locked rotor time	75s (cold) 42s (hot)	0s (cold) 0s (hot)	0s (cold) 0s (hot)
Noise level <sup>2</sup>	59.0 dB(A)	57.0 dB(A)	57.0 dB(A)
Efficiency (%)	25%		
	50%	89.5	89.9
	75%	89.5	89.5
	100%	91.0	88.0
Power Factor	25%		
	50%	0.58	0.65
	75%	0.70	0.75
	100%	0.76	0.79
Bearing type	: <u>Drive end</u> 6309 Z C3 <u>Non drive end</u> 6208 Z C3	Foundation loads	
Sealing	: V'Ring Without Bearing Seal	Max. traction	: 142 kgf
Lubrication interval	: 20000 h 20000 h	Max. compression	: 244 kgf
Lubricant amount	: 13 g 8 g		
Lubricant type	: Mobil Polyrex EM		
Notes USABLE @208V 22.1A SF 1.00 SFA 22.1A			
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.	
Rev.	Changes Summary	Performed	Checked
Performed by			
Checked by			
Date	13/05/2022		
		Page	Revision
		1 / 4	

# LOAD PERFORMANCE CURVE

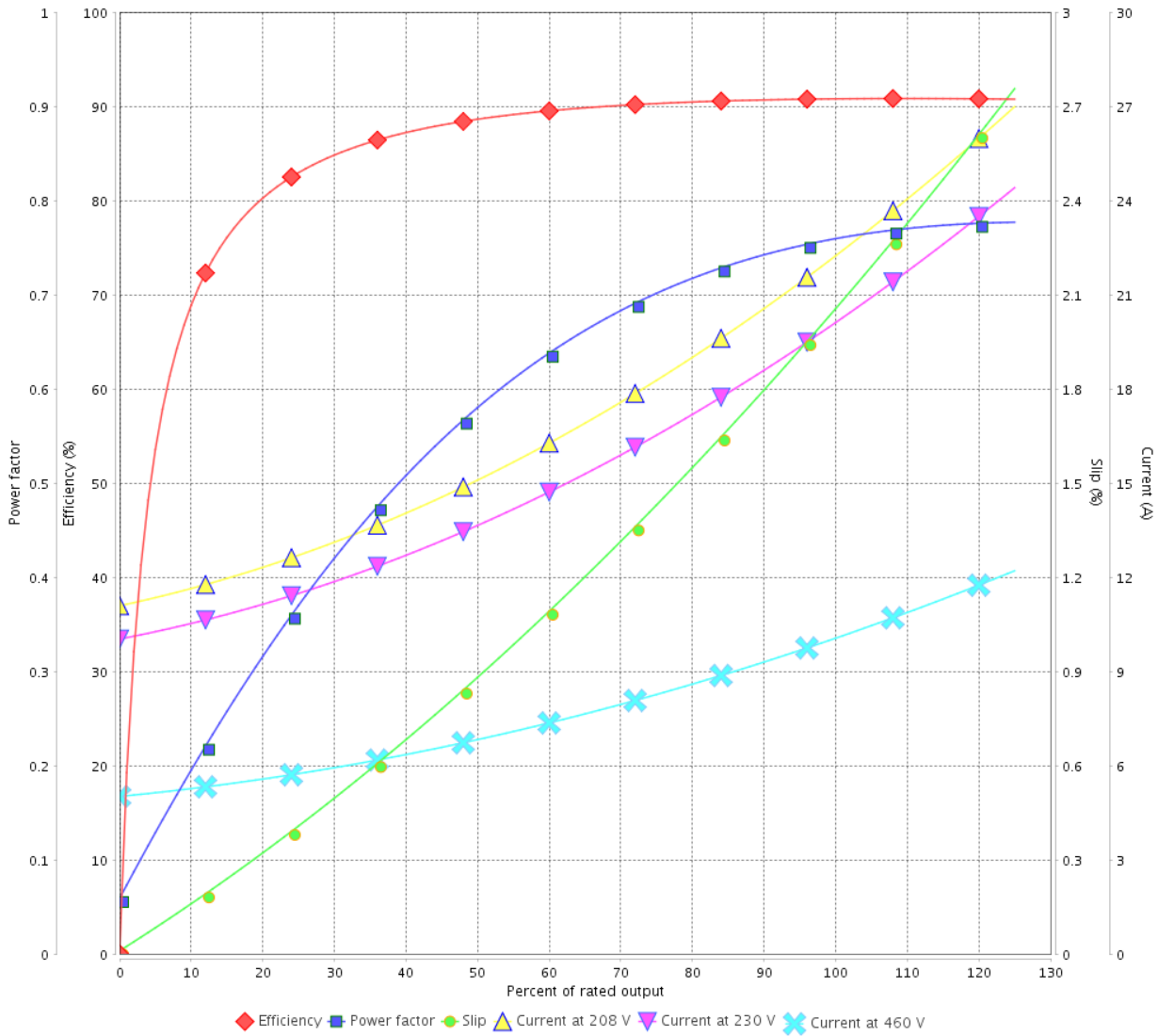
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase      Product code : 16521005

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 20.0/9.98 A  
 LRC : 5.4  
 Rated torque : 4.63 kgfm  
 Locked rotor torque : 200 %  
 Breakdown torque : 229 %  
 Rated speed : 1175 rpm

Moment of inertia (J) : 0.0985 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 4	Revision
Checked by				
Date	13/05/2022			

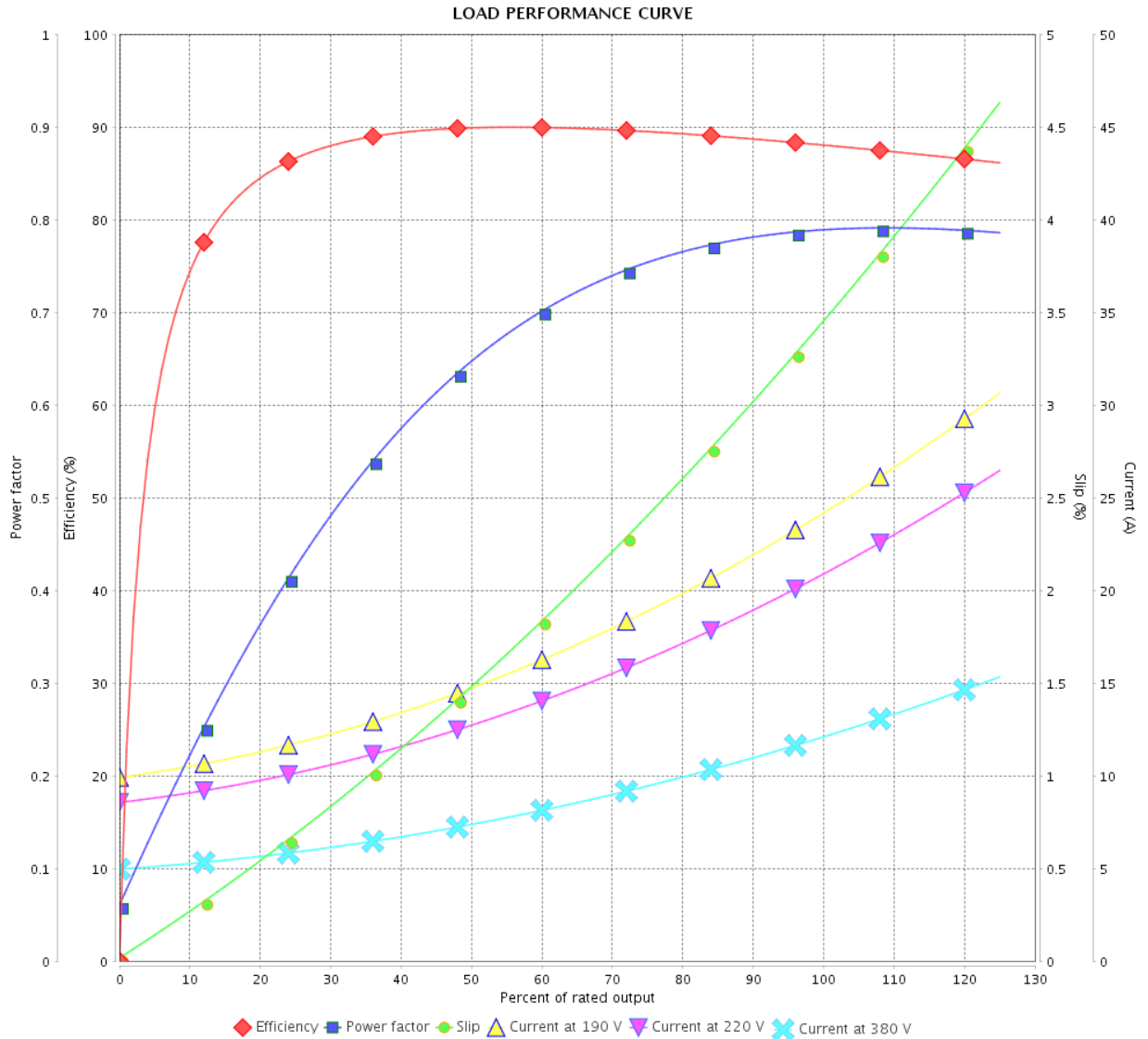
# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase      Product code : 16521005



Performance : 190-220/380 V 50 Hz 6P

Rated current : 24.0-20.7/12.0 A  
 LRC : 4.2  
 Rated torque : 5.64 kgfm  
 Locked rotor torque : 150 %  
 Breakdown torque : 180 %  
 Rated speed : 965 rpm

Moment of inertia (J) : 0.0985 kgm<sup>2</sup>  
 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				
Date				

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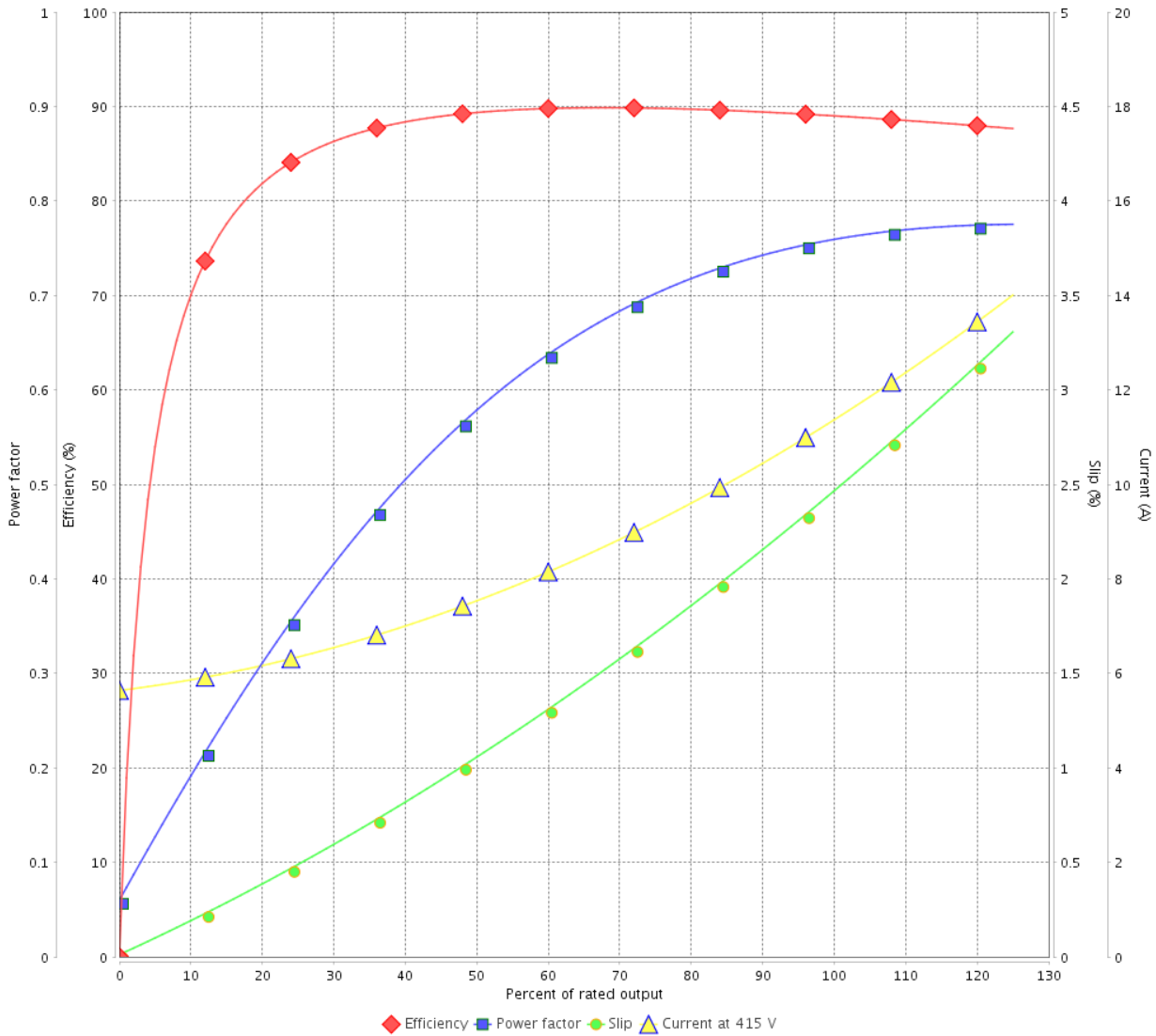
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase      Product code : 16521005

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Performance : 415 V 50 Hz 6P

Rated current	: 11.3 A	Moment of inertia (J)	: 0.0985 kgm <sup>2</sup>
LRC	: 5.1	Duty cycle	: Cont.(S1)
Rated torque	: 5.58 kgfm	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 105 K
Rated speed	: 975 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 4	Revision
Checked by				
Date	13/05/2022			